



Cyd-Bwyllgor Corfforedig
Gogledd Cymru
North Wales
Corporate Joint Committee



North Wales Regional Transport Plan

Integrated Well-being Appraisal Report

July 2025





Integrated Well-being Appraisal Report

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1. Introduction

1.1 What is the North Wales Regional Transport Plan

The Local Government and Elections (Wales) Act 2021 includes provision for the creation of Corporate Joint Committees (CJCs) which are formed to promote regional collaboration through a consistent and democratically controlled framework. CJCs are required to comply with all public body duties and are assigned statutory responsibility for the preparation of Regional Transport Plans (RTPs)¹ which must set out transport policies to implement the Llwybr Newydd: the Wales Transport Strategy 2021², providing a long-term vision for the next 5 years. The CJC for North Wales includes representatives from six local authority areas of the Isle of Anglesey, Wrexham, Conwy, Flintshire, Denbighshire, and Gwynedd as shown in Figure 1 and the Eryri National Park Authority.

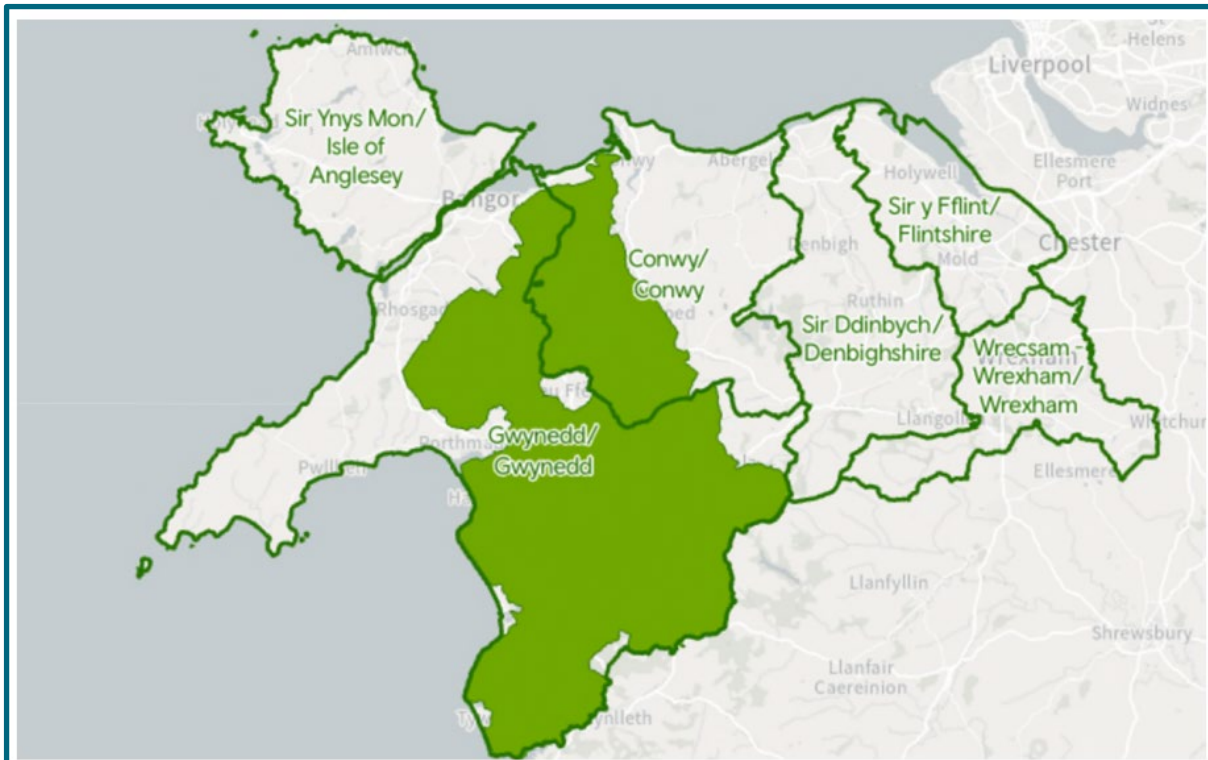


Figure 1 Local Authorities covered by the North Wales Regional Transport Plan (with Eryri National Park in Green)

Llwybr Newydd states that Wales must think differently about the way people travel. The vision for the North Wales Regional Transport Plan (NW RTP) is that North Wales will have a safe, sustainable, affordable, resilient, and effective integrated transport network that supports economic growth, prosperity and well-being.

¹ CJCs also have responsibility for the preparation of Strategic Development Plans

² Llwybr Newydd: the Wales transport strategy 2021 – Available online at: <https://www.gov.wales/llwybr-newydd-wales-transport-strategy-2021> [Accessed 23/04/24]



1.2 What is sustainable development?

Sustainable development is defined by the United Nations³ as development that “*meets the needs of the present, without compromising the ability of future generations to meet their own needs.*” Underpinning sustainable development is the need to balance economic growth, social inclusion, and environmental protection. The balancing of these three elements is required to support the long-term wellbeing of individuals and society. The Welsh Government’s Well-being of Future Generations (Wales) Act 2015⁴ includes seven well-being goals to guide sustainable development, and which must be considered when developing new policy. These are:

- A prosperous Wales
- A Resilient Wales
- A More Equal Wales
- A Healthier Wales
- A Wales of Cohesive Communities
- A Wales of Vibrant Cultural and Thriving Welsh Language
- A Globally Responsible Wales

Sustainable development promotes the building of an inclusive, sustainable, and resilient future for both people and the planet. This includes creating inclusive and equitable economic growth, creating opportunities for all, reducing inequalities, and promoting integrated and sustainable management of natural resource and ecosystems⁵.

1.3 What is an Integrated Well-being Appraisal?

The Welsh Government’s Guidance to Corporate Joint Committees on Regional Transport Plans⁶ sets out that an Integrated Well-being Appraisal (IWBA) is required for the NWRTP, and supporting information should include more detailed statutory impact assessments, technical studies, consultation and engagement summaries, or other information that have been used to inform the development of the NWRTP or IWBA. It explains how current guidance on IWBA is set out in the Welsh transport appraisal guidance (WelTAG) guidance⁷.

WelTAG sets out that integrated well-being appraisal is a rigorous, structured approach to understanding the impact of a programme or project on well-being, using quantitative and qualitative information. Every transport programme, policy or project funded by Welsh Government must include an integrated well-being appraisal that shows how it will contribute to well-being in Wales including the four well-being ambitions and the specific targets for transport. These four ambitions include:

- Good for people and communities
- Good for the environment
- Good for the economy and places
- Good for culture and the Welsh language

The IWBA should be tailored to the needs of the project, programme or policy. WelTAG explains the requirement for IWBA does not replace the need for statutory impact assessments and an IWBA may need to be supported by the relevant statutory and regulatory impact assessments.

³ Report of the World Commission on Environment and Development: Our Common Future. United Nations, 1987. Available online at <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf> [Accessed 30 April 2024]

⁴ Well-being of Future Generations (Wales) Act 2015. June 2015. Available online at: <https://www.gov.wales/well-being-future-generations-act-essentials-html> [Accessed 13/12/2024]

⁵ Sustainable Development Agenda, Goals for People, for Planet. November 2023. Available online at: <https://www.un.org/sustainabledevelopment/development-agenda/> [Accessed 19/11/24]

⁶ Regional transport plans: guidance for Corporate Joint Committee. Available online at <https://www.gov.wales/regional-transport-plans-guidance-corporate-joint-committees>

⁷ Welsh transport appraisal guidance (WelTAG). Available online at: <https://www.gov.wales/welsh-transport-appraisal-guidance-weltag>



An IWBA is therefore a process for assessing the potential social, cultural, economic, and environmental impacts of a plan and aims to place sustainable development at the centre of decision making. IWBA is a valuable tool that can help influence plan development, aligning it with the Welsh Transport Strategy and demonstrating application of the principles of sustainable development.

Where necessary IWBA can be used to show how the following **legislative requirements** are being met:

- Environmental Assessment of Plans and Programmes Regulations (SI 2004/1656) (Strategic Environmental Assessment (SEA) Regulations)
- Well-being of Future Generations (Wales) Act 2015
- Welsh Language (Wales) measure 2011 and Standards
- Children's Rights Impact Assessment (CRIA), as required by the Rights of Children and Young Persons (Wales) Measure 2011
- Equalities Impact Assessment (EqIA), as required by the Equality Act (2010)
- Sustainable Management of Natural Resources (SMNR) and the Natural Resources Policy (NRP) as required by the Environment (Wales) Act (2016)
- Habitat Regulations Assessment, as required by the Conservation of Habitats and Species Regulations 2017 as amended (known as the Habitats Regulations 2017).

More detail of the statutory and non-statutory assessments that have been embedded within this

IWBA can also be used to incorporate the **non-legislative requirements** of assessments relating to:

- Rural proofing
- Health effects
- Climate change

IWBA is provided in Section 1.4 and Section 1.6 below.

It is a **legal requirement** for responsible authorities to undertake SEA of plans and programmes that are subject to preparation and/or adoption by an authority at a local, regional or national level, are required by legislative, regulatory or administrative provisions and result in development that may have significant environmental effects.

The North Wales Regional Transport Plan is a plan that is required by legislative provisions (CJC Regulations⁸ post the Local Government and Elections (Wales) Act 2021⁹) and is likely to result in projects that could have significant environmental effects.

SEA is therefore a statutory requirement, and the SEA process has been used as a basis for the IWBA because it is a recognised and systematic process for evaluating the environmental consequences of plans and programmes.

⁸ Consultation on the Corporate joint committees: draft statutory guidance, 2021. Welsh Government. Available online at: <https://www.gov.wales/consultation-corporate-joint-committees-draft-statutory-guidance-html> [Accessed 14/05/24]

⁹ Local Government and Elections (Wales) Act 2021. Available online at: <https://www.legislation.gov.uk/asc/2021/1/contents> [Accessed 14/05/24].



By expanding the SEA process to include the requirements of other assessments (as listed above), this IWBA delivers one cohesive assessment using a collaborative approach across the different facets of sustainability, facilitating shared knowledge and identifying the intersectionality between the topics considered.

This approach eliminates unnecessary repetition and complies with all legal requirements. It also enables a thorough and transparent assessment that identifies sustainable development issues and opportunities, which can be iteratively fed back into the development of the NWRTP. Section 1.4.1 below sets out the requirements of the SEA Regulations, identifying where these requirements have been satisfied by the IWBA.

1.3.1 Stages of this IWBA process

Guidance produced by the UK Government¹⁰ sets out a relatively prescribed set of stages for SEA. These same stages have been adopted for this IWBA to meet the legal requirements of the SEA Regulations, whilst allowing for the inclusion of the wider assessments required.

Figure 2 sets out the main stages of the IWBA as it aligns with the development of the NWRTP. This report covers **Stage C: Assessment and Environmental Report** but is referred to as an IWBA report due to the other statutory and non-statutory assessments (including the WelTAG requirements) that are incorporated into it.

1.3.2 Geographical scope of the IWBA (study area)

The geographical scope of the IWBA is dictated by the geographical scope of the NWRTP, i.e. the local authority areas of Isle of Anglesey, Wrexham, Conwy, Flintshire, Denbighshire, and Gwynedd. The geographical scope of some baseline topics is closely related to neighbouring areas of Wales and England, in particular Chester and Liverpool as there is significant migration both ways across the border in relation to employment, services (e.g. health) and education. The coastal areas of the study area also means that both terrestrial and marine effects (up to the mean low water mark) are possible and will need to be considered in the IWBA.

1.3.3 Temporal Scope of the IWBA

The NWRTP sets the 5-year plan for the region (2025-2030) which from an appraisal perspective is considered to be short term. The appraisal has identified that all impacts resulting from the Policies of the NWRTP would likely result in effects that extend beyond this five-year time frame and have therefore been identified as 'long-term'.

1.3.4 Appraisal process

The IWBA is predominantly qualitative in nature. Whilst the NWRTP is transport focused it has the potential to support wider targets and have far reaching benefits including increasing physical activity of the population, habitat creation, improving equity of access to education and employment, stimulation of economic activity and boosting tourism. One of the primary functions of the IWBA is therefore to capture these wider benefits and integrate them into the development of the NWRTP.

This IWBA Report, which is published alongside the NWRTP will be used to document the outcome of this process and to communicate how the NWRTP supports sustainable development.

Section 1.4 describes each of the statutory and non-statutory assessments that have been embedded within the IWBA, listing which IWBA objectives used in the assessment, cover the various requirements of each separate assessment. Full details of the IWBA assessment framework (i.e. the IWBA objectives and guiding assessment questions) is included in Section 5.

¹⁰ Gov.uk, 2005. A Practical guide to the Strategic Environmental Assessment Directive. Available online at: <https://www.gov.uk/government/publications/strategic-environmental-assessment-directive-guidance> [Accessed 23/04/24]

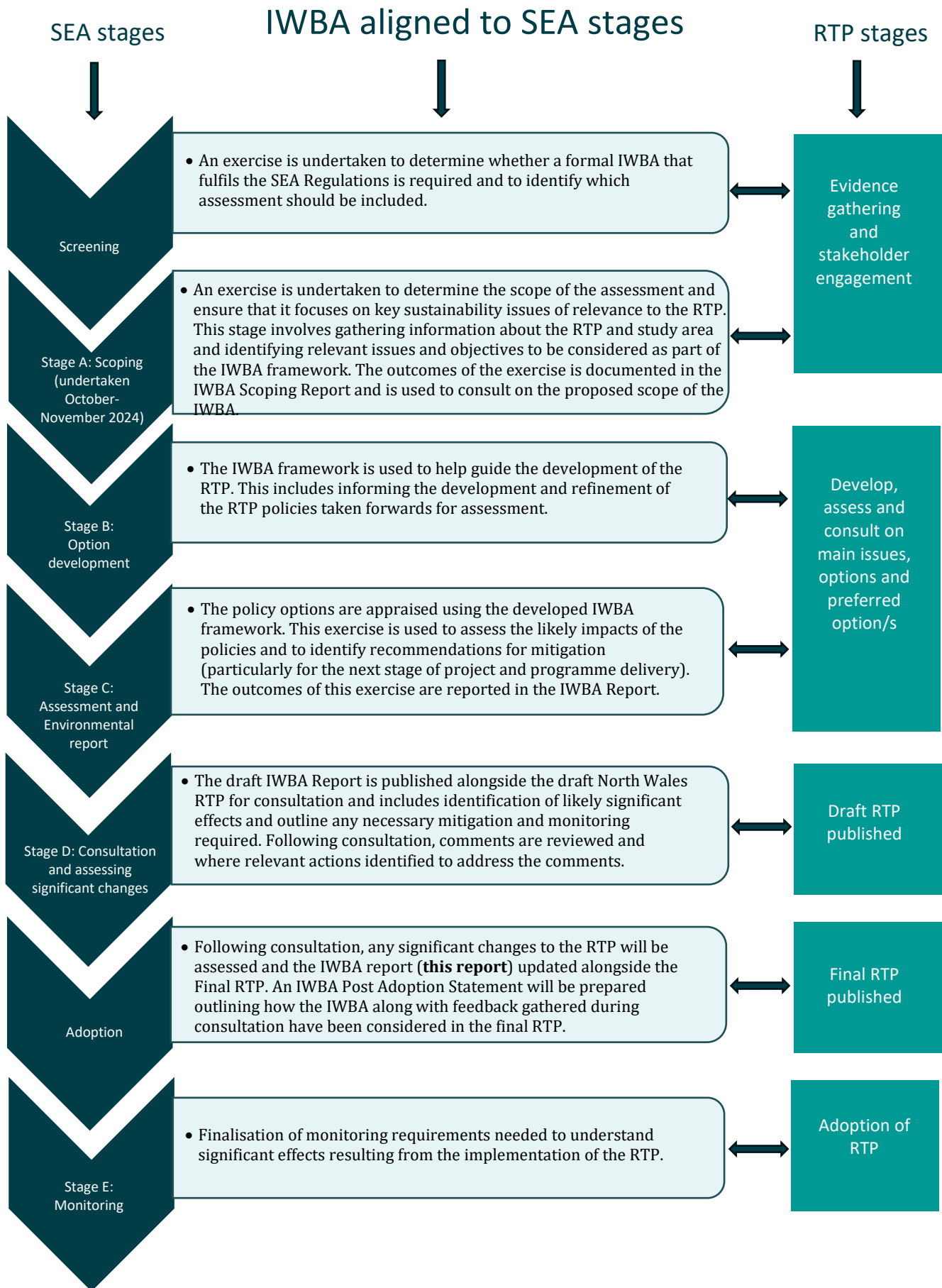


Figure 2 Stages of IWBA (aligned to SEA process) and NWRTP development

1.4 Statutory impact assessments

The following section lists the impact assessments that are a statutory requirement and includes details of how they have been integrated into the IWBA framework.

1.4.1 Strategic Environmental Assessment (SEA)

SEA is required by the SEA (Wales) Regulations (2004) which requires the preparation of an Environmental Report (Regulation 12), the content of which is described in Schedule 2 of the SEA Regulations. Table 1-1 sets out where these various requirements have been satisfied in the IWBA.

Table 1-1 Information requirements for the SEA Environmental Report and where these are covered by the IWBA

SEA Regulation: Schedule 2 requirement	Where covered in the IWBA
1. An outline of the contents and main objectives of the plan or programme, and of its relationship (if any) with other relevant plans and programmes.	Section 2 for an overview of the NW RTP objectives, Section 3 for a summary of relevant plans and programmes and Appendix A for full review of plans and programmes.
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Appendix B for full baseline, Table 4 -1 for summary of key environmental (and wider sustainability) issues relevant to the NW RTP.
3. The environmental characteristics of areas likely to be significantly affected	Appendix B for full baseline, Table 4 -1 for summary of key environmental (and wider sustainability) issues relevant to the NW RTP.
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds and the Habitats Directive.	Appendix B for full baseline, Table 4 -1 for summary of key environmental (and wider sustainability) issues relevant to the NW RTP. Appendix C for a HRA Screening Report.
5. The environmental protection objectives, established at international, community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	Appendix A: Policy, Plan and Sustainability Objectives
6. The likely significant effects on the environment, including short, medium and long term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects on issues including - biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the issues referred to in sub-paragraphs (a) to (l).	Section 5.2 provides a summary of the effects the NW RTP policies/group of policies is likely to have on each IWBA objective. The full appraisal is included in Appendix E.
7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme	Section 6 includes a description of the recommendations for mitigation/enhancement
8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties encountered in compiling the required information.	A Post Adoption Statement has been produced to be read alongside the IWBA and NW RTP.
9. A description of the measures envisaged concerning monitoring in accordance with regulation 17.	Section 7- these are also aligned with the NW RTP Delivery Plan.
10. A non-technical summary of the information provided under the paragraphs 1-9.	A non-technical summary has been produced of the IWBA.

1.4.2 Welsh Language Impact Assessment

The Welsh Language (Wales) measure 2011 and Standards require that consideration is given to whether the NWRTP would have an effect (positive or negative) on the opportunities for people to use the Welsh language, or on the requirement to treat the Welsh language no less favourably than the English language.

The requirements for a Welsh language impact assessment are addressed through the following IWBA Objectives: 6 (see Table 5 -1 for more details).

Transport can play an important part in connecting people and places, which includes opportunities for engaging with the Welsh language and Welsh culture. Conversely, poorly developed or implemented transport can place barriers to engagement with the language.

1.4.3 Children's Rights Impact Assessment

The Rights of Children and Young persons (Wales) Measure 2011 embeds consideration of the United Nations convention on the Rights of the Child (UNCRC)¹¹ and the optional protocols into Welsh law. The main duty within the Measure, under Section 1, requires Ministers to have due regard to the UNCRC when exercising any of their functions.

The process of having due regard can range from thinking about the impact of decisions on children in the course of day-to-day work, to a formal impact assessment with an accompanying record of the outcome.

Transport has the potential to affect children in several ways, e.g. through facilitating access to education, healthcare and other social infrastructure, creating healthy travel options (such as active travel), reducing air quality impacts from transport emissions, allowing safe spaces for play and recreation, and providing safe travel options to stay socially connected with friends and family. The Articles within the UNCRC have been reviewed and the following Articles are identified as being most relevant to the NWRTP: Article 12 (respect for the views of the child); Article 15 (freedom of association); Article 23 (children with a disability); Article 24 (health and health services); Article 27 (adequate standard of living); Article 28 (right to an education); Article 30 (children from minority or indigenous groups); Article 31 (leisure, play and culture).

The requirements for a children's rights impact assessment are addressed through the following IWBA Objectives: 1, 2, 3, 5, 6, 9, 10, 12 (see Table 5 -1 for more details). Consideration of how the relevant UNCRC Articles have been met are integrated into the appraisal responses.

1.4.4 Equalities Impact Assessment (EqIA)

The Equality Act (2010)¹² places a general duty on public bodies to have 'due regard' to the need to eliminate unlawful discrimination, harassment and victimisation, as well as to advance the equality of opportunity and to foster good relations between people who share protected characteristics and those who do not.

Protected characteristics (as defined by the Equality Act) are age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. In Wales there is also a socio-economic duty on the public sector to consider how proposals are likely to affect levels of socioeconomic disadvantage of individuals and communities.

¹¹ United Nations Convention on the Rights of the Child. Available online at <https://www.unicef.org.uk/what-we-do/un-convention-child-rights/> [Accessed 24/04/24].

¹² Equality Act 2010. Available online at: <https://www.legislation.gov.uk/ukpga/2010/15/contents> [Accessed 11/04/24]



Transport and the NW RTP is likely to have potential disproportionate and/or differential impacts on protected characteristic groups. At this stage all protected characteristic groups, with the exception of marriage and civil partnership, have been screened into the assessment.

Consideration of socioeconomic disadvantage is also screened into the assessment. The inclusion of these groups is based on the different needs and vulnerabilities that each protected characteristic group has in relation to transport, for example ease of access, actual and perceptions of safety, economic barriers, journey planning requirements, physical capability.

An EqIA is a systematic analysis of the potential effects of a project, plan or policy on groups of people who share protected characteristics. It considers whether protected characteristic groups could be affected disproportionately or differentially, and the assessment informs the identification of actions to address any adverse effects whilst also supporting the delivery of any beneficial effects. An EqIA helps to demonstrate that the duties under the Equality Act (Public Sector Equality Duty) are being met and provides evidence that equality issues have been considered in decision making.

The requirements for the EqIA have been covered by the following IWBA objectives: 1, 2, 3, 5, 6, 9, 10, 12 (see Table 5 -1 for more details). Appendix D provides an EqIA Screening which considers transport related vulnerabilities of protected characteristic groups. These vulnerabilities and specific needs have been taken into account in the assessment of the NW RTP policies against the IWBA objectives.

1.4.5 Habitat Regulations Assessment (HRA)

The Conservation of Habitats and Species Regulations 2017 as amended (known as the Habitats Regulations 2017) sets out the stages of assessment which must be undertaken to determine if a development project or plan could significantly harm the designated features of a European site. As part of the Habitats Regulations 2019 amendment, a National Site Network (NSN) has been created (as UK sites no longer form part of the EU's Natura 2000 ecological network) on land and sea and include inshore and offshore marine areas in the UK. The NSN includes existing Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and new SACs and SPAs designated following the creation of the NSN.

The Habitats Regulations 2017 states that any plan or project not directly connected with, or necessary to, the management of an internationally important site, but which would be likely to have a significant effect on such a site, either individually or in combination with other plans or projects, must be subject to appropriate assessment of its implications for the internationally important site in view of its conservation objectives.

Transport can have impacts on land use which could lead to impacts on protected habitats. For this reason, consideration is given to how the NW RTP may impact on natural habitats and ecosystems. A separate HRA screening exercise has been undertaken for this stage of NW RTP development (Appendix C).

The requirement for assessing impacts on biodiversity and the natural environment have been covered by the following IWBA objectives: 4, 5, 7 (see Table 5 -1 for more details).

1.5 Welsh Government required assessments

In addition to the statutory impact assessments Welsh Government also requires further impact assessments to ensure that policies and plans consider a wide range of potential impacts at the earliest stages of their development:

1.5.1 Rural proofing impact assessment

Rural proofing is a policy commitment by both the UK Government and the Welsh Government. A rural proofing assessment aims to consider how a policy or plan may positively or negatively affect rural areas which often have different needs and priorities to urban areas. There are large areas of North Wales that are rural and therefore the NW RTP is likely to have the potential to impact on rural communities.



Access to services, education and employment, in addition to the economic development within and between rural and urban areas is likely to be impacted by the choices being put forward in the developing NWRTP.

The assessment of the NWRTP in the rural context is covered by the following IWBA Objectives: 1, 2, 3, 5, 6, 11, 12 (see Table 5 -1 for more details).

1.5.2 Health impact assessment (HIA)

The Public Health (Wales) Act 2017 (Part 6) places a duty on Welsh Ministers to make regulations which require public bodies to carry out HIA in specified circumstances. Whilst this duty has not yet been enacted, it is mandated within the Welsh Transport Appraisal Guidance Process (WelTAG). HIA considers factors which influence population health and well-being (health determinants) may be impacted by a proposed action, policy or plan, and how these changes may lead to changes in health and well-being outcomes. Consideration of how different groups of people within a population may be impacted differently (distributional impacts and health inequalities) are also considered.

Transport planning can have large scale implications for population health and well-being because the way in which people are able to move about influences many factors which contribute to maintaining good physical and mental health. Effectively planned active travel provision enables people to have realistic accessible choices for engaging in walking, wheeling and cycling which therefore contribute to maintaining and improving physical and mental health. Accessibility to services, education, employment and social networks via transport provision is known to be a determinant of health.

The requirements for the HIA have been covered by the following IWBA objectives: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 (see Table 5 -1 for more details). When undertaking HIA it is important to consider which groups within the population may be particularly vulnerable to changes in factors that influence health (health determinants). Appendix D includes a review of population groups and what health vulnerabilities they may have in relation to impacts of NWRTP policies.

1.5.3 Climate change assessment

A climate change assessment considers how the proposed NWRTP may potentially contribute to climate change, alongside how resilient proposals are considered to be to the known effects of existing and future climate change.

Changes in the climate are likely to affect the way that people choose (or need to) travel and therefore the NWRTP needs to consider how it will be able to adapt to the changing climate, whilst also minimising the impact transport systems can have on the climate.

Climate change is captured in the following IWBA objectives: 8, (See Table 5 -1 for more details).

1.5.4 Scoping and consultation stages of the Integrated Well-being Impact Assessment

An Impact Assessment Scoping report was prepared, setting out the scope of the how each of the assessments would be captured within an integrated process, the context of the assessments and the NWRTP, establishing the baseline, reviewing the key plans, programmes and sustainability objectives relevant to the NWRTP, and identifying the appraisal objectives for the appraisal framework. The Impact Assessment Scoping Report was submitted for consultation with Statutory Consultees (Cadw and Natural Resources Wales) in addition to the Welsh Government, Transport for Wales and North Wales local authorities between 15th October 2024 and 19th November 2024.

Table 1-2 sets out the scoping responses:



Table 1-2 Scoping opinions from Statutory consultees

Statutory consultee	Scoping opinion	Response
Cadw	Cadw confirmed that Cultural Heritage is appropriately covered in the scoping report. They also sent the assessment team the Cadw paper on Historic Environment and Regional Transport Plans.	The appraisal framework has been refined to include the factors recommended to be taken account of in the assessment.
NRW	No opinion provided	

A draft IWBA was submitted alongside a draft NWRTP for consultation for a period of 12 weeks (from 20 January to 14th April 2025). Comments received have been carefully considered and, where necessary changes made to address comments. The final NWRTP will be adopted and published alongside a Post Adoption Statement that explains how the IWBA and feedback has shaped the documents.

1.5.5 Integrated Well-being Impact Assessment report structure

The remainder of this IWBA report is set out as follows:

- **Section 2: North Wales Regional Transport Plan** – this section provides an overview of the NWRTP, its purpose and objectives.
- **Section 3: Relevant Plans, Programmes and Sustainability Objectives** – this section summarises key plans, programmes and sustainability objectives that are of relevance to the NWRTP and which have been used to help develop the IWBA objectives. Appendix A includes the full review.
- **Section 4: Baseline Context and identification of key sustainability issues and opportunities** – this section provides an overview of the sustainability context of the NWRTP and outlines the themes and issues of relevance to the NWRTP.
- **Section 5: Appraisal** – this section sets out the IWBA objectives and presents a summary of the appraisal outcomes for each NWRTP policy area against each IWBA objective. The full appraisal tables are found in Appendix E.
- **Section 6: Recommendations** – based on the appraisal outcomes, recommendations for mitigation have been identified. These mostly relate to how mitigation measures may be needed at project delivery phase to mitigate any potential adverse impacts or enhance potential positive impacts.



2. North Wales Regional Transport Plan

2.1 How does the NW RTP fit with the Wales Transport Strategy?

The Wales Transport Strategy (WTS) sets out the vision for Wales to provide an accessible, sustainable and efficient transport system that is fit for future generations and which tackles climate change. The vision set out in the WTS is supported by four long-term ambitions with supporting objectives. The long-term ambitions are to deliver a transport system that is good for:

- People and communities (equality, health, safety and confidence)
- The environment (transport emissions, biodiversity and waste)
- Places and the economy (place making and innovation, job creation, affordability and reducing socioeconomic disadvantage)
- Culture and the Welsh language (including arts, sport, and the historic environment).

The three short-term priorities include:

- bringing services to people in order to reduce the need to travel.
- allowing people and goods to move easily from door to door by accessible, sustainable and efficient transport services and infrastructure.
- encouraging people to make the change to more sustainable forms of transport.

The NW RTP must include policies to support the vision and ambitions of the WTS with an emphasis on delivering on the three short-term priorities through a series of clearly articulated actions. The NW RTP must also deliver on the following:

- Include policies and actions to make best use of existing transport infrastructure.
- Where new infrastructure is needed the NW RTP must follow the sustainable transport hierarchy (i.e. in order of importance: walking, wheeling and cycling, public transport, ultra-low emissions vehicles, other private motor vehicles).
- Identify barriers to sustainable travel for different groups of people using the COM-B model of behaviour change (this includes the premise that for changes in behaviour to happen there must be individual capability, motivation and opportunity).
- Include policies and actions for a range of behaviour change projects.
- Include policies to support cross-cutting pathways (this includes decarbonisation, equality, integrated journeys, and rural pathways).
- Include policies and actions which maximise contribution to the measures in the WTS Monitoring Framework.
- Be developed using the five ways of working of the Well-being Act (i.e. long term, prevention, integration, collaboration, and involvement).

2.2 How does it fit with other land use plans?

RTPs provide a good platform for better integration with land use planning. RTPs must take account of:

- Future Wales: the National Plan 2040¹³
- Planning Policy Wales¹⁴
- the Wales Infrastructure Investment Plan¹⁵
- work undertaken to produce existing and new Local Development Plans (LDPs) and emerging work on their Strategic Development Plans (SDPs).

CJCs must also take account other policies and plans, including:

- Local Authority well-being assessments and well-being plans
- Town Centre First¹⁶
- Regional Economic Frameworks (North Wales Regional Economic Framework)¹⁷
- Net Zero Wales¹⁸
- A Healthier Wales¹⁹
- Clean Air Plan for Wales: Healthy Air, Healthy Wales²⁰
- Noise and Soundscape Plan for Wales²¹

Paragraph 1.4.6 of the RTP Guidance²² sets out CJCs must comply with their statutory duties, listing some of the relevant legislative requirements and considerations. Whilst the RTP Guidance is not explicit, there are associated legislative and regulatory procedures and requirements, including but not limited to consultation, associated with those duties.

¹³ Future Wales – The National Plan 2040. Welsh Government. Available online at: www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf [Accessed 08/05/24].

¹⁴ Planning Policy Wales Edition 12, February 2024. Welsh Government. Available online at: www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf [Accessed 08/05/24].

¹⁵ Wales infrastructure investment plan: project pipeline March 2021. Welsh Government. Available online at: <https://www.gov.wales/wales-infrastructure-investment-plan-project-pipeline-2021> [Accessed 08/05/24].

¹⁶ Town Centres: position statement, 2 May 2023. Welsh Government. Available online at: www.gov.wales/sites/default/files/pdf-versions/2024/2/4/1708619381/town-centres-position-statement.pdf [Accessed 08/05/24].

¹⁷ North Wales Regional Economic Framework. Ambition North Wales. Welsh Government, 2022. Available online at: www.gov.wales/sites/default/files/publications/2023-02/north-wales-regional-economic-framework.pdf [Accessed 08/05/24].

¹⁸ Net Zero Wales, October 2021. Welsh Government. Available online at: <https://www.gov.wales/net-zero-wales> [Accessed 08/05/24].

¹⁹ A healthier Wales: Our plan for health and social care. June 2018. Welsh Government. Available online at: www.gov.wales/sites/default/files/publications/2021-09/a-healthier-wales-our-plan-for-health-and-social-care.pdf [Accessed 08/05/24].

²⁰ Clean Air Plan for Wales: Healthy Air, Healthy Wales. August 2020. Welsh Government. Available online at: <https://www.gov.wales/clean-air-plan-wales-healthy-air-healthy-wales> [Accessed 08/05/24].

²¹ Noise and Soundscape Plan for Wales 2023-2028 (consultation draft). June 2023. Welsh Government. Available online at: www.gov.wales/sites/default/files/consultations/2023-06/draft-noise-and-soundscape-plan-for-wales.pdf [Accessed 08/05/24].

²² Guidance to corporate Joint Committees on Regional Transport Plans, 2023. Welsh Government. Available online at: <https://www.gov.wales/sites/default/files/publications/2023-07/guidance-to-corporate-joint-committees-on-regional-transport-plans-2023.docx>. [Accessed 08/05/24].



2.3 NW RTP vision and objectives

The vision that has been developed for the NW RTP states:

‘North Wales will have a safe, sustainable, affordable, resilient, and effective integrated transport network that supports economic growth, prosperity for all, inclusivity and well-being’.

The vision is supported by four objectives, which will help monitor and evaluate the success of NW RTP:

1. **Improve digital connectivity and local services:** We will enable 30% or more of people in North Wales to work remotely by 2030 through better land use planning and improved digital connectivity, which should reduce the overall need to travel and enable shorter trips better suited to sustainable modes.
1. **Improved accessibility and transport choice:** We will develop infrastructure and services that provide people with a choice about how they travel for each journey and support sustainable economic growth through improved access to key settlements, employment, educational sites and tourist attractions. The accessibility of each key trip attractor should be improved, supporting the national mode share target of 45% of journeys to be undertaken by walking, wheeling, cycling and public transport by 2040.
2. **Enable decarbonisation through transition to a zero-emission fleet:** We will develop supporting infrastructure and support incentives to enable at least 50% of motor vehicles and all public buses operating in North Wales to be zero emission by 2035.
3. **Enable Sustainable Economic Growth:** We will develop a resilient, safe, well-maintained, and efficient transport network that delivers sustainable economic growth by improving accessibility to existing and planned employment areas. At least 50% of households in North Wales will have an increased range of travel within 1 hour by public transport, supporting access to key employment sites and regional centres by 2030.

2.4 Transport Policies

The policies that have been developed for the NW RTP are based around policy themes which include:

- Enabling changes to travel behaviour
- Bus
- Coach, demand responsive and community transport
- Walking, wheeling and cycling
- Integration between modes
- Ports and freight
- Roads, streets, and parking
- Surface access to aviation
- Digital connectivity
- Land use planning

There are two further policy themes including rail and strategic road. However, the CJC and local authorities have no direct influence over these areas so there are no explicit policies in the NW RTP covering these themes.

For full details of the policies please refer to the NW RTP. The IWBA considers each of the policies (or group of policies) under these policy themes (Section 5 for appraisal outcomes).



3. Relevant Plans, Programmes and Sustainability Objectives

The NWRTP could be influenced in different ways by other existing plans, programmes and sustainability objectives (PPO) set out in existing policy or laid down in legislation. It is important to understand the relationship between these PPOs and the NWRTP in order to maximise opportunities and address any conflicts or inconsistencies.

Schedule 2 of the SEA Regulations require the following in relation to the relevant plans and programmes to be considered:

“1. An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes...”

5. The environmental protection objectives, established at international, community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation”.

The review of existing plans, programmes and sustainability objectives to inform the IWBA process and subsequently influence the development of the NWRTP was undertaken at Scoping stage and included:

- Identifying any social, environmental, cultural or economic objectives that should be mirrored in the IWBA framework.
- Identifying any issues that might influence the preparation of the NWRTP.
- Identifying any objectives or aims that would contribute positively to the development of the NWRTP.
- Identifying any potential conflicts or challenges between other identified plans, programmes or sustainability objectives and the emerging draft NWRTP.

3.1 Scope of review

The NWRTP sets the policies for implementing the existing national-scale Wales Transport Strategy (WTS) within the North Wales Region. The North Wales RTP must therefore be consistent with the WTS and support its vision and ambitions. The WTS itself, and the national, UK or international-scale plans, programmes and sustainability objectives identified in relation to the WTS, have therefore been identified as the key top-level strategies which must be taken into account. It is considered that all the national, UK or international plans, programmes and sustainability objectives identified for the WTS are also applicable to the North Wales RTP. These have therefore been reviewed for this IWBA in relation to the NWRTP and a gap analysis carried out to identify any changes, updates or additions that need to be included.

Table 3 -1 summarises the document types reviewed. The full review of plans, programmes and sustainability objectives is included in Appendix A with the focus primarily being on the review of the relevant regional and local level plans, programmes and sustainability objectives. Identified key sustainability themes that have been woven into the IWBA framework are identified in Table 3-2.



Table 3-1 Summary of document types reviewed

Level	Summary
International and European	Key International Conventions and European Directives were previously reviewed for the national-level WTS and relevant interactions have been brought forward for to the North Wales RTP. European Directives are transposed into national legislation in each individual Member State and, therefore, there should be a trickle-down effect of the key principles and an application to the relevant national planning documents. Whilst the UK is no longer a Member State the legislative requirements from when it was, mostly remain in place.
UK-wide	Key UK-wide plans and programmes were previously reviewed for the national-level WTS and relevant interactions have been brought forward for the North Wales RTP. The objectives of these plans, as well as some of the challenges they raise need to be taken into consideration.
Wales	Wales national level plans and programmes were previously reviewed for the national-level WTS and relevant interactions have been brought forward for the North Wales RTP. Many of these documents are produced by Welsh Government and specifically address strategic issues such as the economy; health; safety; sustainable communities; housing; employment; and environmental protection.
Regional	A review has been undertaken of plans produced at the regional level of North Wales. This includes regional plans related to the natural environment, economic development, transport planning, landscape management, energy plans, and tourism.
Local	A review was undertaken of plans produced at the local level. This includes plans within the following local authority areas: <ul style="list-style-type: none">• Isle of Anglesey County• Conwy County Borough• Denbighshire County• Flintshire County• Eryri (Snowdonia) National Park Authority• Wrexham County Borough• Gwynedd County

3.2 Key themes

The key themes identified from the review previously undertaken for the national-level WTS²³, the review of international and national PPO identified since the national-level WTS, and the review of regional and local PPO within the North Wales Region are outlined in Table 3-2.


The IWBA topics have been selected to meet the requirements of the SEA Regulations whilst also aligning with the more general topics of the IWBA guidance: people and communities, the environment, culture and language and economy.

²³ Welsh Government (2020) Consultation Document Wales Transport Strategy: scoping report. Date of issue: 5 May 2020. Available online: <https://www.gov.wales/wales-transport-strategy-scoping-report>



Table 3-2 Key Social, cultural, economic and environmental themes applicable to the North Wales RTP

IWBA Topic	Key Themes from the review of the regional and local plans, programmes and sustainability objectives
Population (communities)	<p>Improvement of the connectivity between, and integration of, communities</p> <p>Better planning and design of communities</p> <p>Promotion of greater equality of opportunity for all citizens.</p> <p>Creation of safe, sustainable, balanced and cohesive communities, in both rural and urban areas.</p> <p>Provision of equitable access to high quality outside/green space.</p> <p>Reducing the isolation of rural communities</p> <p>Creating more inclusive public transport and access to it.</p> <p>Enabling flexible working so that people can work from home if desired.</p>
Human health	<p>Improvement of the physical and mental health and well-being of the population</p> <p>Reduction in health inequalities (across all health determinants) to create a healthier Wales</p>
Biodiversity	<p>Maintenance and enhancement of biodiversity, habitats and species with healthy functioning and resilient ecosystems, including connected networks of green infrastructure throughout rural and urban areas.</p> <p>Enhancement of ecosystem services provided by green infrastructure to take advantage of climate change resilience & mitigation, enhancements to biodiversity, geodiversity and soils and filtering air and water.</p>
Land use and landscape	<p>Establishment of a strong tourist economy, sensitively capitalising on environmental, heritage, and leisure assets.</p> <p>Protection and enhancement of the distinctiveness of landscapes and their settings.</p> <p>Protection of Areas of Outstanding Natural Beauty (AONBs)</p> <p>Creation of a new National Park in North Wales.</p>
Cultural heritage	<p>Protection and enhancement of the distinctiveness of the historic environment, historic assets and their settings.</p> <p>Protection, enhancement and promotion of the Welsh language, culture and heritage.</p>
Ground conditions (geology and soils)	<p>Conservation of soil resources to control soil erosion and maintain their quality.</p>
Water environment	<p>Reduction in the risk of flooding (river, surface water and coastal).</p> <p>Promotion of protection of floodplains or areas of managed realignment.</p> <p>Protection and improvement in the quality and quantity of water resources.</p>
Climatic factors	<p>Sustainable management of natural resources.</p> <p>Addressing the underlying transport factors contributing to climate change.</p> <p>Creation of a climate-resilient transport network, including both new and existing infrastructure. This includes resilience to weather events as well as the long-term impacts of future climate change.</p>



IWBA Topic	Key Themes from the review of the regional and local plans, programmes and sustainability objectives
Air quality	Reduction in air pollution. Improvements in air quality contributing to a healthier Wales.
Noise	Reduction in transport related noise. Alignment with the Soundscape Plan for Wales. Maintenance of tranquillity where applicable and practicable.
Infrastructure	Improvement of the connectivity between, and integration of, communities to improve access to services and reduce isolation, particular in rural communities. Provisioning of inclusive and equitable public transport and access to it.
Transport	Promotion of sustainable patterns of mobility and enhancement of sustainable transport provision to improve air quality, physical health and support the economy. Future proofing planned transport infrastructure in terms of how its use may change over time and therefore affect demand. For example, changes in relation to the international connectivity of regional ports and airports that facilitate international connectivity (e.g. Holyhead Port).
Resources and waste	Management of mineral extraction and minimisation of waste generation Increasing levels of reuse and recycling to achieve more sustainable waste management and reduce landfill. Increasing energy efficiency, stimulating investment and innovation, and promoting the sustainable use of national renewable energy resources to relieve pressure on natural resources. Sustainably manage natural resources and tackle the causes of climate change
Economy	Promotion of quality employment opportunities and economic activity. Promotion of sustainable economic growth, diversity and business competitiveness. Establishment of a strong tourist economy, sensitively capitalising on environmental, heritage, and leisure assets.



4. Baseline information and identification of key sustainability issues and opportunities

4.1 Introduction

The baseline data collected at IWBA Scoping stage served as the groundwork for identifying potential environmental, social, economic, and cultural issues and opportunities relevant to the study area. This information, combined with the themes extracted from the plans, programme, and sustainability objectives review, is used to formulate the IWBA objectives within the assessment framework. These objectives guide the iterative assessment of the NWRTP policies and, if necessary, provide recommendations for any required modifications or alternative approaches.

This IWBA is focused on the study area defined by the North Wales Regional Transport Plan, i.e. the local authority areas of Isle of Anglesey, Wrexham, Conwy, Flintshire, Denbighshire and Gwynedd (Figure 1**Error! Reference source not found.**). Where data is not available at the regional level (e.g. climatic factors) national data is utilised.

The appraisal topics that are considered as part of baseline mirror those considered in the PPO review and include:

Population	Human health	Biodiversity	Landuse and landscape
Cultural heritage	Ground conditions	Water environment	Climatic Factors
Air quality	Noise	Infrastructure	Transport
	Resources and waste	Economy	

Baseline information has been sourced from publicly available baseline datasets available from open data sources, in addition to information reported in published documents and reports. All data sources are referenced and primarily are sourced from Welsh Government, National Resources Wales, Stats Wales and Office of National Statistics. The baseline is presented in Appendix B, and it should be noted that information relevant to each of the assessments has been collated and included within the topic headings listed above. Where mapping of data adds value to the presentation and understanding of the baseline, figures have been prepared and are included.

The SEA Regulations require that ‘material assets’ are included in the assessment. In this context, material assets refer to a range of assets within the study area that are valuable, for example cultural heritage, social services such as schools and hospitals, in addition to good quality agricultural land, cultural heritage assets and valued landscapes. This IWBA considers material assets across the topics identified above.



4.2 Scoping of key sustainability issues and opportunities

The main environmental, social and economic issues of relevance to the NWRTP were identified during the Scoping stage using information gathered from the review of relevant plans, programmes and sustainability objectives (outlined in Section 3 above and Appendix A), the baseline review (Appendix B), and the current understanding of the overarching scope of the NWRTP.

The anticipated environmental, economic, and social trends (assuming the NWRTP is not implemented) have been determined by analysing existing plans, programmes, and sustainability objectives, in conjunction with the current baseline data and historical patterns. These trends will serve as the 'future baseline' against which the NWRTP will be evaluated.

Additionally, opportunities for the NWRTP to positively contribute to sustainability have been identified. These issues and opportunities will serve as guidance for the development of the NWRTP, ensuring that negative effects are minimised and opportunities for maximising benefits are integrated into the plan. Given the strategic nature of the NWRTP, the identified opportunities and issues are currently at a high level. As the Plan progresses and more details become available, they will be further developed and refined. However, they already reflect the broader benefits that can be achieved through collaboration across sectors and jurisdictions.

Sustainability issues and opportunities that require consideration during the development of the NWRTP are outlined in Table 4 -1 below. None of the IWBA topics have been scoped out of the assessment. This is because transport planning has a wide range of likely significant effects, across all topics. Additionally, due to the integrated assessment approach, which includes certain statutory assessments, scoping out specific topics is not feasible.



Table 4-1 Sustainability issues and opportunities of relevance to the NWRTP

IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Population (communities)	<ul style="list-style-type: none">• Decreasing regional population size could impact the effectiveness or financial viability of some of the NWRTP options.• There is an aging population in North Wales which will impact transport needs, such as travel and commuting patterns.• There is lower diversity of ethnicities, religions, languages and LGBTQ+ populations than average, the NWRTP will need to ensure that it makes provision for these groups.• There is a high apprenticeship level and a relatively strong educational attainment across the region, therefore the NWRTP needs to ensure that the travel needs of young people are appropriately accommodated.• There is an existing lack of rural connectivity.	<ul style="list-style-type: none">• Help reduce isolation of rural communities through providing appropriate transport links to connect more remote communities, both to each other and to urban hubs and services.• Develop an integrated and efficient transport system which meets needs of all citizens, promotes equal opportunity, and supports projected population changes.• Develop transport initiatives which support the creation of safe, sustainable, balanced and cohesive communities.• Provide transport services that support changes in lifestyles and travel patterns in a post-pandemic society.• Creation of more inclusive transport options which also provide more equitable access to services and places.



IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Human health	<ul style="list-style-type: none">• Increased need for development of transport services to support an aging population.• The way in which transport availability impacts on mental health needs to be considered.• Increases in traffic can have an adverse impact on the physical and mental health and wellbeing on residents. This can be through severance, air quality issues, and reductions in tranquillity (noise).• Health inequalities are prevalent throughout the region which can be exasperated as a result of poor transport options (especially for people experiencing socio-economic disadvantage).	<ul style="list-style-type: none">• Improve the connectivity of communities and key health services to reduce prevalence of isolation and loneliness; improving traffic safety.• Creating more accessible public transport and providing public amenity (such as public benches and shelters).• Include health promotion measures such as those that promote physical activity (e.g. active travel, walking, wheeling and cycling infrastructure) and social cohesion (e.g. improved access to services and community facilities).• Opportunities to enhance the transport network and infrastructure for the population with physical impairment / sensory loss, neurodiversity and disability needs (inclusive design).• There is the opportunity for the NWRTP to address socio-economic disadvantages (including issues of unemployment, lower educational attainment, housing insecurity and financial insecurity) through promoting the delivery of an inclusive, cost sensitive, sustainable transport network and infrastructure that connects employment opportunities to areas of higher deprivation to promote better mental and physical health.
Biodiversity	<ul style="list-style-type: none">• Designated sites present through the catchment that could be impacted by the placement of interventions, including through habitat loss and degradation.• Protected and priority habitats and species could be impacted by the placement of interventions, including through changes to habitat, and disturbance.	<ul style="list-style-type: none">• Built interventions could incorporate measures to restore, recover, reconnect, and enhance existing habitats to help minimise further biodiversity loss and habitat fragmentation and deliver a Net Benefit for Biodiversity.• There is opportunity to use a natural capital approach to help inform the development of interventions.• Built interventions could contribute to creating habitats that are more resilient to climate change.



IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Land use and landscape	<ul style="list-style-type: none">Any intervention within the study area will need to be cognisant of landscape character and designations, such as Eryri National Park, Anglesey AONB, Llŷn AONB, and Clwydian Range and Dee Valley AONB to minimise any detrimental impact.	<ul style="list-style-type: none">Sympathetic and community-led design can offer the opportunity to further enhance the landscape and character of different areas and change the way communities interact with them.Reduce the negative impact of traffic on the setting of landscape designations through including measures to improve public transport and active travel infrastructure to access key assets such as Eryri National Park.Enhance access to rural landscape through active travel networks; cycle/PROW network and public transport.Protect and conserve soil resources.
Cultural heritage	<ul style="list-style-type: none">Potential for cultural heritage assets to be directly and indirectly impacted by physical changes to the built environment. This includes potential adverse impacts to the setting of heritage assets due to changes in the volumes and composition of traffic experienced in their locality.High proportion of Welsh language speakers and a strong cultural identity.	<ul style="list-style-type: none">Enhance bi-lingual aspects of the NW RTP and its proposals.Connect Welsh speaking communities, strengthening the cultural belonging and linguistic ties within the region.Enhance and integrate the network across the region and improve its resilience for the future to enable better and more inclusive access to significant cultural sites.Encourage the preservation and enhancement of the historic environment, including the setting of heritage assets.Avoid works which would alter the character or physical survival of heritage assets (including archaeology).
Ground conditions (soils and geology)	<ul style="list-style-type: none">Geological hazards, such as coastal erosion, have the potential to disrupt and damage transport infrastructure.	<ul style="list-style-type: none">Protect and improve the quality and quantity of groundwater resources.



IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Water environment	<ul style="list-style-type: none">Interventions associated with the NWTP could contribute to the deterioration in WFD status of waterbodies (including groundwater), such as through changes to build infrastructure and drainage from the transport network.Transport infrastructure could be adversely impacted from flooding (river, surface water and coastal) and coastal erosion.	<ul style="list-style-type: none">Opportunities to meet the objectives for protected areas and achieving good overall Water framework Directive (WFD) status for surface and groundwaters should be explored, including mitigating adverse impacts of the transport sector. This should align with the local measures outlined in River Basin Management Plans and the catchment summaries of the opportunity catchments within the study area (i.e. Ynys Mon/Anglesey, Conwy, Clwyd and Dee).Where possible the NWTP should seek to implement measures to restore and work with natural processes to maximise wider water environmental benefits and outcomes.
Climatic factors	<ul style="list-style-type: none">Future climate change is likely to increase the severity and frequency of extreme weather events including flooding and droughts and cause hotter summers and wetter winters. This has the potential to adversely impact transport infrastructure and cause travel disruption.Changes in climate are likely to affect travel choices people make. For example, wetter winters may deter people from choosing public transport options if there is no shelter available for waiting or if the services are unreliable.	<ul style="list-style-type: none">Opportunity to reduce emissions from transport by implementing low-carbon or zero-carbon solutions including reducing car trips, transition to zero-emission fleet and creating resilient and efficient transport networks.Incorporate measures to ensure that the transport network is resilient to the impacts of future climate change.
Air quality	<ul style="list-style-type: none">Air quality is generally good and not a major issue in the NWTP area given that it is predominantly rural in nature.Promotion of a transition to electric vehicles can support reductions in air pollution associated with carbon dioxide, carbon monoxide and nitrous oxides (such as NO₂). However electric vehicles still release particular matter pollution (PM₁₀ and PM_{2.5}) associated with wear from tyres and breaks.There is a risk that new development in the area (such as the Anglesey Freeport and Wrexham Investment Zone) could increase the volume of freight travelling in the locality, leading to increase air pollution and worsening of local air quality	<ul style="list-style-type: none">In order to have the greatest impact on air quality, interventions should focus on reducing the number of vehicles on the road by supporting the transition to active travel and public transport wherever possible.Creation of active travel links that are sufficiently separated from road traffic can help reduce the amount of pollution that walkers and cyclists are exposed to and increase uptake in active travel through creating safe active travel options.The NWRTTP should include relevant transport initiatives for businesses (e.g. promotion of transportation of goods by rail, and e-cargo bikes for small businesses in main towns) to ensure that the health of local communities and habitats are not detrimentally impacted.



IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Noise	<ul style="list-style-type: none">• Noise pollution associated with roads is a key concern in the NWRTP area, particularly along major routes such as the A55.• There is a risk that new development in the area (such as the Anglesey Freeport and Wrexham Investment Zone) could increase the volume of freight travelling in the locality, leading to increase in noise pollution and impact on local residents.	<ul style="list-style-type: none">• The NWRTP has an opportunity to help reduce noise pollution experienced by local communities by reducing the number of vehicles on the roads (through promoting a transition to use of public transport and active travel) and supporting the transition to electric vehicles.• The NWRTP should include relevant transport initiatives (e.g. promotion of transportation of goods by rail) to ensure that the health of local communities are not detrimentally impacted.• Reducing road traffic noise (and ensuring that this does not increase) around Eryri National Park can help maintain and improve the tranquillity of the area and support health and wellbeing of users.• The NWRTP should align with the Soundscape Plan for Wales where possible.
Infrastructure	<ul style="list-style-type: none">• Over 1,000 new dwellings may need to be provided in North Wales each year to meet housing demand.• House building rates vary across North Wales, with Denbighshire, Conwy and Isle of Anglesey having the highest completion rates and Gwynedd the lowest.• Future hydrogen infrastructure, including production centres and transmission networks, are planned for North Wales that will link to Northwest England.• Two locations within North Wales have been identified for large scale on-shore wind energy development.• North Wales offers a variety of higher and further education institutes, including Bangor University.	<ul style="list-style-type: none">• Holyhead Port plays an essential role in the international movement of imports and exports and also as a cruise port and the NWRTP should include appropriate interventions to support this asset.• Enhancement of public transport connectivity of the higher and further educational establishments, health facilities, and other social infrastructure (e.g. libraries, social, religious, and leisure facilities) to local and regional communities.



IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Transport	<ul style="list-style-type: none">• There are rural parts of North Wales that are more reliant on private car use and have less opportunity to benefit from other modes of public transport and active travel initiatives.• A very small proportion of people in North Wales live close to rail stations with frequent services.• There are limited freight services on the rail network.• Incidents on the Menai Crossings to Anglesey have an adverse impact on connectivity, journey reliability and crossing times.• Long distances to key services, resulting in high rates of car ownership and low levels of walking, wheeling and cycling.• There is currently little provision in North Wales for road freight operators seeking a switch to cleaner fuels.• Car parking is a contentious issue at key beauty spots including within Eryri National Park.	<ul style="list-style-type: none">• To enhance rail services, the key priorities for improvements are the Borderlands Line, increasing capacity at Chester Station, and increased service levels on the North Wales Main Line. Consideration should be given to the importance of connections to key centres such as London, Cardiff, Manchester (including the airport), Liverpool, Crewe, and Warrington (for Northern Powerhouse Rail). Consideration should also be given to sustainable travel links to interchange facilities at rail stations.• Influence bus services to see that timetables, routes and fares better meet local needs and demand.• Support initiatives to decarbonise the freight and logistics networks in North Wales, e.g. through increasing the proportion of freight carried on the North Wales Main Line.• The NWTP can help implement measures to increase provision and use of public transport and active travel.• Future proofing planned transport infrastructure.• The NWTP should include interventions to support and improve public transport links with Chester as this is an important gateway for North Wales and key link for the north-east Wales economy.• Improvements to public transport and active travel access to tourist attractions.
Resources and waste	<ul style="list-style-type: none">• There are existing mineral reserves within Wales, however some areas will experience shortfalls in material available in the future unless new allocations are identified. Built infrastructure required as part of the NWTP should resource material as locally as possible to reduce emissions, freight and support the local economy.	<ul style="list-style-type: none">• The NWTP should incorporate circular economy principles. This includes reducing the need to build infrastructure in the first place, reusing recycled materials and reducing use of raw materials.• Improve on energy efficiency across the transport network.



IWBA Topic	Issues relevant to the Regional Transport Plan	Regional Transport Plan Opportunities
Economy	<ul style="list-style-type: none">• Lack of transport infrastructure and links between key destinations in North Wales impacts opportunities to attract tourists and inward economic investment. This includes links between east Wales and northwest England, as well as links between North and South Wales.• Many tourist locations including Eryri National Park are hard to reach without access to a car.• Gross Value Added (GVA) per head in North Wales is lower than the Welsh average, however this varies between local authorities.• High proportions of second homes and holiday lets within the housing stock are an issues in parts of North Wales, including Gwynedd and Anglesey.	<ul style="list-style-type: none">• Increased public transport options would be beneficial to access key attractions and to reduce the volume of traffic and parking on rural roads and near beauty spots.• Ensure infrastructure is sufficient to support Freeport and investment zones, including for freight and workers.• Implement appropriate transport initiatives and infrastructure that promotes sustainable economic growth and access to quality employment opportunities for all.



5. Appraisal

5.1 IWBA Objectives

The IWBA Framework encompasses a set of objectives that have been developed to assess to the sustainability of the policies (or group of policies) set out in the NWRTP. These are complementary to the NWRTP four objectives and the IWBA objectives are required to provide a means by which the environmental performance of the plan can be assessed. These objectives, listed in Table 5 -1 alongside appraisal questions, were initially identified at Scoping Stage and have been created to take account of the following:

- **NWRTP Context:** key themes from the PPO review (Section 0) and the key sustainability issues and opportunities from the baseline data review (Section 0), have been used to develop appraisal objectives specific to the NWRTP.
- **Well-being Goals:** The Wales Transport Strategy's well-being ambitions are closely tied to the goals of the Well-being of Future Generations Act 2015. This legislation emphasises long-term well-being, environmental protection, and social progress.
- **Statutory assessments** – the appraisal objectives have been developed to encompass the requirements of the statutory assessments outlined in Section 1.4

In summary, the IWBA Framework provides a structured approach to ensure that the NWRTP aligns with broader well-being goals and contributes to sustainable development in North Wales.

The IWBA (WelTAG) guidance identifies a set of four questions, based on the four ambitions in the WTS, that should be answered by the appraisal:

- How will the programme or project benefit **people** and **communities**? (equality, health and safety and confidence)
- How will it benefit the **environment**? (reducing carbon emissions, benefiting biodiversity and ecosystems resilience and reducing waste)
- How will it benefit **places** and the **economy**? (place-making, innovation, freight)
- How will it benefit **culture** and the **Welsh language**? (arts and sport and the historic environment)

Each of these questions have been answered by using the IWBA objectives to consider a wide range of potential effects of the NWRTP policies. Table 5 -1 identifies which IWBA objective is of relevance to each of the IWBA topics scoped into the appraisal, as well as which WTS ambition they aim to address.



Table 5-1 IWBA objectives, appraisal questions and how they align with each IWBA topic and overarching theme

IWBA Objective	How will we test if the objective has been met? Will the NWTP.....	Relevant IWBA Topic	WTS ambition alignment
1. Support the delivery of housing and local services to meet the needs of local communities	<ul style="list-style-type: none">• Support the creation of communities which offer viable and sustainable transport options within and between locations?• Improve access to local services?	Population Human health Infrastructure Economy	People and Communities
2. Reduce inequality and promote community cohesion	<ul style="list-style-type: none">• Improve environmental conditions and quality of life for the most deprived communities?• Support the needs of members of society who have protected characteristics?• Improve the accessibility of public transport and active travel for all members of society?• Engage with stakeholders, partners and local communities?• Create opportunities for community participation?• Support the transport needs of children?	Population Human health Cultural heritage Transport Economy	People and communities



IWBA Objective	How will we test if the objective has been met? Will the NWTP.....	Relevant IWBA Topic	WTS ambition alignment
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<ul style="list-style-type: none"> • Encourage uptake in active travel? • Improve connectivity between local communities, particularly within rural areas? • Reduce social isolation? • Reduce physical damage and improve the safety of transport services and infrastructure? • Improve access to key health services? • Improve access to recreation activities? • Improve public access to green spaces? 	Population Human health Land use and landscape Air quality Noise Economy	People and communities
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<ul style="list-style-type: none"> • Cause harm or any deterioration in the condition of any designated sites? • Result in the loss of valuable habitats? • Deliver opportunities to restore or create semi-natural habitats? • Deliver net benefit for biodiversity and contribute to ecosystem resilience? 	Biodiversity Ground conditions Water environment	Environment
5. Protect and enhance local landscape character, designations and visual amenity	<ul style="list-style-type: none"> • Cause harm to any designated or protected landscapes? • Result in the enhancement to the condition and character of any protected or designated landscapes? • Reduce the adverse impacts of road traffic and parking on landscapes and designations? • Result is loss of amount of Best and Most Versatile (BMV) land? • Contribute to the efficient management of travel in tourist areas during peak periods? 	Land use and landscape Cultural heritage Economy	Places and economy



IWBA Objective	How will we test if the objective has been met? Will the NWTP.....	Relevant IWBA Topic	WTS ambition alignment
6. Protect and enhance the local cultural heritage, including the Welsh language	<ul style="list-style-type: none"> • Cause direct or indirect harm to designated heritage assets? • Enhance the condition or setting of designated heritage assets? • Provide measures to avoid and/or mitigate harm to non-designated heritage assets? • Support Welsh speaking communities? • Include initiatives to implement and encourage use of Welsh language? 	Population Cultural heritage	Culture and Welsh language
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<ul style="list-style-type: none"> • Have a negative impact on water resources used for water abstraction? • Have a negative impact on the quality of water resources? • Have a negative impact on the general health of waterbodies? • Help to achieve the WFD water body measures and support WFD waterbodies achieve 'good' ecological status? 	Ground conditions Water environment	Environment
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<ul style="list-style-type: none"> • Help meet Wales targets to be 'net zero' by 2050? • Increase modal shift from private cars to public transport and active travel. • Include opportunities to support decarbonisation of the transport section? • Support an uptake in the use of cleaner fuels for transport, including electric vehicles? • Include measures to increase the resilience of existing and new infrastructure to the effects of climate change? • Reduce the impact of extreme weather events on the transport network? • Reduce the need to travel to access key amenities and services? 	Climatic factors Transport	Environment



IWBA Objective	How will we test if the objective has been met? Will the NWTP.....	Relevant IWBA Topic	WTS ambition alignment
9. Protect and enhance local air quality.	<ul style="list-style-type: none"> • Improve air quality for communities? • Cause any deterioration in air quality? • Include initiatives to encourage the uptake of active travel and public transport? 	Human health Air quality	Environment
10. Reduce disturbance from transport related noise and vibration to local communities.	<ul style="list-style-type: none"> • Improve the local soundscapes? • Result in a reduction in noise pollution? • Include initiatives to encourage the uptake of active travel and public transport? 	Human health Noise	People and communities
11. Incorporate circular economy principles to reduce the use of raw materials.	<ul style="list-style-type: none"> • Use sustainably sourced materials and ensure materials and resources are used efficiently? • Include transport initiatives and infrastructure that enable recycling and waste to be collected, transported, sorted and managed effectively? • Support the transition of waste collection fleets to cleaner fuels, such as use of EV? • Encourage use of locally sourced material? 	Resources and waste Economy	Environment



IWBA Objective	How will we test if the objective has been met? Will the NWTP.....	Relevant IWBA Topic	WTS ambition alignment
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<ul style="list-style-type: none">• Increase the land available for employment development?• Support equitable access to employment, education and training opportunities?• Improve the reliance and resilience of the transport network to better support businesses and workers?• Encourage regeneration and investment, particularly in more deprived areas?• Improve access between England and North Wales and improve access between North and South Wales?• Encourage sustainable access to tourist facilities and attractions?• Support the rural economy?• Protect and enhance the natural beauty of the area?	Population Economy Transport	Places and economy



5.1.1 Appraisal scoring criteria

The NWRTP options are assessed against the IWBA objectives using the corresponding questions identified in Table 5 -1. A score has been assigned to each objective using the criteria outlined in Table 5 -2 depending on the type and level of effect that the NWRTP Policy, or group of policies is likely to have on the objective. This is accompanied by a qualitative narrative appraisal which describes the identified likely effects, providing references where appropriate.

Table 5-2 IWBA scoring criteria

IWBA Score	Definition
++	Likely significant positive effect
+	Likely minor positive effect
0	Likely negligible effect
-	Likely minor negative effect
--	Likely significant negative effect
?	Likely effect uncertain
+/-	Likely to be a mix of positive and negative effects

5.2 Appraisal outcomes

The full appraisal outcomes are found in Appendix E while Table 5 - 3 provides an overview of the appraisal score outcomes for each objective against each policy/group of policies.

5.2.1 Summary of effects for each IWBA objective

Table 5-4 provides an overview of all the effects identified in relation to each IWBA objective. No scoring is given in this summary, rather it should be read in conjunction with the scoring outcomes in Table 5 - 3 and the full assessment in Appendix E.



Table 5-3 IWBA appraisal scores for each policy/policy group against each IWBA objective

IWBA Objectives	1. Delivery of housing and local services	2. Reduce inequality and promote community cohesion	3. Health and Wellbeing	4. Biodiversity	5. Landscape character areas and designated sites	6. Welsh culture and language	7. Water health	8. Decarbonisation	9. Air quality	10. Noise and local soundscapes	11. Circular economy and reduced raw material use	12. Economic prosperity
WTS ambition	People & communities	People & communities	People & communities	Environment	Places and Economy	Culture & Welsh language	Environment	Environment	Environment	People & communities	Environment	Places & Economy
Policy group												
Enabling changes to travel behaviour												
Policy CB1 – CB7: Providing people with a choice about how they commute	++	?	++	?	+/-	+	+	+	+	+	+	++
Policy CB8 – CB10: Providing people with choices about how they access services and education	++	++	++	?	0	+	+	++	+	+	+	+
Policy CB13: Providing people with choices in rural and semi urban areas	+	++	++	+	0	+	+	+	+	+	+	+
Policy CB14 - CB23: Providing people with information to make more sustainable travel choices & supporting the tourism sector	0	++	+	+	+	+	+	+	+	+	+	+
Bus, coach and community transport												
Policy PT1: Bus Franchising	+	++	+	+	+	+	+	+	+	+	+	++



IWBA Objectives	1. Delivery of housing and local services	2. Reduce inequality and promote community cohesion	3. Health and Well-being	4. Biodiversity	5. Landscape character areas and designated sites	6. Welsh culture and language	7. Water health	8. Decarbonisation	9. Air quality	10. Noise and local soundscapes	11. Circular economy and reduced raw material use	12. Economic prosperity
WTS ambition	People & communities	People & communities	People & communities	Environment	Places and Economy	Culture & Welsh language	Environment	Environment	Environment	People & communities	Environment	Places & Economy
Policy group												
Policy PT2 - PT3: Decarbonising the bus fleet	0	+	+	+	0	0	+/-	++	+	0	+	0
Policy PT4 - PT5: Bus Transformation Network	+	++	+	+	+	+	+	+	+	+	+	++
Policy PT6 - PT8: Improving bus infrastructure	+	++	+	+	+	+	+/-	+	+	+	+	+
Policy PT9 - PT10: Making bus travel easier	+	++	+	+	+	+	+	+	+	+	+	+
Coach, demand responsive and community transport												
Policy PT11 - PT12: Fflecsi and Ring & Ride services	++	++	+	+	0	+	+	?	?	+	+	+
Policy PT13: Taxi	+	+	+	+	0	+	0	+	+	0	+	+
Policy PT14: Longer distance coach services	0	+	+	0	0	+	+	+	+	+	+	+
Policy PT15: Community involvement in rail	+	+	+	+	0	+	0	+	+	0	+	+



IWBA Objectives	1. Delivery of housing and local services	2. Reduce inequality and promote community cohesion	3. Health and Wellbeing	4. Biodiversity	5. Landscape character areas and designated sites	6. Welsh culture and language	7. Water health	8. Decarbonisation	9. Air quality	10. Noise and local soundscapes	11. Circular economy and reduced raw material use	12. Economic prosperity
WTS ambition	People & communities	People & communities	People & communities	Environment	Places and Economy	Culture & Welsh language	Environment	Environment	Environment	People & communities	Environment	Places & Economy
Policy group												
Walking, Wheeling and Cycling												
Policy AT1 – AT2: Further improving infrastructure	+	++	++	+/-	0	+	+	++	+	+	+	+
Policy AT4 – AT6: Making active travel more attractive in rural areas	+	++	++	+/-	0	+	+	++	+	+	?	+
Policy AT7 – AT11: Leadership and funding	+	+	+	0	0	+	+	+	+	+	+	+
Policy AT12 – AT14: Cycle hire, E-bikes and E-scooters	+	++	+	0	0	+	0	0	0	0	0	+
Integration between modes												
Policy IN1 – IN3: Mobility hubs and Gateway stations	+	+	+	+	+	+	+	+	+	+	+	+
Policy IN4: Improving bus and rail integration	+	++	++	+	+	+	+	+	+	+	+	++
Policy IN5 – IN6: Park & ride or Park & share schemes	+	+/-	0	+/-	+	+	+	+	0	0	+	+/-



IWBA Objectives	1. Delivery of housing and local services	2. Reduce inequality and promote community cohesion	3. Health and Wellbeing	4. Biodiversity	5. Landscape character areas and designated sites	6. Welsh culture and language	7. Water health	8. Decarbonisation	9. Air quality	10. Noise and local soundscapes	11. Circular economy and reduced raw material use	12. Economic prosperity
WTS ambition	People & communities	People & communities	People & communities	Environment	Places and Economy	Culture & Welsh language	Environment	Environment	Environment	People & communities	Environment	Places & Economy
Policy group												
Ports and Freight												
Policy PF1 – PF2: Ports	+	+	+/-	--	+	+	?	+/-	+/-	+/-	-	++
Policy PF3: Road freight	+	+	+	?	?	+	-	?	+/-	+	0	0
Policy PF4: Low Emission HGVs	0	+	+	0	0	0	+/-	++	+	0	+	+
Policy PF5 – PF8: Local deliveries	+	+	+/-	?	?	?	+/-	+	+	+	+	+
Policy PF9: Rail freight	0	+/-	+	0	0	0	+	+	+	+	+	+
Roads, Streets and Parking												
Policy RS1 – RS2: Maintenance	+	+	+	+	+	+	0	+	0	+	0	+
Policy RS3 – RS4: Road Safety	++	+	+	0	0	0	0	+	+	+	+	+
Policy RS5 – RS6: Public car parking in towns and cities	+/-	+/-	+/-	+	+	0	+	+	+	+	+	+
Policy RS7 – RS11: Low emission vehicles	+	+	+	+	0	0	+	+	+	0	+	+
Policy RS12 – RS13: Car clubs and sharing	+	++	+	0	0	0	0	+	+	0	+	+



IWBA Objectives	1. Delivery of housing and local services	2. Reduce inequality and promote community cohesion	3. Health and Well-being	4. Biodiversity	5. Landscape character areas and designated sites	6. Welsh culture and language	7. Water health	8. Decarbonisation	9. Air quality	10. Noise and local soundscapes	11. Circular economy and reduced raw material use	12. Economic prosperity
WTS ambition	People & communities	People & communities	People & communities	Environment	Places and Economy	Culture & Welsh language	Environment	Environment	Environment	People & communities	Environment	Places & Economy
Policy group												
Surface access to aviation												
Policy AV1: Surface access to aviation	+	+	0	0	0	0	0	--	+	0	+	+
Digital Connectivity												
Policy DC1: Digital connectivity	+	+	+	+	0	+	+	++	+	+	+	+
Land use planning												
Policy CB19 – LU6	The Strategic Development Plan for North Wales is also the responsibility of the CJC. However, as it will itself require various statutory assessments, this has not been included within this IWBA.											



Table 5-4 Summary of effects against each IWBA objective

IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
1. Support the delivery of housing and local services to meet the needs of local communities	People and communities	<p>Policies related to enabling changes in travel behaviour (CB1-CB15) emphasise enhancing public transport services and active travel routes, which are crucial for improving access to employment sites and essential services such as healthcare, education, and transport interchanges. By focusing on the needs of local communities, particularly in areas with high levels of deprivation, these initiatives aim to provide sustainable transport options that improve connectivity while reducing reliance on private vehicles, particularly in rural areas. This approach not only addresses immediate travel needs but also has the potential to promote long-term housing growth in areas where access to services is improved. Furthermore, the collaborative planning approach across North Wales and with neighbouring authorities would ensure that transport solutions are tailored to community needs, fostering greater social inclusion and cohesion.</p> <p>Policies related to public transport (PT1-PT15) in North Wales highlight a comprehensive approach to enhancing public transport through improved ticketing, better journey and waiting times and accessible, reliable services. This ensures reliable access to essential services like employment, education and social opportunities. This would be particularly beneficial in areas that are more deprived where people may be more reliant on public transport including areas such as Holyhead Town, Marchog, Peblig, Glyn and Rhyl that lie within the 10% most deprived areas,. The policies aim to improve connectivity by supporting viable transport options to meet diverse community needs, particularly benefiting residents of rural areas through safe, flexible and community-led transport solutions. Since these policies enable flexible services which have been designed through community involvement and are locally run and managed, they would improve access to local services and help meet community identified specific needs. Policies related to active travel (AT1-AT14) focus on enhancing active travel infrastructure to promote healthier lifestyles and equitable access to services such as healthcare, education and transport interchanges. Integrated transport policies (IN1-IN6) would also facilitate improved accessibility to services and improved affordability for multimodal travel. This would be achieved through better integration of bus and rail networks with development of mobility hubs, improved active travel accessibility to further transport and Park & Ride/Park & Share schemes. It would be particularly beneficial where public transport options are scarce or not suitable.</p> <p>The policies regarding port developments and freight (PF1- PF9), support the delivery of local services by improving access to essential resources for local communities, particularly in deprived areas like Holyhead and Mostyn. The policies would also enhance employment opportunities within the ports as they expand and the focus on sustainable transport connectivity to port developments and rail stations improves accessibility for local communities to those economic opportunities. Policies PF1-PF9 also support the needs of local communities by improving the local delivery system (making them easier and quicker to use) and contributing to reducing congestion which benefits the local environment and amenity.</p>



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>Policies related to roads, streets and parking (RS1-RS13) support road infrastructure improvements that are climate resilient, facilitating the delivery of housing and access to existing and future services. They also contribute to the mitigation of adverse impacts such as travel delays caused by damage to infrastructure that is not regularly maintained. Improvements to road infrastructure also helps reduce the risk of accidents which has high economic and personal costs associated with it.</p> <p>Sustainable transport options are encouraged through control of parking charges and reallocation of space from parking (RS5 – RS6) which aim to improve local amenity and encourage a greater uptake in public transport and active travel. However, there may be adverse impacts if reduced parking/increased parking charges is not balanced by sufficient and suitable alternative active transport options/ public transport because this would reduce accessibility to services. Improved availability of sustainable transport services improves accessibility to essential services for those that rely more on public transport as well as for those who would prefer to use public transport but feel that they currently do not have a reasonable alternative to the car. Policies enhancing digital connectivity (DC1-DC2) facilitate remote working and improve access to services, including increased access to employment opportunities with a reduced need to travel. They also enable more members of communities to travel using public transport more confidently through digital literacy initiatives.</p> <p>Largely, the assessment reveals that all policies do not have a significant impact on the delivery of housing services, although policies relating to improvements and/or promotion of active travel, would contribute to providing any new housing with appropriate active travel connectivity to existing services.</p>
2. Reduce inequality and promote community cohesion	People and communities	<p>Enhancement of public transport services, particularly supported by Policies PT1-PT10, supports access to essential services, employment, training and education opportunities, as well as to recreational opportunities. This benefits everyone but particularly people who are more reliant on public transport and/or active travel including socio-economically disadvantaged people, younger people, older people, disabled people, and people from global ethnic majority groups²⁴. These Policies focus on creating a more integrated transport network that facilitates easier movement between communities and encourages active travel modes like walking and cycling. This approach is expected to foster social interactions, reducing social isolation, and enhancing overall community well-being. Furthermore, by prioritising connecting rural areas to neighbouring communities and community facilities, the policy improves access to essential services like health, education and employment in rural and semi-urban areas reducing inequality of opportunity that can arise as a result of lack of transport connectivity in rural areas. Enhancement of services does not specifically mention accessibility improvements, resulting in an uncertain impact in this regard. For example, no policy specifically defines which accessibility standards should be followed to ensure accessibility for all users.</p>

²⁴ Welsh Government (2014) National Survey for Wales – Transport. Available online at: <https://statswales.gov.wales/Catalogue/Transport>



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>Policies PT11 – PT15 emphasise flexible, community-led and public transport solutions that cater to vulnerable and isolation populations such as people living deprived areas, older people and people with disabilities, enhancing mobility and social interaction. The promotion of taxi services that promotes safe travel of passengers would be particularly beneficial for vulnerable groups at higher risk of experiencing hate crimes, such as the LGBTQ+ community, and people who are racialised²⁵.</p> <p>Policies related to walking, wheeling and cycling (AT1 – AT14) aim to improve active travel infrastructure, making walking, wheeling and cycling more accessible for people with disabilities or mobility impairment, older people and other wheelchair users and people with infants in prams, and for people experiencing deprivation who do not have access to a vehicle/bike. This reduces inequality of access to transport as does improved multimodal transport (IN1 – IN6) which helps improve connectivity to central locations. However, Policies IN5 – IN6 could result in further social exclusion when P&R (or P&S) facilities are developed at the expense of investment in conventional public transport and if services are exclusively aimed at motorists²⁶.</p> <p>By improving sustainable transport options to ports, particularly in deprived areas like Holyhead and Mostyn, these policies create better access to employment opportunities at port developments (and within areas on the port public transport routes), which would contribute to a reduction in economic inequality between areas of North Wales. The improved road safety and local amenity as a result of rerouting HGVs to more suitable rest locations would be beneficial for communities that are close to the port and which experience more socio-economic deprivation than other areas in North Wales. Encouraging the switch to low emission vehicles, and modal shift to public transport/active travel would contribute to a reduction in air emissions, particularly for communities along the North Wales coast. This would bring health benefits, particularly for vulnerable groups who are more sensitive to changes in air quality including children, older people, people with respiratory disease and pregnant women. A reduction in road freight vehicles with a shift to rail supported by Policy PF9 could lead to loss of employment for HGV drivers which would disproportionately impact men who are more likely to be employed in the road haulage sector.</p> <p>Policies DC1-DC3 focus on improving digital infrastructure and literacy, supporting opportunities for remote working whilst also enhancing accessibility of digital information that helps people plan journeys using public transport (i.e. digital access to real time service information). This would support people less able to travel for work such as disabled people, pregnant women, people with caregiving responsibilities and young people, whilst also supporting people who are more likely to be digitally illiterate (older people). Overall, policies are supportive in strengthening community ties and fostering a more equitable and inclusive society.</p>

²⁵ Out in London: LGBTQ+ People's Safety on London's Transport Network. London Travel Watch, 2023. Available online at: <https://www.diversitytrust.org.uk/2023/11/new-study-lgbtq-people-feel-threatened-and-face-abuse-on-london-public-transport/> [Accessed 15/11/24]

²⁶ Parkhurst, G. Social inclusion implications of park-and-ride. *Municipal Engineer* 156, 2003



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	People and communities	<p>Policies CB1 – CB23 focus on enhancing public transport services and active travel routes to improve connectivity between residential areas and key employment sites, city centres, and cross-border regions. These improvements would encourage modal shift, encouraging increased physical activity levels which promotes improved health outcomes including reducing risks of chronic diseases like obesity, cardiovascular issues, and diabetes, whilst also enhancing mental wellbeing^{27 28}. These policies would achieve this by contributing to better access to sustainable transport options, which helps to alleviate social isolation, particularly among vulnerable groups such as older people, young people, socioeconomically disadvantaged, and disabled people who are more reliant on public transport. Furthermore, improved access to essential healthcare services, recreational spaces, and community facilities, which means that people can more easily access the healthcare and services they need whilst also fostering community cohesion, contributing to overall improved health and wellbeing.</p> <p>Policies PT1-PT10 focus on improving the bus network and would be crucial for connecting individuals to key health services, recreation activities and green spaces. This increases better (simplified) access to opportunities for physical exercise (gyms, parks, natural areas, etc.) contributing to improved health outcomes for all, but particularly for groups who rely more on public transport. An improved bus network with transport hubs would also encourage physical activity, as users are more likely to walk or cycle to these transport hubs. The policies also contribute to reduced air pollution and improved road safety, providing health benefits to communities in deprived and low-income areas. Policies PT11 to PT15 include demand-responsive transport solutions with a particular focus on meeting the travel needs in rural areas. This would contribute to improved health for rural communities as they would be more able to access healthcare along with opportunities for recreation, employment, education and social interactions. Policies like PT13 focus on low-emission vehicles which would contribute to mitigating adverse health impacts caused by air pollution such as respiratory infections, heart disease and stroke²⁹.</p> <p>The active travel Policies (AT1 to AT14) would create supportive environments for active travel through investments in infrastructure that would make active travel more attractive, safer and accessible to a wider range of the population including people with infants in prams, people in wheelchairs, and disabled people (particularly with difficult mobility). These investments would promote better access to active travel, increasing travel choice, agency, community engagement and access to social infrastructure that contributes to better physical and mental health outcomes.</p>

²⁷ Cycling and walking for individual and population health benefits: A rapid evidence review for health and care system decision makers. Public Health England, 2018. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757756/Cycling_and_walking_for_individual_and_population_health_benefits.pdf [Accessed 12/11/24]

²⁸ [Health benefits from recreation, natural capital, UK - Office for National Statistics](#)

²⁹ European Environment Agency, Health impacts of air pollution, 2022; Available online at: [Health impacts of air pollution in Europe, 2022 — European Environment Agency](#) (Accessed 27/11/2024)



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>Policies IN1 to IN6 advocate for an integrated transport network that simplifies transitions between various modes. This includes simplified and integrated ticketing, placemaking and wayfinding, and improved convenience when transitioning between transport modes (e.g. from bike to bus or train or from train to bus). This would improve connectivity between local communities and larger settlements, reducing social isolation for less well connected areas (particularly rural areas). Collectively, these initiatives contribute to a healthier, more cohesive society by prioritising safety, accessibility, and inclusivity in transportation.</p> <p>The policies relating to port developments (PF1 – PF9), have mixed impacts on health. Whilst they support the health and wellbeing of the local population by providing sustainable transport options to employment opportunities in Holyhead and Mostyn ports, the anticipated increase in heavy goods vehicle (HGV) movements due to port expansion poses risks to local air quality and noise levels, potentially adversely affecting communities along the road routes to the Ports. Vulnerable groups including children, people with respiratory disease and older people would be more affected by any decreases in air quality. Conversely, a shift to hydrogen fuels for road and rail freight, along with the introduction of freight consolidation centres and EV for local deliveries, would contribute to reduced traffic and improved air quality for local communities. Where there is an increased use of e-cargo bikes for local deliveries this could cause anxiety for some pedestrians if they are ridden on shared spaces and cyclists of e-bikes themselves can experience increased anxiety levels when cycling in busy urban areas³⁰.</p> <p>Policies PF1-PF9 support the health and wellbeing of HGV drivers with the provision of rest facilities, reducing fatigue and anxiety amongst drivers and reducing risks of accidents and improving overall road safety. However,</p> <p>Policies RS1-RS13 which relate to roads and streets contribute to the creation of road infrastructure that is better maintained, safer for pedestrians, cyclists and motorists, and better able to support the changing needs of EV vehicles. These policies therefore support continued connectivity between communities and essential services, including healthcare, employment, education and recreational facilities Better maintained infrastructure is also more resilient to extreme weather events which means that there would be less disruption during such events, maintaining access to social infrastructure. Whilst reduced car parking and increased charges would encourage reallocation of space to uses that may encourage more physical activity (e.g. improved pedestrian areas, urban green spaces) it may also induce anxiety for some people if they worry about the ability to find suitable parking or about the increased cost of parking. This would potentially deterring access to urban areas negatively impacting physical and mental health as access to services becomes more challenging.</p>

³⁰ Pejhan, S., Agelin-Chaab, M., Yusuf, M., & Eng, D. Analysis of ebike dynamics and cyclists' anxiety levels and interactions with road vehicles that influence safety. *Accident Analysis & Prevention*, Volume 159, 2021.



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		Policies (DC1 – DC3) which focus on enhancing digital connectivity and digital literacy would (DC1 – DC3) aim to facilitate remote working and improve connectivity between communities, including more rural areas. By reducing the need for travel, these policies can alleviate commuting-related stress, make employment opportunities accessible to people who may otherwise struggle to find suitable employment (e.g. people with caring responsibilities or disabled people). These increased opportunities alongside better connectivity promote better mental and physical health outcomes.
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Environment	<p>Where policies of the NW RTP aim to increase use of active travel and public transport, and/or increase use of low emission vehicles, this would result in a reduction in emissions and pollution run off from roads, both of which can adversely impact species and habitats. This includes policies which aim to improve and enhance sustainable transport options so that there is a modal shift (both active travel and public transport) (Policies CB1-CB23, PT1-PT10, AT1-AT6, IN1-IN6), as well as policies which aim to enhance accessibility and connectivity of those sustainable transport options (PT11-PT13 and DC1-DC3). In both cases it is likely that there would be a modal shift away from the private car resulting in positive effects on biodiversity.</p> <p>Improved sustainable travel options to access tourist attractions including national parks and coastal areas, help prevent ecological damage caused by inappropriate parking. At this stage it is not known whether infrastructure improvements would require any physical land take. For example, active travel infrastructure and P&R and P&S schemes (IN5-IN6) pose potential risks to biodiversity and geodiversity, if not sensitively designed, given the unknown status of development locations and land take requirements. Careful planning will be required at project level to mitigate potential negative impacts on biodiversity.</p> <p>Policies IN1 to IN6 facilitate seamless transitions between transport modes, encouraging a modal shift to sustainable transport, while safeguarding ecological sites. However,</p> <p>Policies aimed at enhancing ports and freight infrastructure (PF1 – PF9), present potential risks to biodiversity where this increases land take and development. This would particularly be the case for designated sites like the Anglesey Tern Special Protection Area and the North Anglesey Marine Special Area of Conservation where development activities may increase pressures on these sensitive habitats. As the land requirements and locations of any development at ports (or related to ports such as freight consolidation centres and rest facilities for HGV drivers) outlined in policies is unknown, the impact on biodiversity interests in these cases is uncertain.</p> <p>Policies RS1 – RS13 contribute to enhancing biodiversity where the policies result in space currently dedicated to parking being replaced by high quality place-making that includes ecological enhancement (net benefit for biodiversity). Policy RS2 particularly focuses on enhancing biodiversity interests to contribute to climate and ecosystem resilience.</p>



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		While digital connectivity policies (DC1 – DC3) do not directly address biodiversity, they can facilitate reduced travel needs, leading to lower emissions and less disturbance to natural habitats.
5. Protect and enhance local landscape character, designations and visual amenity	Places and economy	<p>The policies with the NWRTP are not anticipated to impact Best and most versatile (BMV) agricultural land. However, where infrastructure developments are proposed, there is no additional information about locations and land take and which results in an uncertain impact. Therefore, careful planning and consideration is recommended during implementation.</p> <p>Policies CB1 – CB23 and PT1-PT15 focus on enhancing public transport services and active travel routes contributing towards mitigating the adverse impacts of increased traffic, particularly in sensitive areas such as Eryri National Park. By promoting sustainable travel options, these policies can help reduce tourism induced road congestion and parking pressures, thereby mitigating adverse impacts of inappropriate parking on visual amenity in these areas and maintaining the integrity of local landscapes. Transport infrastructure enhancements may result in adverse effects on designations and landscapes where physical changes are required (e.g. road building, port expansion, and parking or active travel infrastructure) so careful planning and implementation will be crucial at project level to ensure that any associated developments do not impact the area's scenic and cultural value.</p> <p>While policies AT1 - AT14 support improvements to active travel infrastructure, making active travel more accessible, even to tourists, the policies are unlikely to reduce vehicle usage in more remote areas which are noted for their special landscape character. Policies IN1 - IN6 promote the development of mobility hubs and better integration of public transport, facilitating transitions between transport modes and supporting a modal shift from private vehicles to sustainable transport. This shift is expected to alleviate adverse effects of traffic congestion and parking pressures on popular tourist destinations, enhancing visual amenity.</p>
6. Protect and enhance the local cultural heritage, including the Welsh language	Culture and Welsh language	<p>Policies of the NWRTP which aim to improve public transport services and active travel infrastructure (CB1 – CB23; PT1 – PT15; AT1 – AT14; IN1 – IN6), would facilitate better connectivity between communities and key cultural sites as well as Welsh medium educational facilities. By reducing traffic congestion and enhancing accessibility, these initiatives make it easier for individuals, particularly those without private vehicles, to visit cultural venues, heritage sites, and improve connectivity between local Welsh-speaking communities. This increased patronage of cultural attractions supports their economic viability.</p> <p>Improved connectivity between Welsh-speaking communities and to educational resources for learning Welsh, are crucial for promoting the daily use of the Welsh language.</p>



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>The policies support initiatives that create opportunities for community engagement and improving access to social opportunities for Welsh speaking communities, especially in areas of Gwynedd and Anglesey that consist of the highest proportion of Welsh speakers. The policies would also facilitate the use of Welsh language in social and community spaces such as transport interchanges, bus waiting areas, bus stops and buses themselves in verbal and written formats.³¹</p> <p>Overall, the Policies collectively contribute to the preservation and promotion of local cultural heritage without posing risks to designated heritage assets.</p>
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Environment	<p>Policies of the NWRTP which aim to enhance public transport services and active travel routes and thereby encourage a modal shift away from private vehicles would reduce the volumes of traffic on the roads. Volumes of traffic on roads would also be decreased by Policy PF9 which supports a shift to rail freight, and Policies DC1-DC3 which focus on digital connectivity reduce travel needs by supporting remote working opportunities and encouraging public transport use. This reduction in road traffic, particularly from HGVs would lead to several environmental benefits: fewer vehicles mean less oil, grease, and other pollutants entering waterways during rain events, thereby improving the quality of rivers, lakes, and streams and protecting aquatic ecosystems. Additionally, decreased traffic lowers airborne pollutants that can settle on surfaces and subsequently wash into water bodies, including harmful nitrogen oxides and sulphur dioxides that contribute to nutrient pollution ³². Conversely Policy PF3 supports the delivery of infrastructure for improving HGV movements and providing specific HGV facilities which would result in an intensification of HGVs in some locations therefore an intensification of pollution and carbon emissions from HGVs that result in the runoff of road pollutants into water bodies.</p> <p>In addition, any development works required to introduce new physical infrastructure (e.g. road engineering works for bus lane introductions) has the potential to result in adverse effects during construction if not appropriately mitigated.</p>

³¹ Welsh Government, 2024. Cymraeg 2050: Welsh language strategy action plan 2024 to 2025. Available online at: <https://www.gov.wales/cymraeg-2050-welsh-language-strategy-action-plan-2024-2025.html> [Accessed 13/11/24]

³² Environmental Agency 2019, 2021 River basin management plans – Pollution from towns, cities and transport. Available online at: https://consult.environment-agency.gov.uk/++preview++/environment-and-business/challenges-and-choices/user_uploads/pollution-from-towns--cities [Accessed 25/11/24]



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>Policy PF4 also has potential to negatively impact water resources as the development of hydrogen hubs would require water for hydrogen production as well as other services like cooling. There are risks to human and aquatic life associated with potential leakage of ammonia used in hydrogen production.³³</p> <p>Policies concerning port development (PF1 – PF9) have the potential to adversely impact the quality of water bodies nearby (through pollution runoff). However, at this stage there is insufficient information detail about what port expansion would and therefore any impact is uncertain. Further, by promoting a modal shift from road to rail for freight transport, the policies aim to reduce the number of heavy goods vehicles (However, there are concerns regarding increased port activities and the development of freight consolidation centres, particularly under Policy PF3, which may lead to a rise in HGV traffic and associated pollution. Policy AV1 related to surface access to aviation is not anticipated to affect water quality.</p>
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of	Environment	<p>Policies within the NW RTP which focus on improving and enhancing sustainable transport options such as public transport and active travel would facilitate a modal shift away from private vehicles, leading to lower transport related carbon emissions. This includes Policies CB1-CB23, PT1-PT10, AT1-AT14 and IN1-IN6. By integrating zero-emission vehicles into public transport systems (PT2- PT3) and improving infrastructure resilience to adverse weather, these policies aim to mitigate the impacts of climate change on transport networks. For example, offering links to alternative public transport services when particular route/s are affected by extreme weather events such as flooding. These initiatives are expected to contribute positively to achieving Wales' net-zero targets by 2050, while also enhancing the adaptability of transport infrastructure in the face of climate-related challenges. Additionally, with a shift to cleaner fuels and zero-emission vehicles, policies support the decarbonisation of the transport sector and improve climate resilience of the transport network with reduced dependency on fossil fuels and related disruptions caused to their supply chain through climate change ³⁴.</p> <p>Policies PT11 - PT15 emphasise community-led transport initiatives, such as the Fflecsi Dynamic Demand Responsive Transport and rail travel, which helps reduce reliance of private vehicles and reduce emissions in rural areas. However, it is unknown whether the community transport will be zero/low emissions, and the impact is therefore uncertain.</p>

³³ Hydrogen: A renewable energy perspective. A report prepared for the 2nd Hydrogen Energy Ministerial Meeting in Tokyo, Japan. 2019. International Renewable energy Agency. Available online at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Sep/IRENA_Hydrogen_2019.pdf [Accessed 12/11/24]

³⁴ International Renewable Energy Agency (IRENA), Bracing for Climate Impact: Renewables as a Climate Change Adaptation Strategy, August 2021; Available online at: [Bracing for Climate Impact: Renewables as a Climate Change Adaptation Strategy](#) (Accessed 25/11/2024)



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
climate change.		<p>Policies PF1 – PF9 aim to support the growth of the regional ports and associated infrastructure which are accessible by sustainable (decarbonised) transport options. However, the policy initiatives may result in increased HGV traffic which currently are less likely to be decarbonised. However, the introduction of hydrogen hubs to support hauliers in the region switch to low emission vehicles (PF4) along with a shift to rail freight (PF9) offers promising avenues for reducing emissions. In relation to local deliveries, Policies PF5-PF8 support for the use of electric vehicles and e-cargo bikes, contributing to decarbonisation and mitigating the environmental impacts of caused by local deliveries. A wider shift to EVs more generally is supported by Policies RS7-RS11 which aim to improve EV charging infrastructure across the region, contributing to the decarbonisation of the transport sector.</p> <p>Policy AV1 improves public transport connectivity to airports, which could indirectly lead to increased air travel emissions, being an adverse effect on the aim to reduce emissions. Policies DC1-DC3 focus on digital connectivity and therefore supports carbon reduction by facilitating remote work, reducing the need to travel. In addition, improved digital access to public transport information, would make it easier to travel using sustainable transport modes, also reducing carbon emissions.</p>
9. Protect and enhance local air quality.	Environment	<p>Where policies of the NWRTP aim to increase use of active travel and public transport, and/or increase use of low emission vehicles, this would result in a reduction in emissions which can adversely impact air quality. This includes policies which aim to improve and enhance sustainable transport options so that there is a modal shift (both active travel and public transport) (Policies CB1-CB23, PT1-PT10, AT1-AT6, IN1-IN6), as well as policies which aim to enhance accessibility and connectivity of those sustainable transport options (PT11-PT13, and DC1-DC3). In both cases it is likely that there would be a modal shift away from the private car resulting in reduced emissions and subsequent improvements in air quality. Additionally, Policies which seek to support the transition to low (zero) emission vehicles would be beneficial to air quality (PT2-PT3, AT12-AT14, PF4, and RS7-RS11).</p> <p>Improved air quality would benefit everyone, but vulnerable groups who are more sensitive to changes in air quality including children, people with respiratory disease, pregnant women and older people^{35,36} would benefit disproportionately and differentially.</p>

³⁵ World Health Organisation, Health consequences of air pollution on populations, June 2024; Available online at: [Health consequences of air pollution](#) [Accessed 14/11/2024]

³⁶ Health impacts of air pollution in Europe, 2022 — European Environment Agency. Available online at: <https://www.eea.europa.eu/publications/air-quality-in-europe-2022/health-impacts-of-air-pollution> [Accessed 27/11/24]



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>More urban centres which have more road transport such as Wrexham and Bangor, as well as the main roads and routes with heavy traffic congestions such as A5, A55 and A4807, are locations where improvements in air quality are more likely to be experienced. These areas often correspond to areas where people experience socio-economic deprivation.</p> <p>The policies focused on port development and freight (PF1 – PF9), promote sustainable transport options to ports and rail stations, helping reduce traffic emissions and improve air quality in areas around Holyhead and Mostyn. However, the policies may result in an increase of HGV movements likely contributing to adverse air quality impacts for local communities near port development areas. Policy PF3 would have the potential to improve air quality for some areas as a result of reduced congestion caused by HGVs but reduce air quality in the areas to which HGVs are directed (e.g. parking specifically for HGVs would concentrate a large number of HGVs in one location). A shift to hydrogen fuels and rail for freight movements and zero emission vehicles for local deliveries would contribute to improved air quality conditions for local communities.</p> <p>Policies DC1-DC3 focus on digital connectivity and therefore supports a reduction in emissions by facilitating remote work, reducing the need to travel. In addition, improved digital access to public transport information, would make it easier to travel using sustainable transport modes, also reducing transport related emissions.</p>
10. Reduce disturbance from transport related noise and vibration to local communities.	People and communities	<p>Policies of the NWRTP which aim to improve and enhance sustainable transport options (Policies CB1-CB23, PT1-PT10, AT1-AT6, IN1-IN6), as well as policies which aim to enhance accessibility and connectivity of those sustainable transport options (PT11-PT13, and DC1-DC3), are likely to result in a modal shift away from the private car (to active travel and public transport use) resulting in less traffic and reduced transport related noise and vibration.</p> <p>This would be particularly beneficial in areas identified as noise priority zones, such as along the A55 and A483, as well as more generally improving local soundscapes and tranquillity in residential areas.</p> <p>Policies PF1-PF9 relate to enhancement of port facilities and facilities for freight drivers. The increased economic activities in the port and nearby development areas may lead to some increased noise from transport, including within residential areas outside the port. Improvements in HGV facilities (rest stops and parking) would increase noise in the locations chosen for these developments. However, it is anticipated that site selection would include consideration of noise impacts on residents which would mitigate this adverse effect. Reduced HGV traffic in town centres, supported by freight consolidation centres and a shift to rail freight, as well as uptake in EV would also contribute towards reducing traffic related noise disturbances.</p> <p>Policies RS1-RS13 support road maintenance and safety which would help reduce noise and vibration caused by poorly maintained roads.</p>



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		Reduced road traffic as a result of the initiatives supported by DC1 – DC3, could lead to reduced disturbances from transport related noise and vibration to local communities living near major roads. Policies DC1-DC3 focus on digital connectivity and therefore contributes to a reduced need to travel, particularly in relation to employment. In addition, improved digital access to public transport information would make it easier to travel using sustainable transport modes resulting in modal shift and reduced private vehicle use. Both of these would reduce noise related to transport movements.
11. Incorporate circular economy principles to reduce the use of raw materials.	Environment	<p>Policies PT2, PT3 and PF4 (freight movements) support the transition to cleaner fuels alongside the development of hydrogen hubs at Deeside and Holyhead which would support the use of locally sourced materials and resources.</p> <p>Policies of the NWRTP which aim to improve and enhance sustainable transport options (Policies CB1-CB23, PT1-PT10, AT1-AT6, IN1-IN6), as well as policies which aim to enhance accessibility and connectivity of those sustainable transport options (PT11-PT13, and DC1-DC3), are likely to result in a modal shift away from the private car (to active travel and public transport use) resulting in reduced use of fuel cars and therefore a reduction in resource use. Policies DC1-DC3 focus on digital connectivity and therefore contributes to a reduced need to travel, particularly in relation to employment, which would also contribute to reduced consumption of fuel.</p> <p>Policies which suggest support for infrastructure development (e.g. AT4 – AT6, PF1) would likely require the consumption of materials. However, there is insufficient information at this stage and therefore any impact is uncertain.</p> <p>Policies PF1 - PF2 support growth at the ports which could result in an increase in HGV movements around the local areas of Holyhead and Mostyn. This would result in increased consumption of raw materials (i.e. fuels). Additionally, Policies RS7 – RS11 would support the transition to cleaner fuels, such as use of EV through the provisioning of improved EV charging infrastructure across locations. This would also contribute to a reduced use of raw materials (fossil fuel).</p>
12. Create an integrated transport system that facilitates efficient and safe movement of both people	Places and economy	<p>Policies related to enabling changes to travel behaviour (CB1 – CB23) focus on improving public transport services and active travel routes to major employment sites (Deeside Industrial Park, Wrexham Industrial Estate, and Chester Business Park), education and travel destinations. This supports equitable access to employment, education, and training opportunities, particularly benefiting communities in coastal towns that experience higher levels of social deprivation as well as commuters to investment zones.</p> <p>Community led transport initiatives improve the reliance and resilience of the transport network, supporting businesses and workers and encouraging sustainable tourism. Improved sustainable transport connectivity to economic hubs and tourist attractions, encourages regeneration and investment in more deprived and rural areas.</p>



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
and freight, contributing to increased economic prosperity in the region.		<p>Policy initiatives improving sustainable transport connectivity also contribute to improved access between England and North Wales and North and South Wales for employment and tourism, further enhancing economic prosperity.</p> <p>The policies related to bus, coach and community transport (PT1 – PT10, IN4) focus on improving bus services, facilitating travel by public transport between major areas of employment both in North Wales and adjacent areas of Northern England including Chester and Deeside and focusing on target areas of concerns like the Menai crossings. By fostering connectivity between communities and these employment hubs, the policies seek to provide equitable access to job opportunities, education, and essential services, particularly benefiting people experiencing socioeconomic deprivation and individuals who rely more on public transport modes. Policies include initiatives to design routes and services to meet customer needs, enhancing connectivity and access to opportunities and services.</p> <p>Policies PT11 – PT15 focus on demand-responsive transport solutions enhancing safety, accessibility and flexibility. The policies support local economies by improving access to workplaces for people without access to a private car and extend tourism geographies accessible by public transport. This can further encourage regeneration and investment in more deprived areas. The integration of low-emission vehicles strengthens the transport network's resilience, mitigating risks from fossil fuel disruptions.</p> <p>Policies supporting improvements to active travel infrastructure (AT1 – AT14, IN1-IN2) is likely to encourage more sustainable travel (including more public transport uptake) to access educational, training and employment opportunities benefiting long term economic prosperity of the region. AT12 – AT14 support cycle/e-bike hire generating income for these businesses and facilitating active travel to and from city centres among tourist, supporting local economies... Policies IN5-IN6 relate to improvements to P&R and P&S schemes, which would contribute to reduced congestion in urban centres. Whilst lower congestion reduces travel time (and therefore frees up time for more productive work) and may encourage businesses to locate in an area (due to better local amenity), it may have the opposite effect if subsidies are required from the local economy, therefore stifling economic growth³⁷. However, it has also been shown that P&R projects are most successful where they are explicitly for providing more parking for economic growth or traffic management reasons, rather than to enhance sustainable mobility³⁸. Economic outcomes would therefore depend on the location and intention of the P&R and P&S facilities.</p>

³⁷ Park and Ride first principles assessment, University of Leeds

³⁸ Parkhurst, G. & Meek, S. (2014). The effectiveness of park-and-ride as a policy measure for more sustainable mobility. Chapter 9 in Ison, S. & Mulley, C. (Eds) Parking Issues and Policies. Emerald, 185-211.



IWBA Objective	WTS Ambition alignment	Summary of policy effects related to each IWBA objective
		<p>Policies PF1-PF2 support the growth of port developments providing more employment opportunities and contributing to economic growth. This would encourage regeneration and investment in areas around ports of Holyhead, Anglesey and Mostyn, benefitting more deprived communities in the areas. The policies also focus on freight and improve connectivity beyond the ports, further boosting economic development.</p> <p>By supporting the development of hydrogen hubs, PF4 contributes to increased employment opportunities in North Wales. Further, the introduction of freight consolidation centres through PF6 – 7, could create new employment opportunities. A shift to rail freight (PF9) would improve reliance and resilience of the transport network (through improved rail freight reliability, capacity and frequency, and also reducing congestion on the roads) better supporting businesses and workers and encouraging investment in the region.</p> <p>Policies RS1 – RS11 relating to roads, streets and parking, promote safe, climate-resilient and reliable transport links to improve access to employment, education, and tourism. Sustainable transport infrastructure such as P&R, P&S schemes and EV charging infrastructure, could improve road and travel conditions, offering lower travel costs and transport options for those without cars, encouraging tourism and supporting the local economies. Better regional and cross-country connectivity would also encourage regeneration and investment, particularly in more deprived areas that are connected to highway networks.</p> <p>Improved public transport access to airports (AV1) could facilitate international business opportunities. Enhanced digital connectivity (DC1 – DC3) will support remote work opportunities, facilitating economic activity by encouraging additions to the job markets by offering flexible working schedules and a reduced need to travel. It also helps improve reliance of the transport network, supporting better journey planning via sustainable transport, supporting commuting workers and encouraging sustainable tourism.</p>



5.3 The Well-being of Future Generations Five Ways of Working

The Well-being of Future Generations (Wales) Act 2015 sets out the five ways of working – Thinking of the long term, Prevention, Integration, Collaboration and Involvement. Public bodies must demonstrate consideration of these principles in their decision making to show they are acting in accordance with the sustainable development principle, defined as ‘acting in a manner that seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs’. The North Wales Regional Transport Plan has considered these ways of working in the following ways:

Thinking for the long term: The Regional Transport Plan covers the period 2025-2030. It considers alignment with other strategic and national plans, including the Wales Transport Strategy (up to 2041), National Transport Delivery Plan (up to 2027), Future Wales (up to 2040) and the emerging Strategic Development Plans (a 25-year plan). The Regional Transport Delivery Plan addresses key issues, needs, and opportunities up to 2030/31, as well as aspirational schemes that may progress beyond 5 years. It emphasises the importance of avoiding short-termism by considering the well-being of both current and future generations. The plan balances immediate needs with the necessity to safeguard long-term interests. The IWBA also consider current and future issues and opportunities, considering the impact of policies and plans on wellbeing in the long term.

Prevention: The Case for Change outlines the challenges and opportunities associated with the key issues in the Regional Transport Plan. By acting early and collaboratively, the proposed policies and interventions aim to tackle root causes before they escalate, leading to better outcomes for individuals, public bodies, and society. This proactive approach ensures that resources are deployed to prevent problems from occurring or worsening, contributing to the well-being objectives of Welsh Government and other stakeholders. The IWBA also flags potential impacts on wellbeing associated with different policies and provides recommendations to mitigate these impacts and offers suggestions for positive benefits.

Integration: The Regional Transport Plan integrates strategies across land use, transportation, and economic development, ensuring a cohesive approach to transport mode integration. The Regional Transport Plan sets out its alignment with other strategic and national plans as described above, which helps to integrate national and regional (as well as local) plans and priorities. The Regional Transport Plan also considers cross border connectivity and helps to approach economic development, land use and transport planning in a joined up and holistic way across regions. The IWBA adopts a comprehensive framework that aligns with the Welsh Government's Wellbeing Act, considering all aspects of wellbeing in an integrated manner, encompassing people, places, and the environment.

Involvement: Our Regional Transport Plan and IWBA emphasise the importance of involving a diverse range of stakeholders to shape decisions and services that impact their lives. By engaging with local authorities, transport users, and operators, and conducting a 12-week public consultation, we ensure our plans reflect the needs and aspirations of the community. This collaborative approach, guided by the Wellbeing of Future Generations (Wales) Act, helps us build on previous efforts and create a sustainable transport system for North Wales. Further details about this approach is available in the engagement section of the Regional Transport Plan.

Collaboration: Ambition North Wales has collaborated closely with other CJs, Transport for Wales, the Welsh Government, local authorities, and key stakeholders representing the economy, society, culture and environment across the region, incorporating feedback from the North Wales Transport Commission and public consultations. The IWBA also promotes active collaboration with local communities in the implementation of policies and plans. This collaborative approach ensures that resources and expertise are maximised to meet the well-being objectives of all involved parties.

6. Recommendations

Based on the outcomes of the IWBA, a series of recommendations have been identified which would help mitigate potential adverse effects. Table 6-1 identifies which policies these are, along with associated recommendations, but these should be read alongside the corresponding assessment tables in Appendix E for context. The need for these mitigation measures should be explored more thoroughly at project or scheme level as more details become available.

Table 6-1 Mitigation recommendations for policies which may have negative effects

Policies	Recommendations
Objective 1: Support the delivery of housing and local services to meet the needs of local communities	
Interaction between modes (IN1 – IN3)	<p>During the implementation of policies, it will be vital to make sure that they meet the actual needs of the communities. Community consultation and engagement with local and community organisation would facilitate better understanding of what these needs are so that they can be met.</p> <p>This should be led by local authorities overseen by Ambition North Wales.</p>
Objective 2: Reduce inequality and promote community cohesion	
Bus (PT1)	<p>Community engagement should be used to design routes and timetables. This would increase sense of community cohesion and create a network that meets local needs.</p> <p>Accessibility should be embedded into the design of new services, infrastructure and vehicles (project level). This would support equitable access to public transport and active travel, whilst also encouraging more people to shift to these modes.</p> <p>This should be led by the scheme designers and planners, overseen by the scheme owner, which is likely to be local authorities in partnership with operators and overseen by Ambition North Wales.</p>
Walking, wheeling and cycling (AT4 – AT6)	<p>Engagement with community stakeholders, particularly those who represent Protected Characteristic/Vulnerable Groups, would ensure that accessibility concerns, ideas and lived experiences are embedded into designs.</p> <p>This should be led by local authorities overseen by Ambition North Wales.</p>
Interaction between modes (IN5-IN6)	<p>When policies relating to P&R and P&S facilities are being implemented, review should be made to ensure that investment in these facilities is not at the expense of investment in conventional public transport and that they do not only benefit motorists (i.e. non-motorist should still be able to benefit from any service). Stakeholder consultation recommends looking at the Gwynedd and Môn Public Service Board which has a subgroup piloting different approaches at Niwbwrch where useful learning will be available for other areas and communities. They advocate for this to be an Ynys Môn wide approach involving improved active travel where that alternative is available.</p> <p>This should be led by local authorities overseen by Ambition North Wales.</p>
Roads, Streets and Parking (RS5 – RS6)	<p>It is important that reallocation of road and parking space is implemented along with initiatives to provide better public transport or carpooling infrastructure to prevent any unintended adverse impacts on accessibility to essential services like healthcare, recreation and green spaces.</p> <p>Any reallocation should also be accompanied by a review of disabled parking requirements in these locations.</p> <p>This should be led by local authorities overseen by Ambition North Wales.</p>



Policies	Recommendations
Digital Connectivity (DC1 – DC3)	Digital training and education delivered by DC2 should incorporate the different learning needs of people with physical or mental disabilities to overcome barriers to digital inclusion. This should be led by local authorities overseen by Ambition North Wales.
Roads, Streets and Parking (RS3 – RS4)	Consideration should be given to the potential use of segregated cycle lanes and pedestrian routes which would make active travel a more attractive mode of transport for more people and increase safety. This should be led by local authorities overseen by Ambition North Wales.
Objective 4: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	
Bus (PT4 - PT5)	At project level, protected sites/areas of natural habitat need to be considered where infrastructure developments require land take. Appropriate survey and design mitigation should be incorporated at that stage. This should be led by the scheme designers and planners, overseen by the scheme owner, which is likely to be local authorities in partnership with operators and overseen by Ambition North Wales.
Ports and Freight (PF1 – PF2)	Mitigation measures should be in place to protect biodiversity and geodiversity interests. The HRA Screening Report and recommendations must be followed. This should be led by the scheme designers and planners, overseen by the scheme owner, which is likely to be local authorities in partnership with operators and overseen by Ambition North Wales.
Ports and Freight (PF3)	Areas of protected habitats must be avoided if new areas of land are required. The HRA Screening Report and recommendations must be followed. This should be led by the scheme designers and planners, overseen by the scheme owner, which is likely to be local authorities in partnership with operators and overseen by Ambition North Wales.
Objective 8: Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	
Coach, demand responsive and community transport (PT14)	Use of zero emission vehicles for longer distance coach services could contribute to decarbonisation for the transport sector. This should be encouraged. This should be led by local authorities in partnership with operators and overseen by Ambition North Wales.
Objective 7: Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	
Ports and Freight (PF3)	Appropriate drainage should be installed in any new facilities that would experience an intensification of HGVs. This should be led by the scheme designers and planners, overseen by the scheme owner, which is likely to be local authorities in partnership with operators and overseen by Ambition North Wales.
Roads, Streets and Parking (RS3 – RS4)	Flood mitigation should be incorporated into highway maintenance. This should be led by local authorities overseen by Ambition North Wales.



Objective 10: Reduce disturbance from transport related noise and vibration	
Ports and Freight (PF3)	<p>Any new services (and their access) for HGV parking should be located away from residential areas and protected habitats.</p> <p>This should be led by the scheme designers and planners, overseen by the scheme owner, which is likely to be local authorities in partnership with operators and overseen by Ambition North Wales.</p>
Objective 12: Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	
Bus (PT6 -PT7)	<p>The A55, the "North Wales Expressway" is the busiest road in North Wales, a dual carriageway primarily connecting Chester to Holyhead, along the coast of North Wales and passing Llandudno Junction, Conwy, and Bangor. It is one of Wales's most important roads that runs through to the port of Holyhead. The crossing of the Menai to Anglesey is important both locally and strategically as, though separated by the Menai Strait and in different local authority areas, towns on both sides of the Strait form a single economic area. A focus on these routes in the improvement of the bus network, policy PT6 could have an enhanced contribution to increased economic prosperity.</p>
Interaction between modes (IN1 – IN3)	<p>Integration of transport services should include as much integration as possible, taking account of local needs and differing needs of the various groups within communities. For example, the transport needs of a person accessing employment (travelling A to B) is likely to be different to a parent who is making several trips within their day (travelling A-B-D-C-A). All user needs should be taken account of.</p> <p>This should be led by local authorities in partnership with operators and overseen by Ambition North Wales.</p>



7. Monitoring & Evaluation

The Guidance to Corporate Joint Committees on Regional Transport Plans³⁹ outlines that an IWBA should utilise an Integrated Well-being Appraisal Framework. This framework incorporates the four well-being ambitions in the Wales Transport Strategy (WTS) and the measures in the WTS Monitoring Framework, including modal shift and decarbonisation targets.

The NWRTP Monitoring and Evaluation Plan seeks to help demonstrate regional progress in achieving the national priorities and ambitions set out in the WTS. It details how the success of the NWRTP will be monitored, measured, and evaluated, considering the objectives set for transport and associated well-being outcomes. This will help to show the region's contribution to national decarbonisation and modal shift targets.

The Monitoring and Evaluation Plan includes a set of measures based on the WTS Monitoring Framework, adapted to the NWRTP's SMART and IWBA objectives. Each measure, designed from the IWBA Framework, is provided with baseline information and, where appropriate, sets targets for improvements over the Plan period up to 2030. For example, the plan aims to enable 30% or more of people in North Wales to work remotely by 2030, to support the national mode share target of 45% of journeys by walking, cycling, and public transport by 2040, to ensure at least 50% of motor vehicles and all public buses in North Wales are zero emission by 2035, and to increase the range of travel within 1 hour by public transport for at least 50% of households in North Wales by 2030, supporting access to key employment sites and regional centres.

The monitoring and evaluation measures also address the well-being objectives outlined in the Integrated Well-being Appraisal. These measures draw on the WTS Monitoring Framework and published baseline data from the Welsh Government and Transport for Wales. For example, to ensure that at least 50% of motor vehicles and all public buses in North Wales are zero emission by 2035, the monitoring and evaluation plan includes measures such as fleet composition (share of each mode by engine type). These measures are aligned with IWBA objectives 8 (supporting a transition toward a transport sector with reduced, including zero, carbon emissions and enhancing the resilience of transport infrastructure to withstand the effects of climate change), 9 (protecting and enhancing local air quality), 10 (reducing disturbance from transport-related noise and vibration to local communities), and 12 (creating an integrated transport system that facilitates the efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region).

Quarterly North Wales committee meetings will provide progress updates from local authority transport officers on the implementation of the Regional Transport Plan (including IWBA) and the Regional Transport Delivery Plan. These meetings will also consider any changing drivers for change and priorities, such as new strategic developments or unforeseen funding opportunities.

For more detailed information, please refer to the detailed Monitoring and Evaluation Plan that is submitted as part of the NWRTP.

³⁹ Regional transport plans: guidance for Corporate Joint Committee. Available online at <https://www.gov.wales/regional-transport-plans-guidance-corporate-joint-committees>



Appendix A

Review of plans, policies and sustainability objectives

Integrated Well-being Appraisal

Appendix A: Plans, Programmes and Sustainability Objectives Review

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1. Introduction

The North Wales RTP could be influenced in different ways by other existing plans, programmes and sustainability objectives set out in existing policy or laid down in legislation. It is important to understand the relationship between these policies and the North Wales RTP in order to maximise opportunities and address any conflicts or inconsistencies.

Schedule 2, Regulation 12(3), of The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (the SEA Regulations) require the following in relation to the relevant plans and programmes to be considered:

“1. An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes...”

5. The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation”.

The North Wales Regional Transport Plan (RTP) will set the policies for implementing the existing national-scale Wales Transport Strategy (WTS) within the North Wales Region. The RTP must therefore be consistent with the WTS and support its vision and ambitions.

The WTS, and the plans, programmes and environmental objectives identified in relation to the WTS, have therefore been identified as the key top level strategies which must be taken into account.

It is considered that all the national, UK or international plans, programmes and protection objectives identified for the WTS are also applicable to the North Wales RTS, and so have been included in the list of relevant plans and programmes below. A gap analysis has been undertaken to identify any new or previously unidentified national, UK or international-scale documents published since the WTS Sustainability Appraisal was undertaken.

The second part of this review focuses on the plans, programmes and protection objectives specifically within the North Wales Region, which weren't generally included in the national-scale IWBA for the WTS.

The review of plans, programmes and sustainability protection objectives aims to inform the Integrated Sustainability Appraisal by identifying key external documents that contain direction on sustainability issues. More information on the role is explained and a summary for each topic is provided in Section 4 of the main Integrated Well-being Appraisal - Scoping Report.

Sections 0 to 1.5 below list all of the identified PPO. The contents and main sustainability objectives of the most pertinent documents, which are identified in underlined text within Sections 1.2 to 1.6, are then included in the following tables:

- Table A.1 International plans, programmes and sustainability objectives
- Table A.2 National (UK and Wales) plans, programmes and sustainability objectives
- Table A.3 Regional plans, programmes and sustainability objectives
- Table A.4 Local plans, programmes and sustainability objectives



1.1 List of International Plans, Programmes, and Sustainability Objectives

The following international plans, programmes and sustainability objectives have been reviewed:

- UNESCO (1971) The Ramsar Convention on Wetlands (1971)
- UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural Heritage
- UNESCO (1973) Convention on International Trade in Endangered Species of Wild Fauna and Flora
- UNESCO (1979) Geneva Convention on Long Range Transboundary Air Pollution
- United Nations (1979) The Convention on the Conservation of Migratory Species of Wild Animals, also known as the Convention on Migratory Species (CMS) or the Bonn Convention
- United Nations (1989) UN convention on the Rights of the Child 1989
- United Nations (1989) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- United Nations (1992) The Rio Convention on Biological Diversity
- United Nations (1992) The Rio Declaration on Environment and Development
- United Nations (1994) The United Nations Framework Convention on Climate Change
- United Nations (1997) Kyoto Protocol to the UN Framework Convention on Climate Change
- United Nations (2002) The World Summit on Sustainable Development (Political Declaration and Implementation Plan)
- United Nations (2006) Convention on the Rights of Persons with Disabilities
- United Nations (2009) The Copenhagen Accord
- United Nations (2010) Cancun Adaptation Framework
- United Nations (2015) the 2030 Agenda for Sustainable Development (setting out the 17 Sustainable Development Goals)
- United Nations (2016) Paris Agreement
- United Nations (2016) Committee on the Rights of the Child Recommendations report
- United Nations (2019) The PEP Partnerships (in relation to the Transport, Health and Environment Pan European Programme (THE PEP), established in 2002)
- United Nations, World Health Organisation and United Nations Economic Commission for Europe (2017) Cycling and Green Jobs
- United Nations Economic Commission for Europe (UNECE) (1998) The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, known as The Aarhus Convention
- World Health Organization (1999) Guidelines for Community Noise
- World Health Organisation (2004) Children's Environment and Health Action Plan for Europe

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- World Health Organisation (2013) Health 2020: A European policy framework supporting action across government and society for health and well-being
 - World Health Organisation (2014) Developing National Action Plans on Transport, Health and Environment
 - World Health Organisation (2018) Making THE (Transport, Health and Environment) Link: Transport, Health and Environment Pan-European Programme and the Sustainable Development Goals
 - World Health Organisation (2018): Healthy Environments for Healthier People
 - World Health Organisation (2021): Sustainable development in Wales and other regions in Europe: achieving health and equity for present and future generations

1.2 List of European Plans, Programmes and Sustainability Objectives

The following European plans, programmes and sustainability objectives have been reviewed:

- Council of Europe (1981) Convention on the Conservation of European Wildlife and Natural Habitats - The Bern Convention
- Council of Europe (1992) European Convention on the Protection of the Archaeological Heritage
- Council of Europe (2000) European Landscape Convention
- European Council (2013) Seventh EU Environmental Action Plan (EAP) (2013-2020)
- European Commission (2006) Groundwater Directive 2006/118/EC
- European Commission (1992) EU Directive on the Conservation of Natural Habitats and Wild Fauna and Flora - The Habitats Directive 92/43/EEC
- European Commission (1999) European Spatial Development Perspective (ESDP) (97/150/EC)
- European Commission (2001) National Emissions Ceiling Directive 2001/81/EC
- European Commission (2002) Environmental Noise Directive (END) 2002/49/EC
- European Commission (2003) Public Sector Information Directive (PSI) 2003/98/EC
- European Commission (2004) Environmental Liability Directive 2004/35/EC
- European Commission (2005) EU Thematic Strategy on Air Quality
- European Commission (2006) Sustainable Development Strategy
- European Commission (2006) Action Plan on Biodiversity
- European Commission (2007) Together for Health - A Strategic Approach for the EU 2008-2013
- European Commission (2007) The Integrated Climate and Energy Package
- European Commission (2007) Green Paper: Towards A New Culture for Urban Mobility
- European Commission (2007) The Floods Directive 2007/60/EC



- European Commission (2008) Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC
- Framework Fourth Daughter Directive 2004/107/EC
- European Commission (2008) Environmental Quality Standards Directive 2008/105/EC
- European Commission (2009) Review of the EU Sustainable Development Strategy European Commission (2009)
- European Commission (2009) The Birds Directive 2009/147/EC
- European Commission (2009) Renewable Energy Directive 2009/8/EC
- European Commission (2009) Promotion of Clean and Energy – Efficient Road Transport Vehicles Directive 2009/33/EC
- European Commission (2009) Action Plan on Urban Mobility
- European Commission (2009) White Paper: A Sustainable Future for Transport
- European Commission (2010) Industrial Emissions Directive (integrated pollution prevention and control) 2010/75/EU
- European Commission (2010) Europe 2020: A strategy for smart, sustainable and inclusive growth
- European Commission (2010) Energy 2020 - A Strategy for Competitive, Sustainable and Secure Energy
- European Commission (2011) A Roadmap for Moving to a Competitive Low Carbon Economy in 2050
- European Commission (2011) Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system
- European Commission (2012) Energy Efficiency Directive (2012/27/EU)
- European Commission (2013) Strategy on Adaptation to Climate Change
- European Commission (2013) Towards Social Investment for Growth and Cohesion 2014-2020
- European Commission (2013) Seventh Environmental Action Programme to 2020 ‘Living well, within the limits of our planet’
- European Commission (2014) 2030 Policy Framework for Climate and Energy
- European Commission (2015) An Aviation Strategy for Europe
- European Commission (2016) A European Strategy for Low – Emission Mobility
- European Commission (2017) Strategic Plan 2016 to 2020 – Mobility and Transport
- European Commission (2020) EU Biodiversity Strategy for 2030
- European Union (2001) SEA Directive (2001/42/EC)
- European Union (2005) Emissions Trading Scheme (EU ETS)

- European Union (2014) Environmental Impact Assessment Directive 2014/52/EU amending Directive 2011/92/EU

1.3 List of UK Plans, Programmes and Sustainability Objectives

The following UK wide plans, programmes and sustainability objectives have been reviewed:

- The Department for Business, Innovation and Skills (BIS) (2010) Local Growth: Realising Every Place's Potential (Local Growth White Paper)
- Committee on Climate Change (2017) UK Climate Change Risk Assessment 2017 Evidence Report
- Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (in Wales, this has been replaced by the Clean Air Plan published in 2020)
- Defra (2007) Conserving Biodiversity the UK Approach 2007
- Defra (2010) Air Pollution: Action in a Changing Climate
- Defra (2010) Adapting to Coastal Change: Developing a Policy Framework
- Defra (2011) Air Quality Plans for the Achievement of EU Air Quality Limit Values for Nitrogen Dioxide (NO₂) in the UK: List of UK and National Measures
- Defra (2011) The Natural Choice: Securing the Value of Nature (Natural Environment White Paper) Defra (2011) Mainstreaming Sustainable Development
- Defra (2012) UK Climate Change Risk Assessment: Government Report
- Defra (2023) Third National Adaptation Programme (NAP3), setting out the actions that government and others will take to adapt to the impacts of climate change from 2023 to 2028
- Defra and Department for Transport (2017) Air Quality plan for NO₂ in the UK Defra (2017)
- The National Adaptation Programme: Making the Country Resilient to a Changing Climate
- DECC (2009) UK Ports for the Offshore Wind Industry: Time to Act
- DECC (2011) Carbon Plan: Delivering our Low Carbon Future
- DECC (2011) UK Renewable Energy Roadmap
- DECC (2014) UK National Energy Efficiency Action Plan
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2018) Coastal communities (How government is helping coastal communities flourish as places to live, work and visit)
- Department for Culture, Media & Sport (2007) Heritage Protection for the 21st Century
- Department for Culture, Media & Sport (2013) Scheduled Monuments & Nationally Important but Non-Scheduled Monuments
- Department for Transport (2007) Ports Policy Review Interim Report
- Department for Transport (2008) Delivering a Sustainable Transport System



- Department for Transport (2012) National Policy Statement for Ports (currently under review as of March 2023)
- Department for Transport (2016) Rail Freight Strategy
- Department for Transport (2017) Transport Investment Strategy – Moving Britain Forward
- Department for Transport (2017) Transport Infrastructure Efficiency Strategy
- Department for Transport (2017) Connecting People: A Strategic Vision for Rail
- Department for Transport (2017) Cycling and Walking Investment Strategy
- Department for Transport (2018) Aviation 2050: The future of UK Aviation
- Department for Transport (2018) The Inclusive Transport Strategy: Achieving Equal Access for Disabled People
- Department for Transport (2019) Future of Mobility: Urban Strategy
- Department for Transport (2019) Clean Maritime Plan: Maritime 2050
- Department for Transport (2019) Port Air Quality Strategies
- Department for Transport (2020) Decarbonising Transport: Setting the Challenge
- Defra, Scottish Government, Welsh Government (2008) The Invasive and Non-Native Species Framework Strategy for Great Britain
- Environment Agency (2010) Managing the Environment in a Changing Climate
- Environment Agency (2013) Groundwater Protection Policy and Practice (GP3)
- Health Protection Agency (2007) Children’s Environment and Health Action Plan
- Health Protection Agency (2008) Health Effects of Climate Change in the UK 2008 - An update of the Department of Health report 2001/2002
- HM Government (1949) National Parks and Access to the Countryside Act 1949
- HM Government (1967) Forestry Act 1967
- HM Government (1973) The Protection of Wrecks Act 1973
- HM Government (1979) Ancient Monuments and Archaeological Areas Act 1979
- HM Government (1981) Wildlife and Countryside Act
- HM Government (1986) Agriculture Act (with numerous revisions) 1986
- HM Government (1990) Environmental Protection Act
- HM Government (1990) Planning (Listed Buildings and Conservation Areas) Act 1990
- HM Government (1996) The Treasure Act 1996
- HM Government (1995) Environment Act 1995
- HM Government (2000) Transport Act 2000
- HM Government (2000) Countryside and Rights of Way Act 2000



- HM Government (2002) The National Heritage Act 2002
- HM Government (2006) The Stern Review: The Economics of Climate Change
- HM Government (2006) Government of Wales Act 2006
- HM Government (2006) Transport (Wales) Act 2006
- HM Government (2006) Natural Environment and Rural Communities Act 2006
- HM Government (2006) Commons Act 2006
- HM Government (2007) Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended 2010)
- HM Government (2008) Climate Change Act 2008
- HM Government (2008) The Energy Act 2008
- HM Government (2009) The Climate Change Act 2008 (2020 Target, Credit Limit and Definitions) Order 2009
- HM Government (2009) Flood Risk Regulations 2009
- HM Government (2009) The Marine and Coastal Access Act 2009
- HM Government (2010) Flood and Water Management Act 2010
- HM Government (2010) The Air Quality Standards Regulations
- HM Government (2010) The Equality Act 2010
- HM Government (2010) Marine Strategy Framework Directive - putting in place the legal framework for implementation
- HM Government (2010) Conservation of Habitats & Species Regulations 2010 (as amended 2011)
- HM Government (2010) Marine Strategy Regulations 2010
- HM Government (2013) Aviation Policy Framework
- HM Government (2015) Ozone-Depleting Substances Regulations 2015
- HM Government (2016) Environmental Permitting (England and Wales) Regulations 2016
- HM Government (2017) The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- HM Government (2017) Industrial Strategy: Building a Britain fit for the Future
- HM Government (2017) Air quality plan for nitrogen dioxide (NO2) in UK (2017)
- HM Government (2017) Clean Growth Strategy
- HM Government (2017) Wales Act 2017
- HM Government (2017) The Conservation of Habitats and Species Regulations 2017
- HM Government (2018) The Environmental Permitting (England and Wales) (Amendment) Regulations 2018



- HM Government (2018) The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy
- HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment
- HM Government (2019) Clean Air Strategy 2019
- HM Government, NI Executive, Scottish Government, Welsh Government (2011) UK Marine Policy Statement
- HM Government (2020) Road Investment Strategy 2 (RIS2): 2020 to 2025
- HM Government (2021) Environment Act 2021
- HM Government (2021) Preparing the third road investment strategy
- HM Government (2021) Net Zero Strategy: Build Back Greener
- HM Treasury (2011) UK Plan for Growth
- HM Treasury (2014) National Infrastructure Plan
- HM Treasury (2021) Build Back Better: our plan for growth
- House of Commons (2016) Regional Airports
- Joint Nature Conservation Committee and Defra (2012) UK Post-2010 Biodiversity Framework
- Natural England and JNCC (2011) Marine Conservation Zone (MCZ) Project
- NERC (2010) Marine Environmental Mapping Programme (MAREMAP)
- Network Rail (2023) England and Wales Strategic Business Plan Control Period 7
- Network Rail Long-Term Planning Process documents
- Sustainable Development Commission (2010) Sustainable Development: The Key to Tackling Health Inequalities
- UK Marine Monitoring and Assessment Strategy (2010) Charting Progress 2: The State of UK Seas
- UK National Ecosystem Assessment (2011) UK National Ecosystem Assessment: Understanding Nature's Value to Society

1.4 National (Wales) Plans and Programmes

The following national (Wales) plans, programmes and sustainability objectives have been reviewed:

- Chwarae Teg (2019) Gender Equality: A Roadmap for Wales
- Climate Change Committee (2017) UK Climate Change Risk Assessment 2017 Evidence Report, Summary for Wales
- Climate Change Committee (2017) Building a low-carbon economy in Wales – Setting Welsh carbon targets
- Climate Change Committee (2020) The path to Net Zero and progress on reducing emissions in Wales



- Climate Change Committee (2023) Adaptation and the nature emergency
- Climate Change Committee (2023) Adaptation and social justice
- Climate Change Committee (2023) Adaptation and decarbonisation
- Climate Change Committee (2023) Adapting to Climate Change – Progress in Wales
- Countryside Council for Wales (now Natural Resources Wales) (2001) Register of Landscapes of Historic Interest
- Countryside Council for Wales (now Natural Resources Wales) (2015) National Seascape Assessment for Wales, LUC, NRW
- Joint Nature Conservation Committee (ongoing) Geological Conservation Review
- National Assembly for Wales (2009) Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009
- National Assembly for Wales (2010) The Air Quality Standards (Wales) Regulations 2010
- National Assembly for Wales (2011) Welsh Language (Wales) Measure 2011
- National Assembly for Wales (2011) Rights of Children and Young Persons (Wales) Measure 2011
- National Assembly for Wales (2012) Contaminated Land (Wales) (Amendment) Regulations 2012
- National Assembly for Wales (2014) Social Services and Well-being (Wales) Act 2014
- National Assembly for Wales (2015) Planning (Wales) Act 2015
- National Assembly for Wales (2015) Well-being of Future Generations (Wales) Act 2015
- National Assembly for Wales (2016) Environment (Wales) Act 2016
- National Assembly for Wales (2016) Historic Environment (Wales) Act 2016
- National Assembly for Wales (2016) Public Health (Wales) Bill
- National Assembly for Wales (2019) The Future Development of Transport for Wales
- Natural Resources Wales (ongoing) LANDMAP Programme
- Natural Resources Wales (2015) LIFE Natura 2000 Programme for Wales
- Natural Resources Wales (2015) Natural Resources Policy Statement
- Natural Resources Wales (2016) State of Natural Resources Report (SoNaRR)
- Natural Resources Wales (2018) Vital nature: Making the connections between biodiversity and the people and places of Wales: NRW's strategic steer for biodiversity to 2022
- Natural Resources Wales (2017) Marine Area Statement
- Natural Resources Wales (2020) The National Peatland Action Programme 2020-2025
- Natural Resources Wales: Our corporate plan to 2030-- Nature and People Thriving Together
- NHS Wales (2011) Together for Health



- Public Health Wales (2015) A Healthier, Happier and Fairer Wales
- Sustainable Development Commission (2009) Low Carbon Wales
- Wales Council for Voluntary Action (2016) Shape Your Future – future trends: Implications for the third sector in Wales
- Welsh Assembly Government (2007) One Wales – A Progressive Agenda for the Government of Wales
- Welsh Assembly Government (2008) One Wales: Connecting the Nation
- Welsh Assembly Government (2008) Welsh Coastal Tourism Strategy
- Welsh Assembly Government (2009) Getting On Together – a Community Cohesion Strategy for Wales
- Welsh Assembly Government (2009) Capturing the Potential: A Green Jobs Strategy for Wales
- Welsh Assembly Government (2009) Rural Health Plan
- Welsh Assembly Government (2010) Improving Lives and Communities – Homes in Wales
- Welsh Assembly Government (2010) Setting the Direction: Primary & Community Services Strategic Delivery Programme
- Welsh Assembly Government (2010) A Major Events Strategy for Wales 2010 – 2020
- Wales Biodiversity Partnership (2010) Wales Biodiversity Framework
- Welsh Government (2006) Play Policy Implementation Plan
- Welsh Government (2006) Environment Strategy for Wales
- Welsh Government (2007) Coastal Access Improvement Programme
- Welsh Government (2007) Making the Most of Wales's Coast: The Integrated Coastal Zone Management Strategy for Wales
- Welsh Government (2008) Wales Transport Strategy
- Welsh Government (2008) People, Places, Future – The Wales Spatial Plan
- Welsh Government (2009) One Wales: One Planet, A New Sustainable Development Scheme for Wales Sustainable Development Scheme
- Welsh Government (2009) Living Well Living Independent Lives
- Welsh Government (2010) Economic Renewal: A New Direction
- Welsh Government (2010) Valuing the Welsh Historic Environment
- Welsh Government (2010) Low Carbon Revolution – the Welsh Government Energy Policy Statement
- Welsh Government (2010) Fulfilled Lives, Supportive Communities
- Welsh Government (2011) Policy Statement: Preparing for a Changing Climate
- Welsh Government (2011) Rural Development Plan for Wales (2014-2020)




- Welsh Government (2011) Welsh Language (Wales) Measure 2011
- Welsh Government (2012) Working Differently – Working Together
- Welsh Government (2011) Preparing Wales for Climate Change: Adaptation Delivery Plan
- Welsh Government (2012) Energy Wales: A Low Carbon Transition
- Welsh Government (2012) Sustaining a Living Wales: A Green Paper on a New Approach to Natural Resource Management in Wales
- Welsh Government (2012) Wales Infrastructure Investment Plan
- Welsh Government (2013) Partnership for Growth: The Welsh Government Strategy for Tourism 2013 – 2020
- Welsh Government (2013) National Flood and Coastal Erosion Strategy for Wales
- Welsh Government (2013) The Historic Environment Strategy for Wales
- Welsh Government (2013) Vibrant and Viable Places New Regeneration Framework
- Welsh Government (2013) The Strategy for Older People in Wales 2013-2023
- Welsh Government (2013) Active Travel (Wales) Act 2013
- Welsh Government (2014) Declaration of Rights for Older People
- Welsh Government (2015) Water Strategy for Wales
- Welsh Government (2015) Nature Based Climate Action Memorandum of Understanding
- Welsh Government (2015) Strategy for Tourism 2013 – 2020: Framework Action Plan Year 2
- Welsh Government (2016) Active Travel Action Plan for Wales
- Welsh Government (2016) Rolling out our Metro
- Welsh Government (2017) Natural Resources Policy
- Welsh Government (2017) Prosperity for All: The National Strategy
- Welsh Government (2017) Prosperity for All: Economic Action Plan
- Welsh Government (2017) Taking Wales Forward 2016 – 2021
- Welsh Government (2017) Welsh Transport Appraisal Guidance
- Welsh Government (2017) Future Trends Report
- Welsh Government (2017) Moving North Wales Forward: Our Vision for North Wales and the North East Wales Metro
- Welsh Government (2017) Cymraeg 2050: A Million Welsh Speakers
- Welsh Government (2018) Clean Air Zone Framework for Wales
- Welsh Government (2018) Improving Public Transport (White Paper)



- Welsh Government (2018) Noise and Soundscape Action Plan for Wales 2018-2023 (a new Soundscape Action Plan for the period 2023-2028 is out for consultation at the time of this review) (dated June 2023)
- Welsh Government (2018) The Climate Change (Carbon Budgets) (Wales) Regulations 2018
- Welsh Government (2018) Woodlands for Wales Strategy
- Welsh Government (2019) Climate Emergency Declaration
- Welsh Government (2019) Healthy Weight: Healthy Wales
- Welsh Government (2019) A railway for Wales: the case for devolution
- Welsh Government (2019) A Railway for Wales: Meeting the needs of future generations
- Welsh Government (2019) Public Transport (Wales) Bill: Draft Regulatory Impact Assessment
- Welsh Government (2019) National Transport Finance Plan 2018
- Welsh Government (2019) International Strategy – Draft for Consultation
- Welsh Government (2019) Prosperity for All: A Low Carbon Wales
- Welsh Government (2019) Prosperity for All: A Climate Conscious Wales
- Welsh Government (2019) Welsh National Marine Plan
- Welsh Government (2020) The Nature Recovery Action Plan for Wales 2020 – 21
- Welsh Government (2020) Connected Communities
- Welsh Government (2020) National Strategy for Flood and Coastal Erosion Risk Management in Wales
- Welsh Government (2020) Welcome to Wales: Priorities for the visitor economy 2020-2025
- Welsh Government (2020) The Clean Air Plan for Wales; Healthy Air, Healthy Wales (updated 2023)
- Welsh Government (2023) Review of the National Air Quality Strategy
- Welsh Government (2021) Wales Infrastructure Investment Strategy 2021
- Welsh Government (2021) Active Travel Act Guidance
- Welsh Government (2021) Llwybr Newydd: the Wales transport strategy 2021
- Welsh Government (2021) Future Wales: the national plan 2040 (National Development Framework, setting the direction for development in Wales to 2040).
- Welsh Government (2021) Electric vehicle charging: strategy and reports
- Welsh Government (2021) A Healthier Wales: our Plan for Health and Social Care
- Welsh Government (2021) The Climate Change (Wales) Regulations 2021: integrated impact assessment
- Welsh Government (2021) Net Zero Wales Carbon Budget 2 (2021 to 2025)



- Welsh Government (2021) The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021
- Welsh Government (2021) The Climate Change (Carbon Budgets) (Wales) (Amendment) Regulations 2021
- Welsh Government (2022) Bws Cymru: connecting people with places
- Welsh Government (2022) One network, one timetable, one ticket: planning buses as a public service for Wales (Consultation White Paper)
- Welsh Government (Transport for Wales) (2023) National transport delivery plan 2022 to 2027
- Welsh Government (2023) Welsh Government response to the Roads Review (The Welsh Government's response to a report advising on current road projects and how to consider future projects).
- Welsh Government (2023) Draft Noise and Soundscape Action Plan for Wales 2023-2028 (national strategy on soundscapes) (consultation document June 2023)
- Welsh Government (2024) Planning Policy Wales (Edition 12)
- Welsh Government (2024) Net Zero Wales (Our second emissions reduction plan for Carbon Budget 2 (2021 to 2025), setting the foundations to make Wales net zero by 2050).
- Welsh Government (2024) Sustainable transport in rural areas: guidance for regional transport planning
- Welsh Government (2024) Road safety strategy (consultation document)
- Welsh Government/ NHS (2016) Measuring the health and well-being of a nation: Public Health Outcomes Framework for Wales
- Welsh Government (2009) Technical Advice Note (TAN) 5: Nature Conservation and Planning
- Welsh Government (2010) Technical Advice Note (TAN) 6: Planning for Sustainable Rural Communities
- Welsh Government (2005) Technical Advice Note (TAN) 8: Renewable Energy
- Welsh Government (1997) Technical Advice Note (TAN) 10: Tree Preservation Orders
- Welsh Government (1997) Technical Advice Note (TAN) 11: Noise
- Welsh Government (2016) Technical Advice Note (TAN) 12: Design
- Welsh Government (1997) Technical Advice Note (TAN) 13: Tourism
- Welsh Government (1998) Technical Advice Note (TAN) 14: Coastal Planning
- Welsh Government (2004) Technical Advice Note (TAN) 15: Development and Flood Risk
- Welsh Government (2007) Technical Advice Note (TAN) 18: Transport
- Welsh Government (2013) Technical Advice Note (TAN) 20: Planning and the Welsh Language
- Welsh Government (2014) Technical Advice Note (TAN) 23: Economic Development
- Welsh Government (2017) Technical Advice Note (TAN) 21: Waste

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- [Welsh Government \(2017\) Technical Advice Note \(TAN\) 24: The Historic Environment](#)
 - [Welsh Government \(2020\) Building Better Places](#)
 - [Welsh Government \(2023\) Town centres: position statement and Town centre first policies](#)
 - [Welsh Government \(2023\) Noise and Soundscape Plan for Wales 2023-2028](#)
 - [Welsh Government: Wales We Want National Conversation](#)
 - [Welsh Water \(2008\) Surface Water Management Strategy](#)
 - [Transport for Wales \(TfW\) Geospatial and Strategic Transport Analysis unit \(G-STAT\).](#)
 - [Welsh Assembly Government \(2008\) The Wales Freight Strategy](#)
 - [Welsh Assembly Government \(2010\) Towards Zero Waste One Wales: One Planet \(The Overarching Waste Strategy Document for Wales\)](#)
 - [Natural Resources Wales Flood risk management plan 2023 to 2029: National Overview](#)
 - [Transport for Wales Climate adaptation and resilience plan](#)

1.5 Regional and local plans, programmes and protection objectives

The following regional plans, programmes and sustainability objectives have been reviewed:

- [Natural Resources Wales: Forest Resource Plans for North West Wales and North East Wales \(for named forests\)](#)
- [Natural Resources Wales North East Wales Area Statement and North West Wales Area Statement](#)
- [Welsh Government \(2022\) North Wales Regional Economic Framework](#)
- [North Wales Economic Ambition Board \(2016\) A Growth Vision for the Economy of North Wales](#)
- [Natural Resources Wales Flood Risk Management Plan: North East Wales Place](#)
- [Natural Resources Wales Flood Risk Management Plan: North West Wales Place](#)
- [North Wales Joint Local Transport Plan 2015 \(adopted 2015\)](#)
- [Llyn Peninsula Area of Outstanding Natural Beauty \(AONB\) Management plan 2015-2020](#)
- [Anglesey AONB Management Plan 2023-2028](#)
- [Clwydian Range and Dee Valley draft AONB Management Plan 2020-2025](#)
- [Ambition North Wales \(The North Wales Economic Ambition Board\) \(2017\) North Wales Growth Deal Bid \(The Growth Deal agreement was signed in December 2020\).](#)
- [Ambition North Wales \(ANW\) Annual Report \(2022 – 2023\)](#)
- [North Wales Corporate Joint Committee \(CJC\) \(ongoing\) emerging work on the North Wales Strategic Development Plan \(SDP\)](#)

Existing and new Local Development Plans (LDPs) within the North Wales Region:



- Isle of Anglesey County Council (2017) Anglesey and Gwynedd Joint LDP (adopted July 2017)
- Isle of Anglesey County Council (2022) Replacement Joint Local Development Plan (Review Report)
- Conwy County Borough Council (2013) Conwy Local Development Plan 2007-2022 (adopted October 2013) (note that they are currently in the process of writing a new plan to go out to consultation).
- Denbighshire County Council (2013) Denbighshire County Council Local Development Plan 2006 – 2021 (Adopted June 2013) (The Deposit Plan for the Replacement LDP 2018 to 2033 is currently being developed)
- Flintshire County Council (2023) Flintshire Local Development Plan 2015-2030 (Adopted January 2023)
- Snowdonia National Park Authority (2016) Eryri Local Development Plan 2016-2031 (Adopted) (a review is currently underway)
- Wrexham County Borough Council (2023) Wrexham Local Development Plan 2 (LDP2) 2013 to 2028 (adopted December 2023)
- Wrexham County Borough Council (2005) Wrexham Unitary Development Plan 1996 - 2011

Local Authority well-being plans within the North Wales Region:

- Gwynedd and Anglesey Public Services Board (2022) Gwynedd and Anglesey Local Well-being Plan 2023-2028
- Flintshire and Wrexham Public Services Board () Our Well-Being Plan 2023 – 2028
- Conwy & Denbighshire Public Services Board (2022) Conwy Local Well-being Plan (2023-2028)

Plans of the Anglesey Freeport

- Plans for new nuclear developments at Trawsfynydd and Wylfa (note that the decision by UK Government on the future of nuclear development is still pending at the time of review)
- Plans for a new National Park in North Wales around the existing Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) and potentially down into north Powys to include landmarks such as the Lake Vyrnwy reservoir.
- Plans of the Wrexham and Flintshire Investment Zone
- Isle of Anglesey County Council (2019) North Anglesey Economic Regeneration Plan (April 2019)
- Isle of Anglesey County Council (2021) Corporate Biodiversity Plan 2021-2022
- Isle of Anglesey County Council (2022) Towards Net Zero Plan March 2022 – March 2025
- Isle of Anglesey County Council (2023) Draft Destination Management Plan 2023-2028
- North Wales Transport Commission (2023) Written Statement: North Wales Transport Commission Final Reports
- North Wales Transport Commission (2023) Improving the Resilience of Connections Across the Menai Strait



2. International plans, programmes and protection objectives

Table A.1 International plans, programmes and sustainability objectives

Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
International			
Convention Concerning the Protection of the World Cultural and Natural Heritage	The Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List. The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. Article 5 commits State Parties to integrating the protection of cultural and natural heritage into comprehensive planning programmes and to take the appropriate measures for the protection, conservation and rehabilitation of cultural and natural heritage.	The North Wales RTP should be developed to ensure that it supports the protection and preservation of the four UNESCO World Heritage sites within North Wales. The RTP should strive to align with the overarching principle set out in Article 4; ensuring the identification, protection, conservation, presentation and transmission of cultural and natural heritage.	Cultural heritage



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
Rio Convention on Biological Diversity	The Rio Convention on Biological Diversity (CBD) is the international legal instrument for “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources” that has been ratified by 196 nations. Its overall objective is to encourage actions, which will lead to a sustainable future. The CBD covers biodiversity at all levels: ecosystems, species and genetic resources.	The North Wales RTP should conserve and enhance biological diversity through avoiding negative impacts to habitat and species and delivering biodiversity net gain.	Biodiversity
Convention on the Conservation of Migratory Species of Wild Animals	The Convention was adopted in 1979 and came into force in 1983. It requires Parties to work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species.	The North Wales RTP should conserve and enhance migratory species and their habitats. This includes where species may be impacted by the RTP where these are located out with the boundaries of the RTP.	Biodiversity
Convention on Wetlands of International Importance	The Convention is an intergovernmental treaty that aims to conserve wetlands through local and national action and international cooperation. Wetlands of International Importance (Ramsar Sites) declared under the Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 are considered European designated sites as a matter of Government Policy.	The North Wales RTP should conserve and enhance the Ramsar sites within the region and avoid both direct and indirect adverse effects to these sites.	Biodiversity



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
United Nations (2016) Paris Agreement	<p>The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on 12 December 2015. It entered into force on 4 November 2016.</p> <p>Its overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”</p> <p>The agreement sets long-term goals to guide all nations: Substantially reduce global greenhouse gas emissions to limit the global temperature increase in this century to 2 degrees Celsius while pursuing efforts to limit the increase even further to 1.5 degrees; Review countries’ commitments every five years; Provide financing to developing countries to mitigate climate change, strengthen resilience and enhance abilities to adapt to climate impacts</p>	<p>The North Wales RTP should support the commitments in the Paris Agreement through helping to mitigate the effects of climate change. The scheme should also look to reduce carbon emissions, such as through the use of nature-based solutions. This will help support the commitments of the Paris Agreement, including reaching net zero by 2050.</p>	<p>Climatic factors</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
UN Sustainable Development Goals (2015)	<p>The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.</p> <p>The 17 SDGs are Integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. The SDGs are:</p> <p>SDG 1: No Poverty SDG 2: Zero Hunger SDG 3: Good Health and Well-Being SDG 4: Quality Education SDG 5: Gender Equality SDG 6: Clean Water and Sanitation SDG 7: Affordable and Clean Energy SDG 8: Decent Work and Economic Growth SDG 9: Industry, Innovation and Infrastructure SDG 10: Reduce Inequalities SDG 11: Sustainable Cities and Communities SDG 12: Responsible Consumption and Production SDG 13: Climate Action SDG 14: Life Below Water SDG 15: Life on Land SDG 16: Peace, Justice and Strong Institutions SDG 17: Partnership for the Goals</p>	<p>The North Wales RTP should integrate the UN SDGs. This should include looking at the targets and indicators for each SDG and consider how to transpose these into key performance indicators at a local level. The RTP has the potential to support many of the SDGs, including:</p> <p>SDG 3 Good health and wellbeing through supporting active travel and modal shift away from more polluting modes</p> <p>SDG 8 Decent Work and Economic Growth through providing access to good quality jobs, regardless of where they live and supporting the growth of the economy across North Wales in urban and rural areas.</p> <p>SDG 9 Industry, Innovation and Infrastructure through designing and integrating new infrastructure.</p> <p>SDG 11 Sustainable cities and communities through connecting people to services, supporting economic development, promoting active travel and more sustainable travel options.</p> <p>SDG 13 Climate action through strengthening resilience and adaptive capacity to climate- related hazards and modal shift.</p> <p>SDG 15 Life on land through ensuring the integration of ecosystem and biodiversity values into national and local planning.</p>	<p>Population (communities), Human health, Biodiversity, Land use and landscape, Cultural heritage, Ground conditions (geology and soils), Water environment, Climatic factors, Air quality, Noise, Infrastructure, Transport, Resources and waste, Economy</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
WHO (2021) Sustainable development in Wales and other regions in Europe: achieving health and equity for present and future generations	The United Nations 2030 Agenda for Sustainable Development (2015), complemented by the WHO European policy framework and strategy for the 21 st century, Health 2020, represents a milestone for human and planetary development. This publication proposes ways of maximizing opportunities to implement these agendas at the national and regional levels across the WHO European Region. Through primarily the Welsh example, it aims to enhance understanding of the key role of regions in translating global priorities into effective policies and actions, providing practical examples. It maps the sustainable-development journey in Wales. It also identifies enablers, challenges and opportunities related to sustainable development in Wales.	<p>The North Wales RTP should maximise opportunities to implement these agendas and take account of the enablers, challenges and opportunities identified.</p> <p>The RTP should put health at the centre of the development.</p>	Human health
UNESCO (1973) Geneva Convention on Long Range Transboundary Air Pollution	The convention is intended to protect the human environment against air pollution and to gradually reduce and prevent air pollution, including long-range transboundary air pollution. It is implemented by the European Monitoring and Evaluation Programme (EMEP), directed by the United Nations Economic Commission for Europe (UNECE).	<p>The North Wales RTP should seek to incorporate measures to improve air quality such as promoting low carbon initiatives and sustainable transport modes. The RTP should maximise the ability of Wales's natural habitats to absorb pollutants and improve air quality.</p> <p>The RTP should seek to improve air quality through low carbon and emissions reduction initiatives and policies and must not prioritise economic development without consideration of ecosystems services.</p>	Air quality



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
WHO (2024) Sustainable behaviours for environment and health challenges: Behavioural and Cultural Insights policy brief	Behaviours are central to many environmental and health challenges, including actions by individuals, communities, commerce, industry and health service providers. Infrastructure, service and information provision, legislation, and regulation all play critical roles in enabling, supporting and promoting positive behaviours for a sustainable future. Behavioural and cultural insights (BCI) provide an approach to systematically understand behaviour and facilitate the changes needed to disrupt the negative impacts and promote positive environmental impacts on our health. This policy brief explores how a BCI approach can improve outcomes by increasing understanding of behavioural and cultural determinants, and by creating more evidence-based and cost-effective policies and interventions to address environment and health challenges.	The North Wales RTP should use the framework and tools provided: Consideration 1: Explore the drivers and barriers influencing specific environment and health (EH)-related behaviours. Consideration 2: Use person-centred and participatory methods to design interventions for advancing positive EH-related behaviours. Consideration 3: Use rigorous techniques to evaluate the feasibility and effectiveness of EH-related interventions. Consideration 4: Use BCI to maximize support for EH policies among decision-makers and the public Consideration 5: Use BCI to tackle misinformation and science denialism about climate change and the environment.	Human health
Cycling and Green Jobs (2017)	This study represents the first attempt to collect evidence from cities in the pan-European region on the number of cycling-related jobs, using a standardized approach, and highlights the role that green and healthy jobs can play.	The North Wales RTP should take account of the relevant policy recommendations: a) Integration of cycling into broader urban transport systems b) Monitoring cycling activity to inform future decision-making c) Effectively collecting and using information on the employment benefits of cycling d) Understanding the contribution of cycling to tourism e) Positioning cycling and a means of achieving multiple SDGs	Human health, Transport, Economy



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
WHO (1999) Guidelines for Community Noise	These guidelines document the adverse health effects of noise.	The North Wales RTP should aim to improve the physical and mental health and well-being of the affected population and reduce health inequalities.	Noise Human health
WHO (2018) Making THE (Transport, Health and Environment) Link: Transport, Health and Environment Pan-European Programme (THE PEP) and the Sustainable Development Goals	Transport plays an essential role in our societies and economies. It provides access to jobs, education, services, amenities and leisure, while contributing to economic growth, jobs and trade. At the same time, it has an impact on the environment and human health. Healthy and sustainable transport policies can make a major contribution to the attainment of many of the Sustainable Development Goals and fulfilment of the 2030 Agenda for Sustainable Development. Since 2002, the Transport, Health and Environment Pan-European Programme (THE PEP), jointly serviced by the WHO Regional Office for Europe and the United Nations Economic Commission for Europe, has provided a unique intersectoral policy platform for Member States, and other stakeholders active in the pan-European region, to collaborate to integrate environment and health considerations into transport policies, and improve the integration of transport and urban planning. This publication presents an analysis of how Member States, working through THE PEP, can advance the 2030 Agenda on multiple fronts; and provides examples of how THE PEP can help.	The North Wales RTP should be aligned to the priority goals of The Transport, Health and Environment Pan-European Programme (THE PEP) and take note of the link to the SDGs and targets. 1. contribute to sustainable economic development and stimulate job creation through investment in environment- and health-friendly transport; 2. manage sustainable mobility and promote a more efficient transport system; 3. reduce emissions of transport-related greenhouse gases, air pollutants and noise; 4. promote policies and actions conducive to healthy and safe modes of transport; 5. Integrate transport, health and environmental objectives into urban and spatial planning policies.	Population (communities), Human health, Climatic factors, Air quality, Transport, Economy
Convention on the Conservation of European Wildlife and Natural Habitats (ETS No. 104)	<p>The Convention aims to ensure conservation of wild flora and fauna species and their habitats. Special attention is given to endangered and vulnerable species, including endangered and vulnerable migratory species.</p> <p>Member parties are required to undertake appropriate measures to ensure the conservation of the habitats of the wild flora and fauna species. Such measures should be included in the Parties planning and development policies and pollution control, with particular attention to the conservation of wild flora and fauna.</p>	The North Wales RTP should conserve and enhance wild flora and fauna species and associated habitat. This includes endangered species.	Biodiversity



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
European Landscape Convention	<p>The European Landscape Convention (ELC) promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. It is open for signature by member states of the Council of Europe as well as European non-member states.</p> <p>The ELC requires “landscape to be integrated into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as any other policies with possible direct or indirect impacts on landscape”.</p>	<p>The North Wales RTP should integrate landscape protection, management and planning and recognise the importance of landscape as an essential part of a sustainable future. This may take the form of place-based green infrastructure, landscape objectives based on understanding of societal values, or climate change adaptation.</p> <p>The North Wales RTP should protect and enhance the local distinctiveness of our landscapes and the historic environment and its setting</p>	Land use and landscape



3. National plans, programmes and protection objectives

Table A.2 National (UK and Wales) plans, programmes and sustainability objectives

Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004	This legislation set out the need for sustainability appraisal and strategic environmental assessment in relation to plan development.	The North Wales RTP must be assessed in accordance with the requirements of the European SEA Directive (2001/42/EC) and the implementing regulations for Wales.	All topics
Welsh Government (2024) Net Zero Wales	<p>The second emissions reduction plan for Carbon Budget 2 (2021 to 2025) sets out the foundations to make Wales net zero by 2050. It includes a series of documents:</p> <ul style="list-style-type: none">• Welsh public sector carbon emissions 2023: net zero report• Welsh Government Net Zero strategic plan• 6 December 2022 Policy and strategy• Engagement approach around Climate Change 2022-26• Public Sector Net Zero data and recommendations• Net Zero Wales Carbon Budget 2 (2021 to 2025)• Net Zero Wales: sustainability appraisal• 27 October 2021 Impact assessment• Working together to reach net zero: all Wales plan• Team Wales - Tackling the Climate Emergency Together: infographic	The North Wales RTP must take account of and actively contribute towards the relevant policies and strategies set out within Net Zero Wales.	Climatic Factors
Welsh Government (2021) Net Zero Wales Carbon Budget 2 (2021 to 2025)	<p>This Net Zero Wales Plan represents outlines Wales's decarbonisation journey with a new net zero target. This Plan sets out 123 policies and proposals, alongside commitments and action across Wales. The policies are broadly set out under the following categories:</p> <ul style="list-style-type: none">• Across the UK• Electricity and heat generation• Transport• Residential buildings• Industry and business	The North Wales RTP should adhere to the policies set out in the Net Zero Wales Carbon Budget. In addition, it should take into account the Climate Change Commission's latest Risk Independent Assessment.	Biodiversity, Land use and landscape, Climatic factors, Infrastructure, Transport, Resources and waste, Economy.



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none"> • Agriculture • Land use, land use change & Forestry • Waste management • Public sector 		
HM Treasury (2021) Build Back Better: our plan for growth	Policy paper from HM Treasury published March 2021. A publication setting out the government's plans to support economic growth through significant investment in infrastructure, skills and innovation. In creating growth it also aims to drive levelling up of the whole of the UK, support the transition to Net Zero and support the vision for Global Britain.	The North Wales RTP should support the transition to net zero through implementing low carbon interventions, including nature based solutions. It should also support the levelling up agenda through supporting economic growth and targeting measures to support those who are most at risk and vulnerable.	Population (communities), Human health, Climatic Factors, Infrastructure, Transport, Economy.
HM Government (2017) Clean Air Strategy 2019	<p>This strategy sets out the comprehensive actions required across all parts of government and society to improve air quality. The strategy sets out how the government will:</p> <ul style="list-style-type: none"> • Protect the nation's health • Protect the environment • Secure clean growth and innovation • Reduce emissions from transport, homes, farming and industry • Monitor progress 	The North Wales RTP should aim to not only reduce pollutants, but also to improve air quality as much as possible, particularly where air quality is poor, thus using Air Quality Management Areas to support prioritisation of interventions.	Air Quality, Population (communities) and Human health
Clean Growth Strategy	This strategy sets out proposals for decarbonising all sectors of the UK economy through the 2020s. It explains how the whole country can benefit from low carbon opportunities, while meeting national and international commitments to tackle climate change.	The North Wales RTP should consider how to decarbonise transport and seek to boost the carbon sequestration and natural capital of the associated land.	Climatic factors, Population (communities), Human health Economy, Transport.
HM Government (2008) Climate Change Act 2008	The Climate Change Act 2008 commits the UK to reducing GHG emissions by 'at least 100% below the 1990 baseline year' (net zero Greenhouse Gas emissions) by 2050. The Climate Change Act also requires the UK government to produce a National Adaptation Programme (NAP), setting out actions for government and others to adapt to the challenges of climate change in England over a five-year period. The devolved administrations produce their own programmes and policies.	The North Wales RTP should consider the full risks from climate change to understand what the challenges and opportunities are in relation to the Plan. It should ensure that it can be achieved within the annual carbon budgets, given that these are aligned with the carbon glide path of the Paris Agreement and ensure net zero operations by 2050.	Climatic factors
Defra (2023) Climate change:	The National Adaptation Programme (NAP) sets the actions that government and others will take to adapt to the impacts	The North Wales RTP should help contribute to the actions and targets outlined in the NAP3.	Air quality, Biodiversity, Climatic



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
Third national adaptation programme (2023 to 2028)	of climate change in the UK. The NAP3 sets out the key actions for 2023 to 2028. This report forms part of the 5-yearly cycle of requirements laid down in the Climate Change Act 2008. The key actions are focused around protecting the natural environment, supporting business in adapting to climate change, adapting our infrastructure, protecting buildings and their surroundings, protecting public health and communities and mitigating international impacts on the UK.	This includes helping mitigate impacts to infrastructure from flooding and supporting restoration and enhancement of the natural environment to increase its resilience to the effects of climate change. For example through using nature-based solutions to help reduce society's vulnerability to climate risk and contribute to species recovery by providing more high-quality habitat for wildlife. The North Wales RTP should also help support health and wellbeing, and heritage actions outlined in the NAP, such as through providing green infrastructure that can help reduce overheating, and reducing flood risk of heritage assets.	factors, Cultural heritage, Economy, Land use and Landscape , Population (communities) and human health
HM Government (2000) Countryside and Rights of Way Act 2000	The Act deals with changes to access to the countryside. This includes open access land, Public Rights of Way, strengthening nature conservation measures and wildlife protection and Areas of Outstanding Natural Beauty.	Three AONBs are located within the North Wales Region. The North Wales RTP should ensure that it does not deter or detract from the natural beauty of the area and look to enhance this (additional information is provided for each AONB Management Plan within the table of regional and local policies).	Biodiversity, Infrastructure, Transport, Land use and landscape , Population (communities) and human health
HM Government (2010) Flood and Water Management Act 2010	The Act provides for better flood risk management for people, homes and businesses, whilst also addressing the threat of water scarcity and protecting the affordability of water drainage charges and protects water supplies to the consumer.	The North Wales RTP should comply with the requirements of the Act to help reduce risk of flooding to people, properties and infrastructure.	Population (communities), human health, Water environment
HM Government (2021) Net Zero Strategy: Build Back Greener	The UK Government's Net Zero Strategy sets out the Government's long-term plan to reduce greenhouse gas emissions to 1990 level and end the U's domestic contribution to man-made climate change by 2050. Four key principles set out the approach to achieving the target: 1. We will work with the grain of consumer choice 2. We will ensure the biggest polluters pay the most for the transition 3. We will ensure that the most vulnerable are protected through government support	The North Wales RTP should be committed to reducing greenhouse gas emissions. The RTP should particularly support the principle of protecting those that are most vulnerable to climate change.	Climatic factors. Population (communities) and human health



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>4. We will work with businesses to continue delivering deep cost reductions in low carbon tech</p> <p>The strategy sets out policies and proposals for future 5-yearly carbon budgets, the Nationally Determined Contribution and a vision for a decarbonised economy in 2050.</p> <p>Policies and proposals in the Net Zero Strategy include: trebling woodland creation rates in England, restoring 280,000 ha of peat and delivering more than 300 walking and cycling schemes.</p>		
Planning (Listed Buildings and Conservation Areas) Act 1990	<p>The Planning (Listed Buildings and Conservation Areas) Act is a UK Act of Parliament introduced in 1990 that changed laws relating to the granting of planning permission for building works, with a particular focus on listed buildings and conservation areas. It created special controls for the demolition, alteration or extension of buildings, objects or structures of particular architectural or historic interest, as well as conservation areas.</p> <p>In Wales, this Act has been amended by the Historic Environment (Wales) Act 2016.</p>	The North Wales RTP should be developed to ensure that it does not cause adverse impacts to listed buildings or conservation areas.	Cultural heritage
The Conservation of Habitats and Species Regulations 2017	<p>A plan or project may require an Appropriate Assessment, as set out in the Conservation of Habitats and Species Regulations 2017 (as amended), if it is considered likely to have significant effects on a site defined in the legislation, including candidate SACs, Sites of Community Importance, SACs, SPAs, Ramsar and any relevant Marine Sites.</p> <p>Regulation 63 of the Habitats Regulations 2017 states that any plan or project not directly connected with, or necessary to, the management of a European site, but which would be likely to have a significant effect on such a site, either individually or in combination with other plans or projects, must be subject to appropriate assessment of its implications for the European site in view of its conservation objectives.</p>	There is potential for the North Wales RTP to affect SAC, SPA, Ramsar and other designated sites. The North Wales RTP should therefore undertake a HRA screening and appropriate assessment. The IWBA will take account of the findings of an appropriate assessment.	Biodiversity, Water environment



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	Regulation 63 of the Habitats Regulations 2017 states that consent should only be granted for a plan or project once the relevant competent authority has ascertained that that it will not adversely affect the integrity of European sites.		
HM Government (2010) Equality Act 2010	The Equality Act 2010 legally protects people from discrimination in the workplace and in wider society, whilst increasing equality of opportunity. The Act sets out who is protected from discrimination (nine protected characteristics), the types of discrimination under the law and what action one can take if one feels unfairly discriminated against in a range of scenarios, for example, in relation to services, education, premises and employment. Section 149 of the Act sets out the Public Sector Equality Duty ('the Duty'). This requires that public bodies have due regard to the need to: Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited under the Act. Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.	The North Wales RTP will have due regard to the Public Sector Equality Duty identifying where any outcomes result in benefits or disbenefits that have disproportionate or differential impacts on protected characteristic groups within local communities.	Population (communities) and Human health
HM Government (2018) The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy	The Road to Zero Strategy sets out long-term ambitions and policies built around a core mission: to put the UK at the forefront of the design and manufacturing of zero emission vehicles and for all new cars and vans to be effectively zero emission by 2040.	The North Wales RTP must support the policies set out within the strategy.	Climatic factors, Transport.
Environment Act 2021	This UK law sets out the framework for environmental governance, waste and resource efficiency, air quality, water, nature and biodiversity. It establishes the Office for Environmental Protection, environmental targets, producer responsibility, storm overflows biodiversity gain and conservation.	The North Wales RTP must meet or exceed the requirements set out within the Act.	All topics



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment	<p>This 25 Year Environment Plan sets out government action to help the natural world regain and retain good health. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first.</p> <p>The plan commits to sustainable development, clean growth and increased resource efficiency.</p> <p>By adopting this Plan we will achieve:</p> <ol style="list-style-type: none"> 1. Clean air. 2. Clean and plentiful water. 3. Thriving plants and wildlife. 4. A reduced risk of harm from environmental hazards such as flooding and drought. 5. Using resources from nature more sustainably and efficiently. 6. Enhanced beauty, heritage and engagement with the natural environment. <p>In addition, we will manage pressures on the environment by:</p> <ol style="list-style-type: none"> 7. Mitigating and adapting to climate change. 8. Minimising waste. 9. Managing exposure to chemicals. 10. Enhancing biosecurity. 	The north Wales RTP must meet the objectives and policies set out within the 25 Year Environment Plan.	All topics
Welsh Government (2021) Llwybr Newydd: the Wales transport strategy 2021	<p>The new strategy sets out the vision for how the transport system can help to deliver the priorities for Wales, helping to put Wales on a pathway to creating a more prosperous, green and equal society. The vision is to create an accessible, sustainable and efficient transport system.</p> <p>These are the three headline priorities for the next five years.</p> <p>Priority 1: Bring services to people in order to reduce the need to travel;</p>	This is the primary policy of importance that will shape the North Wales RTP. It must actively support its strategic direction, objectives and priorities to deliver across different transport modes and sectors.	All topics



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>Priority 2: Allow people and goods to move easily from door to door by accessible, sustainable and efficient transport services and infrastructure;</p> <p>Priority 3: Encourage people to make the change to more sustainable transport.</p> <p>The short-term priorities are designed to contribute to the four long-term, well-being ambitions over the next twenty years. These ambitions show how Welsh Government wants transport to contribute to the wider Welsh Government ambitions and to the goals in the Well-being of Future Generations (Wales) Act 2015. The well-being ambitions are:</p> <ul style="list-style-type: none"> • Good for people and communities (including equality, health, and confidence and safety) • Good for the environment (including greenhouse gas emissions, Biodiversity and ecosystem resilience and waste) • Good for the economy and places in Wales (including Cohesive communities, Innovation, The distribution of goods, Affordability) • Good for culture and the Welsh language (including The Welsh language, Arts, sport and culture and Historic environment) 		
Welsh Government (Transport for Wales) (2023) National transport delivery plan 2022 to 2027	This sets out the programmes, projects and policies to deliver Llywybr Newydd, the new Wales transport strategy.	This is a primary policy of importance that will shape the North Wales RTP. It must actively support the programmes, projects and policies within the national delivery plan to ultimately deliver Llywybr Newydd, the new Wales transport strategy.	All topics
Natural Resources Wales Marine Area Statement	This statement is one of a series of seven Area Statements that have been prepared for the whole of Wales to help solve a range of complex challenges that society, and the natural environment, now face.	The North Wales RDP will need to ensure alignment with the need to protect the marine environment and ecosystems and nature-based solutions and adaptation.	Biodiversity Population (communities) and human health



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>The Welsh Marine Area Statement covers the inshore waters of Wales extending out 12 nautical miles and making up 43% of the Welsh territory.</p> <p>The Statement recognises that the seas and coasts offer a number of incredibly valuable natural resources to the people of Wales. With over 60% of the population of Wales living or working at the coast, marine industries including tourism are incredibly important to our economy.</p> <p>The marine area around Wales Is home to a diverse array of species and habitats.</p> <p>The three identified themes include:</p> <ul style="list-style-type: none">• Building resilience of marine ecosystems• Nature-based solutions and adaptation at the coast• Making the most of marine planning		Water environment, Economy
Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021	These Regulations make amendments to the Climate Change (Interim Emissions Targets) (Wales) Regulations 2018, which set the interim emissions targets under Part 2 of the Environment (Wales) Act 2016. The Act requires Welsh Ministers to meet targets for reducing emissions of greenhouse gasses from Wales. In addition to increase the current 2050 target of 80% lower than the baseline to at least 100% ('net zero') (as outlined in The Environment (Wales) Act 2016 (Amendment of 2050 Emissions Targets), it increases the 2030 and 2040 interim targets to 63% and 89% respectively.	The North Wales RTP should contribute to helping Wales achieve its climate change targets through exploring the use of nature based solutions and low carbon alternatives to help reduce emissions and sequester carbon.	Climatic factors
Welsh Government (2024) Sustainable transport in rural areas: guidance for regional transport planning	<p>This guidance is for local authorities, corporate joint committees (CJCs) and other organisations involved in improving rural transport.</p> <p>Welsh Government want rural communities in Wales to have sustainable and accessible public transport that connects with the services, employment, cultural, social,</p>	The North Wales RTP must be aligned with the shorter and longer term goals within the guidance.	Transport, Population (communities),



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>leisure and education opportunities to enable them to thrive, whilst also meeting our climate change goals.</p> <p>It looks at different ways to meet rural transport needs without relying on the car, including learnings from other countries. It looks at how to make it a reality for rural Wales.</p>		
Welsh Government (2019) Climate Emergency Declaration	<p>In April 2019, the Welsh Environment Minister declared a climate emergency in Wales. The declaration sends a clear signal that the Welsh Government will not allow the process of leaving the EU to detract from the challenge of climate change, which threatens Wales's health, economy, infrastructure and Wales's natural environment.</p>	<p>The North Wales RTP should help reduce the impact of climate change on the environment, society and the economy. It should also explore the use of low carbon alternatives and measures that sequester carbon (such as habitat creation) to help reduce carbon emissions associated with the RTP and its contribution to carbon budgets.</p>	<p>Climatic factors</p>
Environment (Wales) Act (2016)	<p>The Environment (Wales) Act 2016 requires the 'sustainable management of natural resources' and sets out a framework to ensure this is a core consideration in decision making, including the State of Natural Resources Report (SoNARR) and a Natural Resources Policy (NRP). The NRP sets three national priorities for managing Wales's natural resources:</p> <ul style="list-style-type: none">• Delivering nature-based solutions• Increasing renewable energy and resource efficiency; and• Taking a place-based approach. <p>The Environment (Wales) Act (2016) also sets a legal target of reducing greenhouse gas emissions in Wales by at least 80% in 2050.</p>	<p>The North Wales RTP should support the sustainable management of natural resources in accordance with the Act.</p>	<p>Biodiversity, Climatic factors , Land use and Landscape , Resources and waste</p>
Historic Environment (Wales) Act 2016	<p>The Historic Environment (Wales) Act 2016 made a number of important amendments to the Planning (Listed Buildings and Conservation Areas) Act 1990. This includes in relation to consultation and interim protection, temporary stop notices, extending the scope of urgent works notices, applications for certificates of immunity from listing and heritage partnership agreements.</p>	<p>The north Wales RTP should adhere to the requirements outlined in the Act.</p>	<p>Cultural heritage</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
National Landscape Character Areas (Wales)	The National Landscape Character Areas report recognises landscape character, and the natural resources and cultural heritage that defines them. NLCAs are defined at a broad landscape scale throughout Wales. The descriptive profiles for the 48 individual character areas highlight what distinguishes one landscape from another, with reference to their regionally distinct natural, cultural and perceptual characteristics.	The North Wales RTP should have regard for the influences on the National Landscape Character Areas.	Land use and landscape
Welsh Government (2017) Natural Resources Policy	The focus of this Natural Resources Policy (NRP) is on improving the way Wales manages its natural resources. The three national priorities for the management of Wales's natural resources are: <ul style="list-style-type: none"> • Delivering nature-based solutions • Increasing renewable energy and resource efficiency and, • Taking a place-based approach. 	The North Wales RTP should adhere to the policies set out to help improve the management of natural resources in Wales. This should include through taking a place-based approach to delivering nature-based solutions and increasing renewable energy and resource efficiency.	Biodiversity, Land use and landscape, Resources and waste
Natural Resources Wales (2020) The National Peatland Action Programme 2020-2025	The National Peatland Action Programme is a 5 year plan of peatland restoration in Wales. The National Peatland Action Programme has six priorities: <ul style="list-style-type: none"> • Peatland erosion • Peatland drainage • Sustainable management of blanket peats • Sustainable management of lowland peats • The restoration of afforested peatlands • The gradual restoration of our highest carbon-peatlands 	The North Wales RTP should align opportunities for peatland protection and restoration with those opportunities and priorities identified by the programme.	Land use and Landscape, Biodiversity, Water environment Climatic factors
Natural Resources Wales Flood Risk Management Plan 2023 to 2029: National Overview	This Flood Risk Management Plan outlines NRW's priorities and proposed actions across Wales from 2023 to 2029, for the areas of flooding for which NRW have lead responsibilities. The plan's objective is to reduce the risk to people and communities from flooding from main rivers, reservoirs and the sea. To achieve this, NRW have set out 14 priorities including: <ul style="list-style-type: none"> • Responding to the climate and nature emergencies by seeking innovative practices, promoting adaptation and preparing for future change. 	The North Wales RTP should align with the priorities identified by the plan. This includes through responding to the climate and nature emergencies, creating resilience, promoting and implementing nature-based solutions and implementing opportunities for enhancement and provision of wider benefits, such as to health and wellbeing, biodiversity and the environment.	Climatic factors, Population (communities), Human health, Water environment, Biodiversity



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none"> Developing and delivering catchment approaches to reduce flooding and contribute to ecosystem resilience, working with partners and stakeholders where possible and appropriate. Improving community resilience to current and future flood risk. Working with partners to support communities to become more aware and take action to mitigate their own flood risk. Seeking and taking opportunities for enhancement to the health and wellbeing of communities, biodiversity and the environment, and the wider benefits they provide, to support NRW's response to the Nature Emergency. Increasing resilience of flood risk management assets, to reduce the impacts of current and future flood risk. Promoting, supporting and implementing nature-based solutions where appropriate to reduce the risk and impacts of flooding and to deliver wider ecosystem benefits. Undertaking our strategic oversight role to understand all sources of flood risk on a national basis to inform investment and optimise how we plan work including with other partners. 		
Natural Resources Wales: Our corporate plan to 2030— Nature and People Thriving Together	<p>This document outlines Natural Resources Wales's mission, values and objectives to help reach the vision of a Wales where nature and people thrive together. The three objectives outlined in the plan are:</p> <ul style="list-style-type: none"> Nature is recovering Resilience to climate change Minimising pollution <p>through sustainable management of natural resources. These objectives are supported by a series of actions that will be implemented to help achieve them and the overarching vision for 2030.</p>	<p>The North Wales RTP should contribute towards all the goals outlined in the plan, supporting nature to recover, creating communities that are resilient to climate change and minimising pollution. The RTP should incorporate actions outlined in the plan, including measures to protect and restore nature, valuing nature in the decision-making process, reconnecting people and nature, scaling up delivery of nature based solutions, adapting to the risks and impacts of climate change, reducing carbon emissions, making nature and communities resilient to</p>	<p>Air quality, Biodiversity, Climatic factors , Ground conditions (geology and soils), Land use and landscape, Population (communities), Human health, Resources and waste, Water environment</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
		climate change and taking action to minimise pollution.	
Welsh Government (2024) Planning Policy Wales (PPW) Edition 12 (2024)	<p>PPW sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. PPW themes include:</p> <ul style="list-style-type: none"> • Strategic & Spatial Choices • Active & Social • Productive & Enterprising • Distinctive & Natural <p>The PPW sets out the need to for greater protection and enhancement of the environment. This includes green infrastructure assets and networks, including through undertaking green infrastructure assessments, providing net benefit for biodiversity, and greater protection of designated sites.</p> <p>It also sets out the ‘Sustainable transport hierarchy’, to guide decisions about new infrastructure and give priority to walking and cycling and public transport followed by ultra-low emissions and finally private vehicles.</p>	The North Wales RTP should adhere to the land use planning policies set out in the PPW. This should include protecting and enhancing the environment, supporting the creation of accessible and healthy environments and green infrastructure, promoting economic activity and helping to unlock land for development.	All topics
Welsh Government (2017) Planning Policy Wales Technical Advice Note 24: The Historic Environment	<p>The purpose of this Technical Advice Note (TAN) is to provide guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building (LBC) applications. This TAN provides specific guidance on how the following aspects of the historic environment should be considered:</p> <ul style="list-style-type: none"> • World Heritage Sites • Scheduled monuments • Archaeological remains 	The North Wales RTP should implement best practice guidance outlined int the TAN to ensure heritage assets are protected and enhanced, including built assets, historic landscapes and buried archaeology.	Cultural heritage, Land use and landscape



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none"> Listed buildings Conservation areas Historic parks and gardens Historic landscapes Historic assets of special local interest 		
Technical Advice Note 15: Development and Flood Risk	The TAN provides technical guidance which supplements the policy set out in Planning Policy Wales in relation to development and flooding. It advises on development and flood risk as this relates to sustainability principles and provides a framework within which risks arising from both river and coastal flooding, and from additional run-off from development in any location, can be assessed.	The North Wales RTP should aim to reduce the impacts of flooding on at risk communities, infrastructure and development. It should also incorporate measures to increase land available that is suitable for development, in line with the criteria and guidance outlined in the advice note.	Water environment, Ground conditions (geology and soils)
Technical Advice Note 5: Nature Conservation and Planning	The Technical Advice Note provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. This includes advice on sustainability appraisal and the strategic environmental assessment of development plans.	The North Wales RTP should implement best practice guidance outlines in the TAN to help ensure biodiversity is protected and enhanced. This includes providing biodiversity net gain and implementing measures to help species and habitats be more resilient to the effects of climate change.	Biodiversity, Ground conditions (geology and soils)
Welsh Government (2019) Prosperity for All: A Climate Conscious Wales	Prosperity for all: A Climate Conscious Wales is the Welsh Government's 5 year plan to adapt to the impacts Wales may face from climate change. The document aims to raise awareness of climate adaptation and offers knowledge and best practice to improve climate resilience.	The North Wales RTP should incorporate climate resilience.	Climatic factors, Population (communities) and Human health
The Air Quality Standards (Wales) Regulations 2010	The ambient air quality standards and objectives are given statutory backing in Wales through the Air Quality Standards (Wales) Regulations 2010. These Regulations seek to control human exposure to pollutants in outdoor air to protect human health and the environment by requiring concentrations to be within specified limit values. These Air Quality Standards Regulations set 'limit values', 'target values' and 'long-term objectives' for ambient concentrations of the pollutants	The North Wales RTP should adhere to The Air Quality Standards (Wales) Regulations, minimising air pollutions for the full lifecycle of interventions and their indirect impacts as well.	Air Quality, Biodiversity, Population (communities) and Human health
Welsh Government (2021) Future Wales: The National Plan 2040	The National Plan 2040 outlines the Welsh Government's twenty year plan for shaping the future growth and development of Wales. The development plan includes a strategy for addressing key national priorities through the	The North Wales RTP should support Welsh Government's National Plan. This includes supporting sustainable growth, investing in infrastructure to mitigate the impacts of	All topics



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>planning system including sustaining and developing a vibrant economy, achieving decarbonisation and climate resilience, developing strong ecosystems and improving the health and well-being of communities.</p> <p>The plan sets out 11 goals for the next 20 years. These include:</p> <ul style="list-style-type: none"> • A Wales where people live and work in connected, inclusive and healthy places that everyone can be a part of. • A Wales where places manage natural resources and reduce pollution. • A Wales where there are biodiverse, resilient and connected ecosystems. <p>The plan supports "growth of the right thing" i.e. development in town and city centres that supports people's health and wellbeing such as green infrastructure, and "more green infrastructure" to protect and enhance biodiversity. Plans should value and protect nature, find areas to protect or turn into places for ecosystems and include more green infrastructure.</p> <p>Policies include:</p> <ul style="list-style-type: none"> • Policy 1 – Where Wales will grow • Policy 2 – Shaping Urban Growth and Regeneration – Strategic Placemaking • Policy 3 – Supporting Urban Growth and Regeneration – Public Sector Leadership • Policy 8 – Flooding • Policy 9 – Resilient Ecological Networks and Green Infrastructure • Policy 15 – National Forest • Policy 25 – Regional Growth Areas – Mid Wales • Policy 26 – Growing the Mid Wales Economy 	<p>flooding, promoting the use of nature based solutions, enhancing biodiversity, increasing woodland cover and supporting the economic growth of North Wales.</p>	
Welsh Government (2020) The Nature	The Nature Recovery Action Plan for Wales has been refreshed to take into account the growing evidence around	The North Wales RTP should positively contribute to each of the objectives of the	Biodiversity, Climatic factors



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
Recovery Action Plan for Wales 2020 - 21	<p>the scale of the loss of biodiversity and the changing policy context in Wales. This includes the legislative framework and the Natural Resources Policy, the expected impacts of the UK's exit from the EU, the escalating ecological crisis and the need to respond urgently to that alongside the response to the climate emergency. The refreshed plan has five themes for action:</p> <ul style="list-style-type: none"> Aligning the responses to the climate emergency with the biodiversity crisis Addressing the post EU exit funding gap for Agri-environment measures Providing spatial direction for targeting action for biodiversity Improving the condition of the Protected Sites Network Exploring new and sustainable funding mechanisms for biodiversity action. 	NRAP, including through embedding biodiversity in decision making, safeguarding species and habitats of principal importance, increasing resilience and restoring natural habitats, talking pressure on habitats.	
National Assembly for Wales (2015) Well-being of Future Generations (Wales) Act 2015)	<p>This primary legislation focuses on improving the social, economic, environmental and cultural well-being of Wales. The Act sets out the following seven goals, and makes clear that the listed public bodies must work to achieve all of them:</p> <ul style="list-style-type: none"> A Prosperous Wales – low carbon society, recognising planetary limits, efficient use of resources. A Resilient Wales – maintain and enhance biodiverse natural environment, healthy functioning ecosystems that support resilience and adaptability. A More Equal Wales – fulfilled potential no matter the background or circumstances. A Healthier Wales – physical and mental well-being maximised. A Wales of Cohesive Communities – attractive, viable, safe and well-connected communities. 	The North Wales RTP must actively support the seven goals outlined in the Act. This should include incorporating measures to enhance the natural environment, support wellbeing and reduce inequalities, create safe communities and protect Welsh heritage.	All topics



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none"> A Wales of Vibrant Culture and Thriving Welsh Language – promote and protect Welsh language, heritage and culture. A Globally Responsible Wales – positive contribution to global well-being. <p>The Act requires public bodies to implement five key ways of working in its future decision making: looking to the long-term; taking an integrated approach; involving a diversity of the population; working with others in a collaborative way; and understanding the root causes of issues to prevent them from occurring.</p>		
Welsh Government (2018) Woodlands for Wales: Strategy	<p>The strategy outlines Welsh Government’s vision and targets for Wales’s trees, woodlands and forest. It is built around four strategic themes:</p> <ul style="list-style-type: none"> Responding to climate change Woodlands for people A competitive and integrated forest sector Environmental quality <p>The strategy acknowledges that woodlands and trees can contribute to water and soil management at a local and catchment level.</p>	The north Wales RTP should consider the goals of this plan when exploring afforestation interventions, ensuring that woodland creation is guided by the objectives in this strategy and by the need to protect semi-natural habitats, historic features and characteristic landscapes.	Biodiversity, Ground conditions (soil and geology), Population (communities), human health, Resources and waste, Water environment, Climatic factors.
Welsh Government (2023) Town centres: position statement	<p>Two thirds of Wales’s population live in towns or cities with more than 10,000 people. This statement sets out the challenges faced by towns as well as the actions the Welsh Government will take to set the foundations for change and enable local delivery to develop its town centres as locations for a range of services, economic enterprise, employment and to be connected communities.</p> <p>Since the publication of Future Wales in 2021, Town Centre First has been a development plan policy requirement in Wales. It is also a cross cutting principle embedded in the Wales Infrastructure Investment Strategy.</p>	The north Wales RTP should aim to deliver on the policies set out in the position statement to address the challenges faced by town centres and help to reinvigorate them.	Transport, Economy, Population (communities)



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
National Assembly for Wales (2011) Welsh Language (Wales) Measure 2011	<p>The Welsh Language (Wales) Measure 2011 (the Measure) modernises the legal framework regarding the use of the Welsh language in the delivery of public services.</p> <p>It includes provision about the official status of the Welsh language and establishes the office of the Welsh Language Commissioner.</p>	The North Wales RTP should contribute towards the future well-being of the Welsh language.	Population (communities), Cultural heritage
National Assembly for Wales (2011) Rights of Children and Young Persons (Wales) Measure 2011	A MEASURE of the National Assembly for Wales to make provision for and in connection with giving further effect in Wales to the rights and obligations set out in the United Nations Convention on the Rights of the Child; and for connected purposes.	The North Wales RTP should fully consider the rights and obligations set out in the United Nations Convention on the Rights of the Child and the Rights of Children and Young Persons (Wales) Measure 2011.	Population (communities)
Welsh Government (2020) The Clean Air Plan for Wales; Healthy Air, Healthy Wales (updated 2023)	<p>The aim of the Clean Air Plan for Wales is to improve air quality and reduce the impacts of air pollution on human health, biodiversity, the natural environment and the economy.</p> <p>This Plan supports delivery of commitments under Prosperity for All: the national strategy. In particular, 'reducing emissions and delivering vital improvements in air quality' to support 'healthier communities and better environments'.</p> <p>It includes ambitions to meet and where possible exceed requirements set down in UK and international guidance and legislation.</p> <p>The Plan sets out a 10-year pathway to achieving cleaner air. It is structured around four core themes, with actions to enable collaborative approaches to reducing air pollution.</p> <ul style="list-style-type: none"> • People: Protecting the health and well-being of current and future generations • Environment: Taking action to support our natural environment, ecosystems and biodiversity • Prosperity: Working with industry to reduce 	The North Wales RTP should support delivery of the actions and commitments within the Clean Air Plan.	Air quality, Population (communities), Human health Biodiversity, Climatic factors, Economy, Land use and landscape



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>emissions, supporting a cleaner and more prosperous Wales</p> <ul style="list-style-type: none"> • Place: Creating sustainable places through better planning, infrastructure and transport. <p>The themes were designed through the lens of the Well-being of Future Generations Act to enable collaborative and integrated approaches to improving air quality, across a range of policy areas and sectors.</p> <p>The timescales for delivering actions are framed within three Senedd periods, short term: 2020 to 2021, medium term: 2021-26 and longer term: 2026-2031.</p>		
Welsh Government (2021) Wales Infrastructure Investment Strategy 2021	<p>The Wales infrastructure investment strategy 2021 (WIIS) sets out the Welsh Government's 10 year vision of the outcomes that investment in infrastructure should enable.</p> <p>There are several cross cutting principles, including tackling the climate and nature emergency, embedding social justice, resilience to future trends.</p> <p>It also focusses on Environmental Well-Being, Social Well-Being, Economic Well-Being and Cultural Well-Being.</p>	The North Wales RTP should support delivery of the principles and commitments within the Strategy.	Climatic factors, Economy, Biodiversity, Population (communities) and Human health
Welsh Government (2021) Active Travel Act Guidance	Active travel is a key priority in the Welsh Transport Strategy – Llwybr Newydd – and is identified at the top of the sustainable transport hierarchy that guides all of Wales's transport activities.	The Wales RTP should prioritise Active Travel in accordance with the vision and priorities set out in the Guidance.	Population (Communities), Human Health
Transport for Wales Climate adaptation and resilience plan	This plan supports Welsh Government to create a "Resilient Wales" by ensuring TfW networks are adapted to withstand the impacts of future climate change. Creating resilience will underpin the successful delivery of the six other well-being goals, set out in the Well-being of Future Generations (Wales) Act 2015	The North Wales RTP must ensure the existing network and any new infrastructure is resilient to future climatic conditions.	Climatic factors, Transport
Welsh Government (2018) Noise and Soundscape Action	Under the Environmental Noise Regulations, the Welsh Ministers have an obligation to draw up action plans for places near major roads and major railways, and for	The North Wales RTP should contribute to minimising noise associated with transport, especially at the most sensitive locations.	Noise, Population (communities), Human health



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
Plan for Wales 2018-2023	<p>agglomerations. The Regulations apply to environmental noise to which humans are exposed in particular in built-up areas, in public parks or other quiet areas in an agglomeration, and near schools, hospitals and other noise-sensitive buildings and areas.</p> <p>The noise action plan for Wales sets out what Welsh Government is doing to manage the impact of noise, and is updated every 5 years.</p> <p>It contains the following sections of particular relevance:</p> <ul style="list-style-type: none">• Integrating noise and air quality policy• Planning for new development• Tranquil green space in the built environment• Road traffic noise in Wales• Railway noise in Wales <p>Note that a new Soundscape Action Plan for Wales for the period 2023-2028 is out for consultation at the time of this review)</p>		
Welsh Government (2023) Draft Noise and Soundscape Plan for Wales 2023-2028	<p>(consultation document June 2023)</p> <p>The Noise and Soundscape Plan 2023-2028 is Wales's national strategy on soundscapes, meaning the sound environment as perceived or experienced and/or understood by a person or people, in context.</p> <p>The Plan contains various policies. The following Sections are of particular relevance:</p> <ul style="list-style-type: none">• Section 3 Considering soundscapes when planning new development• Section 4 Considering soundscapes in air quality management• Section 5 Considering soundscapes as we decarbonise our society• Section 6 Natural soundscapes• Section 7 Managing the sounds of transportation	<p>The North Wales RTP should align with the Soundscape Plan in relation to transportation noise.</p> <p>The North Wales RTP could contribute towards reducing transportation noise, for example by promoting electric vehicles and trains, which are much quieter than traditional engines.</p>	Noise, Population (communities), Human health, Air quality, Climatic factors, Transport



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none">Section 10 Welsh Government priorities for the next five years (including Planning, Air quality and Transport)		



4. Regional plans, programmes and protection objectives

Table A.3 Regional plans, programmes and sustainability objectives

Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
North Wales			
Natural Resources Wales (NRW) Forest Resource Plans (for North West Wales and North East Wales (for named forests))	The forest resource plans are core management documents used on the Welsh Government's Woodland Estate. They lay out proposals for the future management of a woodland in accordance with current policy and practice. The plans are forest-specific and outline objectives for their management and opportunities such as those in relation to timber production, biodiversity, habitat creation and restoration, water quality, flood risk, heritage, landscape and recreation.	The North Wales RTP should align with the relevant Forest Resource Plans and objectives identified for the forests located within the plan area and incorporate those opportunities identified in the plans, where appropriate, as part of the strategy.	Biodiversity, Ground conditions (geology and soils), Population (communities), Human health, Resources and waste, Water environment, Land use and landscape, Climatic factors, Cultural heritage
Natural Resources Wales <u>North East Wales Area Statement</u> and <u>North West Wales Area Statement</u>	<p>Area Statements outline the key challenges facing that particular locality, what can be done to meet those challenges, and how-to better manage natural resources for the benefit of future generations. The Statements are a response to the Natural Resources Policy (2017). The role of the Area Statements are to coordinate existing measures and enable new initiatives.</p> <p>The North East Wales Area Statement covers the counties of Denbighshire, Flintshire and Wrexham and outlines five themes:</p> <ul style="list-style-type: none"> • Climate emergency: resilience and adaptation • Develop and improve urban/rural green infrastructure • Increasing woodland cover for social, environmental and economic benefits • Promoting the resilience of ecosystems in maintaining and enhancing biodiversity 	The North Wales RTP should incorporate measures to help tackle the challenges identified in the Area Statements and climate change more broadly, incorporating measures identified in the statements.	Climatic factors, Air quality, Biodiversity, Economy, Ground conditions (geology and soils), Land use and landscape, Population (communities), Human health, Resources and waste, Water environment



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none">Protecting water and soil through farming and sustainable land management <p>The North West Wales Area Statement covers extensive upland and coastal areas, together with intervening lowlands and settlements, including Snowdonia National Park, Conwy, the Llŷn Area of Outstanding Natural Beauty (AONB) and the Isle of Anglesey, whose coast is mostly included in the Anglesey AONB.</p> <p>Two crosscutting themes were identified as:</p> <ul style="list-style-type: none">Ways of working; andClimate and nature emergency <p>Other themes include:</p> <ul style="list-style-type: none">Reconnecting people with natureEncouraging a sustainable economySupporting sustainable land managementOpportunities for resilient ecosystems <p>Each theme outlines what success would look like and outlines further opportunities and projects to deliver the themes.</p>		
Welsh Government (2022) North Wales Regional Economic Framework	<p>The stated mission of the framework is to start creating innovative opportunities to ensure we protect and enhance our natural environment whilst also allowing communities to thrive. The framework is based on the principles of a Wellbeing economy (social and community wellbeing, the low carbon and low emissions economy and the experience economy).</p> <p>It identifies the following priorities, framed in the context of a whole systems approach to facilitate decarbonisation of the economy, adapting and mitigating to climate change and to improve the resilience of ecological networks:</p>	<p>The North Wales RTP should incorporate measures to help support the priorities identified in the framework, incorporating measures identified.</p>	<p>Climatic factors, Air quality, Biodiversity, Economy, Ground conditions (geology and soils), Land use and landscape , Population (communities), Human health Resources and waste, Water environment</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ol style="list-style-type: none"> 1. Skills & Workforce 2. Investment in magnets, hubs, supply chains, research and development, innovation and Entrepreneurship 3. Balanced support for indigenous and inward investors 4. Language, culture, place & heritage 5. Foundational Economy and a vibrant Micro / SME base. 6. Empowering communities for the benefit of our future generations 7. Connectivity (transport and digital) 8. Leverage benefits of public sector 9. Low carbon energy 10. Food and Drink Industry 		
North Wales Economic Ambition Board (2016) A Growth Vision for the Economy of North Wales	<p>This is a single, joined-up vision for economic and employment growth for North Wales. It will be achieved through collaboration and partnership working, with a strong private sector involvement and a “Team North Wales” approach, building close economic relationships with neighbouring areas.</p> <p>It will also create the conditions to support the delivery of the UK Governments’ National Infrastructure priorities in North Wales, particularly Wylfa Newydd (nuclear power station) and the rail modernisation project from Crewe to Holyhead, which will include electrification.</p> <p>Our ambition for North Wales in 2035 is put forward in section 2, with sections 3 and 4 setting out our Strategy and Action Plan of projects to deliver growth and enable the private sector to invest and boost productivity.</p>	The North Wales RTP should incorporate measures to help support the ambition for North Wales in 2035 and take account of the Strategy and Action Plan of projects set out.	Economy, Transport, Population (communities), Human health, Land use and landscape
Natural Resources Wales Flood Risk Management Plan: North East Wales Place	This document forms part of the Wales-wide Flood Risk Management Plan (FRMP) and sets out more detailed information in relation to the North East Wales place region, which covers the Local Authorities of Denbighshire, Flintshire and Wrexham.	The North Wales RTP should support the delivery of the plan through incorporating measures to reduce flood risk to those communities and assets identified as at risk and aligning with the delivery plan for the area.	Economy, Infrastructure, Transport, Population (communities), Human health, Water environment, Land use and landscape, Ground



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	It identifies six communities most at risk of flooding within the region. In addition to this, it also highlights transport infrastructure, agricultural land and environmental designations at risk of current and future flooding. The document outlines a delivery plan for the area help manage the risk of flooding.		conditions (geology and soils)
Natural Resources Wales Flood Risk Management Plan: Northwest Wales Place	<p>This document forms part of the Wales wide Flood Risk Management Plan (FRMP) and sets out more detailed information in relation to the Northwest Wales place region, which covers the Local Authorities of Conwy, Isle of Anglesey and Gwynedd.</p> <p>It identifies six communities most at risk of flooding within the region. In addition to this, it also highlights transport infrastructure, agricultural land and environmental designations at risk of current and future flooding. The document outlines a delivery plan for the area help manage the risk of flooding.</p>	The North Wales RTP should support the delivery of the plan through incorporating measures to reduce flood risk to those communities and assets identified as at risk and aligning with the delivery plan for the area.	Economy, Infrastructure, Transport, Population (communities), Human health, Water environment, Land use and landscape, Ground conditions (geology and soils)
North Wales Joint Local Transport Plan 2015 (adopted 2015)	<p>The vision statement for the Plan is: “The North Wales Local Authorities aim to remove barriers to economic growth, prosperity and well-being by delivering safe, sustainable, affordable and effective transport networks.”</p> <p>The Plan also includes a wide range of schemes and interventions for delivery.</p> <p>Section Two: provides a review of the policies and priorities established for the region;</p> <p>Section Three: sets out the vision for the LTP;</p> <p>Section Four: sets out the issues and opportunities for transport in North Wales (including issues related to climate change, connectivity, and the economy and jobs);</p>	The vision, outcomes and high-level interventions from the LTP should be reviewed during the process of development the North Wales RTP.	Climatic factors, Economy, Transport, Infrastructure, Population (communities), Human health,



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>Section Five: establishes the outcomes sought and the higher level interventions and schemes to achieve the outcomes;</p> <p>Section Six: provides the five year programme of schemes for 2015-2020 to deliver each higher level intervention;</p> <p>Section Seven: provides an indicative programme of schemes for 2020-2030 and an overview of medium and longer term interventions;</p> <p>Section Eight: considers the statutory checks that have been undertaken as part of the preparation of the plan;</p> <p>Section Nine: identifies the process of consultation undertaken to develop the LTP; and</p> <p>Section Ten: sets out the framework for monitoring and evaluation.</p>		
Llŷn Peninsula Area of Outstanding Natural Beauty (AONB) Management plan 2015-2020	<p>The Llŷn Peninsula is a natural extension of Snowdonia. Around a quarter of the peninsula is an AONB which includes superb, unspoilt coastal scenery, long-extinct volcanic peaks and Iron Age forts.</p> <p>The special qualities of the Llŷn AONB include:</p> <ul style="list-style-type: none"> • Landscape and coast • Tranquillity and a clean environment • A wealth of wildlife • The Historic environment • The Welsh Language and Culture • People and close-knit communities • Local produce and rural businesses • Rights of way and access <p>The four basic principles are defined as:</p>	The North Wales RTP must take account of and actively support the visions and principles set out in regard to the special qualities of the AONB. It should also increase accessibility to the AONB.	Air quality, Biodiversity, Climatic factors, Economy, Infrastructure, Transport, Population (communities), Human health, Land use and landscape, Cultural heritage, Ground conditions (geology and soils), Water environment, Noise, Resources and waste



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none"> • Preserve, maintain and where appropriate restore features which make Penrhyn Llŷn special and unique. • Take steps to promote sustainable development and prepare for future climate change. • Identify, promote and develop an appreciation of the environmental services and benefits provided by AONB. • Support the people and communities who work and live in Llŷn and encourage involvement in AONB activities and the area's future. 		
Anglesey AONB Management Plan 2023-2028	<p>Most of Anglesey's coast, from South Stack in the west to Puffin Island in the east, is an AONB. The AONB contains many habitats which have statutory protection because of their nature conservation value.</p> <p>The management plan sets out the vision, five key themes, key features of the AONB and key drivers for change.</p> <p>Features of the Anglesey AONB which define its designation status are:</p> <ul style="list-style-type: none"> • Coastal landscape / seascape features • Traditional agricultural landscape features • Geological and geomorphological features <p>The special qualities of the Anglesey AONB which define its designation status:</p> <ul style="list-style-type: none"> • Expansive views / seascapes • Peace and tranquillity • Islands around Anglesey • Broadleaved woodlands • Lowland coastal heath • Species-rich roadside verges 	<p>The North Wales RTP must take account of and actively support the special qualities of the AONB and the main objectives of the plan. It should also increase accessibility to the AONB.</p>	<p>Air quality, Biodiversity, Climatic factors, Economy, Infrastructure, Transport, Population (Communities), Human health, Land use and landscape, Cultural heritage, Ground conditions (geology and soils), Water environment, Noise, Resources and waste</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<ul style="list-style-type: none"> • Ecologically important coastal and wetland habitats (including rocky shores, mudflats and estuaries, saltmarshes, beaches and dunes) • Built environment including conservation areas and listed buildings • Archaeology and ancient monuments / historic landscapes, parks and gardens • Rural agricultural / coastal communities • Welsh language • Soil, air and water quality • Public rights of way network • Accessible land and water <p>Its six main objectives include:</p> <ul style="list-style-type: none"> • The Welsh Language • Social Care and Wellbeing • Education • Housing • Economy • Climate Change 		
Clwydian Range and Dee Valley draft AONB Management Plan 2020-2025	<p>At its heart is the Clwydian Range, a 21-mile chain of hills stretching from Prestatyn to Llangollen on the lively River Dee.</p> <p>The special qualities and features of the AONB are identified as:</p> <ul style="list-style-type: none"> • Landscape Character and Quality • Habitats and Wildlife • Historic Environment • Access Recreation and Tourism • Culture and People <p>The Management Plan sets an agenda for responding to the challenges facing the AONB during the 2020-2025 plan period in the context of protecting the Special Qualities and Features under the four themes (Nature, Landscape and</p>	The North Wales RTP must take account of the special qualities of the AONB and the main objectives and actions of the plan. It should also increase accessibility to the AONB.	Air quality, Biodiversity, Climatic factors, Economy, Infrastructure, Transport, Population (Communities), Human health, Land use and landscape, Cultural heritage, Ground conditions (geology and soils), Water environment, Noise, Resources and waste



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>Heritage, The Changing Climate, Recreation, Health & Wellbeing, and The Rural Economy).</p> <p>Each theme section sets out the context within the introduction. The Principle Aims establishes the high level objectives for the theme in the face of pertinent drivers during the 2020-2025 plan period. A number of actions are set to achieve each objective.</p>		
North Wales Growth Deal Bid	<p>In December 2017 the North Wales Growth Board (a partnership of Local Authorities and wider partners e.g. Higher Education, Further Education and The North Wales Mersey Deeside Business Council) submitted a Growth Deal application to the Welsh and UK Governments for £383m project funding for North Wales.</p> <p>The proposals will act as a catalyst for a total investment of £1.3 billion in the North Wales economy. It is expected that over 5,000 jobs could be created from the potential investments within the Growth Deal in the areas of technology and innovation, sites for business, digital connectivity, skills, transport and Business support.</p> <p>The North Wales Economic Ambition Board has been successful in securing a commitment of £240m from the Welsh and UK Governments.</p> <p>The Growth Deal agreement was signed in December 2020. Work will now begin on the five programmes that make up the £1bn Deal led by the North Wales Economic Ambition Board.</p> <p>The Government funding will be received annually over the next 15 years (by 2036) as projects receive Full Business Case approval. The private and public sector will work collaboratively to attract additional funding that will make up the £1 billion total.</p>	<p>The commitment to the Growth Deal and subsequent implications will need to be fully considered to ensure that the potential opportunities arising from it are maximised.</p>	<p>Transport, Economy, Infrastructure, Population (community), Human health</p>



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>By delivering the Growth Deal's five programmes by 2036, the portfolio will:</p> <ul style="list-style-type: none"> • build on regional strengths in manufacturing and low carbon energy • target digital innovation and infrastructure to better connect the region • invest in key sites and premises for the developer market • enable innovation to boost productivity • support key industries in tourism and agriculture to develop for the future <p>The stated aims are:</p> <ul style="list-style-type: none"> • To build a more vibrant, sustainable and resilient economy in North Wales. • To build on our strengths, to boost productivity while tackling long-term challenges and economic barriers to deliver inclusive growth. • To promote growth in a scalable, inclusive and sustainable way, in line with the Well-being of Future Generations (Wales) Act 2015. 		
Ambition North Wales (ANW) Annual Report	This report provides an overview of annual progress in implementing the Growth Deal – the 15-year agreement with the Welsh and UK Governments—to sustainably develop North Wales and enhance economic, social, and environmental wellbeing.	The North Wales RTP should ensure alignment with the Plans set out in the report, especially in relation to transport and skills.	Population (communities), Human health, Transport, Economy, Infrastructure
Plans for new nuclear developments at Trawsfynydd and Wylfa	<p>If the sites in north Wales are chosen to be a part of the next generation of nuclear reactors, this could bring tens of thousands of additional jobs to the area.</p> <p>The Committee's report is urging the Welsh Government to be ready to ensure there are maximum benefits to the Welsh economy if the decision to go ahead with nuclear in north Wales is made.</p>	The decision by UK Government on the future of nuclear development is still pending at the time of review. The North Wales RTP should continue to monitor development and take into account any relevant decisions.	Population (communities), Human health, Economy
Plans for a new National Park in North Wales	Natural Resources Wales are considering plans for the creation of a new National Park around the existing Clwydian Range and Dee Valley Area of Outstanding	The plans are still developing at the time of review. The North Wales RTP should continue	Biodiversity, Cultural heritage, Land use and Landscape, Population



Document name	Contents and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal topics
	<p>Natural Beauty (AONB) and potentially down into north Powys to include landmarks such as the Lake Vyrnwy reservoir.</p> <p>Ultimately, it will be down to the Rural Affairs Minister to make a decision on whether to give the new park the go-ahead. The Welsh government aim is for this to happen before the next election in 2026.</p>	<p>to monitor development and take into account any relevant decisions.</p>	<p>(communities), Human health</p>



5. Local plans, programmes and protection objectives

Table A.4 Local plans, programmes and sustainability objectives

Document name	Contents, context and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal
Gwynedd and Isle of Anglesey			
Anglesey and Gwynedd Joint Local Development Plan 2011 - 2026	<p>This joint development plan sets out the strategy and aims for development and land use for the two councils with a strong cross-boundary relationship in terms of function, economy, infrastructure and policy. The plan will be used to determine which development will receive permission in the future by the councils. Key joint issues were: jobs, Wales Spatial Plan (2008), Anglesey Energy Island Programme, road and railway networks, housing market areas, shopping, infrastructure, landscape.</p> <p>The development plan includes provision in its policies and proposals for sustainable development, with the economy an important part of the strategy.</p>	The North Wales RTP should see that the goals of this joint plan are incorporated, where appropriate and relevant.	Air quality, Biodiversity, Climatic factors, Land use and Landscape, Population
Isle of Anglesey County Council (2022) Anglesey and Gwynedd Replacement Joint Local Development Plan (Review Report)	<p>The review report looks at all the evidence relevant to the Joint LDP and reaches a conclusion about the type of review that will be followed. It does not detail any changes to be made to the plan.</p> <p>The Draft Review Report was subject to a 6 week public consultation period between 5 November to 20 December 2021.</p> <p>The report identifies the following most relevant issues that need consideration:</p> <ul style="list-style-type: none"> Plans for Wylfa Newydd (NSIP) and associated National Grid connection lines (separate NSIP) Covid Pandemic Brexit Phosphate Biodiversity 	The North Wales RTP should take account of all relevant issues documented within the report and the policies, strategic objectives and vision for the new LDP.	All topics



Document name	Contents, context and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal
	<p>Plan policies:</p> <ul style="list-style-type: none"> • Growth Management and Development – Safe, Healthy, Distinctive and Vibrant Communities (including Sustainable transport, development and accessibility) • Growth Management and Development – Sustainable living (including Sustainable Development and Climate Change, renewable technology and managing coastal change) • Growth Management and Development – Economy and Regeneration 		
Isle of Anglesey County Council (2019) North Anglesey Economic Regeneration Plan (April 2019)	<p>The Regeneration Plan identifies a number of proposals for action and investment in North Anglesey to help the area respond to the recent announcements, and to drive economic revitalisation across the area up to 2026. This coincides with the lifetime of the Statutory Anglesey and Gwynedd Joint Local Development Plan (JLDP).</p> <p>The aim of the Regeneration Plan is to provide a clear strategy that – following implementation and further progression over the coming years – will deliver significant improvements to the wellbeing of the area and deliver lasting benefits.</p>	<p>The North Wales RTP should take account of the strategy documented within the Plan.</p>	<p>Economy, Transport, Infrastructure</p>
Gwynedd and Anglesey Local Well-being Plan 2023-2028	<p>The Well-being of Future Generations (Wales) Act 2015 requires local authorities to prepare a Well-being Plan.</p> <p>The Plan contains nine main messages:</p> <ol style="list-style-type: none"> 1. The need to maintain a healthy community spirit. 2. The importance of protecting the natural environment. 3. Understand the impact of demographic changes. 4. Protect and promote the Welsh language. 5. Promote the use of natural resources to improve health and well-being in the long term. 6. Improve transport links to enable access to services and facilities. 7. The need for high quality jobs and affordable homes for local people. 	<p>The Gwynedd and Anglesey Well-being Plan, including any action plan must be monitored to ensure consistency of purpose and content</p>	<p>Population (communities), Human Transport, Biodiversity, Land use and landscape</p>



Document name	Contents, context and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal
	<p>8. The impact of poverty on well-being. 9. Ensure that all children have the opportunity to succeed.</p> <p>The plan sets out 2 well-being objectives of ‘thriving and long-term prosperous Communities’ and ‘Healthy and independent Residents with a good standard of life’.</p> <p>Six priorities have been identified to achieve both well-being objectives.</p>		
Plans of the Anglesey Freeport	<p>Stena Line and the Isle of Anglesey County Council have announced the submission of the Outline Business Case (OBC) for Anglesey Freeport, a transformative project poised to stimulate economic growth and create numerous job opportunities across Anglesey and North Wales.</p> <p>The OBC, submitted to both the UK and Welsh Governments, contains extensive details of how Anglesey Freeport plans to operate, as well as defining the specified tax and initial customs locations which will lie within the Freeport boundary.</p> <p>The proposals within the OBC build on the two core defining missions of Anglesey Freeport:</p> <ul style="list-style-type: none"> Increasing the volume of trade through the Port of Holyhead (Britain’s second largest roll on/roll off port) and revitalising the “GB Landbridge” – connecting the island of Ireland to mainland Europe; and Attracting regional, national and global investment into the Freeport’s key tax and custom sites, in particular from the low carbon energy sector, aligning with the existing Energy Island Programme. 	The North Wales RTP should maximise opportunities to support the plans of the Anglesey freeport	Population (communities), Transport, Economy, Infrastructure
Wrexham			
Wrexham County Borough Council (2023) Wrexham	This Local Development Plan provides a long-term land use and development strategy, focused on achieving sustainable development and will guide development for housing,	The North Wales RTP should give due regard to the vision, objectives and policies outlined in the plan and	Air quality, Biodiversity, Climatic factors, Land use and landscape, Population



Document name	Contents, context and main sustainability objectives	Relationship to the North Wales Regional Transport Plan (RTP)	Links to Integrated Well-being Appraisal
Local Development Plan 2 (LDP2) 2013 to 2028	employment, retail and other uses. Once adopted, the policies set out will be used to decide on planning applications and safeguard areas of land requiring protection of enhancement. The focus areas of the plan are housing, open space, employment, community, transport and education.	how they scheme may impact these and ensure that it adheres to relevant policies (once adopted).	
Wrexham County Borough Council (2005) Wrexham Unitary Development Plan 1996 - 2011	The Plan covers the administrative area of the Wrexham County Borough Council. The strategy outlines the Council's broad intention for development in different areas and provides a framework for the more specific policies and proposals. Specific policies are outlined in the document, which expand on the strategic vision for the County Borough and provide detailed guidance for the development and other use of land.	The North Wales RTP should give due regard to the vision, objectives and policies outlined in the plan and how the RTP may impact these and ensure that it adheres to relevant policies.	All topics
Conwy			
Conwy County Borough Council (2013) Conwy Local Development Plan 2007-2022 (adopted October 2013)	<p>The Plan sets out the key challenges facing Conwy, identifies the Vision, Objectives and the Spatial Strategy for development in the area over the period 2007 to 2022. A key purpose of the Plan is to afford protection to the natural and built environment.</p> <p>It includes the vision that the communities of Conwy will be more sustainable and offer a higher quality of life.</p>	The North Wales RTP should give due regard to the vision, objectives and policies outlined in the plan and how the RTP may impact these and ensure that it adheres to relevant policies.	All topics
Conwy & Denbighshire Public Services Board (2022) Conwy Local Well-being Plan (2023-2028)	<p>Our Local Well-being Plan was approved in March 2023 and sets out the local objectives we as a Board will take to improve the economic, social, cultural and environmental well-being for the area.</p> <p>We will focus on making Conwy and Denbighshire a more equal place with less deprivation. We have also identified 4 key themes to support our main objective, these include –</p> <ul style="list-style-type: none"> Well-being – Communities are happier, healthier and more resilient in the face of challenges, such as 	The North Wales RTP should give due regard to the well-being objectives identified.	Population (communities), Human health



	<p>the Climate Change and Nature Emergency, or the rising cost of living.</p> <ul style="list-style-type: none"> • Economy – There is a flourishing economy, supported by a skilled workforce fit for the future. • Equality – Those with protected characteristics face fewer barriers. • Housing – There is improved access to good quality housing. 		
Denbighshire			
<p>Denbighshire County Council (2013)</p> <p>Denbighshire County Council Local Development Plan 2006 – 2021 (Adopted June 2013)</p>	<p>The Local Development Plan (LDP) sets out the proposals and policies for future development and use of land in Denbighshire.</p> <p>It sets out the Plan Vision, Issue and objectives and LDP policies under the key themes:</p> <ul style="list-style-type: none"> • Respecting Distinctiveness • Building Sustainable Communities • Promoting a Sustainable Economy • Valuing Our Environment • Achieving Sustainable Accessibility 	<p>The North Wales RTP should give due regard to the vision, objectives and policies outlined in the plan and how the RTP may impact these and ensure that it adheres to relevant policies.</p>	<p>All topics</p>
Flintshire			
<p>Flintshire County Council (2023)</p> <p>Flintshire Local Development Plan 2015-2030 (Adopted January 2023)</p>	<p>The LDP sets out strategic and detailed policies, under the following themes:</p> <ul style="list-style-type: none"> • Creating Sustainable Places and Communities • Supporting a Prosperous Economy • Meeting Housing Needs • Valuing the Environment 	<p>The North Wales RTP should give due regard to the strategic and detailed policies outlined in the plan and consider how the RTP may impact these and ensure that it adheres to relevant policies.</p>	<p>All topics</p>
<p>Flintshire and Wrexham Public Services Board ()</p> <p>Our Well-Being Plan 2023 – 2028</p>	<p>Based on what we have learned over the last few years, from the COVID-19 pandemic and using evidence and data to guide us, we have produced two broad well-being objectives, which will help us all to work together to tackle inequality and improve well-being:</p> <ul style="list-style-type: none"> • Build flourishing communities by reducing inequalities across environment, education, employment, income and housing. 	<p>The North Wales RTP should contribute to the well-being objectives of the Plan.</p>	<p>Population (communities), Human health</p>



	<ul style="list-style-type: none"> • Improve community well-being by enabling people of all ages to live healthy and independent lives. <p>Our well-being objectives have then allowed us to identify six outcomes where we really want to improve well-being under three key themes: Children and Young People, Our communities and Where we work.</p>		
Plans of the Wrexham and Flintshire Investment Zone	<p>Welsh Government has backed plans to create an £80 million Investment Zone in Flintshire and Wrexham, one of 12 Investment Zones across the country.</p> <p>It is believed it would leverage an additional £1.7 billion of investment for the area and help create thousands of new jobs.</p>	The North Wales RTP should maximise the opportunities in relation to the investment zone as plans develop.	Population (communities), Human health, Economy
Snowdonia National Park			
Snowdonia National Park Authority (2016) Eryri Local Development Plan 2016-2031 (Adopted)	<p>The Local Development Plan lists factors to consider when evaluating planning applications and granting planning permissions. The factors are based on the qualities that need to be protected and enhanced within the National Park. These include:</p> <ul style="list-style-type: none"> • The natural beauty of the National Park • The National Park's communities and culture • The National Park's wildlife • The National Park's heritage and history 	The North Wales RTP should give due regard to the development strategy, strategic and development policies outlined in the plan and consider how the RTP may impact these and ensure that it adheres to relevant policies.	Biodiversity, Population (communities), Human health, Cultural heritage, Land use and Landscape



Appendix B

Baseline

Integrated Well-being Appraisal

Appendix B: Baseline Context

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1. Introduction

This appendix sets out a high-level baseline of information and data related to the study area which aligns with the area covered by the North Wales Regional Transport plan and includes the local authorities of Isle of Anglesey, Wrexham, Conwy, Flintshire, Denbighshire and Gwynedd (see Figure 1-1). Eryri National Park Authority area is also covered within the study area.

This builds on and supplements the baseline information presented in the Case for Change and Regional Transport Plan, with a focus on the IWBA topics. Key indicators and trends are detailed in relation to the baseline which covers a wide range of topics, including population, human health, biodiversity, land use and landscape, cultural heritage, ground conditions, water environment, climatic factors, air quality, noise, infrastructure, transport, resources and waste, and economy.

It should be noted that the baseline is a dynamic entity, subject to change over time due to various factors. Therefore, it will be reviewed at various stages of IWBA preparation to reflect the most accurate and current conditions.

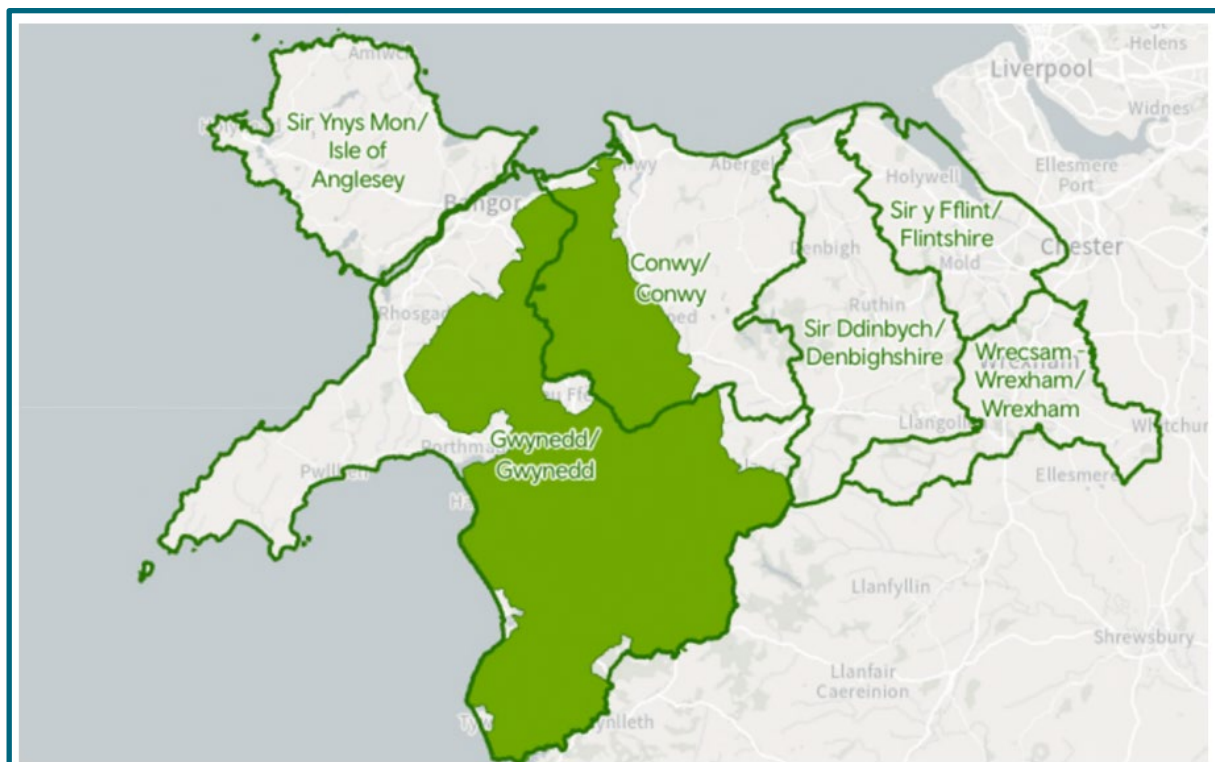


Figure 1-1 Study area for the North Wales Regional Transport Plan and ISA (with Eryri National Park in Green)



2. Population (communities)

2.1 Current and future population trends

North Wales has an estimated population of 688,201 (mid-2022 estimate) and a 2021 Census population of 687,000. Whilst relatively stable in size, this is estimated to have decreased by approximately 0.04% since the 2011 Census¹. Its population ranges from an estimated 155,600 residents in Flintshire to around 70,000 in the Isle of Anglesey, which is the third smallest local authority in Wales by population. The population of each local authority area based on mid-year 2022 estimates compared to 2020 and 2021 is shown in Table 1 below.

Table 1 Population estimates by North Wales local authority compared to the region and national average (mid-2022)

Area	Mid-year 2020 Population	Mid year 2021 Population	Mid-year 2022 Population
Wales	3,104,483	3,105,633	3,131,640
North Wales	668,167	677,041	688,201
Isle of Anglesey	68,794	68,937	69,049
Gwynedd	118,180	117,072	117,591
Conwy	114,651	114,788	114,290
Denbighshire	95,558	96,047	96,558
Flintshire	155,004	155,045	155,319
Wrexham	135,980	135,152	135,394

Source: Welsh Government²

¹ Office for National Statistics (2022) Population and household estimates, Wales: Census 2021. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimateswales/census2021> (Accessed: April 2024).

² Welsh Government (2023) Population estimates by local authority and year. Available at: <https://stats.wales.gov.wales/Catalogue/Population-and-Migration/Population/Estimates/Local-Authority/populationestimates-by-localauthority-year> (Accessed: April 2024).

North Wales had an average population density of 195.8 persons per square kilometre in mid-2022³⁴. Despite variation in the distribution of residents between the local authorities of North Wales, the population of North Wales is more evenly distributed across its local authorities than in the other three regions of the Welsh National Development Framework (Mid Wales, Southwest Wales and South East Wales)³ (see Figure 2-1).

Of the four regions, it exhibited the most even population distribution across authorities, with over 100,000 residents each in 4 of the 6 authorities: Flintshire, Wrexham, Gwynedd and Conwy.

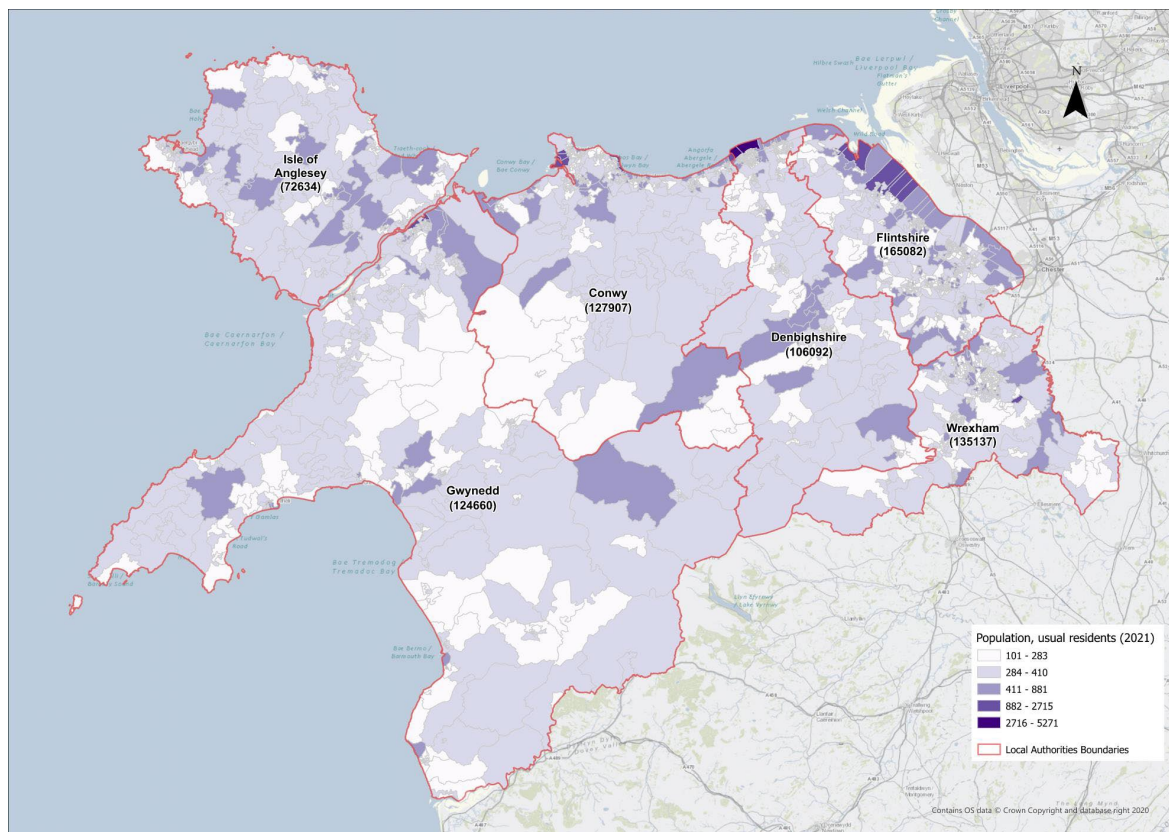


Figure 2-1 Population

2.1.1 Population projections

Between mid-2021 and mid-2031, the population of Wales is projected to increase by 5.8% from 3.11 million to 3.29 million (based on 2021 population projections as published by Welsh Government on 30 January 2024)⁵. A full update to national population projections is due to be released in October/November 2024.

³ Welsh Government (2020) Summary statistics for North Wales region: 2020. Available at: <https://www.gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-north-wales-region-2020-806.pdf> (Accessed: April 2024).

⁴ Welsh Government (2023) Population density (persons per square kilometre) by local authority and year. Available at: <https://stats.wales.gov.wales/Catalogue/Population-and-Migration/Population/Density/populationdensity-by-localauthority-year> (Accessed: April 2024).

⁵ Welsh Government (2024) National population projections: 2021-based (interim data). Available at: <https://www.gov.wales/national-population-projections-2021-based-interim-data> (Accessed: April 2024)



The latest available population projections for local authorities within Wales are based on 2018-projections, and as such are expected to have some variations from the 2021-based national projections data. The estimated projections for the study area of North Wales between 2025 - 2040 are set out in Table 2 below. Based on these statistics, the North Wales region is expected to experience an average 1.5% increase in population size, however this is not expected to be evenly distributed across the local authority areas, with Wrexham and the Isle of Anglesey projected to have slight declines in population size, with Conwy estimated to experience the largest population increase.

Table 2 Population projections 2025-2040 (2018-based projections)

Area	2025	2030	2035	2040	Change (number)	Change (%)
Anglesey	69,800	69,600	69,500	69,500	-300	-0.4%
Gwynedd	126,300	128,300	129,900	131,300	5,050	3.8%
Conwy	119,200	120,500	121,700	123,000	3,800	3.1%
Denbighshire	96,500	97,100	97,600	98,400	1,850	1.9%
Flintshire	158,200	159,200	160,100	161,300	3,050	1.9%
Wrexham	134,800	133,700	132,900	132,500	-2,350	-1.8%
North Wales	704,900	708,300	711,800	715,900	11,050	1.5%
Wales	3,193,600	3,229,300	3,260,700	3,290,300	96,700	2.9%

2.1.2 Refugees and asylum seekers

Home Office statistics indicate that there are approximately 2,300 asylum seekers in Wales. The Welsh Refugee Council estimates that there are approximately 10,000 refugees in Wales. Refugees and asylum seekers represent around 0.5% of the population in Wales. From 2017 to 2021, 241 asylum seekers have been resettled across the North Wales local authorities. In North Wales, Wrexham and Conwy both accommodate dispersal centres⁶.

2.1.3 Age profile

According to Census 2021 data, the population age profile in North Wales is significantly older than the national average. In 2021, the average (median) age in North Wales was 46 years, compared to Wales average of 42 and an England and Wales average of 40. For North Wales, this figure is also higher than the median age of 43 years in 2011⁷.

North Wales has an ageing population. Within 2021 Census data, the proportion of households made up of only pensioners increased to 27.1%, which is high compared to national figures (Wales in 2021 = 24.8% and England and Wales = 22.1%).

⁶ North Wales Regional Partnership Board (2022) Population Needs Assessment. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2023/04/Population-Needs-Assessment-April-2022-pub-20230418-eng.pdf> (Accessed: April 2024).

⁷ North Wales Regional Partnership Board (2022) 2021 Census Topic summary: demography & migration November 2022. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2022/11/2021-Census-topic-summary-demography-migration.pdf> (Accessed: April 2024).



Pensioners living alone made up the majority of these households (47,676 or 15.8% of all households). Conwy County Borough had the second highest percentage of pensioner-only households in Wales in 2021. According to the North Wales Population Assessment (2022)⁶, the population of people aged 65+ could rise to 207,600 by 2040. The number of people aged 85 and over has increased by 15.6% between 2010 and 2020⁶. This increase is due to improvements in mortality rates, meaning that people are living longer, and also due to the ageing of the large group of 'baby boomers' who were born after World War II (generally defined as the period between 1946 and 1964)⁶.

The age profile of North Wales's local authorities according to mid-2022 estimates⁸ is set out in Figure 2-2 below.

The North Wales Population Needs Assessment (2022) predicts that the region will experience a decrease in the numbers of people aged 15 and under, a pattern across all local authority areas. The working age group, those between 16 and 64 years of age will also decrease across the region, and this trend is replicated across all local authorities with the exception of Gwynedd which remains relatively stable.

The proportion of households containing dependent children in 2021 was lower in North Wales than the national average (North Wales = 24.0%; Wales = 26.5%; England and Wales = 28.4%). The number and proportion of households containing dependent children has decreased since 2011 for all North Wales unitary authority areas. However, the number and proportion of lone parent families has increased.

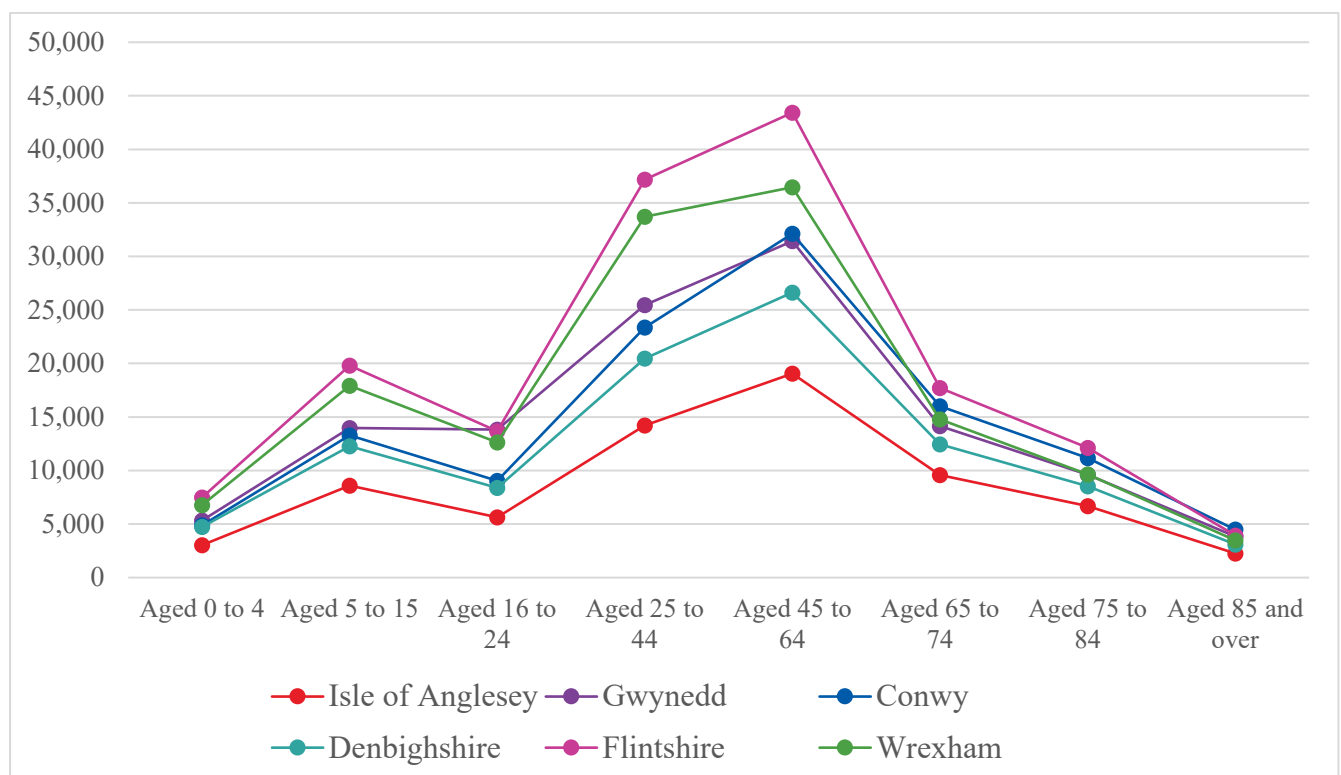


Figure 2-2 Age profiles of North Wales's local authorities (mid-2022 estimates)

⁸ Welsh Government (2023) Mid-year population estimates, Office for National Statistics. Available at: <https://stats.wales.gov.wales/Catalogue/Population-and-Migration/Population/Estimates/Local-Authority/populationestimates-by-localauthority-region-age> (Accessed: April 2024).



2.1.4 Ethnicity and main language

The percentage of usual residents born outside of Wales has increased slightly from 39.7% (273,387) in 2011 to 40.3% (276,695) in 2021. Most of these were born in England (229,078 or 33.3% of all usual residents)⁹.

According to Census 2021 data, the population of North Wales is much less ethnically diverse than across England and Wales as a whole. There has been minimal change in the last decade in the overall proportions within each high-level ethnic group. The proportion of people in North Wales who identified within the ethnic category “White” was 665,147 people or 96.8% of the population. This was slightly smaller than in 2011 (97.5%)⁹. This proportion is high when compared to national figures (England and Wales, 81.7% and Wales, 93.8%). The proportion was highest in Anglesey at 98.1% and lowest in Wrexham at 96.0%.

Across all lower-level ethnic categories, the largest group after “White: Welsh, English, Scottish, Northern Irish or British” was “Any other White background”, with 2.9% of the population or 19,802 people selecting this option. In North Wales, the highest proportions of people from “Any other White background” in 2021 were in Wrexham (4.8%) and Flintshire (3.9%).

For North Wales as a whole, “Asian, Asian Welsh or Asian British” remained the second largest high-level ethnic group category in 2021 (9,400 people, 1.4% of all usual residents).

StatsWales have published ethnicity data by area and ethnic group for year ending 2023 (Figure 2-3). It should be acknowledged that the data items for Black, Asian and Minority Ethnic (BAME) % are based on a relatively low survey response rate, and in the case of Flintshire the data item is disclosive or not sufficiently robust for publication.



Figure 2-3 Ethnicity by area and ethnic group¹⁰

⁹ North Wales Regional Partnership Board (2022) 2021 Census Topic summary: ethnic group. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2022/12/2021-Census-topic-summary-ethnic-group.pdf> (Accessed: April 2024).

¹⁰ Welsh Government (2023) Ethnicity by area and ethnic group. Available at: <https://statswales.gov.wales/Catalogue/Equality-and-Diversity/Ethnicity/ethnicity-by-area-ethnicgroup> (Accessed: April 2024).



The above ethnicity data is reflected in the proportion of North Wales residents (aged 3+) who have English or Welsh as their main language, which is found to be higher than the national average for England and Wales as a whole. Of the 19,349 people who did not select English or Welsh as a main language in 2021, 14,894 or an additional 2.2% of the population said they could speak English well or very well.

This takes the figure for those who have a good level of proficiency in English or Welsh to 99.3%, which is similar to the figure for 2011 (99.4%)¹¹.

Welsh-speakers in North Wales form a higher proportion of the population than the other Welsh regions³. In 2020 North Wales had 279,300 residents who can speak Welsh¹², this equates to 41% of the overall population across the 6 local authorities. Gwynedd has the highest percentage of Welsh speakers with 76% of the resident population able to speak Welsh which is followed by Anglesey at 66%. Conwy has the third highest rate of Welsh speakers with 38% and neighbouring Denbighshire has 34%⁶. The most Eastern counties of Flintshire and Wrexham have the lowest percentage of Welsh speakers as 23% and 26% respectively⁶.

Table 3 Population of Welsh speakers by North Wales local councils

Local council	All aged 3 and over (population total)	Yes can speak Welsh	No cannot speak Welsh	% of people who can speak Welsh
Anglesey	68,100	45,100	22,900	66.3%
Gwynedd	118,800	90,700	28,000	76.4%
Conwy	111,800	41,900	69,900	37.5%
Denbighshire	91,200	31,200	59,800	34.3%
Flintshire	151,300	35,000	116,200	23.2%
Wrexham	135,200	35,400	99,800	26.2%
North Wales	676,400	279,300	396,600	41.2%
Wales	3,034,400	884,300	2,147,800	29.2%

Source: Stats Wales Annual Population Survey 2021 (ending June 2021)

2.1.5 Sexual orientation and gender identity

According to the 2021 Census data for North Wales, 89.4% of the population aged 16 years and over) described themselves as “Straight/Heterosexual”. (Wales, and England and Wales = 89.4%); 2.5% of the population aged 16 or over selected an LGB+ sexual orientation (“Gay or Lesbian”, “Bisexual” or another minority sexual orientation), which is lower than the national

¹¹ North Wales Regional Partnership Board (2022) 2021 Census Topic summary: main language December 2022. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2022/12/2021-Census-topic-summary-main-language.pdf> (Accessed: April 2024).

¹² Welsh Government (2021) Welsh language data from the Annual Population Survey: April 2020 to March 2021. Available at: <https://www.gov.wales/welsh-language-data-annual-population-survey-april-2020-march-2021#:~:text=For%20the%20year%20ending%2031,to%20around%2024%2C600%20more%20people.> (Accessed: April 2024).



averages for Wales (3.0%) and England and Wales (3.2%). The remaining aged 16 years and over (8.1%) did not answer the question on sexual orientation¹³.

In terms of gender identity, 92.8% of usual residents aged 16 years and over answered “Yes”, indicating that their gender identity was the same as their sex registered at birth. A minority (0.3%) answered “No”, indicating that their gender identity was different to their sex registered at birth, which again is lower than the national averages for Wales (0.4%) and England and Wales (0.5%).¹³.

2.1.6 Religion

Across Wales more people reported they had no religion (46.5%) than any single religious affiliation. For England and Wales, the percentage was 37.2%.

Within North Wales, there was a significant increase between 2011 and 2021 in the number and proportion of people who said they had no religion. In 2021, 41.7% usual residents reported that they had no religion, which was a significant increase from 26.9% in 2011¹⁴. This was attributed by a significant decrease in those who identified as Christian in North Wales (49.8% in 2021 compared to 63.9% in 2011).

Nevertheless, the population of North Wales is less religiously diverse than national averages, where 1.8% of the population identified with a religion other than Christian. This compares to 3.6% for Wales and 10.6% for England and Wales as a whole¹⁴. The proportions of the population identifying with religious groups other than Christian for North Wales saw minimal change from 2011 to 2021 as a whole or for individual unitary authority area.

2.1.7 Education

Between 2011 and 2021 all unitary authority areas in North Wales saw a significant improvement in qualification levels, and a corresponding decrease in the number and percentage of people with no qualifications¹⁵. In addition, 18.7% (106,341) of usual residents aged 16 or over had no qualifications. This was lower than the Welsh average.

However, across North Wales the proportion of people who reported their highest qualification at level 4 or above on census day 2021 (for example Higher National Certificate, Higher National Diploma, Bachelor's degree and postgraduate qualifications) was just below the national (Wales) average. For North Wales this was 31.1% or 176,740 people, whilst Wales was 31.5% and England and Wales was 33.8%. Within North Wales, the proportion was highest in Gwynedd at 34.5% and lowest in Wrexham at 29.1%. According to the North Wales Regional Partnership Board, part of the difference compared to the Welsh average is explained by the proportion of apprenticeships as highest level of qualification in North Wales. This was greater than national averages at 6.3% compared to 5.6% across Wales and 5.3% for England and Wales.

¹³ North Wales Regional Partnership Board (2023) 2021 Census Topic summary: sexual orientation and gender identity January 2023. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2023/01/2021-Census-topic-summary-sexual-orientation-and-gender-identity.pdf> (Accessed: April 2024).

¹⁴ North Wales Regional Partnership Board (2022) 2021 Census Topic summary: religion December 2022. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2022/12/2021-Census-topic-summary-religion.pdf> (Accessed: April 2024).

¹⁵ North Wales Regional Partnership Board (2023) 2021 Census Topic summary: education January 2023. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2023/01/2021-Census-topic-summary-education.pdf> (Accessed: April 2024).



3. Human Health

3.1 Healthcare governance in North Wales

Within the study area, Betsi Cadwaladr University Health Board (BCUHB) is responsible for North Wales NHS services in Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire and Wrexham (as depicted on Figure 3-1). The Health Board has published a Public Health Annual Report (2023)¹⁶, which states at high level that the data in North Wales continues to show inequalities in health outcomes for those living in the poorest communities with a range of factors responsible for this including the accessibility and quality of health and social care services, individual behaviours and the wider determinants of health (such as housing, income and the physical environment).

The North Wales Regional Partnership Board (NWRPB) North Wales Regional Plan (2023-2028)¹⁷, includes a range of health and well-being data for North Wales, as set out below. This Regional Plan is based on the findings of the Population Needs Assessment 2022⁶ (reliant on 2011 Census data for some metrics) undertaken by the six North Wales local councils, BCUHB and Public Health Wales.

¹⁶ Betsi Cadwaladr University Health Board Annual Report (2023) Collective Action For A Healthier North Wales Taking A Whole System Approach. Available at: <https://bcuhb.nhs.wales/about-us/governance-and-assurance/bcuhb-public-health-annual-report-2023/> (Accessed: April 2023).

¹⁷ North Wales Regional Partnership Board (2022) North Wales Regional Plan 2023-2028. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2023/04/NW-Regional-Area-Plan-2023-1.0.pdf> (Accessed: April 2024).

Swansea Bay LHB

- 1 Afan
- 2 BayHealth
- 3 CityHealth
- 4 Cwmtawe
- 5 Llŵchwr
- 6 Neath
- 7 Penderi
- 8 Upper Valleys

Aneurin Bevan LHB

- 9 Blaenau Gwent East
- 10 Blaenau Gwent West
- 11 Caerphilly East
- 12 Caerphilly North
- 13 Caerphilly South
- 14 Monmouthshire North
- 15 Monmouthshire South
- 16 Newport East
- 17 Newport West
- 18 Torfaen North
- 19 Torfaen South

Betsi Cadwaladr University LHB

- 20 Anglesey
- 21 Arfon
- 22 Central & South Denbighshire
- 23 Conwy East
- 24 Conwy West
- 25 North East Flintshire
- 26 Dwyfor
- 27 North West Flintshire
- 28 Meirionnydd
- 29 South Flintshire
- 30 North Denbighshire
- 31 South Wrexham
- 32 North West Wrexham
- 33 Central Wrexham

Cardiff and Vale University LHB

- 34 Cardiff East
- 35 Cardiff South East
- 36 City & Cardiff South
- 37 Cardiff North
- 38 Cardiff South West
- 39 Cardiff West
- 40 Central Vale
- 41 Eastern Vale
- 42 Western Vale

Cwm Taf Morgannwg LHB

- 43 Bridgend East
- 44 Bridgend North
- 45 Bridgend West
- 46 North Cynon
- 47 Merthyr Tydfil
- 48 Rhondda
- 49 Taf Ely
- 50 South Cynon

Hywel Dda LHB

- 51 Amman Gwendraeth
- 52 Llanelli
- 53 North Ceredigion
- 54 North Pembrokeshire
- 55 South Ceredigion
- 56 South Pembrokeshire
- 57 Tywi Taf

Powys Teaching LHB

- 58 Mid Powys
- 59 North Powys
- 60 South Powys

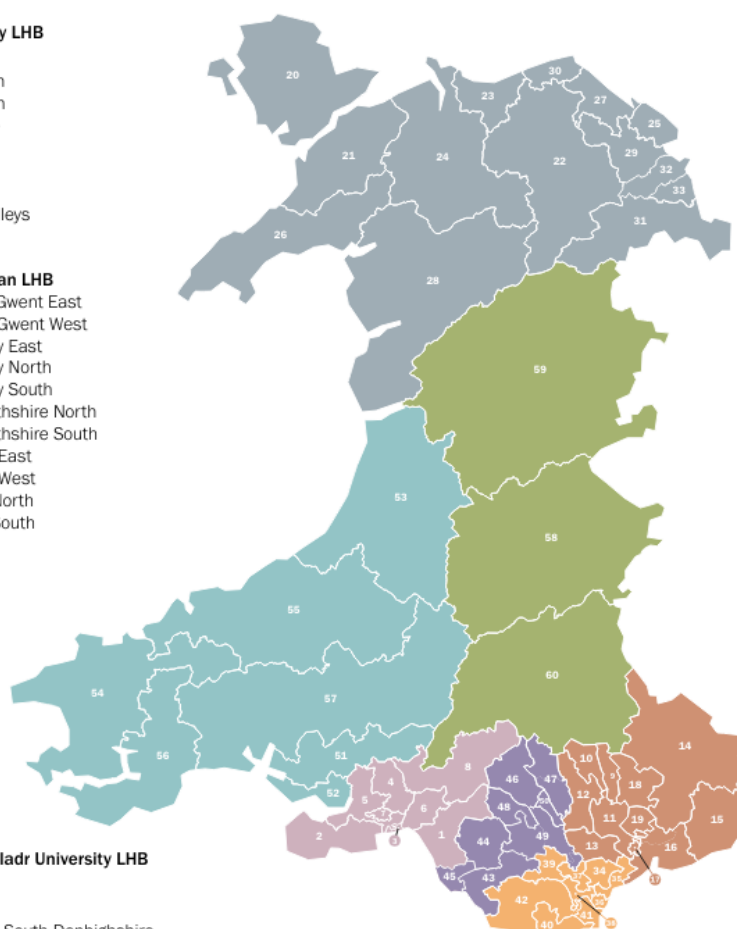


Figure 3-1 Primary care clusters within Wales regions (Source: Welsh Government 2023¹⁸)

3.2 Life expectancy and overall health

Life expectancy is the average length of time a child born today can expect to live. In contrast, healthy life expectancy is an estimate of lifetime spent in 'very good' or 'good' health, based on how individuals perceive their general health. Average life expectancy and healthy life expectancy are both important headline measures of the health status of the population. The health state life expectancy measure adds a 'quality of life' dimension to estimates of life expectancy by dividing it into time spent in different states of health.

¹⁸ Welsh Government (2021) A Healthier Wales: our plan for health and social care. Available at: <https://www.gov.wales/sites/default/files/publications/2021-09/a-healthier-wales-our-plan-for-health-and-social-care.pdf> (Accessed: April 2024).

In Wales, there were increases in the proportion of people who reported 'very good' health (from 45.7% in 2011, to 46.6% in 2021) and 'good health' (from 31.4% in 2011, to 32.5% in 2021), and decreases in the proportion of people who reported bad health (from 6.0% in 2011, to 5.1% in 2021) and very bad health (from 1.9% in 2011, to 1.6% in 2021).

2021 Census data for North Wales indicates that approximately 81% of people living in North Wales report their health to be 'good', or 'very good'¹⁹, which is above the national average. This is depicted in the age standardised proportions of usual residents reporting very good health (see Figure 3-2 below).

North Wales has a higher than Wales average healthy life expectancy for both females (65.2 compared to 62.4) and males (63.9 compared to 61.5)¹⁹. However, as shown on Figure 3-2, there are also significant variations in healthy life expectancy across North Wales local authorities.

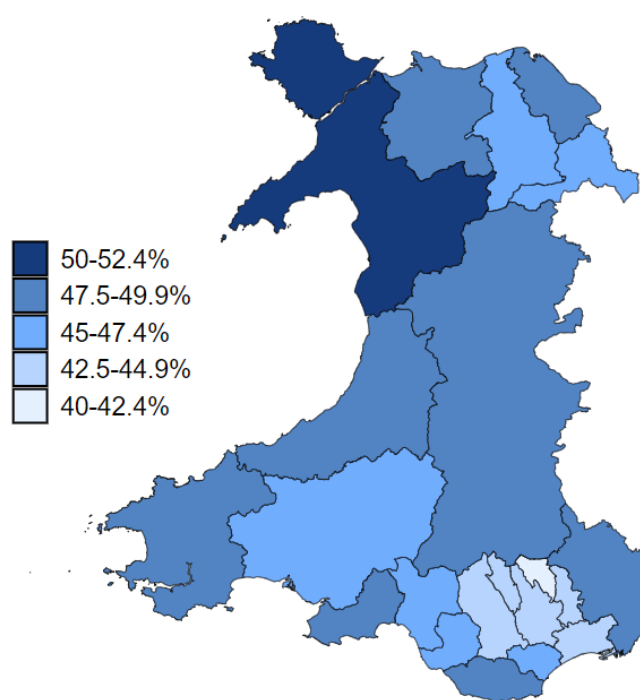


Figure 3-2 Age-standardised proportions of usual residents reporting very good health by local authority in Wales, 2021 (Source: Welsh Government 2023)²⁰

¹⁹ Health expectancies in Wales with inequality gap. Public Health Wales Observatory. Available online at: https://publichealthwales.shinyapps.io/PHWO_HealthExpectanciesWales_2022/ (Accessed July 2024)

²⁰ Welsh Government (2023) Health, disability and provision of unpaid care in Wales (Census 2021). Available at: [https://www.gov.wales/health-disability-and-provision-unpaid-care-wales-census-2021-html#:~:text=As%20in%202011%2C%20Census%202021,the%20Equality%20Act%20\(2010\).](https://www.gov.wales/health-disability-and-provision-unpaid-care-wales-census-2021-html#:~:text=As%20in%202011%2C%20Census%202021,the%20Equality%20Act%20(2010).) (Accessed: April 2024).



3.3 Social care and services

According to the North Wales Population Assessment (2022), there were almost 2,900 children receiving care and support across North Wales⁶. The primary category of need for children receiving care for North Wales is as follows: over half are due to abuse or neglect (56.5%); child's disability or illness (17.2%); family dysfunction (11.1%); or family in acute stress (8.3%)⁶.

Within North Wales the number of children in foster care has increased year on year since 2015⁶. This increase is also in line with national trends, with numbers increasing across Wales as a whole. At the local authority level, Wrexham had the largest increase, with the number of children doubling, and Gwynedd also saw a significant increase. Numbers in the other local authorities have fluctuated⁶.

In terms of provision of unpaid care, there are around 1,750 young carers supported across North Wales and the numbers are increasing. In North Wales, around 14% of people aged 65 and over provide unpaid care¹⁷.

3.4 Key health issues

The below are identified as the key health issues experienced within North Wales and therefore comprise the current and future sustainability baseline.

3.4.1 Obesity

Obesity is a major contributory factor for premature death and is associated with both chronic and severe medical conditions, including coronary heart disease, diabetes, stroke, hypertension, osteoarthritis, complications in pregnancy and some cancers. People who are obese may also experience mental health problems, bullying, or discrimination in the workplace⁶. Obesity is related to social disadvantage, with higher levels in the most disadvantaged populations. In North Wales, just over half the adult population (55%) are overweight or obese, which is just below the average for Wales, 60%⁶.

The BCUHB Health Board Annual Report (2023)¹⁹ sets out that within North Wales:


- Only four in ten adults are at a healthy body weight.
- 2 out of every 7 children aged 4-5 is living with overweight or obesity.
- The overweight and obesity rate is 36% higher in the most deprived areas compared to the least deprived.

3.4.2 Chronic diseases and long-term conditions

Chronic conditions are generally those which cannot be cured, only managed. Within Wales, general trends indicate that people living in the most deprived areas have higher levels of hearing and visual impairment, and also long-term health problems, particularly chronic respiratory conditions, cardiovascular disease and arthritis⁶.

Approximately 11,500 children and young people in North Wales have a limiting long-term illness, with support also needed for many parents and carers. The number of children receiving care and support with a disability supported by social services has fluctuated¹⁷.

Around one third of people in North Wales are living with a chronic condition, such as high blood pressure, asthma, heart failure or diabetes¹⁷. In addition, there are currently estimated to be between 10,000 and 11,000 people living with dementia in North Wales¹⁷.



The lower estimate is published in the Quality Outcomes Framework Statistics (Welsh Government, 2018a) and the higher estimate is used in the Daffodil projections (Institute of Public Care, 2017). As people live longer, it is estimated that the number of cases of dementia will increase, as age is the biggest known risk factor.

In terms of future trends, the number of people living with a limiting long-term illness is predicted to increase by nearly 22% over the 20-year period to 2035¹⁷, this is largely attributed to the increase population living to older age.

3.4.3 Impacts of Covid-19

Long-covid is also a key issue emerging as a result of the Covid-19 pandemic¹⁷ and the ONS has placed a 15% assumption of long-covid cases emerging amongst those who have tested positive for the virus.

The Covid-19 pandemic has had a significant impact on the delivery of services across Wales. Much of this is also reflected in North Wales and includes:

- Reduced capacity in emergency departments and hospitals.
- Disruption of clinical services resulting in significant backlogs.
- The number of people waiting over 52 weeks is at its highest ever.
- People are delaying contacting their GP about symptoms, which could impact on treatment and outcomes.
- Increase in demand for mental health services, including an estimated 25% increase in demand for hospital services⁶.

3.4.4 Disability and neurodiversity

An estimated 16 million people or 24% of the total population are disabled in the UK (under the core definition of disability that appears in legal terms in the Equality Act 2010) according to the latest available data²¹. The prevalence of disability rises with age: in 2021/22 around 11% of children in the UK were disabled, compared with 23% of working-age adults and 45% of adults over State Pension age.

The proportion of the population claiming a disability benefit varies across the UK, with Scotland and Wales having a higher proportion of disabled people (both approximately 26%), however North Wales is identified as an area with higher than national average caseloads for disability benefits (see Figure 3-3). Data on the number of Blue Badges is not available for Wales, however the latest data available for concessionary travel in Wales is from the end of March 2020, when around 55,000 concessionary passes had been issued to disabled people²¹.

²¹ House of Commons Library (2023) UK disability statistics: Prevalence and life experiences. Available at: <https://researchbriefings.files.parliament.uk/documents/CBP-9602/CBP-9602.pdf> (Accessed: April 2024).

Disability benefit claimants*

*PIP, DLA, AA and Scottish disability benefits

Local authorities with the highest/lowest proportion

Local authority	Nation/region	% of pop. claiming disability benefit
Blaenau Gwent	Wales	17.8%
Neath Port Talbot	Wales	17.6%
Merthyr Tydfil	Wales	17.2%
Inverclyde	Scotland	16.6%
Caerphilly	Wales	16.4%
Knowsley	North West	16.3%
Hartlepool	North East	16.0%
Blackpool	North West	15.9%
West Dunbartonshire	Scotland	15.7%
Rhondda Cynon Taf	Wales	15.5%
City of London	London	4.9%
Isles of Scilly	South West	4.9%
Cambridge	East of England	4.8%
Richmond upon Thames	London	4.8%
Wokingham	South East	4.8%
Hart	South East	4.6%
Elmbridge	South East	4.5%
Wandsworth	London	4.4%
Windsor & Maidenhead	South East	4.3%
St Albans	East of England	2.8%

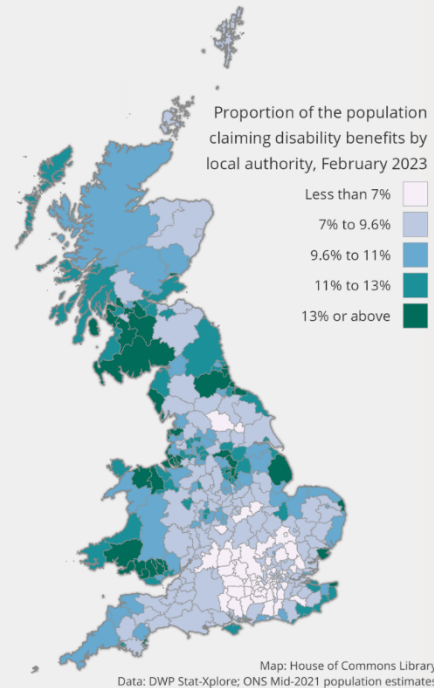


Figure 3-3 Disability benefit claimants (February 2023) (Source: House of Commons Library, 2023).

The RNID estimate that one on five adults in the UK is deaf or has hearing loss²², which equates to approximately 610,000 people in Wales. For people over 50, around 40% are estimated to have some form of hearing loss this rises to 71% of people aged over 70²². The number and rate per 100,000 of people estimated to be living with hearing impairments within North Wales is comparable to the national average for Wales (249 compared to 252)²³.

The 2021 Census indicates that across Wales, the proportion of disabled people was 21.1% (670,000 people)²⁰, which is a 2.3% decrease from the 2011 Census.

Recent estimates show that there were 415,600 disabled people in 2020 aged 16 to 64 in Wales, representing 21.9% of the 16 to 64 population¹⁷. In Wales, there are approximately 100,000 people living with a neurological condition that has a significant impact on their lives such as Parkinson's disease, epilepsy, multiple sclerosis or motor neurone disease¹⁷.

Within the study area, the rate of sight loss, blindness and partial sight loss for North Wales is higher than the Wales rates⁶. According to the RNIB, there are 27,600 people estimated to be living with sight loss across North Wales. This includes:

- 17,720 people living with mild sight loss.
- 6,140 people living with moderate sight loss
- 3,750 people living with severe sight loss.

²² Royal National Institute for Deaf People (2024) Prevalence of deafness and hearing loss. Available at: <https://rnid.org.uk/get-involved/research-and-policy/facts-and-figures/prevalence-of-deafness-and-hearing-loss/#:~:text=One%20in%20five%20adults%20in,have%20hearing%20loss%20or%20tinnitus> (Accessed: April 2024).

²³ Royal National Institute of Blind People (No date) Sight loss data tool version 4.3.1. Available at: <https://www.rnib.org.uk/professionals/health-social-care-education-professionals/knowledge-and-research-hub/sight-loss-data-tool/> (Accessed: April 2024).



This number is projected to increase to 32,300 by 2032, representing an additional 4,700 people living with sight loss within less than a decade²⁴.

The RBIN explain how shared-use spaces, where road users mix on a level surface without detectable kerbs or controlled crossings, are not accessible to blind and partially sighted people. These individuals often have severely reduced distance vision, making it difficult to detect moving vehicles or judge gaps in traffic. Controlled crossings with signals, spinning cones, or audible beeps are the most accessible, as they indicate a full stop in traffic. Techniques like 'shorelining,' involving detectable linear pathways, are crucial for orientation and navigation but become challenging when clear lines are removed.

Active travel networks with inaccessible infrastructure put blind and partially sighted pedestrians at risk, especially when encountering silent, agile, and fast-moving cycles and micromobility vehicles. Collisions with obstacles, including bikes and e-scooters, are common. Cycling infrastructure often lacks accessibility features, like detectable kerbs and tactile paving, making it difficult for those with sight loss to navigate. To ensure safety, it is vital to have clear demarcation between pedestrian and cycle routes and accessible signal-controlled crossings.

It is also estimated that 1.1% of the population are on the autism spectrum. This is an estimated 6,160 people over 18 in North Wales¹⁷.

The North Wales Population Needs Assessment (2022) identified through consultation and engagement that accessibility of transport links to those with chronic health needs, physical disability and sensory impairment were especially an issue in more rural areas, where social isolation can be more profound due to lack of public transport infrastructure.

3.4.5 Mental health and wellbeing

People in North Wales report slightly better mental health than in Wales as a whole, but the number of people with mental health needs is likely to increase¹⁷.

Covid-19 has had a major impact on the mental wellbeing of the population of North Wales. A third of adults reported that their mental health had worsened during the Covid-19 pandemic compared to pre-March 2020. Locally, there has been an increase in the number of children and young people being referred for mental health support and this is likely to continue following the impact of Covid-19 on children and young people's mental health⁶.

3.4.6 Deprivation

Deprivation is the lack of access to opportunities and resources which are expected in our society and where people experience deprivation this can have significant impacts on their health and wellbeing. The Welsh index of multiple deprivation looks at a number of different domains of deprivation to build an overall picture of relative deprivation for small areas in Wales. These domains include income and employment, health, education, access to services, housing, community safety. Figure 3-4 identifies the areas of most and least deprivation within the study area which shows that generally, the coastal areas of Conwy and Denbighshire, the northern borders of Flintshire and areas of Wrexham are the most deprived.

²⁴ It is important to note that this data only accounts for people resident in Anglesey, Conwy, Denbighshire, Flintshire, Gwynedd and Wrexham.

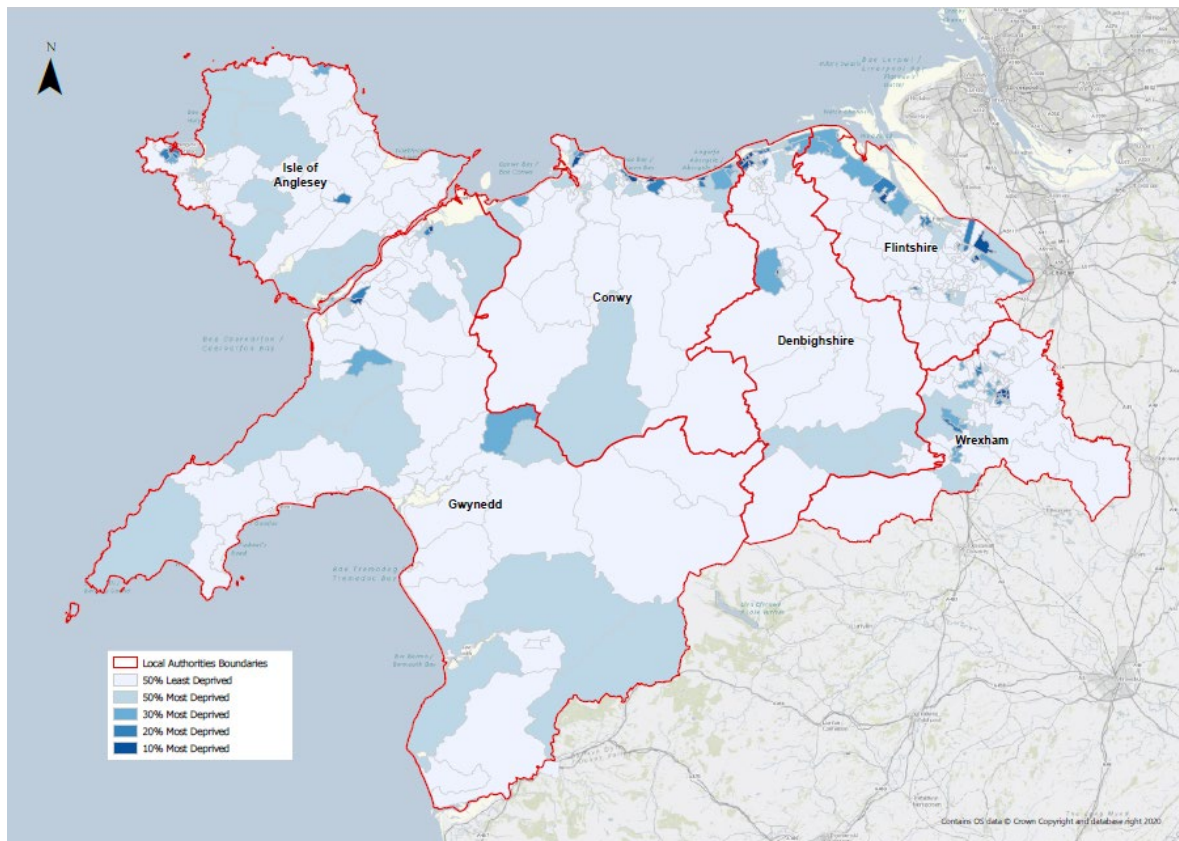


Figure 3-4 Welsh index of multiple deprivation – areas of most, to least deprived



4. Biodiversity

The study area comprises six unitary authorities including Isle of Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire and Wrexham. A desk study search has been undertaken obtaining biodiversity and designated site information from Multi-Agency Geographic Information for the Countryside (MAGIC)²⁵ maps, Joint Nature Conservation Committee (JNCC)²⁶, Natural Resources Wales (NRW)²⁷ and the Woodland Trust²⁸.

4.1 Priority Habitats

Within the study area, which comprises six local planning authorities, there are areas of significant natural heritage with internationally important wetlands, blanket bogs, ancient woodlands and meadows that support unique biodiversity.

Priority habitats cover a wide range of semi-natural habitat types and were identified as being the most threatened, requiring conservation action. In Wales there are 55 habitats listed under Section 7 of the Environment (Wales) Act 2006.

A desk study search has been undertaken using NRW priority habitat records. This identified a diverse selection of 22 priority habitat types within the study area, including ancient woodland, as displayed on Figure 4-1. In total, the area (ha) covered by priority habitats within the study area equates to approximately 208,499ha (approximately 33% of the study area). The dominating priority habitat is upland heathland (51,451 ha) and the second most abundant is ancient woodland (23,500 ha). This is followed by coastal and floodplain grazing marsh (23,363 ha), upland flushes, fens and swamps (22,139ha), and lowland dry acid grassland (21,730 ha). Figure 4-2 shows the percentage cover of all priority habitats found within the study area recorded.

²⁵ Department for Environment, Food & Rural Affairs (no date) Multi-Agency Geographic Information for the Countryside (MAGIC). Available at: <https://magic.defra.gov.uk/MagicMap.aspx>. (Accessed: April 2024).

²⁶ Joint Nature Conservation Committee (2024) For nature, people and the planet. Available at: <https://jncc.gov.uk/> (Accessed: April 2024).

²⁷ Natural Resources Wales (2024) Natural Resources Wales. Available at: <https://naturalresourceswales.gov.uk/?lang=en> (Accessed: April 2024).

²⁸ Woodland Trust (2024) Ancient Tree Inventory. Available at: <https://ati.woodlandtrust.org.uk/> (Accessed: April 2024).

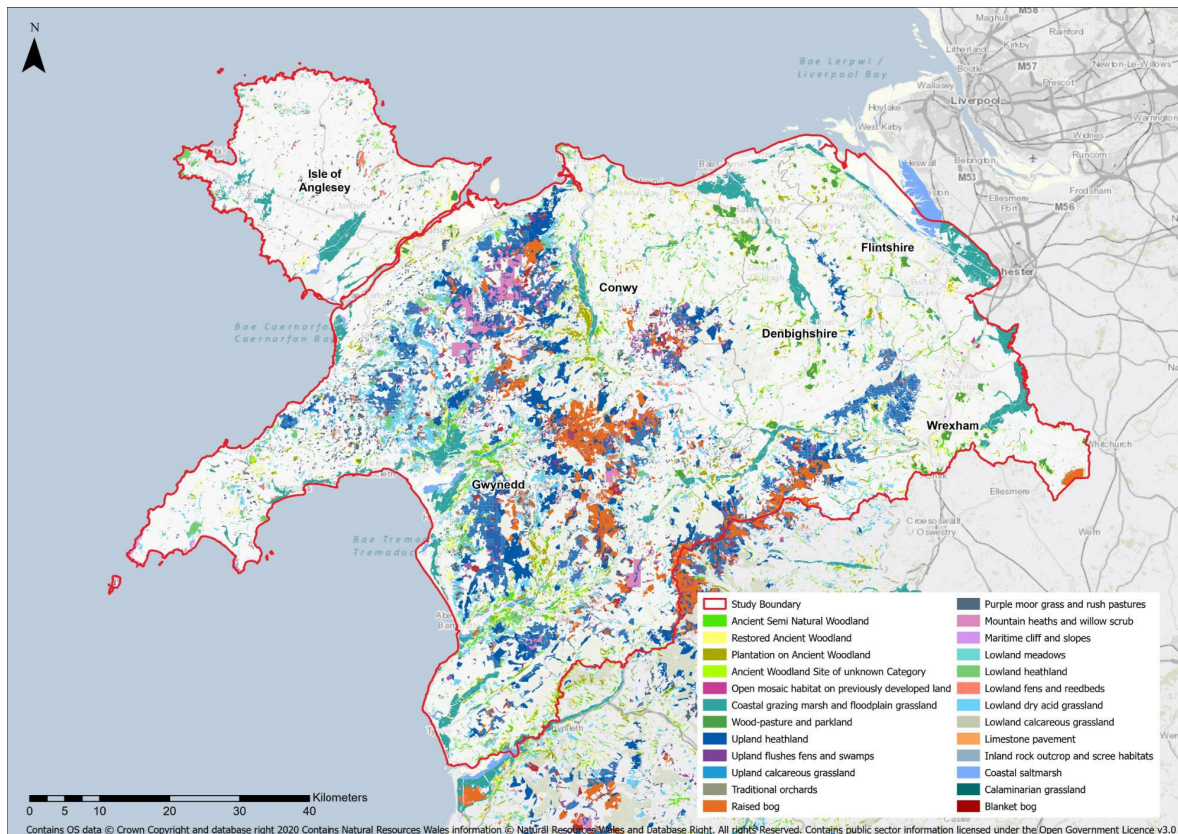


Figure 4-1: Priority habitats within the study area

In addition, there is approximately 2480 km of main rivers within the study area. These are statutory watercourses which are designated by NRW and comprise larger streams and rivers as well as small watercourses of significance.

Upland heathland is the most dominant priority habitat type within the study area. The majority of this habitat is identified within the west of the study area, particularly within Snowdonia and Gwydir Forest Park. Upland heathland accounts for 24.7% of the total priority habitat cover within the study area.

Ancient woodland is defined as woodland that has existed since 1600 (in England and Wales) and has therefore had time to develop complex communities of plants and animals. There are 5,057 ancient woodland parcels in Wales which is significantly higher than the 155 parcels in England. Ancient woodland, including ancient semi natural woodland, plantation on ancient woodland site, and restored ancient woodland site has an approximate area of 23,500 ha within the study area, which is the second most dominant priority habitat. This accounts for 11.3% of the total priority habitat cover within the study area. Ancient woodland is present across the study area, with the majority concentrated within national parks and mountain ranges.



Within the study area, there are approximately 1,300 mapped significant trees comprising ancient, veteran and notable trees. Ancient trees²⁹ are defined as being in the third or final stage of their life; old relative to others of the same species; and/or interesting biologically, aesthetically or culturally due to age. Veteran trees are usually in their second or mature stage of life and have developed some of the features found on ancient trees but are not old enough to be ancient³⁰. Notable trees³¹ are defined as mature trees which may stand out in the local environment because they are large in comparison with older trees around them but do not have any obvious veteran characteristics.

There are extensive stretches of coastal and floodplain grazing marsh within the study area, and therefore is the third most common priority habitat. This priority habitat accounts for approximately 23,363 ha (11.2% of the priority habitat cover) within the study area. Large concentrations of this habitat are identified on the north Wales and north-west England border, by the Dee Estuary as well as a large expanse on the Isle of Anglesey running adjacent to the Afon Cefni.

Upland flushes, fens and swamps are the fourth most common priority habitat. Parcels of this priority habitat were concentrated within Eryri/ Snowdonia National Park, Gwynedd and surrounding Llyn Brenig within east Conwy. Upland flushes, fens and swamps account for approximately 22,138 ha (10.6% of the total priority habitat cover) within the study area.

Lowland dry acid grassland constitutes a large proportion of the priority habitats, approximately 21,730 ha (10.4% of the total priority habitat cover) within the study area. This habitat is distributed across the study area, with the largest concentration within the north-west of Eryri/ Snowdonia National Park. The majority of the lowland dry acid grassland is identified within Gwynedd.

Raised bog accounts for approximately 17,211 ha (8.2% of the total priority habitat cover) within the study area. The majority of this habitat is concentrated across the border of Gwynedd and Conwy within Eryri/ Snowdonia National Park and Gwydir Forest Park. An extensive stretch of raised bog is situated along the southern border of Denbighshire, adjacent to Wrexham. This stretch also contains parcels of blanket bog. Overall, blanket bog accounts for approximately 16,595 ha (8% of the total priority habitat cover) within the study area. Two large areas of blanket bog are identified within Eryri/ Snowdonia National Park and scattered across the borders of Gwynedd and Conwy. In addition, blanket bog is recorded in the north of Gwydir Forest Park.

The following priority habitats have a scattered, smaller distribution across the study area. This includes purple moor grass and rush pasture which is scattered within the west of the study area, with larger parcels identified across Eryri/ Snowdonia National Park.

Collectively purple moor grass and rush pasture has an approximate area of 9,790 ha which accounts for 4.7% of the total priority habitat within the study area.

The distribution of lowland heathland is scattered within the western study area, with greater clusters of this priority habitat within Eryri/ Snowdonia National Park. Lowland heathland

²⁹ Woodland Trust (2024). Ancient trees. Available at: <https://ati.woodlandtrust.org.uk/what-we-record-and-why/what-we-record/ancient-trees/> (Accessed: April 2024).

³⁰ Woodland Trust (2024) Veteran trees. Available at: <https://ati.woodlandtrust.org.uk/what-we-record-and-why/what-we-record/veteran-trees/> (Accessed: April 2024).

³¹ Woodland Trust (2024) Notable trees. Available at: <https://ati.woodlandtrust.org.uk/what-we-record-and-why/what-we-record/notable-trees/> (Accessed: April 2024).



accounts for approximately 7,893 ha (4% of the total priority habitat cover) within the study area.

Small parcels of wood pasture and parkland are predominantly concentrated within the north-eastern study area, for example on the northern border between Conwy and Denbighshire. This priority habitat accounts for approximately 4,129 ha (2% of the total priority habitat cover) within the study area.

Lowland fens and reedbeds are scattered across the study area but is predominantly concentrated within Snowdonia to the south of the Llyn Trawsfynydd. This priority habitat accounts for approximately 3,170 ha (1.5% of the total priority habitat cover) within the study area.

There are approximately ten locations where coastal saltmarsh is concentrated. The largest area of this priority habitat is adjacent to the Dee estuary, this is followed by parcels adjacent to the River Conwy, Afon Dwyryd, Afon Mawddach and Foryd Bay. In total, these areas of coastal saltmarsh have an approximate area of 2,933 ha (1.4% of the total priority habitat cover) within the study area.

Maritime cliff and slopes are concentrated to coastal areas along the study area such as south of Porthmadog within Gwynedd and along the coastline of the Isle of Anglesey. This priority habitat accounts for approximately 1,390 ha (0.7% of the total priority habitat cover) within the study area.

Inland rock outcrop and scree habitats are present in the Cadair Idris Range within Gwynedd. There are also parcels of rock scree slip within the Snowdon mountain range across the border of Gwynedd and Conwy. This priority habitat equates to approximately 1,372 ha (0.7% of the total priority habitat cover) within the study area.

Lowland calcareous grassland is identified mostly within the east of the study area. There are two dominant clusters of this priority habitat, comprising parcels in west Denbighshire and one stretch within east Flintshire. There are also scattered parcels of lowland calcareous grassland along the coastline in north Conwy and the Isle of Anglesey. In total, this priority habitat equates to approximately 676 ha (0.3% of the total priority habitat cover) within the study area. Upland calcareous grassland is also recorded within the study area, where the majority of this priority habitat is identified across Snowdonia, located broadly across north Gwynedd and west Conwy. There is also a stretch of this priority habitat north of Llangollen which is located within the southeast of Denbighshire. Upland calcareous grassland accounts for approximately 328 ha (0.2% of the total priority habitat cover) within the study area.

The priority habitat classified as open mosaic on previously developed land is recorded in Llanberis, located north-west of Snowdonia. There are some scattered parcels within Flintshire and north Wrexham. This priority habitat accounts for approximately 276 ha (0.1% of the total priority habitat cover) within the study area.

Lowland meadow is sparsely scattered within each county of the study area. This priority habitat accounts for approximately 261 ha (0.1% of the total priority habitat cover) within the study area.

Traditional orchards are found scattered mostly outside of Snowdonia, within the study area. This priority habitat accounts for approximately 129 ha (0.06% of the total priority habitat cover) within the study area.

There are concentrated parcels of limestone pavement located east of the Clwydian Range which intersects both Denbighshire and Flintshire. This priority habitat accounts for approximately 125 ha (0.06% of the total priority habitat cover) within the study area.



The least abundant priority habitat within the study area is Calaminarian grassland. This is mostly located in two locations; scattered within central Flintshire and south-west of Llanrwst within Conwy. This priority habitat accounts for approximately 44 ha (0.02% of the total priority habitat cover) within the study area. Figure 4-2 visually the percentage cover of priority habitats recorded within the study area.

In addition to the priority habitats described above, there are areas of mountain heath and willow scrub. This is predominately identified within the west of the study area across Gwynedd and Conwy. The majority of this habitat type is located within Snowdonia, Eryri/ Snowdonia National Park and along the Cadair Idris Range. This priority habitat has not been included within the total percentage of priority habitat for the study area due to inaccuracies in mapping the extent of mountain heath and willow scrub.

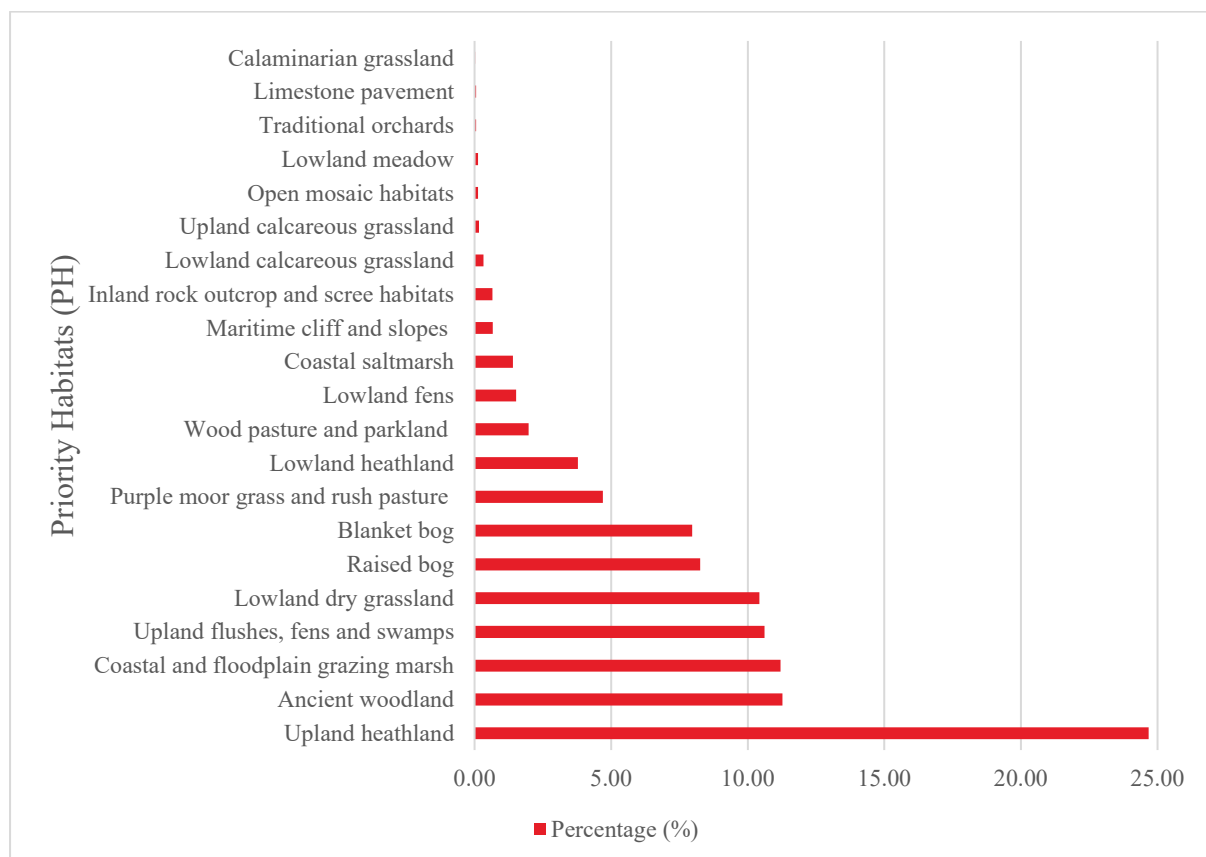


Figure 4-2 Percentage of priority habitats recorded within the study area

4.2 Designated Sites

The best quality examples of priority habitats within the study area and the species they support, are qualifying features for numerous statutory designated sites for nature conservation. These include internationally important Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites, and nationally important Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) (Figure 4-3).

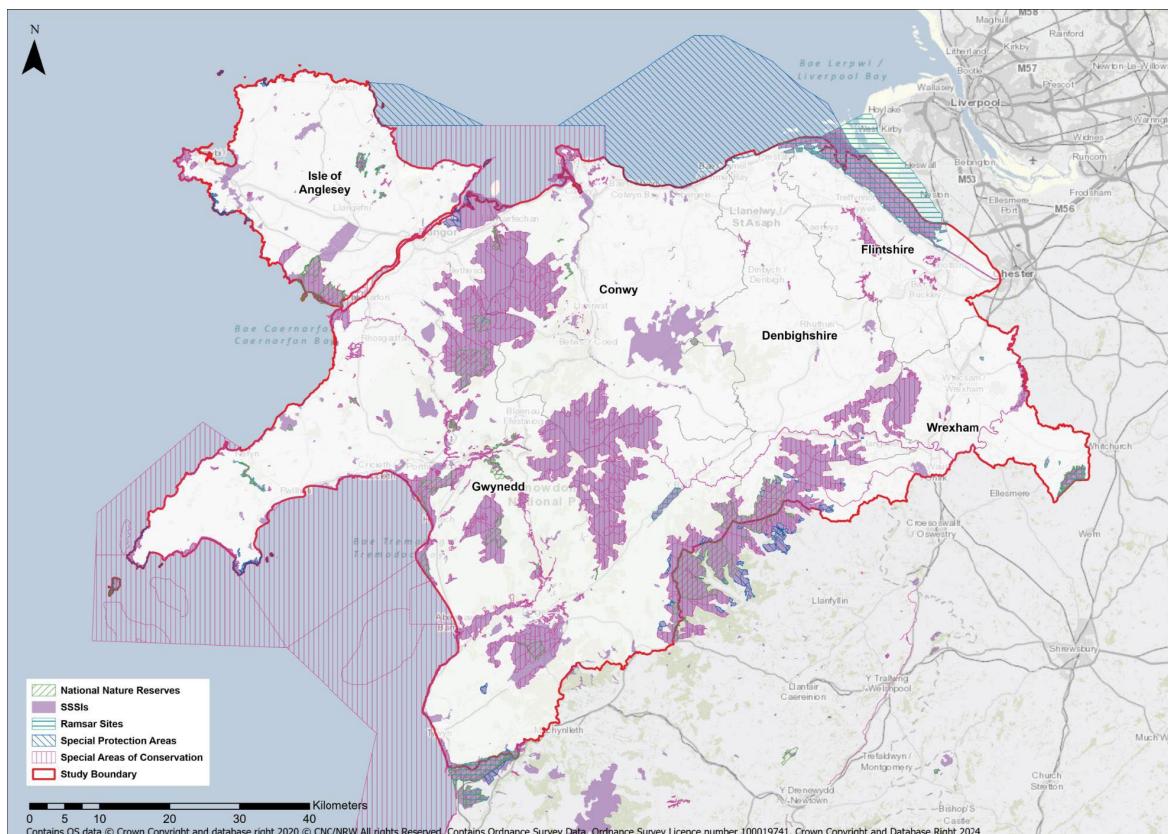


Figure 4-3 Statutory nature conservation designations within the study area


A total of 56 internationally important designated sites were identified within the study area. This includes seven Ramsar sites, 40 SACs and 14 SPAs. Ramsar sites, SACs, and SPAs cover areas of approximately 8943 ha, 1,338,933 ha, and 46,580 ha, respectively. The sites selected for multiple designations or have a significant area are described as follows:

- On the north Wales and north-west England border, locates the Dee Estuary where the River Dee flows into Liverpool Bay. The site spans five unitary authorities in England and Wales. The estuary is designated as a Ramsar site (The Dee Estuary), SPA (The Dee Estuary) and SAC (Dee Estuary/ Aber Dyfrdwy). The site is designated as an SAC for Annex I habitats as a primary reason for designation, comprising mudflats and sandflats, *Salicornia* spp., saltmarsh and Atlantic salt meadows (*Glauco-Puccinellietalia*)³². This site supports bird assemblages of international importance such as redshank (*Tringa totanus*)³³. The site is a SPA as it supports populations of Annex I bird species such as common tern (*Sterna hirundo*) and bar-tailed godwit (*Limosa lapponica*) and is used regularly by 20,000 waterbirds³⁴.

³² Joint Nature Conservation Committee (no date) Dee Estuary/ Aber Dyfrdwy. Available at: <https://sac.jncc.gov.uk/site/UK0030131> (Accessed: April 2024).

³³ Joint Nature Conservation Committee (JNCC) (2009) Information Sheet on Ramsar Wetlands (RIS): The Dee Estuary. Available at: <https://jncc.gov.uk/jncc-assets/RIS/UK11082.pdf> (Accessed: April 2024).

³⁴ Natural England (2014) European Site Conservation Objectives for Dee Estuary SPA. Available at: <https://publications.naturalengland.org.uk/publication/6557770283220992> (Accessed: April 2024).

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- South-west of Wrexham locates Berwyn, which stretches along the Clywd Mountains. This site is designated as a SAC (Berwyn a Mynyddoedd de Clwyd/ Berwyn and South Clwyd Mountains) and SPA (Berwyn) due to its important moorland breeding birds and vegetation such as blanket mire. As part of the SAC designation, Annex I habitats present included European dry heaths and blanket bogs³⁵. Berwyn is an SPA due to supporting species such as hen harrier (*Circus cyaneus*) and Merlin (*Falco columbarius*)³⁶.
 - Migneint - Arenig – Dduallt is located centrally from the A470, A5 and A494 roads. It stretches between Ysbyty Ifan and Penmachno in the north down to Rhydymain in the south, and from Trawsfynydd in the west to just east of Llyn Celyn. This site is designated as a SAC (Migneint-Arenig-Dduallt) and SPA (Migneint-Arenig-Dduallt). Annex I habitats that feature as part of primary selection of the SAC are European dry heaths and blanket bog³⁷. The site qualifies as an SPA due to its ornithological interest, supporting Annex 1 species such as hen harrier, Merlin, peregrine (*Falco peregrinus*)³⁸.
 - To the south-east of the site listed above (Migneint - Arenig – Dduallt), locates the River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid. The River Dee and Bala Lake is designated as a SAC (River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid), whilst the Bala Lake (Llyn Tegid) is also a Ramsar Site. This river flows through the valley near Corwen, and the Vale of Llangollen before entering the Cheshire plain at Erbistock and meandering northwards through the Cheshire plain to its tidal limit at Farndon. The Llyn Tegid/ Bala Lake is the largest natural lake in Wales and a Ramsar Site. It is important for internationally rare plant species, particularly floating water plantain (*Luronium natans*) and unique fish fauna³⁹. River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC contains water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation which is an Annex I feature. Annex II species are also a primary reason for site selection, this includes Atlantic salmon (*Salmo salar*) and floating water-plantain (*Luronium natans*)⁴⁰.

³⁵ Joint Nature Conservation Committee (no date) Berwyn a Mynyddoedd de Clwyd/ Berwyn and South Clwyd Mountains. Available at: <https://sac.jncc.gov.uk/site/UK0012926> (Accessed: April 2024).

³⁶ Joint Nature Conservation Committee (2015) Berwyn. Available at: <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9013111.pdf> (Accessed: April 2024).

³⁷ Joint Nature Conservation Committee (no date) Migneint-Arenig-Dduallt. Available at: <https://sac.jncc.gov.uk/site/UK0030205> (Accessed: April 2024).

³⁸ Natural Resources Wales (2003) EC Directive 79/409 on the Conservation of Wild Birds: Special Protection Area (SPA). Available at: https://naturalresources.wales/media/632420/SPA_UK9013131_Register_Entry_EN001.pdf. (Accessed: April 2024).

³⁹ Joint Nature Conservation Committee (1991) Information Sheet on Ramsar Wetlands (RIS): Llyn Tegid. Available at: <https://jncc.gov.uk/jncc-assets/RIS/UK14008.pdf> (Accessed April 2024).

⁴⁰ Joint Nature Conservation Committee (no date) River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid. Available at: <https://sac.jncc.gov.uk/site/UK0030252> (Accessed: April 2024).



- North of Bangor, there is a cluster of parcels associated to Corsydd Môn. This area comprises both a Ramsar site (Corsydd Môn a Llyn / Anglesey and Llyn Fens) and SAC (Corsydd Môn / Anglesey Fens), the site areas are approximately 630 ha and 470 ha, respectively. The site qualifies under the Ramsar convention due to base-rich fen, a rare wetland type, and its genetic and ecological diversity⁴¹. It is designated as a SAC for calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*⁴².
- Eryri/ Snowdonia is a SAC with an approximate area of 19,740 ha, located across Conwy and Gwynedd. Annex I habitats include alpine pioneer formations of the *Caricion colorisatrofuscae*, blanket bog, hard-water springs depositing lime and species-rich *Nardus* grassland on siliceous substrates in mountain areas⁴³.
- Anglesey Tern SPA and North Anglesey Marine / Gogledd Môn Forol SAC have an approximate area of 101,930 ha and 324,900 ha, respectively. Both sites are present along the coast of Anglesey. Anglesey Tern SPA is designated for Annex I breeding birds such as Roseate tern (*Sterna dougallii*), common tern, Arctic tern (*Sterna paradisaea*), and sandwich tern (*Sterna sandvicensis*)⁴⁴. North Anglesey Marine / Gogledd Môn Forol SAC is designated for harbour porpoise *Phocoena phocoena*⁴⁵.

A full list of statutory international sites are listed in Table 4.

Table 4 Statutory internationally designated sites with the study area

Site name	Percentage area of total study area (%)
Ramsar Sites	
The Dee Estuary (Wales) Ramsar	1.044
Midland Meres & Mosses Phase 2 (Wales) Ramsar	0.121
Corsydd Môn a Llyn / Anglesey and Llyn Fens Ramsar	0.098
Llyn Tegid Ramsar	0.076
Cors Fochno and Dyfi Ramsar	0.063
Llyn Idwal Ramsar	0.002
The Dee Estuary (England) Ramsar	0.002

⁴¹ Natural Resources Wales (1997) Ramsar Convention on wetlands of international importance: Corsydd môn a llyn anglesey and llyn fens. Available at: https://naturalresources.wales/media/626365/RAMSAR_UK14005_Citation_EN001.pdf (Accessed: April 2024).

⁴² Natural Resources Wales (2005) Entry in the register of European sites for Wales. Available at: https://naturalresources.wales/media/627718/SAC_UK0012884_Register_Entry001.pdf (Accessed: April 2024).

⁴³ Joint Nature Conservation Committee (no date) Eryri/ Snowdonia. Available at: <https://sac.jncc.gov.uk/site/UK0012946> (Accessed: April 2024).

⁴⁴ Joint Nature Conservation Committee (2017) Anglesey Terns / Morwenoliaid Ynys Môn. Available at: <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9013061.pdf> (Accessed: April 2024).

⁴⁵ Joint Nature Conservation Committee (no date) North Anglesey Marine / Gogledd Môn Forol. Available at: <https://sac.jncc.gov.uk/site/UK0030398>. (Accessed: April 2024).



Site name	Percentage area of total study area (%)
SPA	
Migneint-Arenig-Dduallt	3.141
Berwyn	2.011
The Dee Estuary (Wales)	1.044
Anglesey Terns / Morwenoliaid Ynys Môn	0.412
Traeth Lafan / Lavan Sands, Conway Bay	0.355
Glannau Ynys Gybi / Holy Island Coast	0.095
Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island	0.080
Dyfi Estuary / Aber Dyfi	0.067
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal	0.058
Liverpool Bay / Bae Lerpwl (Wales)	0.044
Craig yr Aderyn (Bird's Rock)	0.014
Ynys Seiriol / Puffin Island	0.005
The Dee Estuary (England)	0.002
Northern Cardigan Bay / Gogledd Bae Ceredigion	0.000
SAC	
Migneint-Arenig-Dduallt	3.141
Eryri / Snowdonia	3.105
Berwyn a Mynyddoedd De Clwyd / Berwyn and South Clwyd Mountains	2.728
Dee Estuary / Aber Dyfrdwy (Wales)	0.978
Pen Llyn a'r Sarnau / Llyn Peninsula and the Sarnau	0.748
Cadair Idris	0.595
Rhinog	0.495
Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	0.445
Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites	0.443
Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes	0.288



Site name	Percentage area of total study area (%)
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales)	0.181
Morfa Harlech a Morfa Dyffryn	0.167
Clogwyni Pen Llyn / Seacliffs of Llyn	0.165
Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh	0.151
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (Wales)	0.109
Halkyn Mountain / Mynydd Helygain	0.096
Corsydd Mon / Anglesey Fens	0.074
Glannau Ynys Gybi / Holy Island Coast	0.072
Coedydd Aber	0.054
Great Orme's Head / Pen y Gogarth	0.048
Afon Eden - Cors Goch Trawsfynydd	0.045
Corsydd Llyn / Llyn Fens	0.045
Deeside and Buckley Newt sites	0.033
Glynllifon	0.030
Alyn Valley Woods / Coedwigoedd Dyffryn Alun	0.027
Corsydd Eifionydd / Eifionydd Fens	0.023
Coedwigoedd Penrhyn Creuddyn / Creuddyn Peninsula Woods	0.019
Afon Gwyrfai a Llyn Cwellyn	0.018
Coedwigoedd Dyffryn Elwy / Elwy Valley Woods	0.013
Johnstown Newt Sites	0.011
Bae Cemlyn / Cemlyn Bay	0.007
Mwyngloddiau Fforest Gwydir / Gwydyr Forest Mines	0.006
Llyn Dinam	0.006
Llwyn	0.003
Glan-traeth	0.002
Dee Estuary / Aber Dyfrdwy (England)	0.002
West Wales Marine / Gorllewin Cymru Forol	0.002
North Anglesey Marine / Gogledd Mln Forol	0.001



Site name	Percentage area of total study area (%)
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (England)	0.000
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (England)	0.000

Additionally, a total of 369 nationally significant designated sites were identified within the study area. This comprises 336 SSSIs and 33 NNRs, covering an approximate area of 114,560 ha and 18,250 ha, respectively.

The study area is also likely to support numerous locally designated sites (such as Sites of Importance for Nature Conservation (SINCs) and Local Nature Reserves (LNRs), which have not been mapped as part of this assessment, due to the large scale of the study area. Additionally, the wide range of habitats within the study area, would likely support a range of species including protected and notable species such as breeding and wintering birds, roosting and foraging/commuting bats, riparian mammals, amphibians and reptiles, invertebrates, fish, and vascular plants, bryophytes, lichens and fungi. Specific surveys, and desktop studies would need to be undertaken to confirm the presence and distribution of particular species.

4.3 Natural capital

Natural capital can be defined as the world's stocks of living and non-living natural assets such as forests (Figure 4-4), fisheries, rivers, biodiversity, land and minerals which provide a range of services to society⁴⁶. Stocks of natural capital provide flows of services (i.e. ecosystem services) and benefits over time. In terms of land use, the study area includes a large number of habitats (as described above). These habitats contribute heavily in terms of provision of ecosystem services in the study area, particularly those relating to recreation, climate regulation, water quality and air quality.

⁴⁶ HM Treasury (2022) The Green Book, Central Government Guidance on Appraisal and Evaluation. Available at: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government> (Accessed: April 2024).

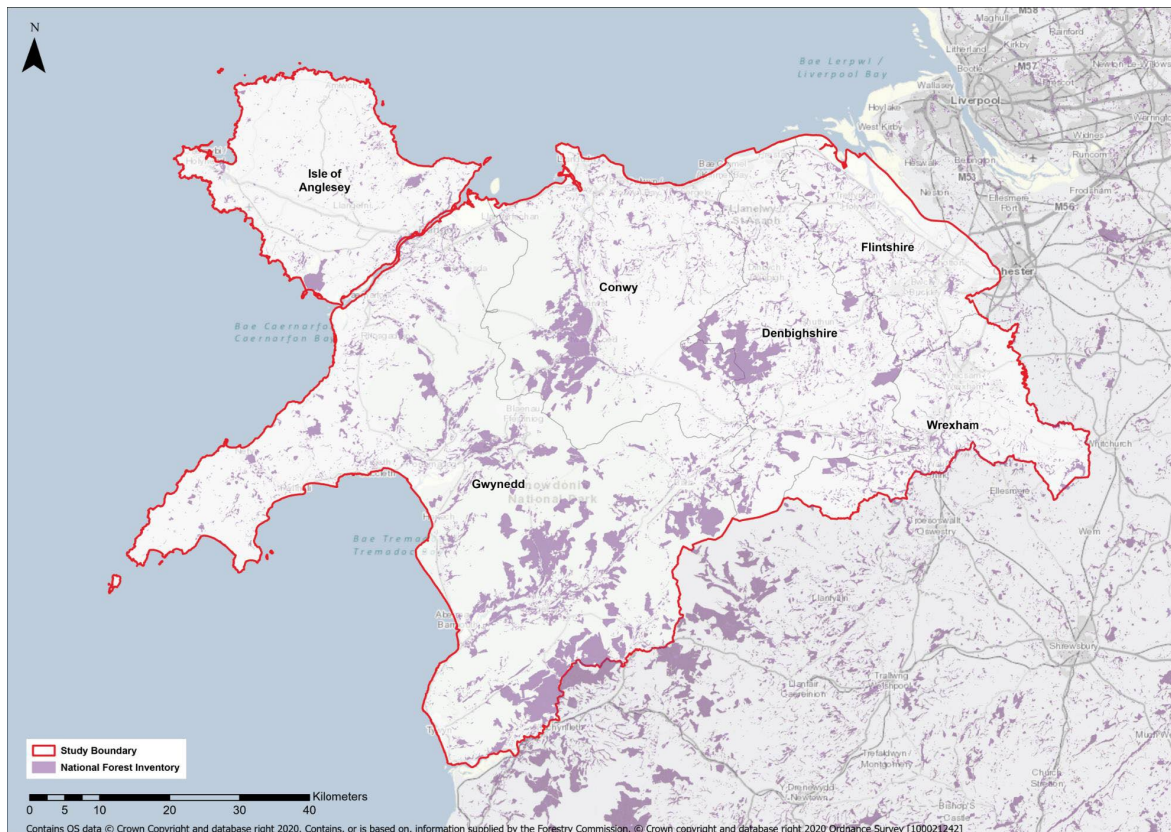


Figure 4-4 Forest habitats within the study area

4.4 Historic and future trends

As of October 2023 Planning Policy Wales (version 12) has been updated to include a requirement for a net benefit for biodiversity. In practice this means development must provide a net benefit for biodiversity and improve, or enable the improvement, of the resilience of ecosystems through implementation of the DECCA framework⁴⁷. It is recognised that many of the retained priority habitats and designated nature conservation sites, are too small and isolated to be resilient to the environmental changes they are facing. Under the Environment (Wales) Act, Natural Resources Wales and other bodies are required to seek to maintain and enhance biodiversity and the resilience of ecosystems⁴⁸. A framework approach has been developed which uses four interlinked ecosystem attributes to assess ecosystem resilience: diversity, extent, condition and connectivity.

⁴⁷ Natural Resources Wales (2023) Annex to Heads of Planning Letter Dated 11 October 2023: Addressing the Nature Emergency through the planning system: Updated National Planning Policy for Chapter 6 of Planning Policy Wales. Available at: <https://www.gov.wales/sites/default/files/publications/2023-10/annex-addressing-the-nature-emergency-through-the-planning-system.pdf> (Accessed: April 2024).

⁴⁸ Natural Resources Wales (2022) Ecosystem resilience field guide. Available at: <https://naturalresources.wales/guidance-and-advice/environmental-topics/land-management/ecosystem-resilience-field-guide/?lang=en> (Accessed: April 2024).



Known as the DECCA framework it is the intention that it can be applied to environmental process at different scales, habitats and land uses, to drive the sustainable management of natural resources in Wales⁴⁹. Planning authorities must take account of and promote the resilience of ecosystem, following the DECCA framework approach.

In 2020, the plan for a National Forest in Wales was announced which will create new areas of woodland and protect and enhance ancient woodland. Despite this, the State of Nature 2019 reports a significant decline in average species abundance since 1970, with a 6% decrease occurring in the last decade alone. Only 20% of the area designated as SSSIs in Wales were in a favourable condition in 2022⁵⁰. Rapid changes in abundance are underway and average species distribution has fallen⁵¹ due to pressures such as poor land management, land use change, pollution, hydrological change and invasive non-native species⁵².

As the study area is within Wales, where at a national level the rate of change in nature is increasing, with pressures on wildlife from agricultural management, urbanisation, pollution, hydrological change, woodland management and invasive non-native species⁵³. These factors combined with climate change are driving widespread changes in the abundance, distribution and ecology of Wales's wildlife.

Climate change is already driving widespread changes in the abundance, distribution and ecology of wildlife. In future, sensitive ecosystems are expected to come under increasing pressure as a result of extreme events and disturbance such as floods, wildfires and droughts. The projected impacts of these trends include potential adverse impacts to both terrestrial and aquatic biodiversity resulting from extreme weather events, water scarcity, increased water temperatures and phenological shifts. These alterations to biodiversity are also anticipated to have an impact on existing landscape characteristics, likely to be exacerbated by both natural and managed alterations to soil, hydrology and geomorphology⁵⁴. The risk to freshwater species and habitats from a changing climate has been assessed as high to very high, whilst the risk to terrestrial species and habitats is unknown¹²⁷.

Future trends in Wales relating to opportunities for the conservation and enhancement of biodiversity and for the sustainable management and use of natural resources are declining⁵³. Finally, it is widely recognised that the targets committed to through the Convention on Biological Diversity will not be met.

⁴⁹ Natural Resources Wales (2020) Ecosystem Resilience in a Nutshell 1: What is ecosystem resilience? Available at: <https://cdn.cyfoethnaturiol.cymru/media/696279/ecosystem-resilience-in-a-nutshell-1-what-is-ecosystem-resilience.pdf> (Accessed: April 2024).

⁵⁰ Department for Environment, Food & Rural Affairs (2023) Extent and condition of protected areas. Available at: <https://www.gov.uk/government/statistics/england-biodiversity-indicators/1-extent-and-condition-of-protected-areas> (Accessed: April 2024).

⁵¹ National Biodiversity Network (2019) State of Nature 2019. Available at: <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-summary.pdf> (Accessed: April 2024).

⁵² Natural Resources Wales (2020) Protected sites baseline assessment, 2020. Available at: <https://naturalresources.wales/evidence-and-data/research-and-reports/protected-sites-baseline-assessment-2020/?lang=en> (Accessed: April 2024).

⁵³ Royal Society for the Protection of Birds (2019) State of Nature: A Summary for Wales. Available at: <https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26053-SoN-Wales-summary-report-v10.pdf> (Accessed: April 2024).

⁵⁴ UK Climate Risk (2023) Evidence for the third UK Climate Change Risk Assessment (CCRA3) Summary for Wales. Available at: <https://www.ukclimaterisk.org/independent-assessment-ccra3/national-summaries/> (Accessed: April 2024).



5. Land use and landscape

5.1 Landscape character areas

The study area has an array of diverse landscapes. Landscape Character Areas (LCAs) are defined by Natural Resources Wales (NRW) which uses LANDMAP to record, classify and describe Welsh landscapes. LCAs are often used for decision making and planning as well as monitoring change across the landscape. There are 19 defined National Landscape LCAs in the study area⁵⁵. Due to only having a very small extent within the study area, for the purposes of this study, the Cambrian Mountains has been incorporated into the adjacent Eryri LCA.

The LCAs are shown on Figure 5-1. The descriptions are as follows:

- Aberdovey Coast LCA: swash aligned soft coastline, dunes and estuary bars.
- Anglesey Coast LCA: coastal zone.
- Arfon LCA: the Arfonian plateau, Menai Strait.
- Berwyn LCA: spine of extensive, open, unenclosed, rolling uplands.
- Central Anglesey LCA: land-locked central part of Anglesey.
- Clwydian Range LCA: rounded, heather clad open hills in two main groups.
- Conwy Valley LCA: a deep, major fault-guided glaciated valley, southern flood plain section.
- Deeside and Wrexham LCA: lowland, foothills and levels.
- Denbigh Moors LCA: rolling unenclosed uplands with gentle topography.
- Eryri & Cambrian Mountains LCA: mountainous topography.
- Llŷn LCA: peninsula, northern spine of distinctively profiled, angular hills.
- Maelor LCA: flood plain or rolling lowland, a rural agricultural character.
- North Wales Coast LCA: carboniferous limestone hills and coastal headlands.
- Rhos LCA: rural inland foothills and valleys.
- Tremadoc Bay LCA: lowland fringes of northern Cardigan Bay, hemmed in by steeply rising uplands.
- Vale of Clwyd LCA: a broad agricultural vale, distinctive line of hills forming the eastern boundary.
- Vale of Llangollen and Dee Valley LCA: major river valley, largely tranquil, rural landscape.

⁵⁵ Natural Resources Wales (2023) National Landscape Character Areas. Available at: https://datamap.gov.wales/layers/inspire-nrw:NRW_LANDSCAPE_CHARACTER_AREAS (Accessed: April 2024).

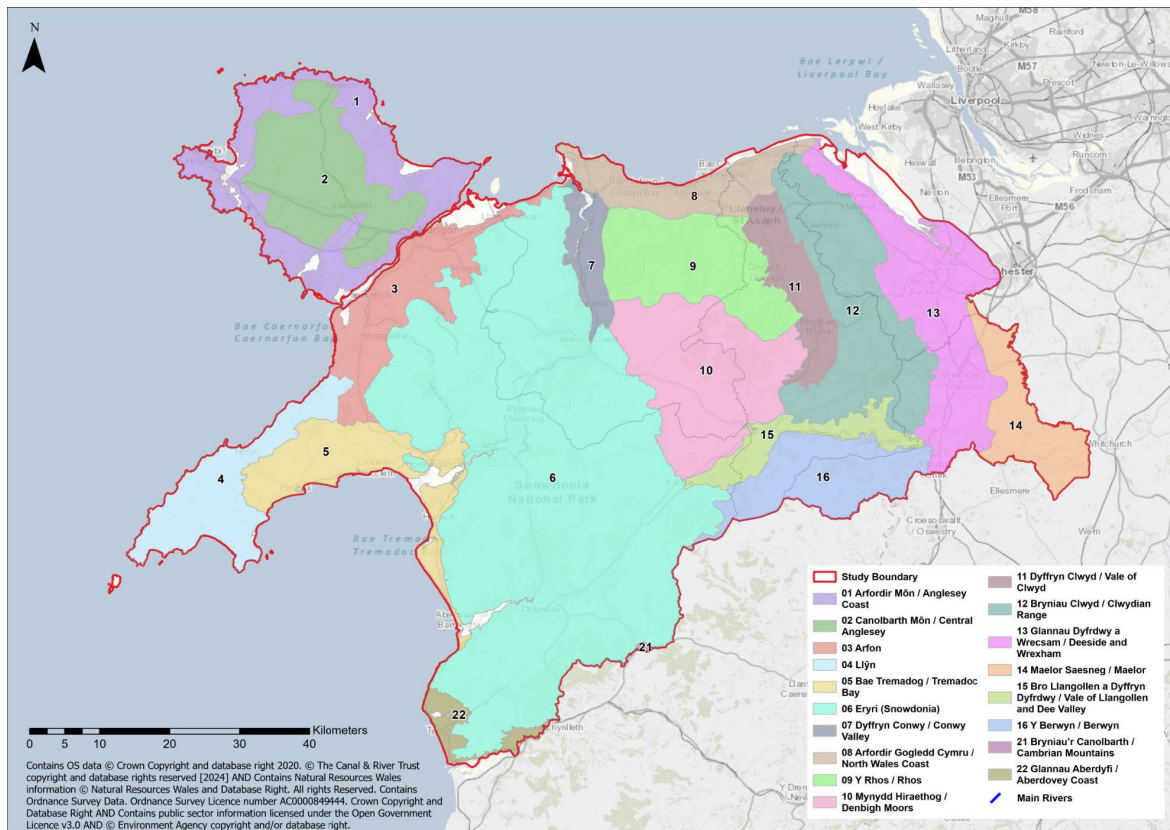


Figure 5-1 Landscape Character Areas within the study area

The topography in the study area reaches its highest points in Eryri National Park at Snowdon.

5.2 Land use

Land uses across the study area are illustrated in Figure 5-2. Land use in North Wales is dominated by agriculture with most of this being pasture. Welsh Government own areas of woodland that are managed by Natural Resources Wales⁵⁶. Furthermore, in the north-west, Eryri National Park covers the main upland spine of mountains, with further upland moors to the east, in Conwy⁵⁷.

Areas of peatland are also present in North Wales and of the 70,000 ha of blanket bogs found in Wales, most of this is located within the upland areas of the Migneint and Berwyn Mountains, in the south of Snowdonia National Park⁵⁸.

⁵⁶ Natural Resources Wales (2023) *NRW Forest Ownership*. Available at: https://datamap.gov.wales/layers/inspire-nrw:NRW_FORESTRY_OWNERSHIP_GB#download-metadata-section (Accessed: April 2024).

⁵⁷ Natural Resources Wales (2018) *Area Statement North West Wales Landscape*. Available at: <https://naturalresources.wales/media/685443/as-north-west-wales-landscape-final-april-2018.pdf> (Accessed: April 2024).

⁵⁸ Royal Society for the Preservation of Birds (2017) *Restoring ancient blanket bogs in North Wales*. Available at: <https://community.rspb.org.uk/ourwork/b/actionfornature/posts/restoring-ancient-blanket-bogs-in-north-wales> (Accessed: April 2024).

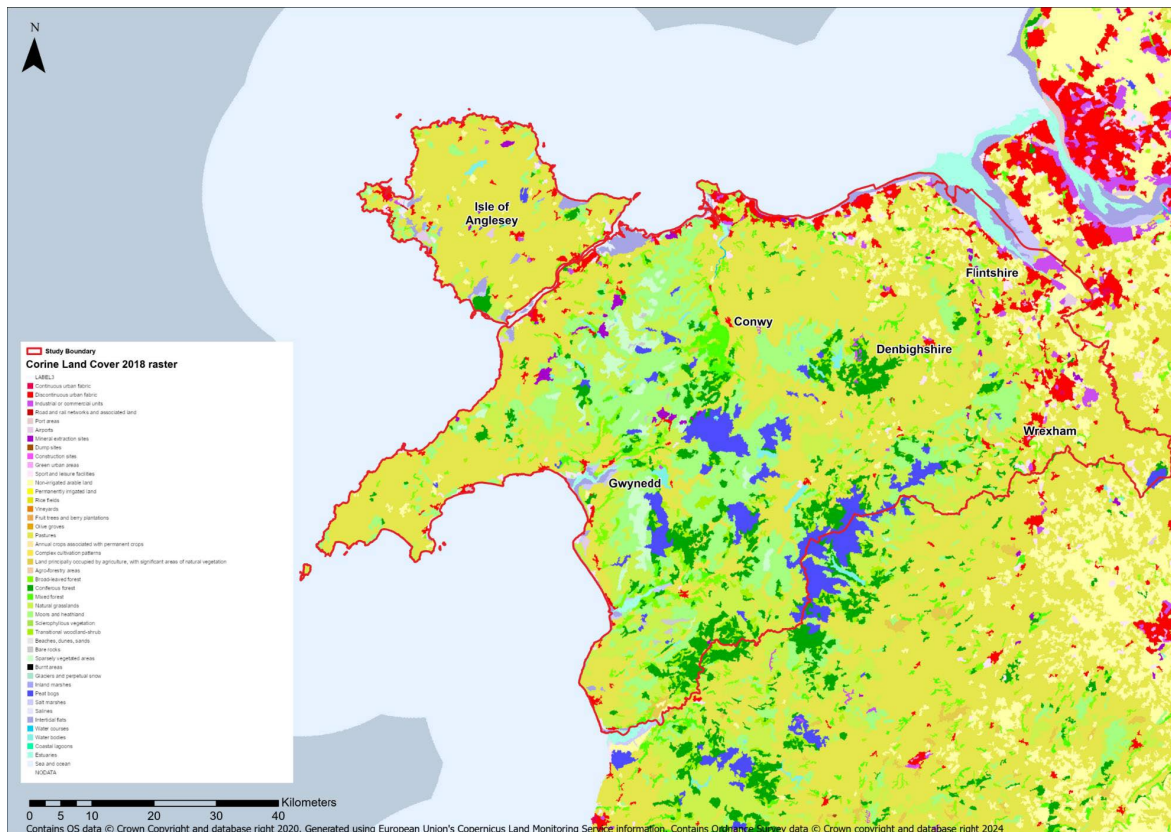


Figure 5-2 Land use

5.3 Designated sites and attractions

A wide range of environmental designations are within the study area as shown on Figure 5-3. Wales's landscape is made up of around 20% as National Parks⁵⁹. Eryri National Park, which is Wales's largest National Park, falls within the study area. Furthermore, the following Areas of Outstanding Natural Beauty (AONBs) fall within the study area:

- Anglesey AONB: main features include low cliffs alternating with coves and pebble beaches, sheer limestone cliffs interspersed with fine sandy beaches, and stretches of sand dunes with beaches⁶⁰.
- Clwydian Range and Dee Valley AONB: features include a chain of heather-clad peaks, iron age hillforts, Llandegla moors, Ruabon mountain, and limestone cliffs⁶¹.
- Llŷn AONB: features include a total of 22 Sites of Special Scientific Interest (SSSI) within the AONB and that the area is home to the chough⁶².

⁵⁹ National Parks Wales (no date) *The National Parks of Wales*. Available at: <https://www.nationalparkswales.uk/npw/about/nationalparkswales> (Accessed: April 2024).

⁶⁰ Isle of Anglesey County Council (no date) *Anglesey Area of Outstanding Natural Beauty (AONB)*. Available at: <https://www.anglesey.gov.wales/en/Residents/Countryside/Areas-of-Outstanding-Natural-Beauty-AONBs/Anglesey-Area-of-Outstanding-Natural-Beauty-AONB.aspx> (Accessed: April 2024).

⁶¹ Clwydian Range and Dee Valley (no date) *The Clwydian Range and Dee Valley Area of Outstanding Natural Beauty*. Available at: <https://www.clwydianrangeanddeevalleyaonb.org.uk/the-aonb/> (Accessed: April 2024).

⁶² Llŷn Area of Outstanding Natural Beauty (no date) *Llŷn Area of Outstanding Natural Beauty*. Available at: <https://www.ahne-llyn-aonb.org/Home> (Accessed: April 2024).

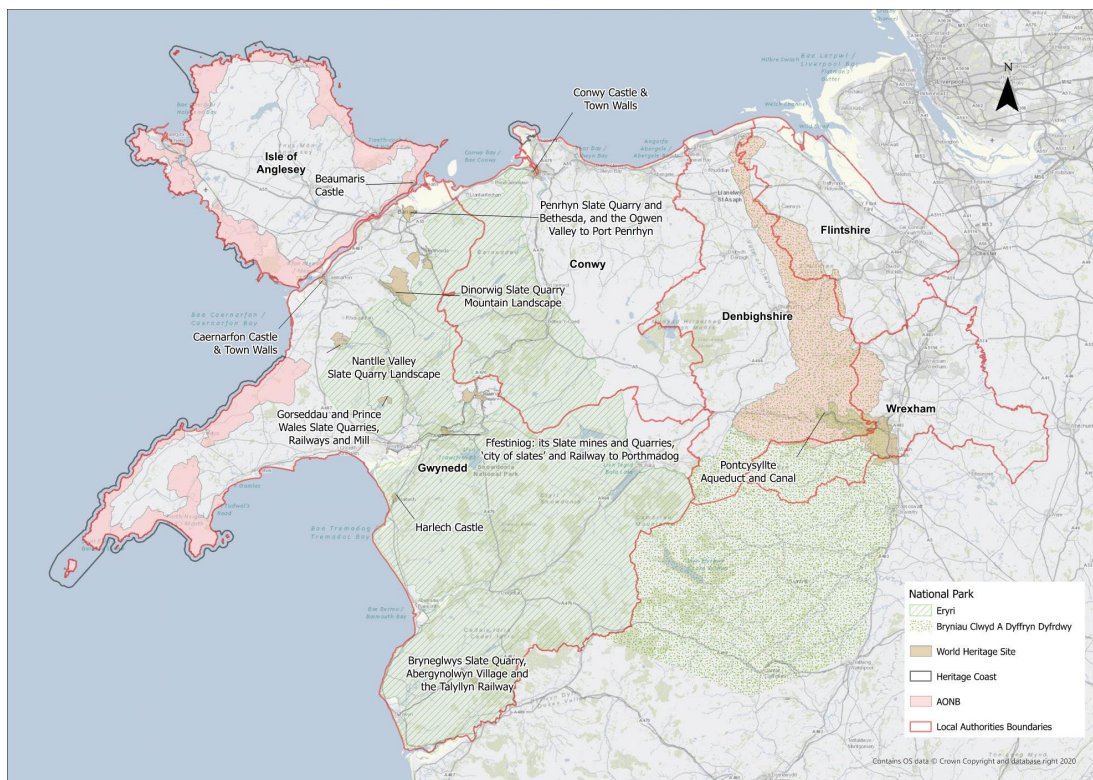


Figure 5-3 Landscape designations

5.4 Tourist destinations and attractions

Within the study area the main tourist destinations consist of Eryri National Park, Anglesey AONB, Llŷn AONB, and Clwydian Range and Dee Valley AONB. There are several Registered Parks and Gardens, Registered Historic Landscapes, CADW sites, and National Trust sites. Numerous play areas, parks, gardens and sports facilities are also present within the study area, particularly in densely populated areas with Flintshire being the most populated local authority in North Wales.

The study area includes a swathe of historic landscapes, including 17 Registered Landscapes of Outstanding Interest and seven Registered Landscapes of Special Interest⁶³. The Registered Landscapes of Outstanding Interest consist of the following:

⁶³ Cadw, the Countryside Council for Wales (now part of Natural Resources Wales) and the International Council on Monuments and Sites (2021) *WOM21 Historic Landscape Areas (HLA)*. Available at: https://datamap.gov.wales/layers/geonode:GWC21_Historic_Landscape_Area (Accessed: April 2024).

- 
- Aberglaslyn
 - Amlwch and Parys Mountain
 - Ardudwy
 - Blaenau Ffestiniog
 - Creuddyn and Conwy
 - Dinorwig
 - Hollywell Common and Halkyn Mountain
 - Llyn and Bardsey Island
 - Lower Conwy Valley
 - Mawddach
 - Nantlle Valley
 - North Arllechwedd
 - Ogwen Valley
 - Penmon
 - The Vale of Clwyd
 - Transfynydd Basin and Cwm Prysor
 - Vale of Dolgellau

The Registered Landscapes of Special Interest consist of the following:


- Bala and Bala Lakesides
- Berwyn
- Denbigh Moors
- Dysynni Valley
- Lower Elwy Valley
- Maelor
- Vale of Llangollen and Eglwyseg

5.5 Rural proofing and rural populations

Large parts of Wales are rural in character with 40% of the population living in settlements with fewer than 10,000 people⁶⁴. Lack of employment opportunity is a key reason behind rural depopulation, particularly in the younger workforce; it can also contribute to deprivation and inequality. Therefore, developing local opportunities, particularly in higher paid sectors, is important to retain workers, broaden the skills base and help sustain communities.

Policy four of the 'Future Wales, The National Plan 2040'⁶⁴ aims to support rural communities while policy five aims to support the rural economy. As part of policy four, Strategic and Local Development Plans must identify their rural communities, assess their needs and set out policies that support them. Policies should consider how age balanced communities can be achieved, where depopulation should be reversed and consider the role of new affordable and market housing, employment opportunities, local services and greater mobility in tackling these challenges.

⁶⁴ Welsh Government (2021) *Future Wales The National Plan 2040*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf> (Accessed: April 2024).



Meanwhile, policy five sets out that Strategic and Local Development Plans must plan positively to meet the employment needs of rural areas including employment arising from the foundational economy; the agricultural and forestry sector, including proposals for diversification; start-ups and micro businesses.

Furthermore, the Welsh Government aims to support investment in public transport, active travel and vehicle charging networks to support ultra-low emission vehicles. The National Plan sets out the planning authorities should support improvements to connectivity within and between rural settlements.

5.6 Agricultural land classifications

Agricultural land classification (ALC) is a system used in Wales to grade the quality of land for agricultural use. It is used to inform planning decisions affecting greenfield sites. The system classifies land into five grades, from Grade 1 (excellent quality agricultural land) to Grade 5 (very poor-quality agricultural land).

Over half of the study area is agricultural land, comprising the predominate land use outside of Snowdonia National Park⁶⁵. However, predictive⁶⁶ ALC mapping⁶⁷ indicates limited areas of excellent or very good quality agricultural within the study area. The highest quality agricultural land (Grade 1) is mainly present in the east of the study area (in Maelor, Vale of Clwyd, and Deeside and Wrexham national landscape character areas) and the north of the study area (in Arfon and Anglesey Coast national landscape character areas)⁶⁸ (see Figure 5-4). Good and moderate quality agricultural land surrounds areas of better quality land, whilst poor and very poor grade land is largely located in the uplands, particularly in Snowdonia National Park.

⁶⁵ Copernicus (2018) *CORINE Land Cover 2018 (vector/raster 100 m), Europe, 6-yearly*. Available at: <https://land.copernicus.eu/en/products/corine-land-cover/clc2018> (Accessed: April 2024).

⁶⁶ Whilst it is recognised that this is predictive data, and a level of uncertainty therefore exists without full surveys being carried out.

⁶⁷ Welsh Government (2019) *Predictive Agricultural Land Classification (ALC) Map 2*. Available at: https://datamap.gov.wales/layers/inspire-wg:wg_predictive_alc2 (Accessed: April 2024).

⁶⁸ Welsh Government (2017) *Predictive Agricultural Land Classification (ALC) Map*. Available at: https://datamap.gov.wales/layers/inspire-wg:predictive_alc_partitioned (Accessed: April 2024).

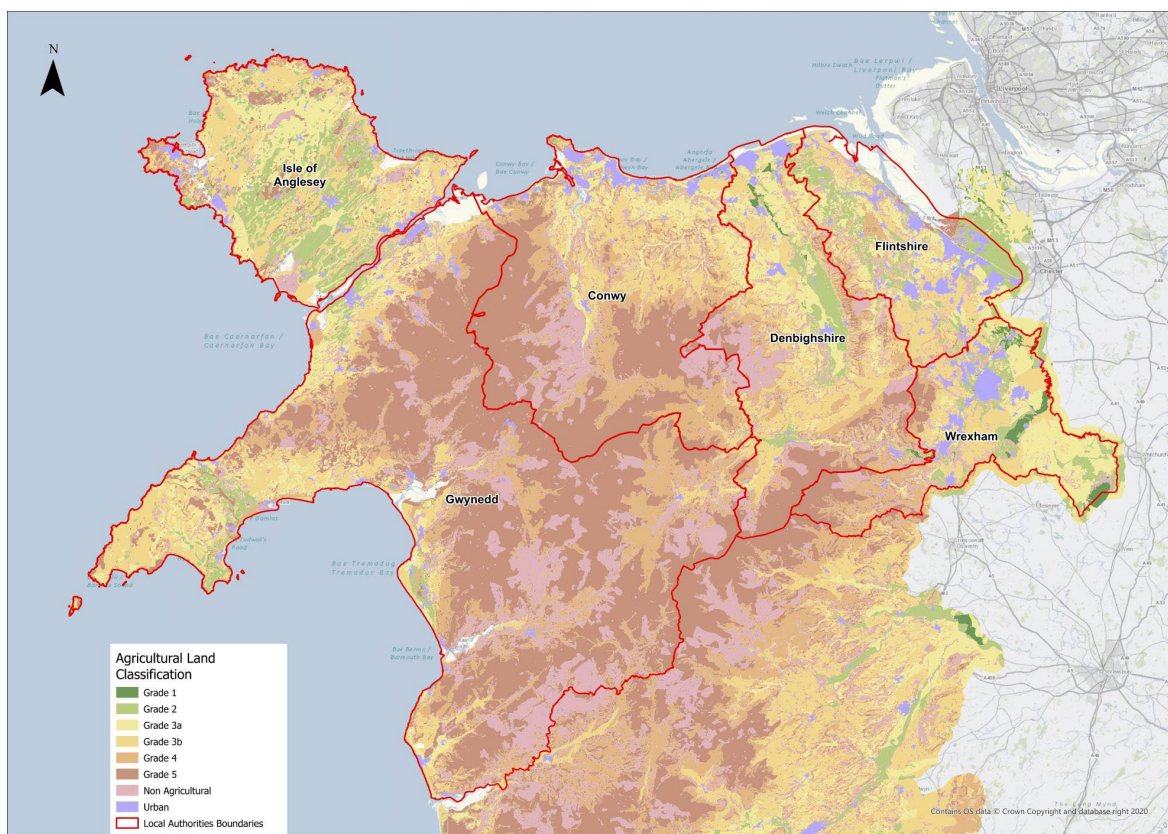


Figure 5-4 Agricultural land classification

5.7 Historic and likely future trends

The Welsh Government has committed to the ongoing conservation and enhancement of National Parks and AONBs in ‘Valued and Resilient: The Welsh Government’s Priorities for Areas of Outstanding Natural Beauty and National Parks’⁶⁹. As part of this, the Welsh Government has recognised designated landscapes as strategic national assets which are a key delivery mechanism for the Welsh Government’s environmental, social and economic ambitions. The statement contains four goals for AONBs and National Parks in Wales, including that they be valued places, contain resilient environments, support resilient communities, and adopt resilient ways of working. Additionally, the North West Wales Area Statement will aim to reconnect people with nature, improving access to green space⁷⁰. A new National Park is being proposed to replace the Clwydian Range and Dee Valley AONB in the north-east of Wales.

⁶⁹ Welsh Government (2018) *Valued and Resilient: The Welsh Government’s Priorities for Areas of Outstanding Natural Beauty and National Parks*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-02/areas-outstanding-natural-beauty-national-parks-2018-report%20.pdf> (Accessed: April 2024).

⁷⁰ Natural Resources Wales (2024) *Reconnecting people with nature*. Available at: <https://naturalresources.wales/about-us/what-we-do/strategies-and-plans/area-statements/north-west-wales-area-statement/reconnecting-people-with-nature/?lang=en> (Accessed: April 2024).



In the 'Valued and Resilient: The Welsh Government's Priorities for Areas of Outstanding Natural Beauty and National Parks' statement, the government has also acknowledged the challenges facing ecosystems and has challenged designated landscapes to do more to identify, safeguard and realise the benefits from the public goods they protect.

However, there is increasing pressure on non-designated rural and agricultural land from developers, with future population growth necessitating more housing and urban development infrastructure. Opportunities for the protection and enhancement of the local distinctiveness of landscapes and townscapes is declining⁷¹.

⁷¹ Welsh Government (2021) *Integrated Sustainability Appraisal of National Development Framework*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-integrated-sustainability-appraisal.pdf> (Accessed: April 2024).

6. Cultural Heritage

6.1 Historic landscape and archaeology

Cadw, in partnership with the Countryside Council for Wales (now called Natural Resources Wales) and the International Council on Monuments and Sites (ICOMOS UK), has compiled a non-statutory Register of 58 landscapes of outstanding or special historic interest in Wales. This register aims to raise awareness and provide information about the most important and significant historic landscape areas in Wales. Historic landscapes across the study area are shown on Figure 6-1.

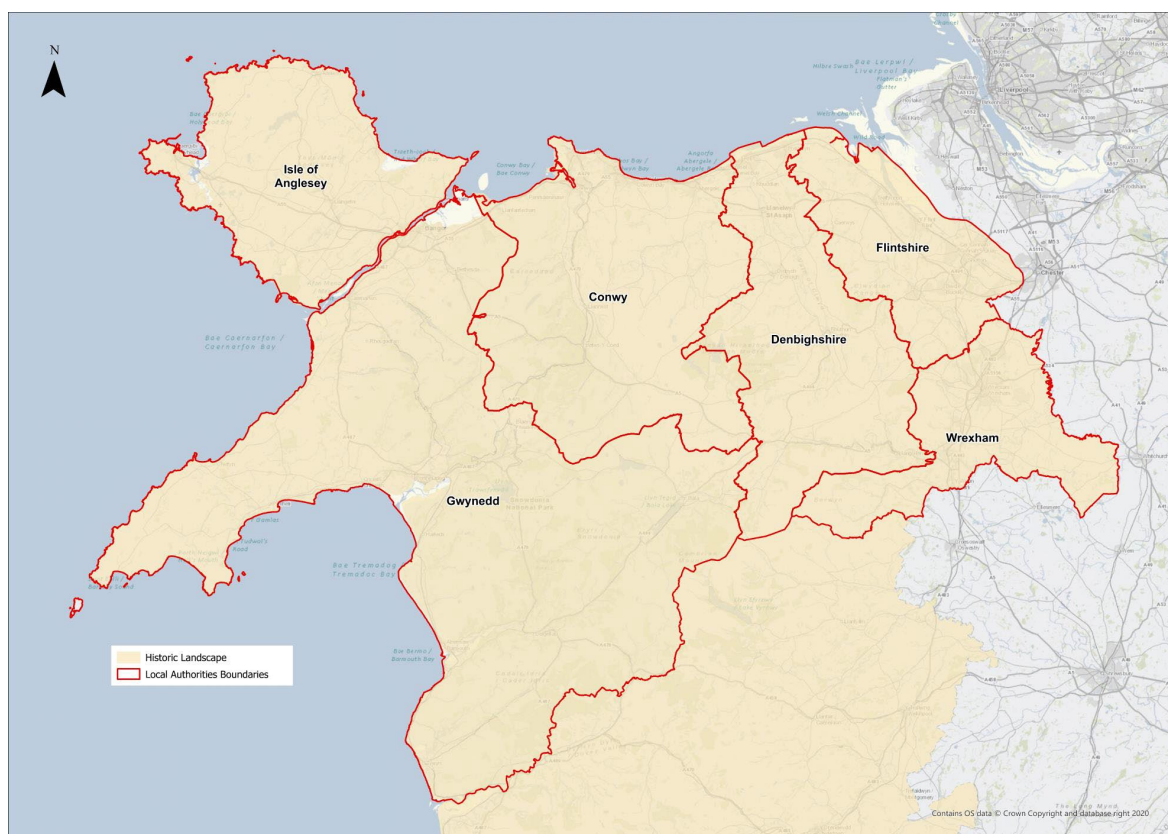


Figure 6-1 Historic landscapes across the study area

Humans have lived in North Wales for an estimated quarter of a million years. Palaeolithic hunter-gatherers roamed the coastline and valleys, and the oldest Neanderthal remains in Britain were found near St Asaph, Denbighshire. Neolithic remains are scattered within the landscape, especially on Anglesey, where features like Bryn Celli Ddu and Barclodiad y Gawres stand as testament to ancient civilisations⁷².

⁷² Welsh Government (2024) *Discover historic North Wales*. Available at: <https://www.visitwales.com/destinations/north-wales/north-wales-history-language-landmarks-and-legends> (Accessed: April 2024).



6.2 UNESCO World Heritage Sites

Cultural attractions are awarded UNESCO World Heritage Status when they are ranked by the United Nations as being one of the world's most significant sites and of 'outstanding value to humanity'. Four sites in Wales have been awarded this prestigious title to date. The study area includes three out of the four UNESCO World Heritage Sites, each offering an array of cultural, recreational and historic interest which serves the local population and tourism sector.

In July 2021 the Slate Landscape of Northwest Wales became the fourth UNESCO World Heritage Site in Wales⁷³. The Slate Landscape of Northwest Wales consists of six separate sites around the Gwynedd area including areas of interest of the Welsh slate industry, as follows:

- Dyffryn Ogwen
- Dinorwig Quarry
- Dyffryn Nantlle
- Gorseddau and Bwlch y Ddwy Elor
- Ffestiniog and Porthmadog
- Abergynolwyn and Tywyn

Within Gwynedd, the Castle and Town Walls of King Edward I are also designated World Heritage Sites. The four strongholds comprise Conwy Castle in the county of Conwy, Harlech Castle and Caernarfon Castle in Gwynedd, and Beaumaris Castle on the island of Anglesey. The adjoining historic towns of Conwy and Caernarfon and are also included in the UNESCO listing.

The more urban Northeast region of the study area includes a UNESCO World Heritage Site, the Pontcysyllte Aqueduct and Canal. Along with the aqueduct, the UNESCO listing includes 17km of scenic canal way.

6.3 Listed Buildings

Buildings and structures of national importance are given legal protection by being placed on a 'List' of Buildings of Special Architectural or Historic Interest. Under Section 1 of the Planning (Listed Buildings and Conservation Areas) Act 1990, the Welsh Ministers are required to compile and maintain this list.

In Wales there are over 30,000 buildings and structures on the list. Listed buildings range from Medieval Churches to modern commercial premises. Structures can include railings, gate piers, walls, war memorials, gravestones, post boxes and telephone boxes. The Listing of buildings and structures is an ongoing process. Buildings and structures can also be removed from the List in a process called 'De-Listing'.

Buildings on the List are given one of three grades which denote their level of importance, Grade I being the highest. The Grades are: -

⁷³ Welsh Government (2024) *Wales Slate: The quarry communities of Gwynedd*. Available at: <https://www.visitwales.com/destinations/north-wales/north-wales-history-language-landmarks-and-legends> <https://www.visitwales.com/destinations/north-wales/eryri-snowdonia-mountains-and-coast/six-areas-unesco-awarded-slate> (Accessed: April 2024).

- Grade I - Are of exceptional interest;
- Grade II* - Are particularly important; and
- Grade II - Are of special interest.

Within the study area, according to the Cadw database⁷⁴ there are currently 10,936 listed buildings (Grade I, II* and II) which have been designated between 1949 and 2024. These are depicted in Figure 6-2.

The distribution of listed buildings by local authority area as follows:

- Isle of Anglesey – total 1,127
- Conwy – total 1,745
- Denbighshire – total 1,814
- Flintshire – total 1,030
- Gwynedd – total 4,178
- Wrexham – total 1,042

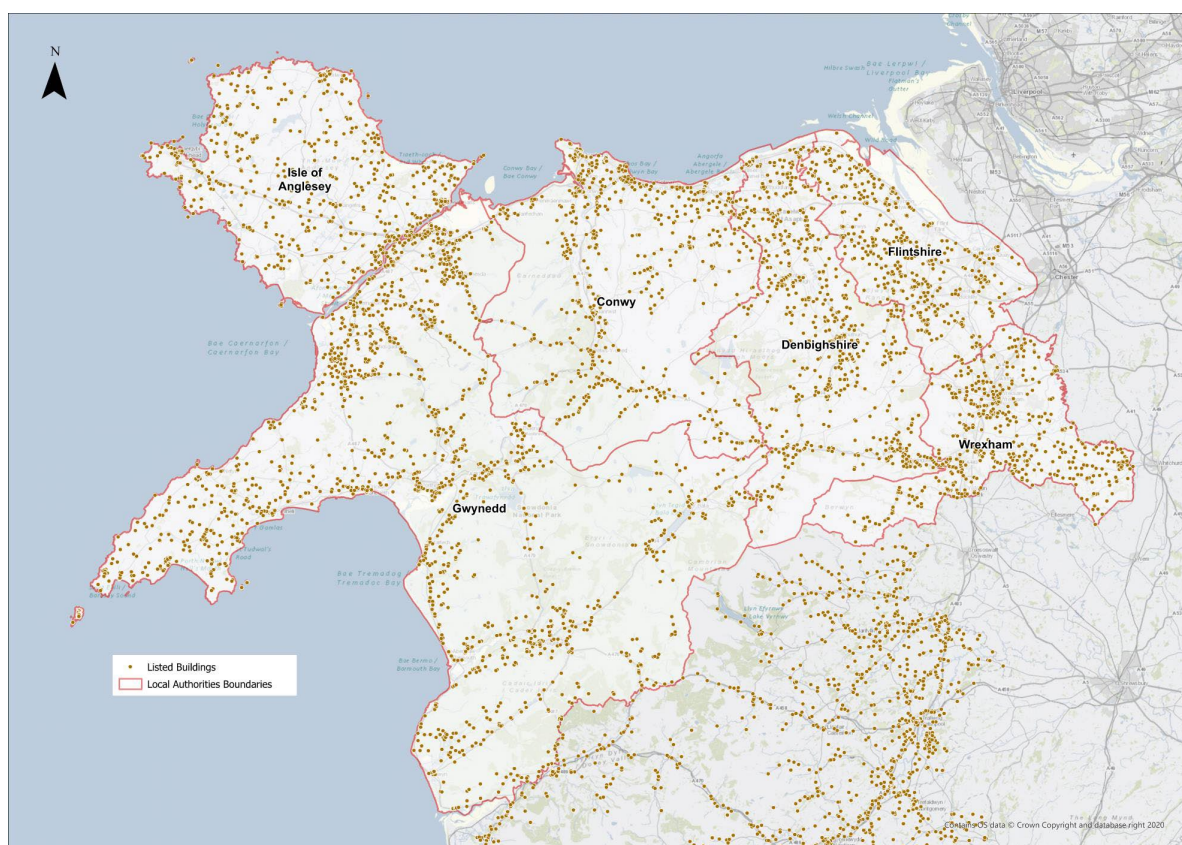


Figure 6-2 Listed buildings within the study area

⁷⁴ Cadw (2021) *Cadw Historic Assets*. Available at: <https://datamap.gov.wales/maps/cadw-historic-assets/> (Accessed: April 2024).



6.4 Scheduled Monuments

Archaeological sites of national importance are given legal protection by being placed on a 'Schedule' of monuments. Under the Ancient Monuments and Archaeological Areas Act 1979, the Welsh Ministers are required to compile and maintain this schedule. In Wales, monuments have been scheduled since the 1920s and this process has continued and is ongoing. Scheduled Monuments can be subject to a 'Revision', where new archaeological/historical evidence regarding the monument has required an alteration to the map depiction. Monuments can also be removed from the Schedule in a process called 'De-Scheduling'.

In Wales there are over 4,000 examples of Scheduled Monuments, which include, amongst others, Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages, industrial sites and 20th century military complexes.

Within the study area, according to the Cadw database⁷⁴ there are currently 1,214 Scheduled Monuments ranging from prehistoric, neolithic, bronze age, iron age, roman, medieval, early medieval, post medieval, Victorian and industrial and modern. These are depicted in Figure 6-3 below. The distribution of Scheduled Monuments by local authority area is as follows:

- Isle of Anglesey – total 143
- Conwy – total 156.
- Denbighshire – total 169
- Flintshire – total 130
- Gwynedd – total 515
- Wrexham – total 101

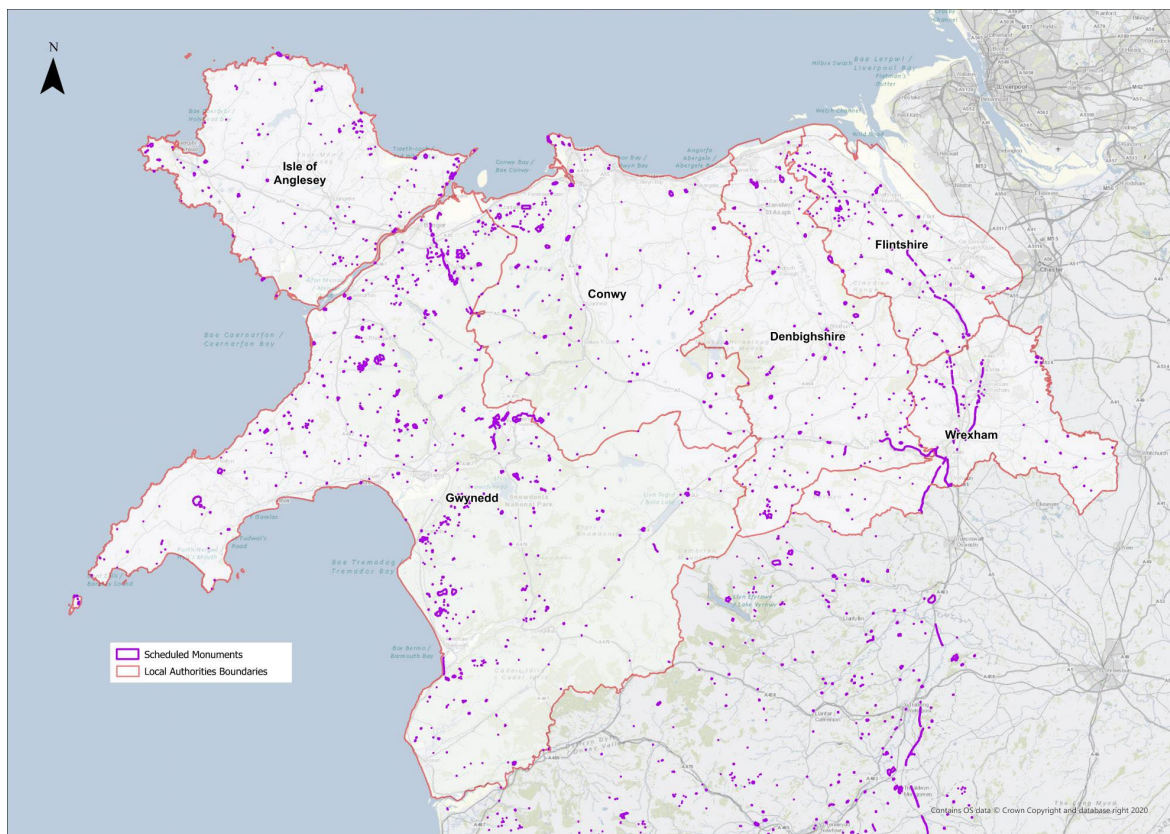


Figure 6-3 Scheduled monuments within the study area



6.5 Other cultural significance

Alongside the rich prehistoric, Celtic and roman history of North Wales, North Wales played a significant role in the Industrial Revolution. Mineral extraction and manufacturing drove the economy. The Greenfield Valley, with initiatives ranging from copper to cotton, exemplifies the region's industrial innovation from the 18th Century⁷⁵

As discussed in the Population section within this Appendix, Welsh-speakers in North Wales form a higher proportion of the population than in other Welsh regions³.

In 2022, Wrexham successfully achieved city status in the Queen's Platinum Jubilee City Status competition. It was also a finalist for UK City of Culture in 2025.

⁷⁵ North East Wales Heritage Forum (2024). Webpage information. Available online at: <https://www.newalesheritageforum.org.uk/en/industrial-innovation/> (Accessed July 2024)



7. Ground Conditions (soils and geology)

Given the size of the study area, this report gives a high-level summary of the geology and hydrogeology only.

7.1 Geological Summary

7.1.1 Superficial Deposits

The study area has the largest coverage of Glacigenic Deposits - Diamicton (Clay, Sand and Gravel). Land at higher elevations across the study area has little coverage of superficial deposits, whereas the land at lower elevations has high coverage (see Figure 7-1). Till and associated glacial material are widespread on lower-lying ground and largely absent in upland areas. In Snowdonia, outcrop is extensive⁷⁶.

The superficial deposits found within the study area are listed below. The units are generally ordered from youngest to oldest. This should be read in conjunction with Figure 7-1.

- **Aeolian Deposits - Sand** – located around the coastal areas of the study area, particularly around Tywyn, Porthmadog, west coast of Anglesey, Llandudno and Rhyl. Aeolian deposits include wind-blown deposits formed in a variety of depositional environments and climates⁷⁷.
- **Peat** is present in a small number of locations covering approximately 68km². Some small areas of peat are present in the central study area around Llyn Brenig and nearby lakes. Larger areas are present in various upland areas.
- **Alluvium** is found in the flat valley floors adjacent to the rivers and transitional waterbodies within the study area. These deposits generally comprise unconsolidated clays, silts, sands and gravels⁷⁸.
- **River terrace deposits** are found adjacent to alluvium in river valleys in the east of the study area such as along the River Clwyd and River Dee. These deposits consist of sands and gravels, with local lenses of silt, clay or peat⁷⁹.

⁷⁶ British Geological Survey (2016) *Hydrogeology of Wales: Introduction - geology and groundwater*. Available at: https://earthwise.bgs.ac.uk/index.php/Hydrogeology_of_Wales:_Introduction_-_geology_and_groundwater (Accessed: April 2024).

⁷⁷ British Geological Survey (no date) *Aeolian deposits*. Available at: <https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=aeold> (Accessed: April 2024).

⁷⁸ British Geological Survey (no date) *Alluvium*. Available at: <https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=alv> (Accessed: April 2024).

⁷⁹ British Geological Survey (no date) *River terrace deposits*. Available at: <https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=RTD> (Accessed: April 2024).

- Glacial sand and gravel is present in the east of the study area and in smaller quantities on the north west coast, with isolated deposits near Brynecrug, Groesffordd. This unit is comprised mainly of coarse-grained sands and gravels, with a smaller proportion of finer-grained deposits such as clay interbedded locally⁸⁰.
- Till covers a large proportion of the study area. Till is an unsorted and unstratified glacial drift, a heterogeneous mixture of clay, sand and gravel and boulders of varying size and shape.

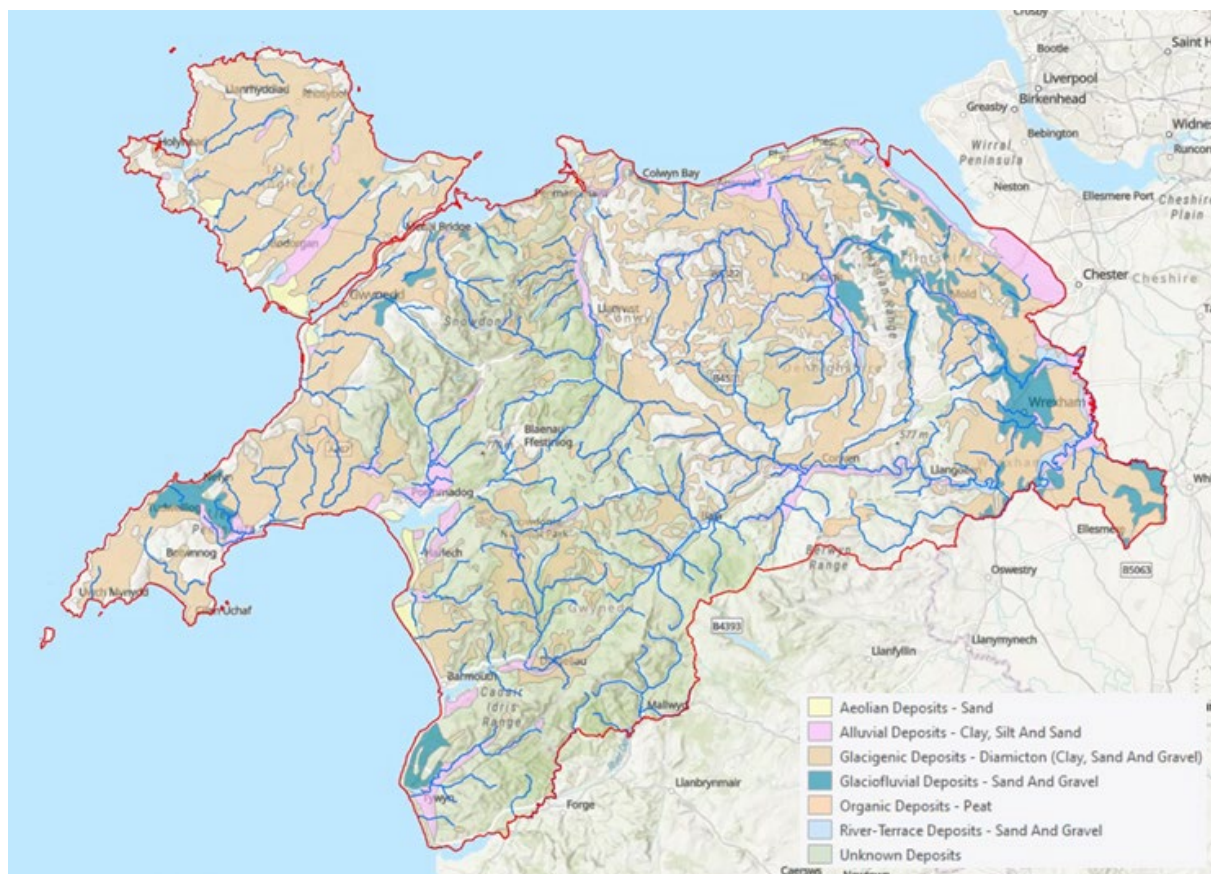


Figure 7-1 Superficial deposits

7.1.2 Bedrock Geology

North Wales is generally underlain by metamorphic and igneous Precambrian and Cambrian rocks. Late Precambrian rocks are widespread on Anglesey, Llŷn and Arfon. Triassic strata occurs in the Vale of Clywd. Carboniferous limestone covers extensive areas in both Wales⁸¹.

The bedrock geology is presented in Figure 7-2. Sedimentary formations, which cover most of the study area, are predominantly early Palaeozoic mudstones, siltstones and sandstones. Triassic, Permian and Carboniferous formations are present in the east and north of the study

⁸⁰ British Geological Survey (no date) *Glaciofluvial deposits*. Available at: <https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=GFDU> (Accessed: April 2024).

⁸¹ British Geological Survey (2016) *Hydrogeology of Wales: Introduction - geology and groundwater*. Available at: https://earthwise.bgs.ac.uk/index.php/Hydrogeology_of_Wales:_Introduction_-_geology_and_groundwater (Accessed: April 2024).

area. There is also a sparse outcropping of early Palaeozoic-aged igneous material, in the west of the study area and Neoproterozoic-aged material in the north west (Figure 7-2).

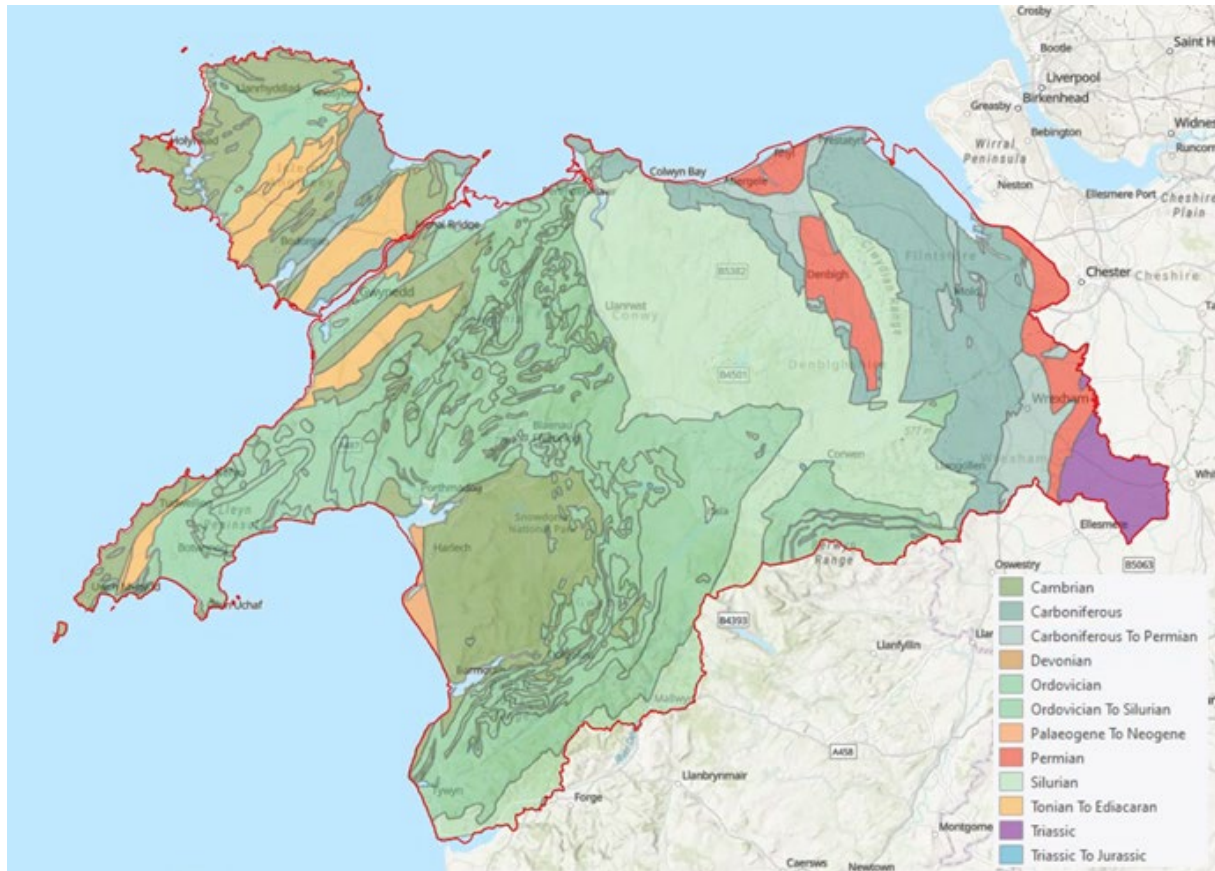


Figure 7-2 Bedrock geology

7.1.3 Mining

Wales has a long history of mining coal and metals, with a large number of mines and quarries being located within the study area (see Figure 7-3). However, almost all of the over 8000 known mine and quarry sites within north Wales have ceased operating^{82,83}.

Historically, coal mining has been focused around the Anglesey Coalfield and North Wales Coalfield which extends from Deeside to Oswestry^{82,84}. Both regions are designated as Coal Mine Reporting Areas and Surface Coal Resource Areas⁸⁵. There has been increased interest in the North Wales Coalfield in recent years as a resource for gas and potential source of public water supply⁸⁴.

⁸² Hendrecoed (no date) *Gazetteer and Bibliography of the Mines and Quarries of Wales*. Available at: <https://www.hendrecoed.org.uk/Wilkinson/#:~:text=The%20former%20north%20Wales%20counties,and%20small%20roads%20gravel%20pits> (Accessed: April 2024).

⁸³ British Geological Survey (2024) *GeoIndex Onshore – Mines and quarries layer*. Available at: <https://mapapps2.bgs.ac.uk/geoindex/home.html? ga=2.17170233.1290109575.1714125085-192347584.1714125085> (Accessed: April 2024).

⁸⁴ British Geological Survey (2016) *Wales (Cymru) - North Wales Coalfield*. Available at: [https://earthwise.bgs.ac.uk/index.php/Wales_\(Cymru\)_-North_Wales_Coalfield](https://earthwise.bgs.ac.uk/index.php/Wales_(Cymru)_-North_Wales_Coalfield) (Accessed: April 2024).

⁸⁵ The Coal Authority (no date) *Interactive Map*. Available at: <https://mapapps2.bgs.ac.uk/coalauthority/home.html> (Accessed: April 2024).

Small areas of this coalfield in the eastern portion of the study area are classed as onshore licenced areas and prospective areas for shale gas /oil by the Department of Energy & Climate Change⁸⁶.

Intensively mined areas within the study area include the Dee Valley for lead and the River Mawddach catchment⁸². Parys Mountain, on the Isle of Anglesey, was the largest copper mine in the world during the 18th and 19th century. Underground workings ceased in the early 20th century. Anglesey Mining Plc currently holds the mining rights⁸⁷ and intend to develop, build and operate a mine at Parys Mountain⁸⁸.

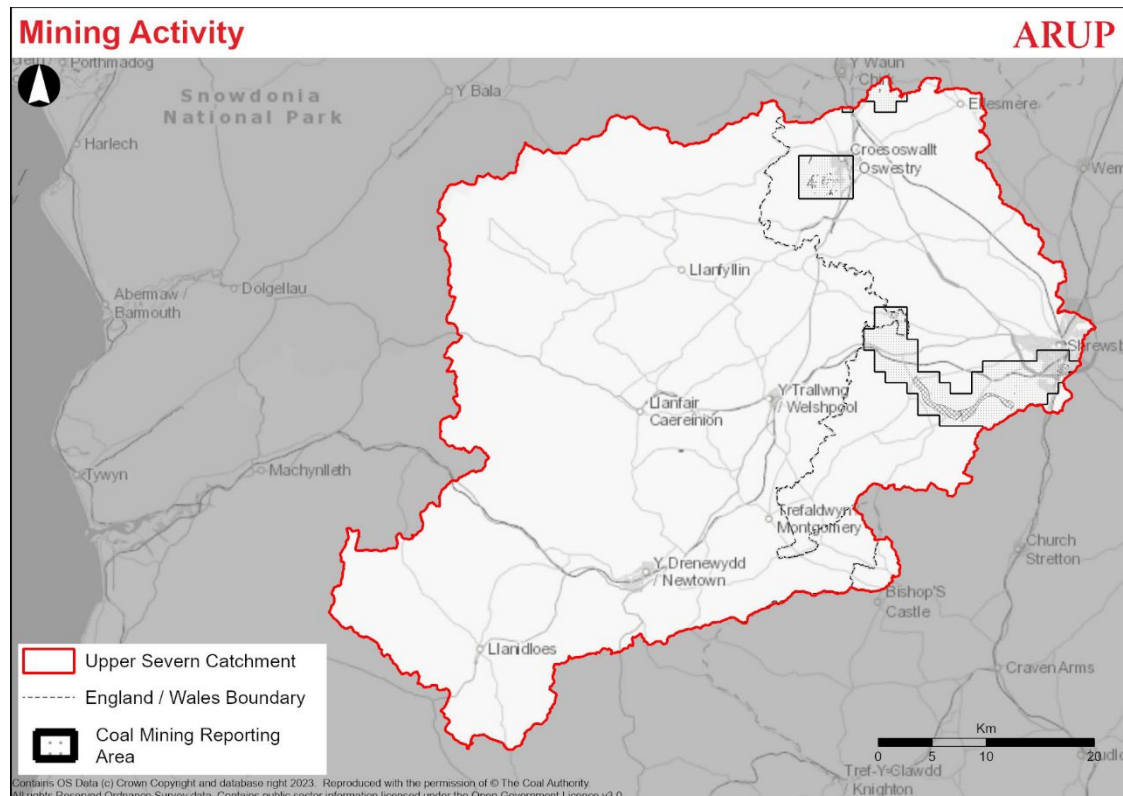


Figure 7-3 Mining activity


7.1.4 Geological hazards

The UK has low levels of earthquake activity and hence a low seismic hazard. Much of Wales experiences similar frequency earthquakes to the rest of the UK. An exception is the Llŷn Peninsula, in the western part of the study area, which has received a number of earthquakes with epicentres approximately 20km below the surface⁸⁸. Ground stability is more of an issue in areas of historic mineral exploitation.

⁸⁶ Department of Energy & Climate Change (2014) *Map of Onshore Licences, SEA Areas and Prospective Areas*. Available at: https://assets.publishing.service.gov.uk/media/5a7ed87040f0b6230268be69/SEA_Licence_Prospect_On.pdf (Accessed: May 2024).

⁸⁷ Grwp Tanddaearol PARYS Underground Group (no date) Grwp Tanddaearol PARYS Underground Group. Available at: <https://parysmountain.co.uk/> (Accessed: May 2024).

⁸⁸ Anglesey Mining Plc (no date) Parys Mountain. Available at: <https://www.angleseymining.co.uk/parys-mountain/> (Accessed: May 2024).



Northeast Wales has a history of landslides with numerous instances of damaged caused to public transport networks and properties after heavy rainfall⁸⁹. Over half of the study area is classed as having a significant landslide risk⁹⁰.

7.2 Hydrogeology

For the current baseline, only an outline of the hydrogeological designations and water resources are covered given the scale of the study area.

7.2.1 Aquifer Classification

NRW classify aquifers is based on their ability to transmit water and support water abstractions, surface flow and wetland ecosystems, and is defined, largely, by the rock's characteristics, on both a macro and micro scale.

These classes and their definitions are as follows:

- **Principal Aquifer** - highly permeable rock that provides water supply and/ river base flow.
- **Secondary A Aquifer** - permeable layers capable of supporting water supplies at a local rather than strategic scale. In some cases, they form important sources of baseflow to rivers.
- **Secondary B Aquifer** - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.
- **Secondary (undifferentiated) Aquifer** - assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.
- **Unproductive Strata**

7.2.2 Bedrock Aquifers

The bedrock aquifer classification is provided in **Error! Reference source not found.** Three principal aquifers are present, albeit to very limited extents, within the study area. These are Triassic and Permian Sandstones and Carboniferous Limestones.

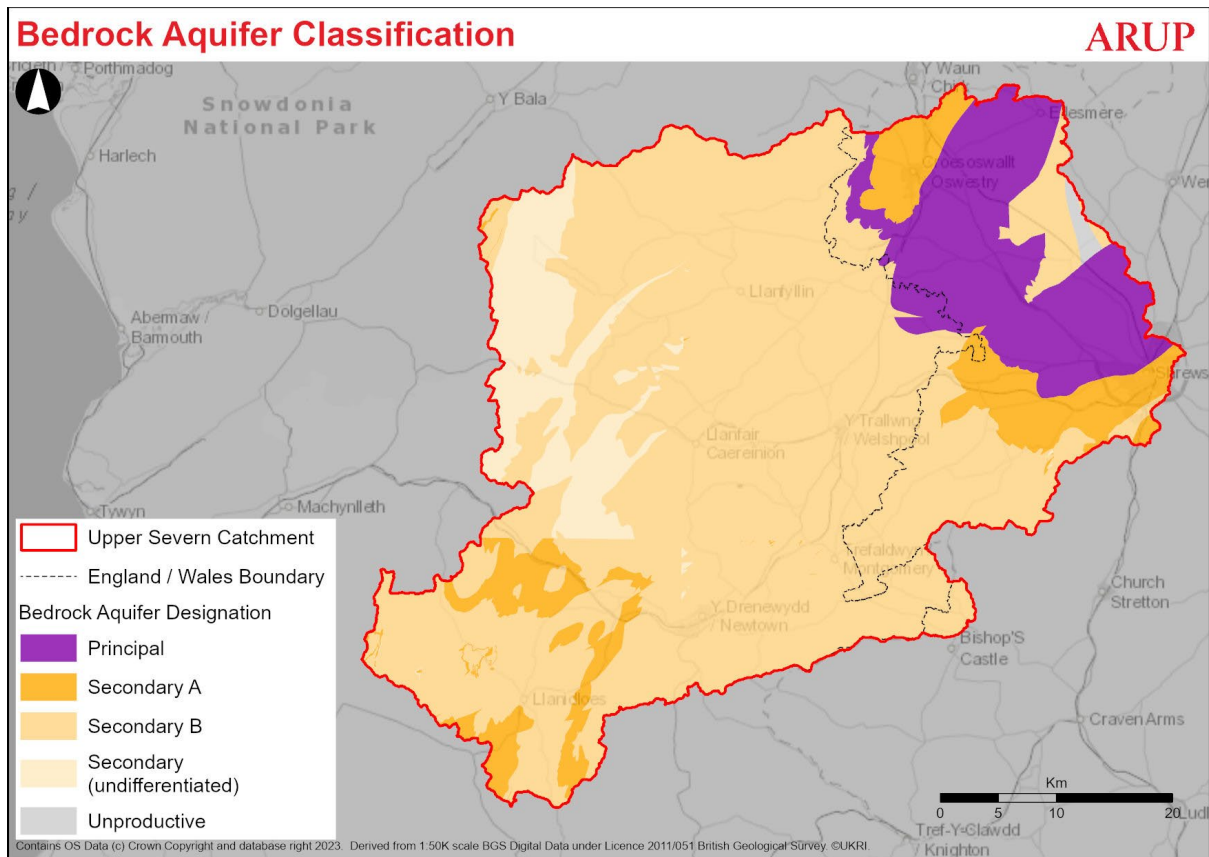
The Triassic sandstone aquifer in the Vale of Clwyd in north Wales is the only aquifer designed as 'Principal A'⁹¹.

Within the study area, the predominant aquifer classification, spatially, is 'Secondary B'.

⁸⁹ Miller, S., & Degg, M. (2012). Landslide susceptibility mapping in North-East Wales. *Geomatics, Natural Hazards and Risk*, 3(2), 133–159. <https://doi.org/10.1080/19475705.2011.600778>

⁹⁰ British Geological Survey (no date) *BGS Geosure 5 km hex grid*. Available at: <https://www.bgs.ac.uk/datasets/bgs-geosure-5-km-hex-grid/> (Accessed: May 2024).

⁹¹ British Geological Survey (2016) *Hydrogeology of Wales*. Available at: <https://nora.nerc.ac.uk/id/eprint/513064/1/Hydrogeology%20of%20Wales.pdf> (Accessed: April 2024).



7.2.3 Superficial Aquifers

The superficial aquifer classifications in the study area are shown in Figure 7-5. Typically, the Alluvium, Peat, Glacial Sands and Gravels and River Terrace Deposits are classified as Secondary A Aquifers, whereas the Till is generally Secondary (undifferentiated).

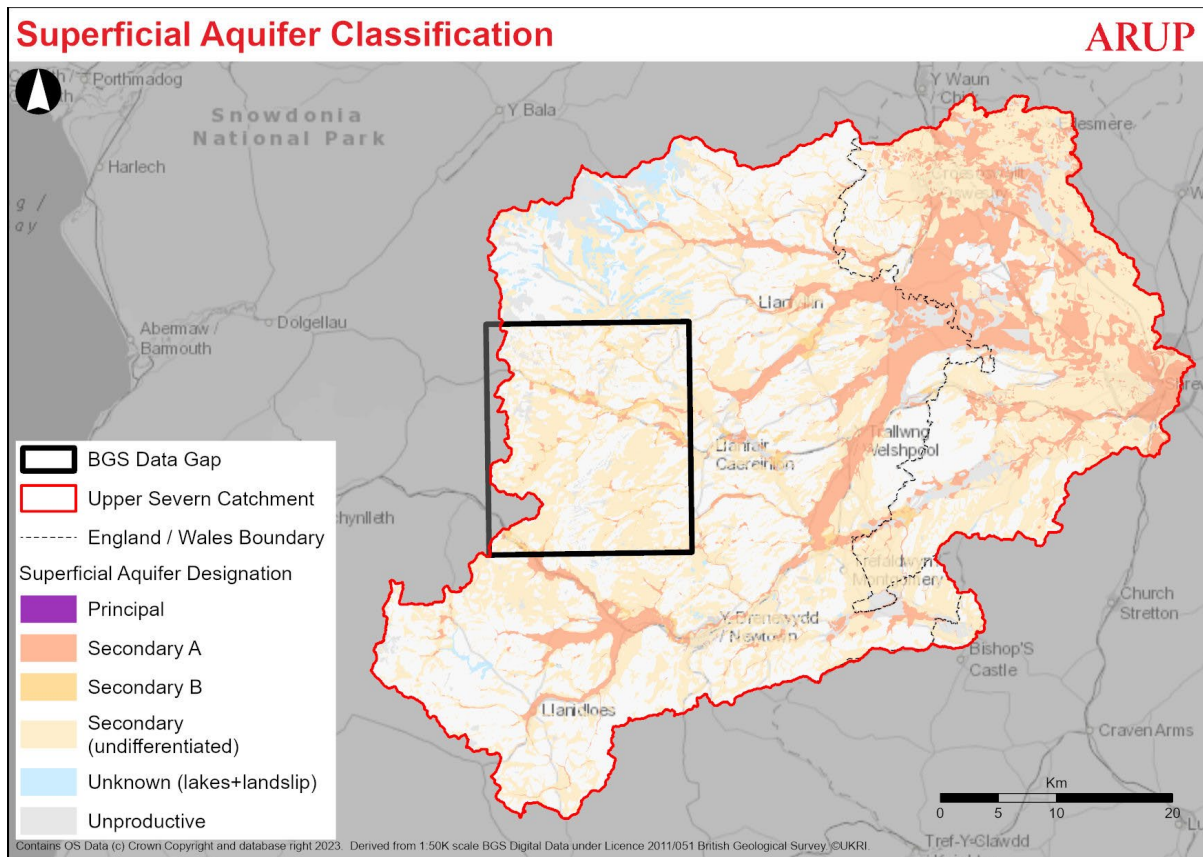


Figure 7-5 Superficial aquifer classification

7.2.4 Groundwater Abstraction

There are 705 licenced abstractions (those above 20m³/d) in the study area, of which 90 are from groundwater sources⁹². These are predominantly located within the Llyn and Eryri and Clwyd Permo-Triassic Sandstone WFD groundwater bodies.

Approximately 8% of the total water supply in Wales (250 Ml/d) comes from groundwater sources, with an additional 95 Ml/d abstracted for private water consumption⁹¹.

At this stage of the project, data on private groundwater abstractions (<20m³/d) have not been requested from the Local Authorities.

7.2.5 Designations

The following environmental designations are relevant to the hydrogeology of the study area:

- Fifteen groundwater bodies (covered in Section 8. Water environment)
- Fifteen Source Protection Zones (SPZ)
- Fifteen Groundwater Drinking Water Protected Areas (All WFD Groundwater bodies are Drinking Water Protected Areas). Two of these areas; Dee Carboniferous Coal Measures and Llyn & Eryri are considered to be at risk.

⁹² Natural Resources Wales (2024) *Licensed Water Abstractions*. Available at: https://datamap.gov.wales/layers/geonode:nrw_water_resource_permits (Accessed: May 2024).

- Fourteen Nitrate Vulnerable Zones (NVZ), of which six are groundwater, six are surface water and two are eutrophic.

7.2.6 Groundwater Flooding

Groundwater levels are heavily influenced by the underlying geology and the catchment topography, as well as other factors such as extended periods of heavy rain, abstraction or changes to underground flows. Groundwater flooding occurs when water levels in the ground rise above the natural surface. It can cause significant damage to property and pose risks to the environment and ground stability.

Groundwater flooding is not a widespread issue in Wales and flood events are rare due to the geology and topography. In Wales, groundwater flooding is most likely to occur from disused mine workings⁹³.

Historical records relating to groundwater flooding within Conwy, Anglesey and Flintshire are limited^{94,95,96}. In Denbighshire, there is no recorded history of significant groundwater flooding⁹⁷ and it is not considered to be a significant source of flooding in Gwynedd⁹⁸.

The level of groundwater flood risk was not presented in the Wrexham Flood Risk Management Strategy⁹⁹. Between 2011 and 2018, there were no recorded events of groundwater flooding within the Dee and Severn RBD that also intersect with the study area^{93,100}.

Limited areas with groundwater flooding potential due to the susceptibility to surface water flooding, such as Llandudno, Llanrwst, Eglwysbach, Dolgarrog, Llansannan and Cerrigydrudion, are reported in the Conwy Strategic Flood Consequences Assessment¹⁰¹.

⁹³ Natural Resources Wales and Environment Agency (2018) Dee preliminary flood risk assessment. Available [Online] at: <https://naturalresources.wales/media/689107/dee-pfra.pdf> (Accessed: July 2024).

⁹⁴ Conwy County Borough Council (2013) Conwy Local Flood Risk Management Strategy. Available [Online] at: <https://www.conwy.gov.uk/en/Resident/Crime-and-emergencies/Preparing-for-Emergencies/Flooding/documents/Conwy-Local-Flood-Risk-Management.pdf> (Accessed: July 2024).

⁹⁵ Isle of Anglesey County Council (2013) Anglesey Local Flood Risk Management Strategy. Available [Online] at: <https://www.anglesey.gov.wales/documents/Docs-en/Highways/Flooding/Anglesey-Local-Flood-Risk-Management-Strategy.pdf> (Accessed: July 2024).

⁹⁶ Flintshire County Council (2013) Flintshire Local Flood Risk Management Strategy. Available [Online] at: <https://www.flintshire.gov.uk/en/PDFFiles/Flooding-and-Drainage/Flintshire-Local-Flood-Risk-Management-Strategy.pdf> (Accessed: July 2024).

⁹⁷ Denbighshire County Council (2011) Preliminary Flood Risk Assessment. Available [Online] at: <https://www.denbighshire.gov.uk/en/documents/your-council/strategies-plans-and-policies/strategies/community-and-living/local-flood-risk-management-strategy/preliminary-flood-risk-assessment-flood-risk-regulations-2009.pdf> (Accessed: July 2024).

⁹⁸ Gwynedd Council (2013) Local Flood Risk Management Strategy. Available [Online] at: <https://www.gwynedd.llyw.cymru/en/Residents/Documents-Residents/Parking-roads-and-travel/Flood-and-Coastal-Risk-Management/Local-Flood-Risk-Management-Strategy.pdf> (Accessed: July 2024).

⁹⁹ Wrexham County Borough Council (2023) Flood Risk Management Strategy. Available [Online] at: <https://moderngov.wrexham.gov.uk/documents/s32779/Appendix%201.pdf?LLL=0> (Accessed: July 2024).

¹⁰⁰ Natural Resources Wales and Environment Agency (2018) Severn preliminary flood risk assessment. Available [Online] at: <https://naturalresources.wales/media/687716/pfra-severn.pdf> (Accessed: July 2024).

¹⁰¹ Conwy County Borough Council (2012) Conwy Strategic Flood Consequences Assessment. Available [Online] at: <https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Strategic-Planning-Policy/Adopted-Local-Development-Plan-LDP/Evidence-Base/Natural-Environment/BP17-Conwy-Strategic-Flood-Consequences-Assessment.pdf> (Accessed: July 2024).



Additionally, the risk of groundwater emergence is suggested to be very high in parts of Denbigh and Prestatyn in the Denbighshire Flood Consequence Assessment¹⁰².

Furthermore, Internal Drainage Districts (IDDs) in North Wales are specialised areas where water levels are managed to reduce the risk of flooding and ensure effective drainage. These districts, such as Afon Ganol, Dysynni Valley, and Malltraeth Marsh, are typically low-lying and prone to groundwater flooding. When developing transport infrastructure in these areas, it is crucial to consider several elements: the impact on existing drainage systems, potential changes in groundwater levels, and the need for sustainable drainage solutions. Additionally, developers must ensure compliance with local flood risk management plans and obtain necessary permits from regulatory bodies like Natural Resources Wales. Proper assessment of environmental impacts and engagement with local communities are also essential to ensure that infrastructure projects do not exacerbate flooding risks or negatively affect the local ecosystem.

The 12 Internal Drainage Districts in North Wales that are susceptible to groundwater flooding are as outlined below:

1. Afon Ganol
2. Ardudwy Marsh
3. Borth Bog
4. Dysynni Valley
5. Glaslyn - Pensyflog
6. Harlech & Maentwrog
7. Llanfrothen
8. Malltraeth Marsh
9. Mawddach & Wnion
10. River Conwy
11. Towyn
12. Powysland

¹⁰² Denbighshire County Council (2018) Denbighshire Flood Consequence Assessment - Level 1. Available [Online] at: <https://www.denbighshire.gov.uk/en/documents/planning-and-building-regulations/ldp/evidence-monitoring-and-information/strategic-flood-consequence-assessment-final-report-january-2018.pdf> (Accessed: July 2024).



7.3 Soils

The uplands of the National Park comprise of blanket bog peat soils and very acid loamy upland soils with wet peaty surface soils. Over 370km² of peatlands are present within the study area, acting as an important carbon store, wildlife habitat and flood controller¹⁰³. Almost half of the total soil carbon stock in Wales is stored in peat-containing soil, despite only covering 20% of Wales¹⁰⁴.

Also in the uplands are extensive areas of freely draining acid loamy soils over rock. Podzol soils are found extensively across the study area, predominately in the mid elevations across Snowdonia National Park. Areas of seasonally wet pastures and woodland, located throughout the lowlands of the catchment are typically slowly permeable seasonally wet acid loamy and clayey soils. Areas of brown soils are present across the Isle of Anglesey and the Vale of Clwyd¹⁰⁴.

As introduced in Section 5.2, the study area is dominated by pasture, comprising 46.8% of the total study area. Other significant land cover types within the study area include moors and heathland (14.9%), natural grassland (11.9%), coniferous forest (5.2%) and non-irrigated arable land (4.7%) (see Figure 5-2)⁶⁵. Nationally, 75% of land is considered to be non-BMV (ALC classes 3b, 4 and 5). Within the study area, 80% of land is considered to be non-BMV.

Grasslands are generally considered to be at a low risk of soil degradation. However, the intensity of management of this grassland can increase this risk¹⁰⁴.

7.4 Historic and likely future trends

The State of Natural Resources Report (SoNaRR) for Wales 2020 explains that the condition of woodland soil has generally been improving since the 1970s whereas the condition of agricultural soils have been stable or declining¹⁰⁵. It is anticipated that soils will continue to be impacted by human activity such as intensive agriculture, historic industrial pollution, actions that increase vulnerability to erosion, compaction and loss of organic matter. In the future, there is a high risk that soils will be further degraded as a result of changing climatic conditions, including seasonal aridity and wetness¹²⁷. There is no soils plan for Wales, however the National Peatland Action Programme in Wales sets the vision for the management, protection and restoration of peatland.

¹⁰³ Welsh Government (2022) Peatlands of Wales. Available [Online] at: https://datamap.gov.wales/layers/geonode:peatlands_of_wales_scg8 (Accessed: July 2024).

¹⁰⁴ Welsh Government (2022) Welsh Soil Evidence Review. Available [Online] at: https://www.gov.wales/sites/default/files/publications/2022-08/review-welsh-soil-evidence_0.pdf (Accessed: July 2024).

¹⁰⁵ Natural Resources Wales (2020) The Second State of Natural Resources Report (SoNaRR2020) Assessment of the achievement of sustainable management of natural resources: Land use and soils. Available at: <https://naturalresources.wales/media/693310/sonarr2020-theme-land-use-and-soils.pdf> (Accessed: April 2024).

8. Water environment

8.1 Waterbodies and flooding

The study area is located within three River Basin Districts (RBDs). The Western Wales River Basin District forms that largest proportion of the study area (71.74% or 4559.97km²), followed by Dee RBD (27.85% or 1770.00km²), and the Severn RBD (0.41% or 26.37km²). RBDs are split into Water Framework Directive (WFD) surface water 'management catchments'; within the study area there are 8 management catchments. These are:

- The Severn Middle Shropshire management catchment overlaps with approximately 14.96km² of the study area at the south eastern border.
- The Llyn and Eryri management catchment is located entirely within the study area. The eastern portion of the catchment is mountainous upland, with lower lying land on the Llyn Peninsula¹⁰⁶.
- The Ynys Mon management catchment is located entirely within the study area. Maintaining the quality of the water environment is vital on Anglesey, particularly to support the water-based recreation and lakes that are used for public water supply¹⁰⁷.
- The Clwyd management catchment is located entirely within the study area and is dominated by agriculture. Part of the catchment is designated as a Nitrate Vulnerable Zone and modified natural lakes provide public water supplies¹⁰⁸.
- The Conwy management catchment is located entirely within the study area. Uplands of the catchment are blanket bog, with much of the catchment located in Snowdonia National Park. There are important fisheries, drinking water supply reservoirs and commercial fisheries in the Conwy estuary¹⁰⁹.
- The Meirionnydd management catchment is largely located within the south western part of the study area. The catchment is predominantly agricultural, with some forestry and a history of mining¹¹⁰.

¹⁰⁶ Natural Resources Wales (no date) *Llyn and Eryri Management Catchment Summary*. Available at: <https://naturalresources.wales/media/3221/llyn-and-eryri-management-catchment.pdf> (Accessed: April 2024).

¹⁰⁷ Natural Resources Wales (no date) *Ynys Mon Management Catchment Summary*. Available at: https://naturalresources.wales/media/679396/2016_updated_ynys_mon_catchment_summary_nrw.pdf (Accessed: April 2024).

¹⁰⁸ Natural Resources Wales (no date) *Clwyd Management Catchment Summary*. Available at: <https://cdn.cyfoethnaturiol.cymru/media/3206/clwyd-management-catchment.pdf?mode=pad&%3Brnd=131625760771870000> (Accessed: April 2024).

¹⁰⁹ Natural Resources Wales (no date) *Conwy Management Catchment Summary*. Available at: <https://naturalresources.wales/media/3226/conwy-management-catchment.pdf> (Accessed: April 2024).

¹¹⁰ Natural Resources Wales (no date) *Meirionnydd Management Catchment Summary*. Available at: <https://naturalresources.wales/media/679377/meirionnydd-catchment-summary-nrw-updated-2016.pdf> (Accessed: April 2024).

- The Dee management catchment is largely located within the study area. The source is in the mountains and lakes of Snowdonia, with reservoirs in the upper reaches that regulate the flow in the Dee, supplying drinking water and reducing the risk of flooding downstream¹¹¹.
- The Severn Uplands management catchment overlaps with approximately 11.41km² of study area along with southern perimeter.

There are 226 river water bodies, 54 lake water bodies, 16 transitional water bodies, 15 groundwater bodies and 12 coastal waterbodies located within the study area (shown in Figure 8-1 and Figure 8-2). These water bodies are also summarised in Appendix C: WFD Waterbodies.

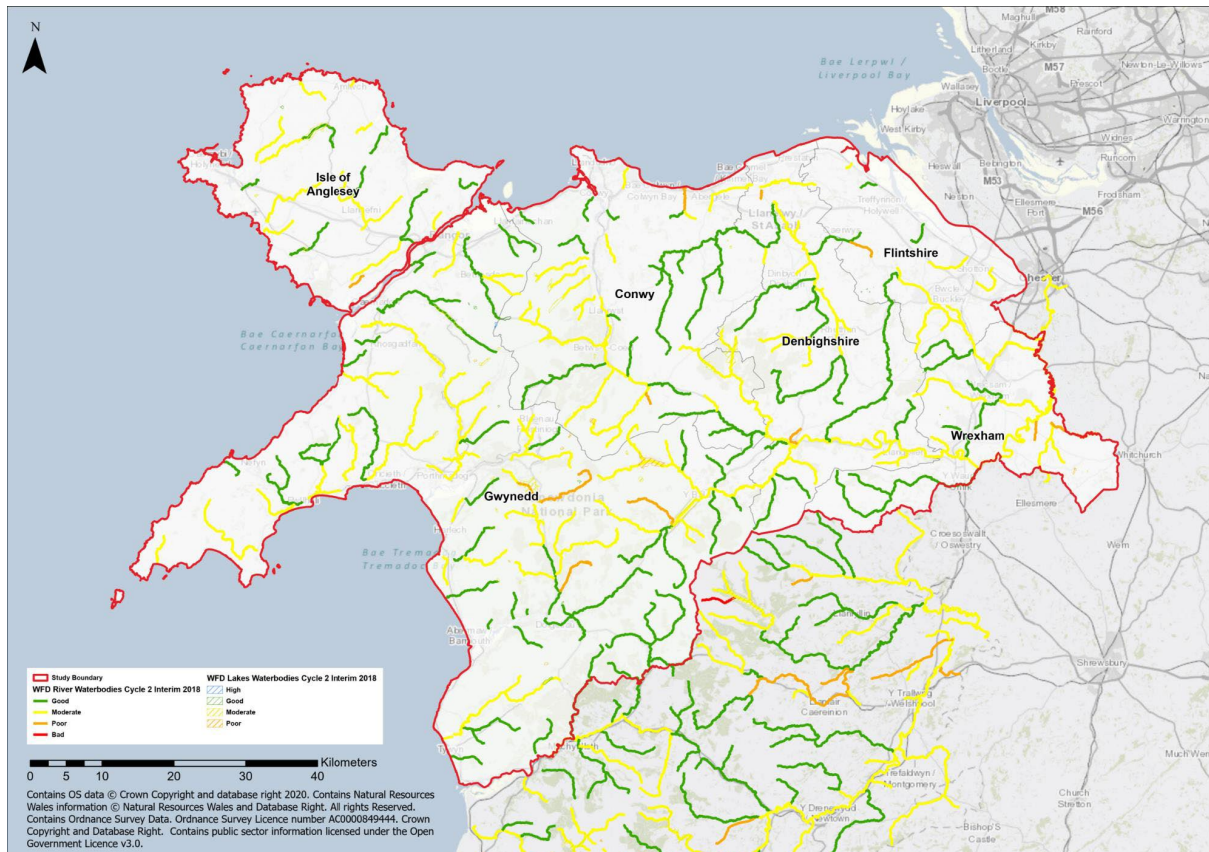


Figure 8-1 Surface water bodies within the study area

¹¹¹ Natural Resources Wales (no date) *Dee Management Catchment Summary*. Available at: <https://naturalresources.wales/media/3225/dee-management-catchment.pdf> (Accessed: April 2024).

Table 8-1 Summary of overall status of water bodies within the study area

Overall status	River water bodies	Lake water bodies	Transitional water bodies	Groundwater bodies	Coastal water bodies
High	0 (0%)	1 (2%)	0 (0%)	0 (0%)	1 (8%)
Good	109 (48%)	13 (24%)	4 (25%)	7 (47%)	4 (33%)
Moderate	96 (42%)	29 (54%)	12 (75%)	0 (0%)	7 (58%)
Poor	16 (7%)	10 (19%)	0 (0%)	8 (53%)	0 (0%)
Bad	5 (2%)	2 (4%)	0 (0%)	0 (0%)	0 (0%)

When a water body is not achieving good status, action is required to improve the status to good. 'Reasons for not achieving good' (RNAGs) are identified, and each RNAG is recorded using a defined set of pressures and reasons for failure. 70% of lake water bodies (38 of 54), 69% of transitional water bodies (11 of 16), 47% of groundwater bodies (7 of 15), 42% of coastal water bodies (5 of 12) and 33% of river water bodies (74 of 226) have at least one RNAG identified. Across the study area, a total of 416 individual RNAGs have been identified, as shown in Table 8-2.

Table 8-2 Count of the RNAGs for each business category for each water body type within the study area

Business Category	River water bodies	Lake water bodies	Transitional water bodies	Groundwater bodies	Coastal water bodies
Agriculture and rural land management	50 (20%)	23 (22%)	7 (19%)	2 (20%)	1 (5%)
Domestic/General public	13 (5%)	4 (4%)	7 (19%)	0 (0%)	1 (5%)
Industry, Manufacturing and other Business	12 (5%)	3 (3%)	2 (6%)	0 (0%)	4 (19%)
Mining and Quarrying	53 (22%)	4 (4%)	0 (0%)	8 (80%)	0 (0%)
NRW	6 (2%)	0 (0%)	4 (11%)	0 (0%)	0 (0%)
Unknown (pending investigation)	13 (5%)	2 (2%)	1 (3%)	0 (0%)	2 (10%)
Urban and Transport	12 (5%)	24 (23%)	0 (0%)	0 (0%)	4 (19%)
Water Industry	56 (23%)	13 (13%)	12 (33%)	0 (0%)	3 (14%)
Not applicable	13 (5%)	21 (20%)	0 (0%)	0 (0%)	0 (0%)
Other category	18 (7%)	9 (9%)	1 (3%)	0 (0%)	6 (29%)

The most common business category associated with not achieving good status is the water industry, with agriculture and rural land management and mining and quarrying also identified as key sectors. For river and lake waterbodies, point source pollution, i.e. sewage discharges, is the predominant Surface Water Management Issue identified in association with water industry related RNAGs (91.30% of the RNAGs in this category).

There are two water companies operating within the study area, with Dŵr Cymru operating within a large proportion. Hafren Dyfrdwy supplies water to homes and businesses in a smaller portion of the eastern area of the study area including Wrexham and Llangollen¹¹².

At each RBMP cycle, a range of measures are identified to address pressures on water bodies that are not achieving good status. Any development or activity must take all practicable steps to not deteriorate the current status or future status objectives of a waterbody or prevent the implementation of these measures.

Flood risk combines the probability and the potential consequences of flooding¹¹³ from all sources (rivers, rainfall affecting ground surface and rising groundwater, sewers and drainage systems, reservoirs, canals, lakes and other artificial sources). As a result of climate change, the UK is likely to experience more frequent heavy rainfall which will likely lead to an increase in the number and severity of flood events. Within the study area, there are a number of areas that fall within Flood Zone 3 (high probability of flooding)¹¹⁴ (see Figure 8-3). Areas at highest risk of river flooding include land along the River Dee, River Conwy, River Clwyd, River Glaslyn, and the transitional areas of the River Mawddach and River Dysynni. In total, the proportion of the study area in Flood Zone 3 from rivers, sea and surface water and small watercourses is 4.97% (316km²), 6.82% (434km²) and 4.17% (265km²), respectively. Communities with the highest risk to flooding include the coastal area between Abergele and Prestatyn (including Rhyl), Queensferry and other communities along the Dee estuary, Porthmadog and Fairbourne¹¹⁵.

Furthermore, in recent years Wales has experienced periods of prolonged dry weather resulting in reduced river flows, groundwater levels and soil moisture levels¹¹⁶.

8.2 The Water Environment (Water Framework Directive) Regulations water bodies

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as retained and as amended) set out a framework for the protection of surface waters, transitional waters (e.g. estuaries), coastal waters and groundwater – the water bodies within the study area are set out in Appendix D.

¹¹² Ofwat (no date) *Contact details for your water company*. Available at: <https://www.ofwat.gov.uk/households/your-water-company/contact-companies/> (Accessed: April 2024)

¹¹³ Department for Levelling up, Housing and Communities and Ministry of Housing, Communities & Local Government (2022) Flood risk and coastal change guidance. Available at: <https://www.gov.uk/guidance/flood-risk-and-coastal-change#table1> (Accessed: April 2024).

¹¹⁴ Land having a 1% or greater annual probability of river flooding; or land having a 0.5% or greater annual probability of sea.

¹¹⁵ Natural Resources Wales (2023) *Communities at Risk Register (CaRR)*. Available at: https://datamap.gov.wales/layergroups/geonode:nrw_communities_at_risk_register (Accessed: April 2024).

¹¹⁶ Natural Resources Wales (2023) *Dry weather updates*. Available at: <https://naturalresources.wales/about-us/news-and-blogs/blogs/dry-weather-updates/?lang=en#:~:text=Driest%20seven%2Dmonth%20period%20on%20record&text=Between%20March%20and%20September%20Wales.period%2C%20including%201995%20and%201976> (Accessed: April 2024).

The environmental objectives of the Regulations principally relate to the improvement of water bodies through the development and implementation of plans to recover failing water bodies to a good condition, or better.

In total there are 323 WFD water bodies present within the study area, comprising of:

- 226 river water bodies,
- 54 lake water bodies,
- 16 transitional water bodies,
- 15 groundwater bodies, and
- 12 coastal waterbodies.

Information on each water body, including its status and objectives, can be found on NRW's Water Watch Wales¹¹⁷.

8.3 Coastal Erosion

Coastal erosion is a significant concern for the North Wales Regional Transport Plan (NW RTP) area, necessitating a comprehensive approach to manage and mitigate its impacts. The Shoreline Management Plans (SMPs) relevant to this area include those developed by the West of Wales Coastal Group and the North West England and North Wales Coastal Group.

West of Wales Coastal Group SMP118: The West of Wales SMP covers the coastline from Cardigan Bay and Ynys Enlli to the Great Orme. This plan divides the coast into seven general Coastal Areas, further detailed within Policy Development Zones (PDZs). The SMP outlines strategies for managing coastal erosion and flood risks over short-term (2005-2025), medium-term (2025-2055), and long-term (2055-2105) periods. The policies include "Hold the Line" (HTL), "Managed Realignment" (MR), and "No Active Intervention" (NAI), tailored to specific sections of the coastline based on environmental, social, and economic factors.

North West England and North Wales Coastal Group SMP119: The North West England and North Wales SMP extends from Great Orme's Head in North Wales to the Scottish Border. This non-statutory, high-level policy document provides a large-scale assessment of coastal flood and erosion risks. It identifies sustainable management policies for the short-term (0-20 years), medium-term (20-50 years), and long-term (50-100 years).

The policies include "Hold the Line," "Advance the Line" (ATL), "Managed Realignment," and "No Active Intervention," aiming to balance the protection of people, property, and the environment.

Both SMPs emphasise the importance of adapting to changing environmental conditions and integrating coastal management strategies with broader regional planning initiatives. These plans should be considered in the development and implementation of the NW RTP to ensure a

¹¹⁷ Natural Resources Wales (2022) Water Watch Wales. Available at: <https://waterwatchwales.naturalresourceswales.gov.uk/en/> (Accessed: April 2024).

¹¹⁸ Natural Resources Wales (2012), West of Wales Coastal Group. Available at: <https://naturalresources.wales/flooding/managing-flood-risk/shoreline-management-plans/?lang=en> (Accessed May 2025)

¹¹⁹ Natural Resources Wales (2016), North West and North Wales Coastline. Available at: <https://www.mycoastline.org.uk/shoreline-management-plans/> (Accessed May 2025)

resilient and sustainable approach to managing coastal erosion and its impacts on transport infrastructure.

8.4 Historic and likely future trends

Overall, water quality of Welsh rivers, estuaries and coastal waters has improved in the last few decades. This has been delivered through investment and an improved understanding of the pressures on the water environment which has benefitted people, wildlife and the economy^{120,121,122}. Currently 44.5% of Welsh rivers are in good ecological status¹²³. Between 2015 and 2012, the proportion of water bodies in the Dee RBD achieving good or better overall status increased from 27% in 2015 to 38% in 2021¹²¹. However, improvements in the Western Wales RBD and Severn RBD were more modest (both achieved a 2% increase in the proportion of water bodies achieving good or better overall status^{120,122}), and fell short of the predicted increase.

Some research suggests that improvements in river health have slowed in recent years, citing issues such as combined sewer overflows, agricultural runoff, climate change, microplastics and pharmaceuticals¹²⁴.

In Wales, the area of land designated as Nitrate Vulnerable Zones is proposed to increase due to nutrient pollution from agricultural practices¹²⁵. Dŵr Cymru have a number of schemes aimed at protecting and enhancing river and coastal water quality, including a commitment to improving 420km of rivers in Wales and Herefordshire in order to help achieve good ecological status¹²⁶.

In recent years, dry weather and drought have become more common in Wales. This can place significant pressure on ecosystems, water supplies and the agricultural sector. Future trends are likely to include an increased frequency and severity of droughts and an increased demand for water due to population growth, industry and agriculture.

Wales is also likely to experience increased winter rainfall, which will result in an increased number and severity of flood events. The number of homes and businesses at risk of flooding in

¹²⁰ Natural Resources Wales (2022) *Western Wales River Basin Management Plan 2021 – 2027 Summary*. Available at: https://naturalresources.wales/media/695227/western-wales-rbmp-2021_2027-summary.pdf (Accessed: April 2024).

¹²¹ Natural Resources Wales (2022) *Dee River Basin Management Plan 2021 – 2027 Summary*. Available at: https://naturalresources.wales/media/695219/dee-rbmp-2021_2027-summary.pdf (Accessed: April 2024).

¹²² Natural Resources Wales (2022) *Welsh part of the Severn River Basin Management Plan (2021-2027) Summary*. Available at: https://naturalresources.wales/media/695983/severn-rbmp-2021_2027-summary.pdf (Accessed: April 2024).

¹²³ Dŵr Cymru (no date) *River Water Quality*. Available at: <https://corporate.dwrcymru.com/en/community/environment/river-water-quality> (Accessed: April 2024).

¹²⁴ Pharaoh, E., Diamond, M., Ormerod, S. J., Rutt, G. and Vaughan, I. P. Evidence of biological recovery from gross pollution in English and Welsh rivers over three decades, *Science of The Total Environment*, Volume 878, 2023, 163107, ISSN 0048-9697, <https://doi.org/10.1016/j.scitotenv.2023.163107>.

¹²⁵ Natural Resources Wales (2022) *The State of Natural Resources Report (SoNaRR): Assessment of the Sustainable Management of Natural Resources*. Available at: <https://naturalresources.wales/media/684348/chapter-3-state-and-trends-final-for-publication.pdf> (Accessed: April 2024).

¹²⁶ Dŵr Cymru (2022) *Improving our river water quality*. Available at: <https://corporate.dwrcymru.com/en/community/environment/river-water-quality> (Accessed: April 2024).

the study area can be expected to increase. In the UK, Annual damages expected to increase by 25% by 2050 and 40% by 2080 under a 2°C by 2100 warming scenario¹²⁷.

Future trends in Wales relating to the reduction and management of flood risk, along with the protection and enhancement of the quality and quantity of water features and resources is declining¹²⁸.

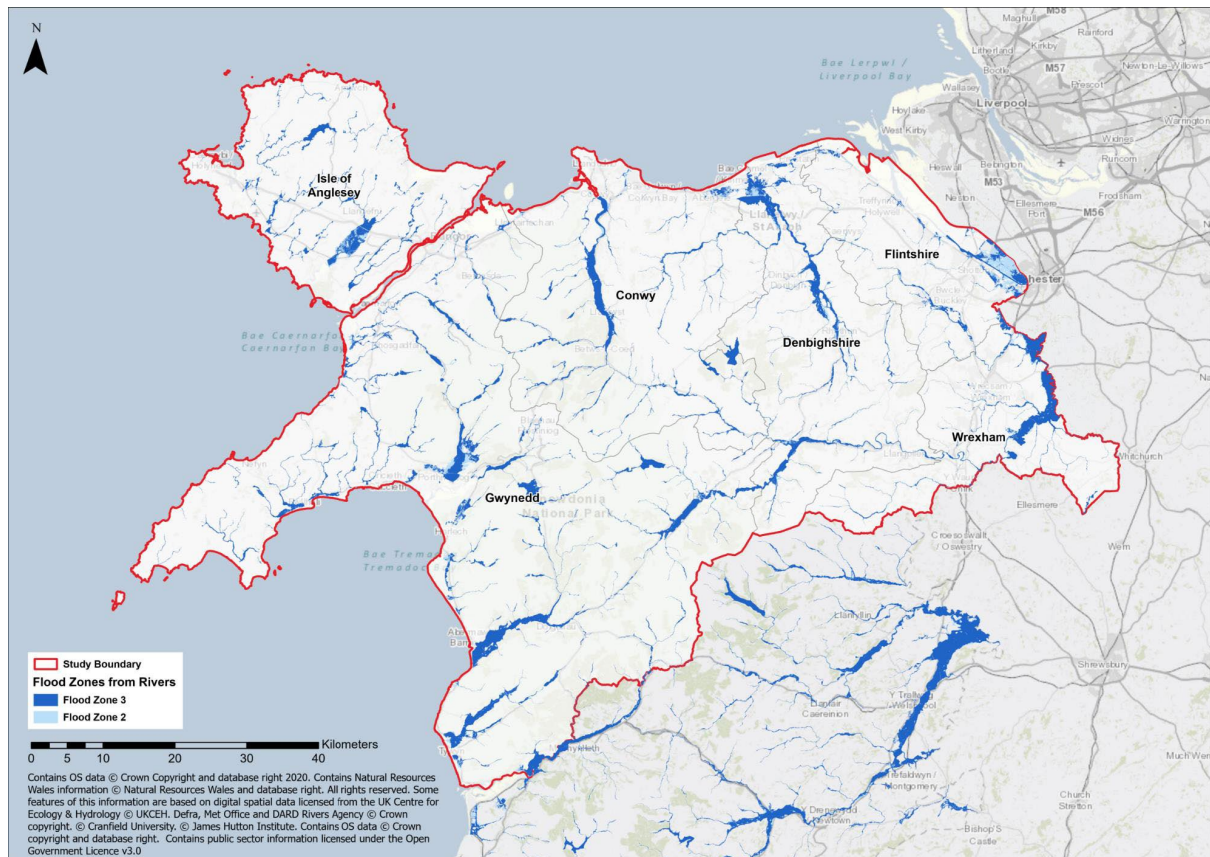


Figure 8-3 Areas within the Upper Severn Catchment area within Flood Zone 2 and 3

¹²⁷ HM Government (2022) *UK Climate Change Risk Assessment 2022*. Available at: <https://assets.publishing.service.gov.uk/media/61e54d8f8fa8f505985ef3c7/climate-change-risk-assessment-2022.pdf> (Accessed: April 2024).

¹²⁸ Welsh Government (2021) *Integrated Sustainability Appraisal of the National Development Framework*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-integrated-sustainability-appraisal.pdf> (Accessed: April 2024).

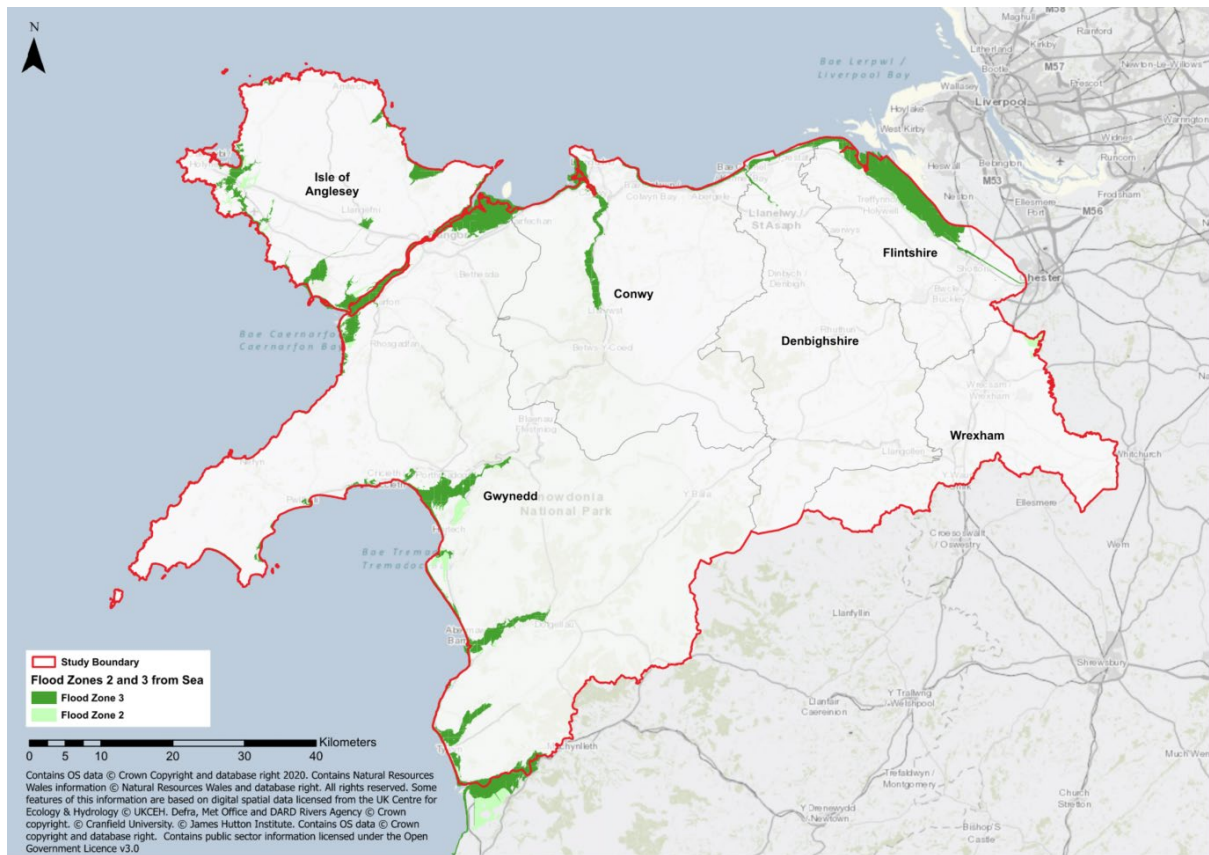


Figure 8-4 Areas within the Upper Severn Catchment area within Flood Zone 2 and 3 from Sea

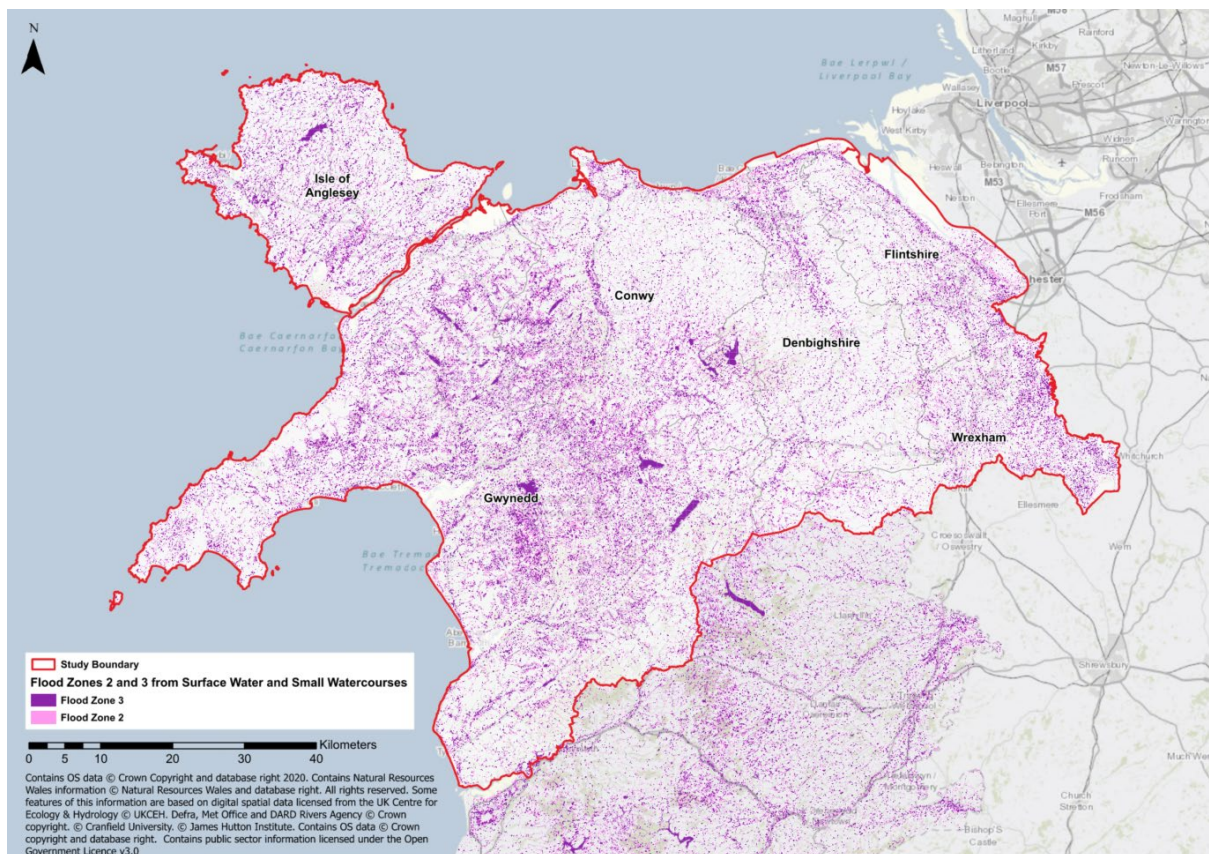


Figure 8-5 Areas within the Upper Severn Catchment area within Flood Zone 2 and 3 from Surface Water and Small Watercourses

9. Climatic Factors

In 2015, the 21st UN Climate Change Conference was held in Paris. During this conference, the Paris Agreement was agreed upon and adopted by 196 countries, including the UK. The Paris Agreement is a legally binding international treaty on climate change, with an overarching goal of holding the increase in global average temperature to well below 2°C above pre-industrial levels. Additionally, efforts are being made to limit the temperature increase to 1.5°C above pre-industrial levels.

In response to this, both the UK Government and the devolved Welsh Government committed to a legally binding target of an 80% reduction in carbon emissions relative to 1990 levels, to be achieved by 2050. In June 2019, secondary legislation was passed, extending that target to “at least 100%.”

The Welsh Government accepted these targets, however, following the advice of the Committee on Climate Change (CCC) in 2019 and 2020, Wales subsequently increased the ambition of its 2050 target to be Net Zero emissions, i.e. instead of producing no more than the 1990 level, they committed to producing net zero emissions. Wales has also committed to achieving net zero collectively across the public sector by 2030. The Net Zero Strategy: Build Back Greener defines net zero as reducing emissions to as close to zero as possible, with any remaining emissions absorbed through natural carbon sinks like forests and new technologies like carbon capture

¹²⁹.

There is no data available on climate change and carbon that relates specifically to the North Wales region. The approach is therefore to consider the data and trends at the national (Wales) level.

9.1 Climate Change

Climate change has been identified as one of the biggest threats facing our future generations. The Welsh Government declared a climate emergency in 2019¹³⁰, recognising that climate change is one of the biggest threats facing our future generations. Actions identified as being needed to tackle climate change relate to decarbonisation and adaptation to the changing climate.

The Wales Future Trends Report 2021¹³¹ identifies potential impacts relating to climate change, including species loss, and decreasing ecosystem resilience and vulnerability to food insecurity, noting the likelihood that climate risks will be disturbed unequally. These impacts are noted with potential to occur within the context of changing transport use and demand.

¹²⁹ HM Government (2021) *Net Zero strategy: Build Back Greener*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf (Accessed: April 2024).

¹³⁰ Welsh Government (2019) Welsh Government makes climate emergency declaration. Available at: <https://gov.wales/welsh-government-makes-climate-emergency-declaration> (Accessed: April 2024).

¹³¹ Welsh Government (2021) *Future Trends Report Wales 2021*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-12/future-trends-report-wales-2021-narrative-summary.pdf> (Accessed: April 2024).

Transport accounted for 17% of Wales' total emissions in 2018 with 62% of emissions from transport associated with private car use¹³². Although vehicles are increasingly efficient in terms of their emittance of greenhouse gases, people are also travelling more, with the total number of kilometres travelled by motor vehicles reaching a record high in 2018. Trends since that time towards increased home working associated with changes resulting from Covid-19 may impact this trend. However, overall transport sector emissions were reported in 2018 as being 3% higher than the 1990 baseline¹³³.

9.2 Carbon

UK GHG emissions have been steadily falling in the UK over the past three decades and in 2022 were 46% below 1990 levels. The UK has set out its carbon reduction obligations within Carbon Budgets that run over five-year periods. The UK met its first two carbon budgets and is likely to have met its third, which ran from 2018 to 2022. Using the provisional estimate for 2022 emissions, total emissions over the Third Carbon Budget period were 2,327 MtCO₂e. The historic UK GHG emissions data and projected carbon emissions, in context of current carbon budgets, are shown below in Figure 9-1.

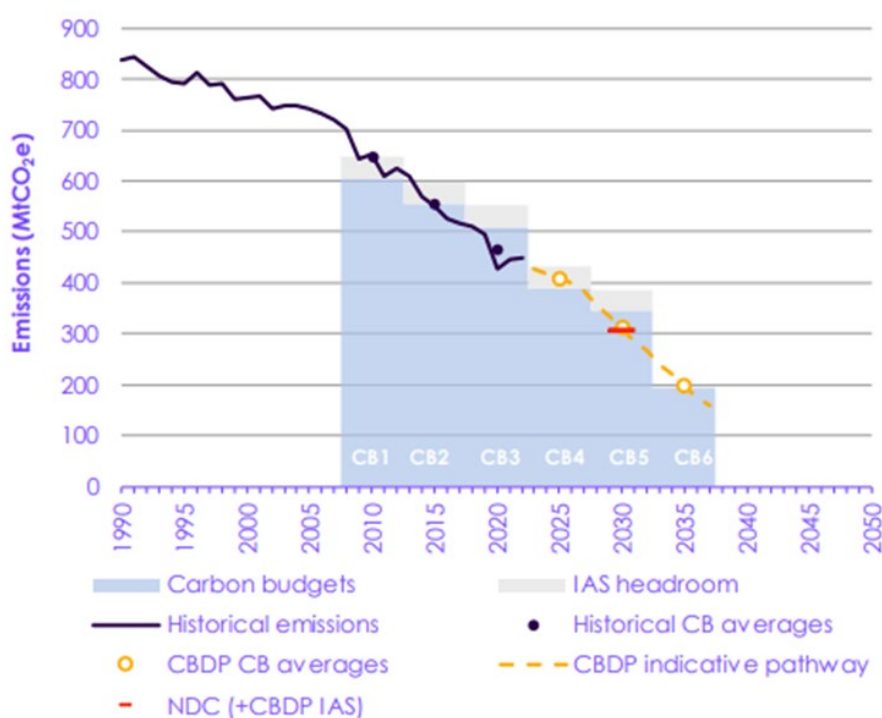
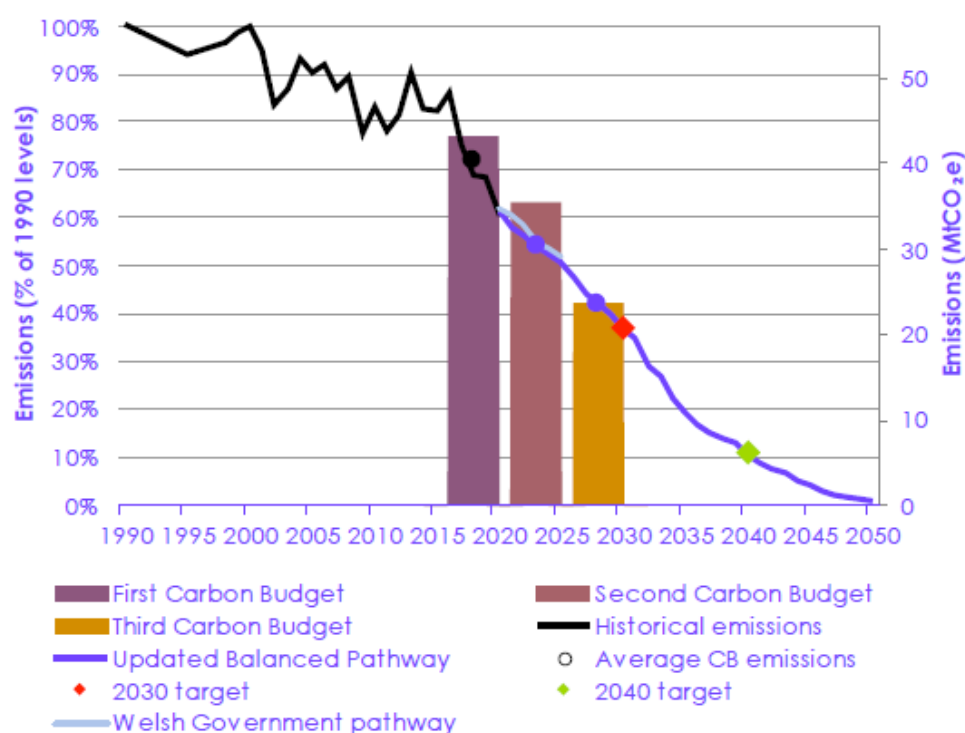


Figure 9-1: Historic and future GHG emissions data and projections for the UK

¹³² Welsh Government (2021) *Llwybr Newydd: The Wales Transport Strategy 2021*. Available at: <https://www.gov.wales/llwybr-newydd-wales-transport-strategy-2021> (Accessed: April 2024).

¹³³ Welsh Parliament (2021) *Key issues for the Sixth Senedd*. Available at: <https://research.senedd.wales/media/eovoh1d/key-issues-for-the-sixth-senedd.pdf> (Accessed: April 2024).

The Welsh Government's carbon budgets fall within the UK's however, using their devolved powers, have set their own Carbon Budgets. Wales met both its 2020 interim target and its First Carbon Budget, with emissions falling to an average of 28% compared to 1990 levels over the period 2016-2020¹³⁴. The progress of these reductions is shown in Figure 9-2 below.



Source: National Atmospheric Emissions Inventory (2022) Greenhouse Gas Inventories for England, Scotland, Wales & Northern Ireland: 1990-2020; CCC (2020) The Sixth Carbon Budget; CCC analysis; Welsh Government.
 Notes: The updated Balanced Pathway includes the following changes: rescaling residential buildings emissions to match 2019 emissions and correcting for greenhouse gas inventory methodology updates up to the 1990-2020 inventory. The global warming potentials are those without carbon feedback from the IPCC's Fifth Assessment Report.

Figure 9-2: Wales recorded emissions, targets, and projections between 1990 and 2050

¹³⁴Climate Change Committee (2023) *Progress Report: Reducing emissions in Wales*. Available at: <https://www.theccc.org.uk/publication/2023-progress-report-reducing-emissions-in-wales/#:~:text=Welsh%20greenhouse%20gas%20emissions%20decreased,Decarbonisation%20indicators> (Accessed: April 2024).

9.3 Future Climate

The United Kingdom Climate Projections 18 (UKCP18) uses climate science to provide updated observations and climate change projections out to 2100 in the UK and globally¹³⁵. The UKCP18 projections are broken into four Representative Concentration Pathways (RCPs) and represent progressively worse warming scenarios. RCP2.6 represents a pathway where greenhouse gas emissions are strongly reduced, resulting in a best estimate global average temperature rise of 1.6°C by 2100 compared to the preindustrial period. RCP8.5 is a pathway where greenhouse gas emissions continue to grow unmitigated, leading to a best estimate global average temperature rise of 4.3°C by 2100. RCP4.5 and RCP6.0 are two medium stabilisation pathways, with varying levels of mitigation.

All of the UKCP18 climate projections for the UK show trends of increased chance of warmer, wetter winters and hotter, drier summers along with an increase in the frequency and intensity of extremes.

In UKCP18, the probabilistic projections provide local low, central, and high changes across the UK, corresponding to 10%, 50% and 90% probability levels. These can be broken down to the specific regions within the UK. Met Office illustrations of RCP6.0 climate projects are provided Figure 9-3 - Figure 9-8 below, showing the projected mean temperature and projected mean precipitation for Wales during the 2020-2039 and 2080-2099 timescales for UKCP18 RCP6.0 scenario¹³⁶. According to the RCP6.0 model, Wales will experience changes in climate outlined in Table 9-1 over the second half of the 21st century.

Table 9-1: RCP6.0 climate projections¹³⁷

Climate Variable	2050s	2080s
Annual Temperature	+1.1°C	+2.3°C
Summer Rainfall	-15%	-26%
Winter Rainfall	+6%	+13%
Sea level rise (Cardiff)	28cm ¹³⁸	76cm ¹³⁸

¹³⁵ Met Office (no date) *UKCP18 UK climate projections*. Available at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp> (Accessed: April 2024).

¹³⁶ Met Office (2022) *Climate change projections over land*. Available at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/summaries/climate-change-projections-over-land> (Accessed: April 2024).

¹³⁷ These values are taken from the UKCP18 probabilistic projections and represent a central (median) estimate of 30-year average change in each variable from a 1981-2000 baseline. Two emissions scenarios are used; RCP2.6 (roughly equivalent to a global warming +2°C above preindustrial scenario by 2100) and RCP6.0 (roughly equivalent to a global warming +4°C above preindustrial levels by 2100). *The exception is Sea Level Rise, where the RCP8.5 scenario is used, as for marine projections this is closer to a +4°C global warming scenario. The full likely range of change (i.e. 10 - 90th percentile) in each average variable is not shown here but is available from the full UKCP18 database. It is important to note that because these projections show average changes for a 30-year period and only the central estimate, changes in individual years would show a much greater range of change and could be significantly higher (or lower).

Figure 9-3: Annual mean temperature in Wales 2020-2039

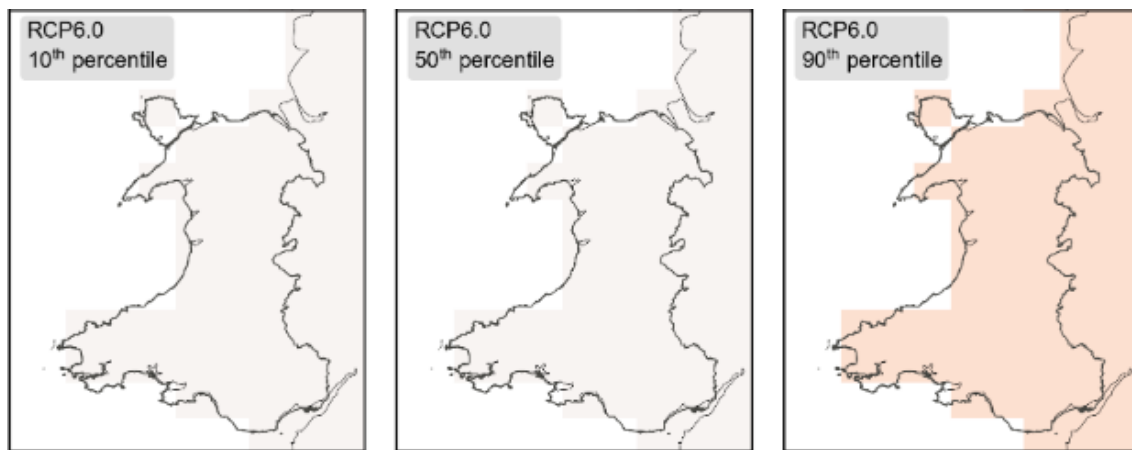


Figure 9-4: Annual mean temperature in Wales 2040-2059

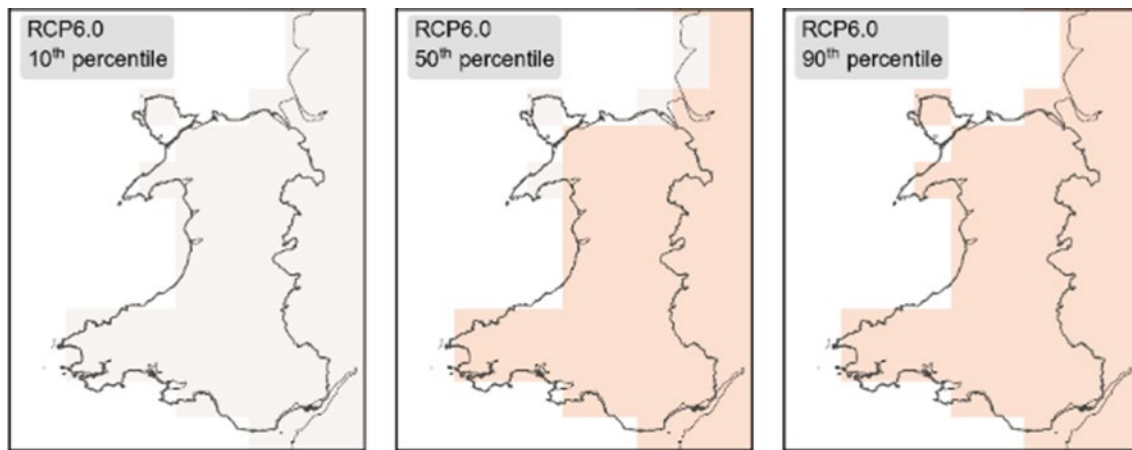


Figure 9-5: Annual mean temperature in Wales 2060-2079

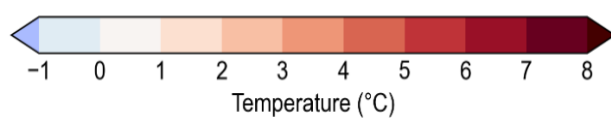
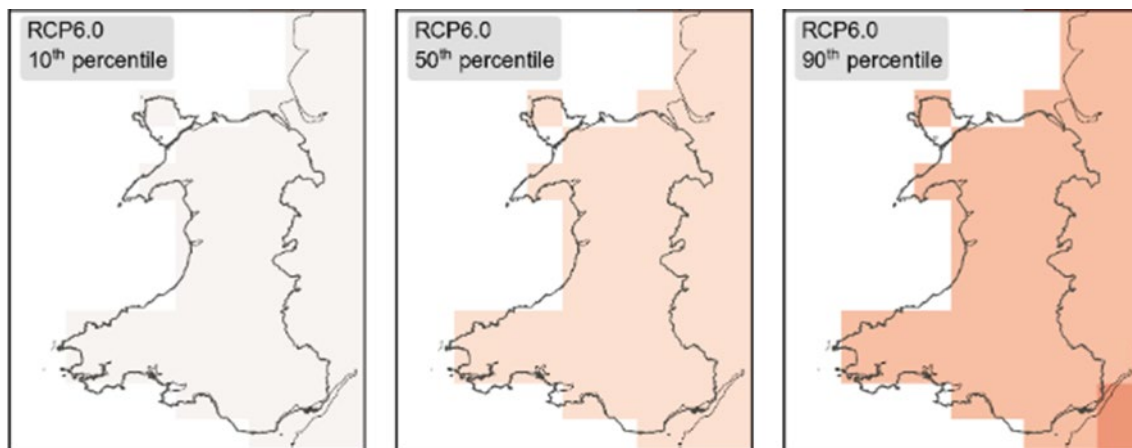


Figure 9-6: Annual mean precipitation in Wales 2020-2039

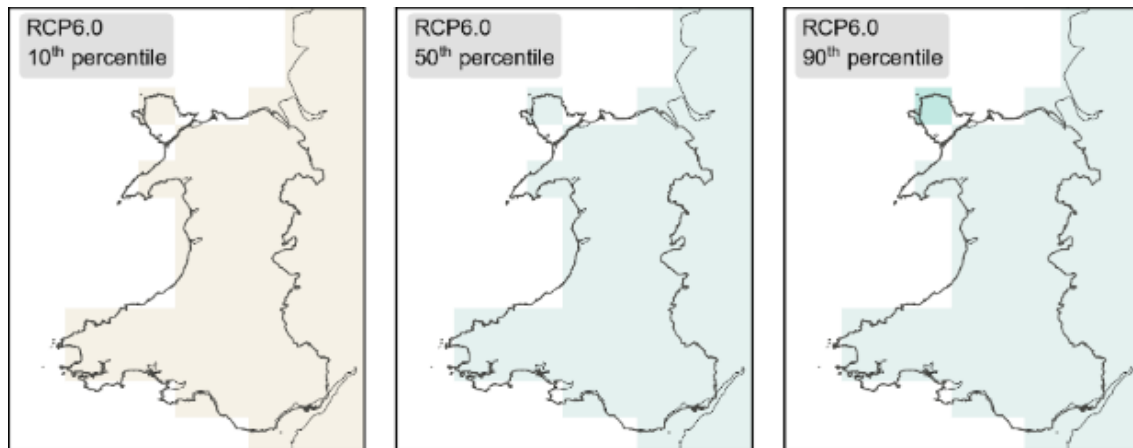


Figure 9-7: Annual mean precipitation in Wales 2040-2059

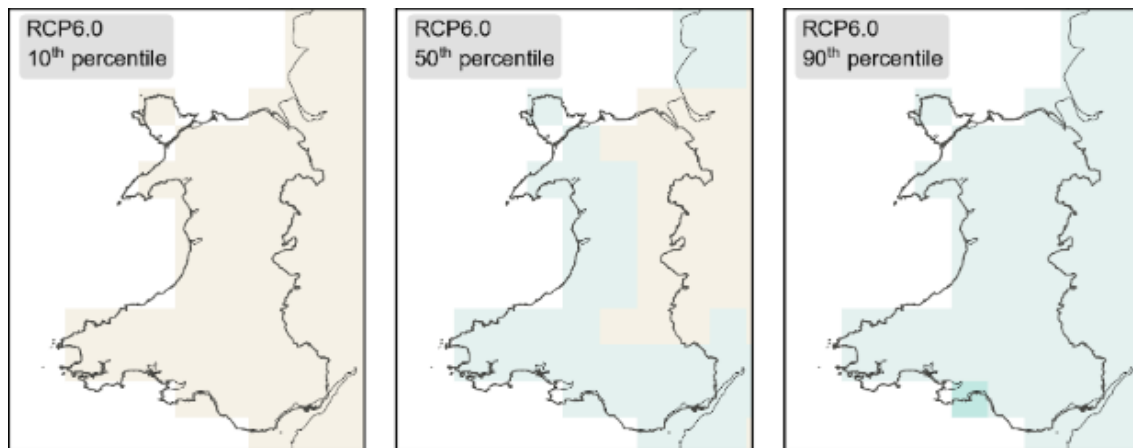
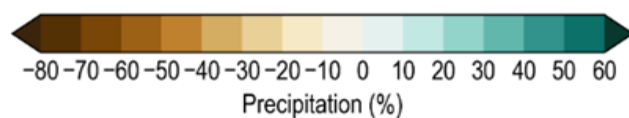
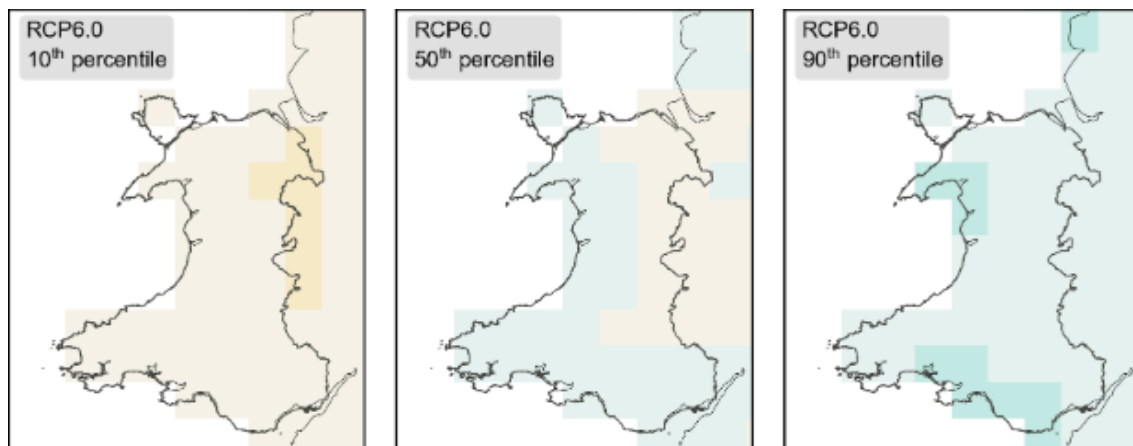


Figure 9-8 Annual mean precipitation in Wales in 2060-2070



9.4 Historic and likely future trends

The Paris Agreement commits countries to pursuing efforts to limiting global temperatures to 1.5°C above pre-industrial levels. Subsequently, the UK Government has committed reduce carbon emissions at least 100% relative to levels in 1990 and the Welsh Government has committed to be Net Zero emissions by 2050. As a result, UK GHG emissions have fallen over the past three decades.

Numerous plans, policies, and objectives such as the Climate change: Third national adaptation programme (2023 to 2028) and Net Zero Wales Carbon Budget 2 (2021 to 2025) set out key actions focused on climate change adaptation and mitigation. The Future Wales- the National Plan⁶⁴, for example, notes the importance of reducing the impacts of car use in Wales, and how this can be supported by:

- developing active travel;
- improving public transport;
- then transition to low emission vehicles; and
- developing infrastructure responsibly

The Net Zero Strategy, for example, sets the UK Government's ambition to use land more effectively to tackle climate change and decarbonise power systems by 2035 (Net Zero Strategy: Build Back Greener). In 2020, the UK Government pledged to end the sale of new petrol and diesel cars by 2030. Opportunities to reduce greenhouse gas emissions and encourage energy efficiency and sustainable design is improving¹³⁹, although the global dependency on fossil fuels is likely to remain for some time.

Climate projections for the UK show trends of increased change of warmer, wetter winters and hotter, drier summers along with an increase in the frequency and intensity of extreme weather and sea level rise. This is expected to be reflected in Wales (see Figure 9-3 to Figure 9-8 in the section above).

9.5 Adaptation

The Climate Change Act 2008 places a duty of the Welsh Ministers to lay before the National Assembly for Wales from time to time a report on:

- the objectives of the Welsh Ministers in relation to greenhouse gas emissions and the impact of climate change in Wales;
- the action that has been taken by the Welsh Ministers and others to deal with such emissions and that impact; and
- the future priorities for the Welsh Ministers and others for dealing with such emissions and that impact.

¹³⁹ Welsh Government (2021) *Integrated Sustainability Appraisal of the National Development Framework*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-integrated-sustainability-appraisal.pdf> (Accessed: April 2024).

Responding to the above requirements in relation to the impact of climate change comes under the umbrella of Climate Change Adaptation. Adapting to climate change means being prepared for effects such as increased temperatures, stronger winds, rising seas and more rain as identified in the above in Section 0 (future climate).

The Welsh Government has published a climate change adaptation plan¹⁴⁰ which identifies a number of more urgent actions for Wales. These are:

- risks to people, communities, buildings, and infrastructure from flooding.
- risks to public water supplies from drought and low flows.
- some land management practices exacerbating flood risk.
- risks to ecosystems and agriculture businesses from changes in climatic conditions.

The Wales National Transport Strategy¹³² recognises the link between achieving a shift away from private car use to more sustainable modes of travel reducing greenhouse gas emissions. It sets a target of 45% of journeys to be made by public transport, walking and cycling by 2040. The Welsh Government's Infrastructure Finance Plan 2022-23 to 2024-25¹⁴¹ sets out that investment must be made in enabling infrastructure to make public transport and active modes viable options and that achieving the Welsh Government's modal shift targets could contribute cumulative emissions savings of 0.3-0.7 MtCO₂e up to 2040. These aims form part of the Welsh Government's commitments to improving opportunities for modal shift and improving public transport infrastructure.

¹⁴⁰ Department for Transport and Driver and Vehicle Agency (2022) *Vehicle licensing statistics: April to June 2022*. Available at: <https://www.gov.uk/government/statistics/vehicle-licensing-statistics-april-to-june-2022/vehicle-licensing-statistics-april-to-june-2022> (Accessed: April 2024).

¹⁴¹ Welsh Government (2021) *Infrastructure Finance Plan 2022-23 to 2024-25*. Available at: <https://www.gov.wales/sites/default/files/publications/2021-12/infrastructure-finance-plan-2021-1.pdf> (Accessed: April 2024).

10. Air Quality

Exposure to air pollution represents one of the most significant environmental threats to health in the UK, with thousands of deaths a year being attributed to long-term exposure. Air pollution can increase morbidity and mortality risks from heart disease, strokes, respiratory diseases, lung cancer as well as causing other adverse health effects¹⁴². Air pollution can also disproportionately affect vulnerable groups such as children, older people and those with underlying disease.

Progress has been made in improving air quality with reduction in levels of some pollutants over the past 50 years, such as total annual emissions of fine particulate matter (PM_{2.5}) and nitrogen oxides (NO_x). However, more recent health evidence suggests that smaller particles are associated with a wider range of health effects. Particulate matter (PM₁₀ and PM_{2.5}) and nitrogen dioxide (NO₂) remain of particular concern for human health Figure 10-1. In addition, ultrafine particles which are less than 100 nanometres across, are subject to increasing focus to understand their role in pollution and health effects¹⁴³.

The UK Government's Clean Air Strategy¹⁴⁴ sets out actions to meet targets for several pollutants, including cutting public exposure to particulate matter pollution. The Clean Air Plan for Wales: Healthy Air, Healthy Wales¹⁴⁵ sets out the Welsh Government's commitment to improving air quality and reducing the impacts of air pollution on the environment and society. The Environment (Air Quality and Soundscapes) (Wales) Act 2024¹⁴⁶, which became law in February 2024, will support a series of the commitments and actions outlined in the plan. The act aims to facilitate improvements in air quality in Wales as well as responding to the climate and nature emergencies and supporting reductions in inequalities. The act:

- provides a framework for setting national air quality targets;
- amends existing legislation relating to the national air quality strategy; local air quality management; smoke control; clean air zones/low emission zones and vehicle idling; and
- places a duty on Welsh Ministers to promote awareness of air pollution.

¹⁴² Public Health Wales (2018) *Making a difference: reduce health risks associated with road traffic pollution in Wales*. Available at: <https://phw.nhs.wales/services-and-teams/knowledge-directorate/research-and-evaluation/publications/making-a-difference-reducing-health-risks-associated-with-road-traffic-pollution-in-wales/> (Accessed: April 2024).

¹⁴³ UK Air (2018) Ultrafine Particles (UFP) in the UK. Available at: https://uk-air.defra.gov.uk/assets/documents/reports/cat09/1807261113_180703_UFP_Report_FINAL_for_publication.pdf (Accessed: April 2024).

¹⁴⁴ UK Government (2019) Clean Air Strategy. Available at: <https://www.gov.uk/government/publications/clean-air-strategy-2019> (Accessed: April 2024).

¹⁴⁵ Welsh Government (2020) *Clean Air Plan for Wales: Healthy Air, Healthy Wales*. Available at: <https://www.gov.wales/clean-air-plan-wales-healthy-air-healthy-wales#:~:text=Our%20plan%20to%20improve%20air,natural%20environment%20and%20our%20economy> (Accessed: April 2024).

¹⁴⁶ Environment (Air Quality and Soundscapes) (Wales) Act 2024, (asc 2)

The Air Quality Standards Regulations 2010 (amended in 2016)¹⁴⁷ defines the policy framework for 12 air pollutants known to have harmful effects on human health or the natural environment. The Secretary of State for the Environment has the duty of ensuring compliance with the air quality limit values (pollutant concentrations not to be exceeded by a certain date).

Some pollutants have standards expressed as annual average concentrations due to the chronic way in which they affect health or the natural environment, i.e. effects occur after a prolonged period of exposure to elevated concentrations. Some pollutants have standards expressed as 24-hour, 1-hour or 15-minute average concentrations due to the acute way in which they affect health or the natural environment, i.e. after a relatively short period of exposure. Several pollutants have standards expressed in terms of both long and short-term concentrations. Air quality limit values and objectives are standards for clean air. Therefore, in this baseline, the term 'air quality standard' has been used to refer to the national limit values.

Table 10-1 sets out the national air quality standards and targets for NO₂, PM₁₀ and PM_{2.5}, which are the pollutants of relevance to the NWTP¹⁴⁸.

Table 10-1 Air quality standards and targets

Pollutant	Averaging period	Air quality standard
Nitrogen Dioxide (NO ₂)	Annual mean	40µg/m ³
	1-hour mean	200µg/m ³ ^a
Particulate Matter (PM ₁₀)	Annual mean	40µg/m ³
	24-hour mean	50µg/m ³ ^b
Fine Particulate Matter (PM _{2.5})	Annual mean	25µg/m ³

Notes:

^a not to be exceeded more than 18 times a year

^b not to be exceeded more than 35 times a year

The Environment Act 2021¹⁴⁹ requires local authorities to review and assess air quality with respect to the air quality standards for the pollutants under the Local Air Quality Management (LAQM) framework, as set out in the Environment Act 1995¹⁵⁰. Local authorities are required to carry out an assessment and produce an Annual Status Report (ASR) of their area every year. Where objectives are not predicted to be met, local authorities must declare the area as Air Quality Management Area (AQMA).

In addition, local authorities are required to produce an Air Quality Action Plan that includes measures to improve air quality in the AQMA.

Air quality within the NWTP area is generally good. Air pollution is slightly lower in the more rural west of the NWTP area compared to the more urbanised east. The major cities in North Wales are Wrexham and Bangor, located north east and north west Wales, respectively. There

¹⁴⁷ The Air Quality Standards (Amendment) Regulations 2016, SI 2016/1184

¹⁴⁸ Welsh Government (no date) *Standards and Objectives*. Available at: <https://www.airquality.gov.wales/about-air-quality/standards-and-objectives> (Accessed: April 2024).

¹⁴⁹ UK Government (2021) *Environment Act 2021*. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted> (Accessed: April 2024).

¹⁵⁰ Environment Act 1995, Chapter 25, Part IV Air Quality

are no AQMAs declared in the Isle of Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire, and Wrexham¹⁵¹. As a result, none of the local authorities have published any action plans, however air quality monitoring is undertaken at key locations across these jurisdictions. The most recent North Wales air quality progress report¹⁵² found that there were no exceedances of the respective NO₂, PM₁₀, PM_{2.5} Air Quality Objectives recorded at any monitoring sites across the NWTP area in 2022. Figure 10-1 shows the background concentrations of NO₂, Ozone, PM₁₀ and PM_{2.5}.

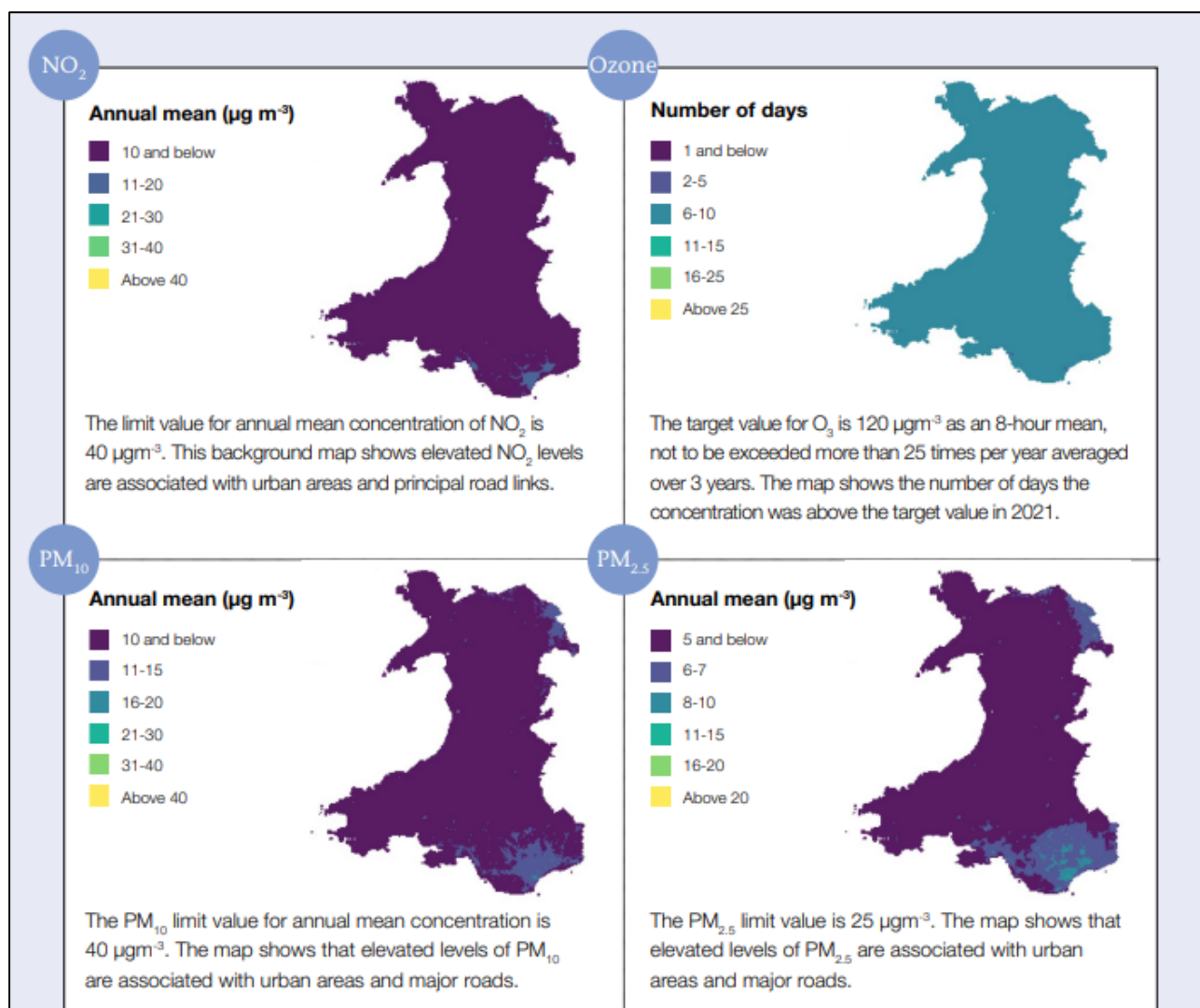


Figure 10-1 Background concentrations of NO₂, Ozone, PM₁₀ and PM_{2.5}¹⁵³

¹⁵¹ Department for Environment, Food and Rural Affairs (2024) *UK Air Information Resource; Air Quality Management Areas*. Available at: <https://uk-air.defra.gov.uk/airquality/maps/> (Accessed: April 2024).

¹⁵² North Wales Authorities (2023) *North Wales Authorities Collaborative Project 2023 Air Quality Progress Report*. Available at: <https://www.conwy.gov.uk/en/Resident/Environmental-problems/assets-Air-Quality/documents/NW-Annual-Progress-Report-2023.pdf> (Accessed: April 2024).

¹⁵³ Welsh Government (2023) *Air Quality in Wales 2022/23*. Available at: <https://www.airquality.gov.wales/reports-seminars/reports> (Accessed: April 2024).

Air quality within the NWTP area will be influenced by various sources, such as industrial sources (and their regulated and localised impacts), domestic activities (such as heating), traffic and natural sources. The largest contribution of emissions within the NWTP area to air will be vehicle emissions from the surrounding main roads. Major roads within the NWTP area include the A55 "North Wales Expressway, A5, A55 and A483.

Major roads close to residential development already affects the health of those living there. The location of future development within the NWTP area can be informed by these existing sensitive routes and other areas where major roads are close to residential areas. One of the challenges associated with future development is to balance the requirement for good access to transport infrastructure, while avoiding, creating, or increasing pollution to areas of high pollution.

Impacts on air quality could arise from any proposed construction works associated with any infrastructure proposed as part of the NWTP caused by the movement of heavy goods vehicles (HGV) and construction activities including construction, earthworks and associated trackout. However, it is anticipated that with effective mitigation, impacts on air quality could be reduced to insignificant levels.

Nitrogen is a nutrient that is damaging to ecological habitats, originating from ammonia and nitrogen oxides which are commonly emitted by vehicles. Deposition of these pollutants on natural ecosystems causes nutrient enrichment and changes in vegetation and soils¹⁵⁴. Changes to transport, such as switching to electric vehicles and reducing reliance on private car travel can help reduce NO₂ pollution and impacts on sensitive ecological habitats that are located near roads.

10.1 Historic and likely future trends

Generally, air quality has improved in the last 30 years (Figure 10-2) due to improved regulation, investment in cleaner processes in industry and the use of cleaner fuels. More recently however, concentrations of pollutants have stabilised¹⁵⁵.

In the NWTP area annual mean concentrations were found to be generally lower than previous years except when comparing annual mean concentrations from 2023 to 2020. However, lower concentrations from 2020 are anticipated to be associated with the impact of the Covid-19 pandemic in 2020 resulting in reduced traffic flows. Although there has been a general improvement in air quality in the study area since 2017, several monitoring sites in WCBC and DCC have noted increases in NO₂ over this period¹⁵².

Poor air quality, particularly PM₁₀, PM_{2.5} and NO₂, remains of one of the UK's biggest public health challenges, as well as being detrimental to the natural environment. It is possible that climate change will result in poorer air quality with one effect being the accumulation of stagnated air in cities¹⁵⁶. Transport options and the resulting emissions will contribute to the magnitude of this effect.

¹⁵⁴ UK Air (2018) Impacts of Vegetation on Urban Air Pollution. Available at: https://uk-air.defra.gov.uk/assets/documents/reports/cat09/1807251306_180509_Effects_of_vegetation_on_urban_air_pollution_v12_final.pdf (Accessed: April 2024).

¹⁵⁵ UK Air (2019) Air quality statistics in the UK 1987 to 2018. Available at: <https://uk-air.defra.gov.uk/news?view=252> (Accessed: April 2024).

¹⁵⁶ Department of Health and Social Care (2022) Chief Medical Officer's annual report 2022: air pollution. Available at: <https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2022-air-pollution> (Accessed: April 2024).

The UK Clean Air Strategy sets targets for five damaging air pollutants, which if met should halve the effects of air pollution on health by 2030¹⁵⁷ as well as having considerable benefits on the environment.

Future trends in Wales relating to opportunities for improving air quality are improving (Figure 10-2). This includes potential reductions in pollution from transport emissions as the UK's fleet of vehicles are transitioned from petrol and diesel to electric vehicles.

This transition is particularly important in the more rural parts of the NWTP area where public transport and active travel options are more limited. In the more urbanised areas, current and planned future promotion of active travel and sustainable travel can also help support improvements to air quality.

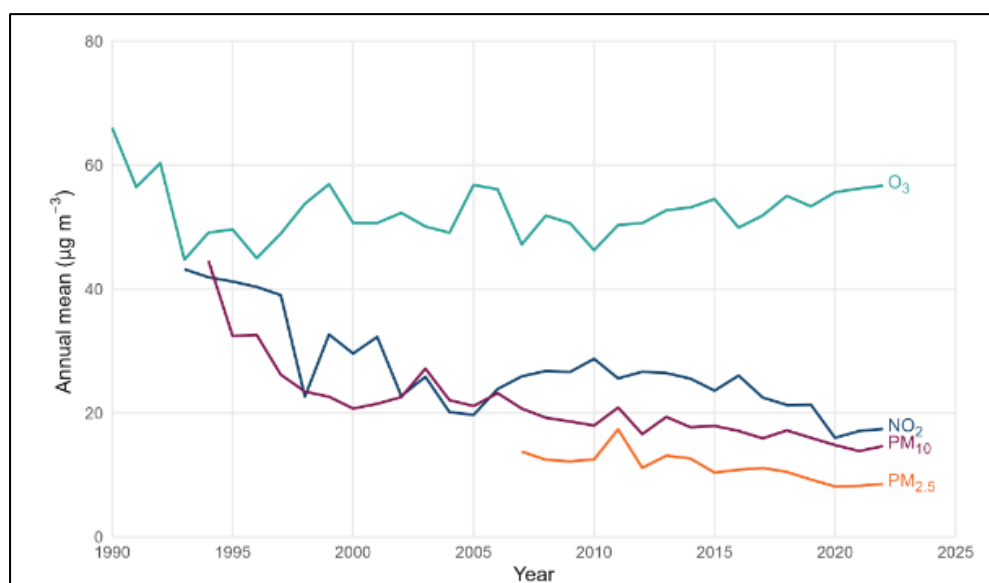


Figure 10-2 Wales Ambient pollutant trends 1990-2022¹⁵³

10.2 Sustainability risks and opportunities

The air quality baseline and trend data identify the following sustainability risks and opportunities relevant to the RTP:

- Air quality is generally good and not a major issue in the NWTP area given that it is predominantly rural in nature.
- The way in which we travel has a direct impact on air quality. Promotion of a transition to electric vehicles can support reductions in air pollution associated with carbon dioxide, carbon monoxide and nitrous oxides (such as NO₂). However electric vehicles still release particulate matter pollution (PM₁₀ and PM_{2.5}) associated with wear from tyres and breaks. Therefore, interventions should focus on reducing the number of vehicles on the road by supporting the transition to active travel and public transport wherever possible.

¹⁵⁷ Defra (2023) 25 Year Environment Plan. Available at: <https://www.gov.uk/government/publications/25-year-environment-plan/25-year-environment-plan-our-targets-at-a-glance> (Accessed: April 2024).

- Creation of active travel links that are sufficiently separated from road traffic can help reduce the amount of pollution that walkers and cyclists are exposed to and increase uptake in active travel through creating safe active travel options, having an additional benefit of leading to reductions in traffic and improvements to air quality.
- There is a risk that new development in the area (such as the Anglesey Freeport and Wrexham Investment Zone) could increase the volume of freight travelling in the locality, leading to increase air pollution and worsening of local air quality. The NWTP should include relevant transport initiatives (e.g. promotion of transportation of goods by rail) to ensure that the health of local communities and habitats are not detrimentally impacted.

11. Noise

Exposure to environmental noise can have a negative impact on human health and cause disturbance to protected habitats and species. Risks to human health include cardiovascular disease, sleep disturbance, poor performance and learning, mental health problems, stress and reduced quality of life¹⁵⁸.

Welsh Ministers have a duty to review and publish noise action plans for major roads, major railways and agglomerations under the Environmental Noise (Wales) Regulations 2006¹⁵⁹. The Environment (Air Quality and Soundscapes) (Wales) Act 2024¹⁴⁶ places a duty on Welsh Ministers to publish a national soundscape strategy and complements legislation to achieve appropriate soundscapes as set out in the Noise and Soundscape Action Plan 2018-2023.

The main sources of noise pollution within the NWTP area are associated with noise from roads, namely the A55, A483, A494 and A487 as well as neighbouring routes¹⁶⁰. Figure 11-1 is an extract from a map of road network noise in North Wales.¹⁶⁰ Noise pollution associated with rail and industry is not a major concern in the area¹⁶¹.

¹⁵⁸ Public Health Wales (no date) *Environmental Noise Pollution*. Available at: <https://phw.nhs.wales/services-and-teams/environmental-public-health/environmental-noise-pollution/> (Accessed: April 2024).

¹⁵⁹ Environmental Noise (Wales) Regulations 2006 (W.225)

¹⁶⁰ Welsh Government (2023) *Noise and Soundscape Plan for Wales 2023-2028*. Available at: <https://www.gov.wales/sites/default/files/publications/2023-11/noise-and-soundscape-plan-for-wales-2023-2028.pdf> (Accessed: April 2024).

¹⁶¹ Extrium (2024) *Wales Noise and Air Quality Viewer*. Available at: <http://www.extrium.co.uk/walesnoiseviewer.html> (Accessed: April 2024).

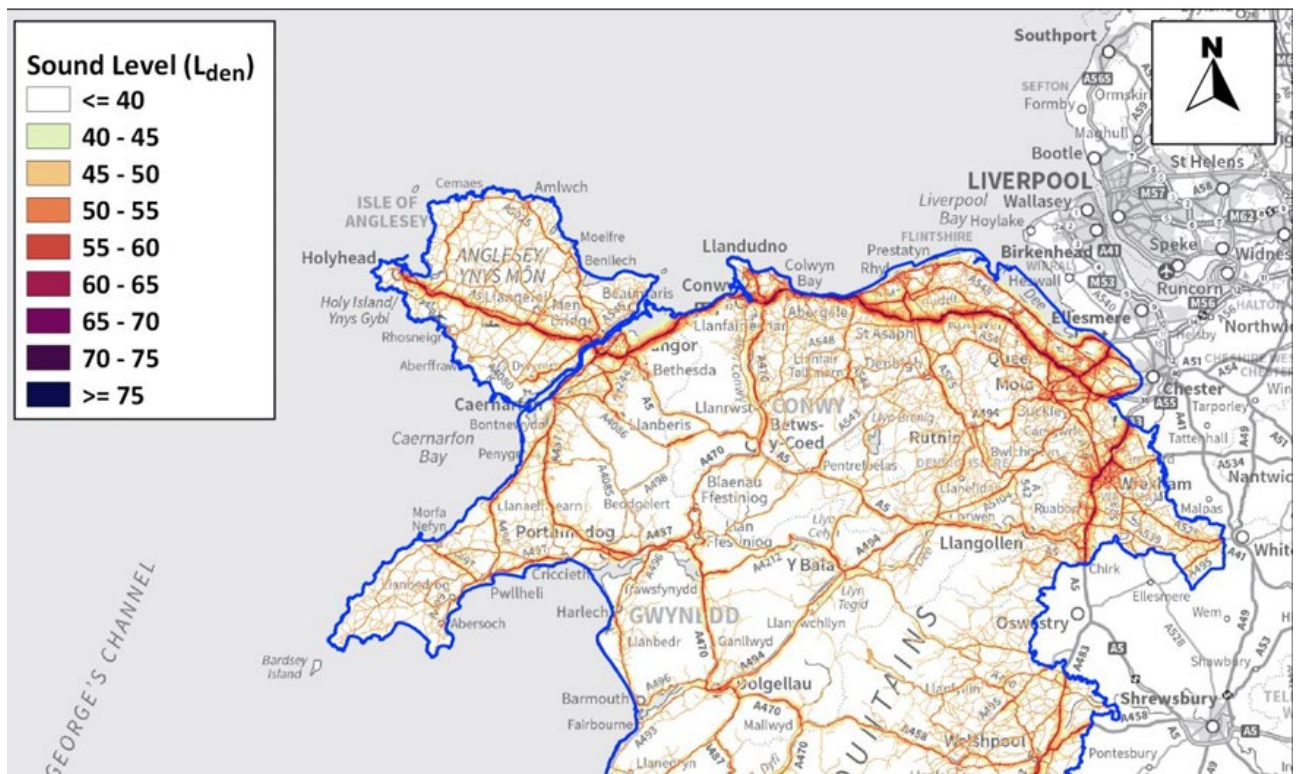


Figure 11-1 Road noise in North Wales¹⁶⁰

Noise complaints in the NWTP area have been predominantly associated with sections of the A55 and A483¹⁶² and there are a series of noise priority areas located along stretches of the A55, A4871, A4087, A547, A5119, A494, A550, A483 and A5152¹⁶¹. The Welsh Government has carried out noise reduction schemes across the Welsh Strategic Road Network, including on the A55 at Abergele¹⁶⁰.

Tranquillity mapping for Wales was undertaken in 2009 (Figure 11-2), which while some time ago is likely to be similar today as there have been no major development changes. This mapping identifies areas within North Wales that are relatively undisturbed in terms of tranquillity. The tranquillity classifications take into consideration the sound environment, including noise from road and railway as well as sound from people. Across the NWTP area there are areas of reduced tranquillity located near settlements and roads, particularly along the north coast and to the east along the Welsh/ English border. There are areas of relatively undisturbed tranquillity within the central parts of the NWTP area where it is more rural, including around Eryri National Park and Clwydian Range and Dee Valley. Tranquil soundscapes can help support relaxation and improve health and wellbeing.

¹⁶² Welsh Government (2015) *Review of strategic noise maps in Wales*. Available at: <https://www.gov.wales/sites/default/files/publications/2019-04/review-of-strategic-noise-maps-in-wales.pdf> (Accessed: April 2024).

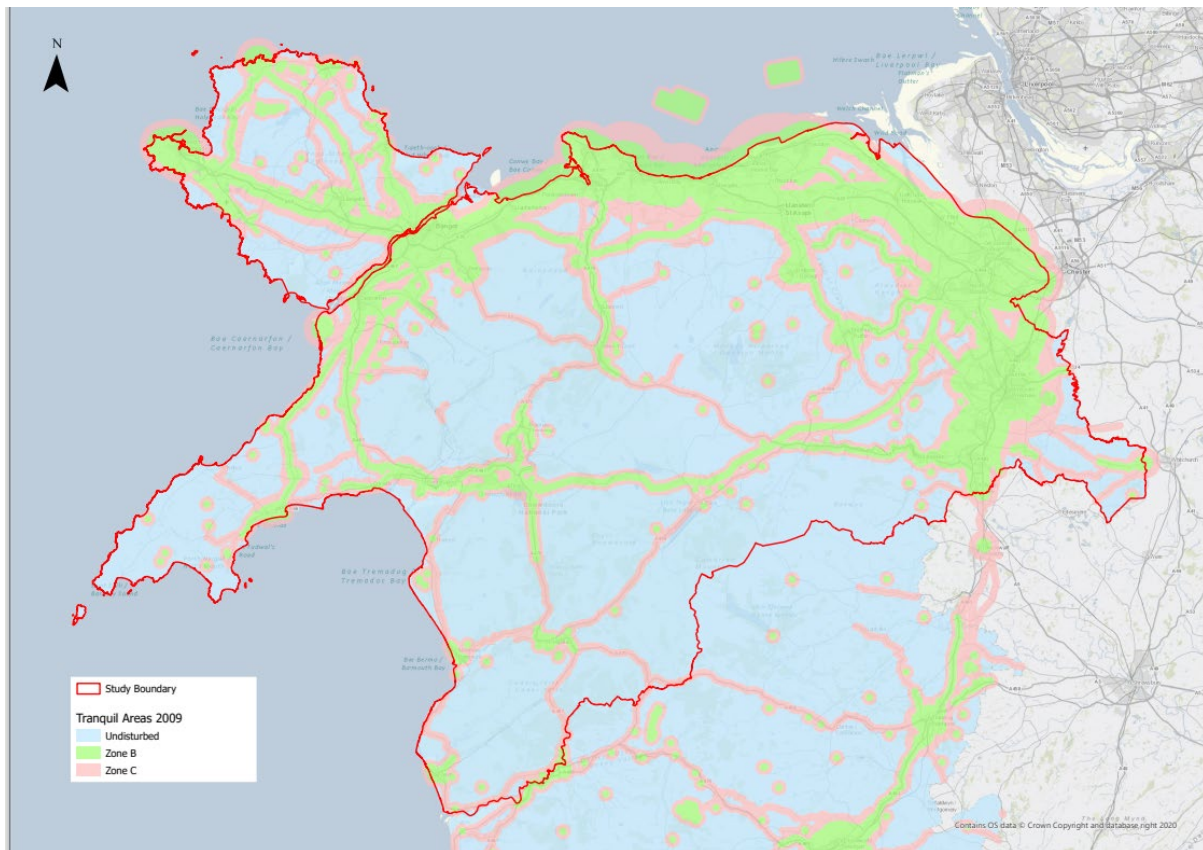


Figure 11-2 Tranquillity mapping for Wales 2009¹³²

11.1 Historic and likely future trends

Future development has the potential to increase noise pollution and create adverse impacts to human and ecological receptors if not sensitively designed and located. There is significant development planned for the NWTP area including Anglesey Freeport and the Flintshire and Wrexham Investment Zone that are likely to increase freight transporting goods through the NWTP area. Increase vehicle movements could exacerbate noise levels experienced along main transport corridors.

The recent roll out of the default 20mph speed limit on restricted roads across Wales is expected to decrease noise pollution in built up areas where the new speed limits apply. There may also be reductions in noise levels in the future associated with a transition towards electric vehicles, improvements in public transport and active travel networks and electrification of rail lines (such as the North Wales Coast Main Line).

In the future, as climate change results in more frequent periods of extreme hot weather, there is likely to be an increasing need for residents to open windows to reduce impacts of overheating. This may result in increased disturbance and health effects from noise, particularly during the evening.

11.2 Sustainability risks and opportunities

The noise environment baseline and trend data identify the following sustainability risks and opportunities relevant to the RTP:

- Noise pollution associated with roads is a key concern in the NWTP area, particularly along major routes such as the A55.
- The NWTP has an opportunity to help reduce noise pollution experienced by local communities by reducing the number of vehicles on the roads (through promoting a transition to use of public transport and active travel) and supporting the transition to electric vehicles. This could reduce the number of built mitigation interventions that local councils and Welsh Government need to provide (such as installation of acoustic barriers) to address noise pollution in noise priority areas.
- There is a risk that new development in the area (such as the Anglesey Freeport and Wrexham Investment Zone) could increase the volume of freight travelling in the locality, leading to increase in noise pollution and impact on local residents. The NWTP should include relevant transport initiatives (e.g. promotion of transportation of goods by rail) to ensure that the health of local communities are not detrimentally impacted.
- Reducing road traffic noise (and ensuring that this does not increase) around Eryri National Park can help maintain and improve the tranquillity of the area and support health and wellbeing of users.

12. Infrastructure

12.1 Transport Infrastructure

Across Wales and the regions, the Welsh Government wishes to see development built in sustainable locations supported by active travel and public transport infrastructure and services to enable people to live active and healthy lives. The aim is to reduce the need to travel, particularly by private vehicles, and support a modal shift to walking, cycling and public transport. Policies 11 and 12 of 'The National Plan 2040'⁶⁴ set out the strategic approach to national and regional connectivity and how the Welsh Government will support and invest in improvements to active travel and public transport.

Travelling by road from east to west via the A55, using the coastal train line or by bus, there are popular seaside communities, skirting an Area of Outstanding Natural Beauty (AONB) and castles which attract many visitors to the area. With Welsh Government now exploring options around a second National Park through a North East Wales National Park designation project, incorporating lessons learnt from other localities at an early stage will enhance planning around any future transport/accessibility strategy.

12.2 Infrastructure Management and Maintenance

A network of well-maintained transport infrastructure is key to supporting travel around North Wales, both for private car journeys but also for bus services and active travel journeys. All bus journeys and a large proportion of active travel trips take place on the highway. Highway defects such as pot holes can be a more significant hazard for cyclists than other highway users.

12.3 Rail

In North Wales, rail infrastructure and services are fundamental to an effective and efficient transport network and are central to improving regional and national connectivity. The North Wales Metro (rail improvements between 2019-2024 and beyond) provides an opportunity to improve accessibility across the region. There are strong functional relationships between settlements in the North and the Northwest of England, with people travelling daily in both directions to access jobs, services and facilities. The Metro will make it easier and faster to travel between the north coast, Wrexham, Deeside and the Northwest of England. It will open up opportunities across the region and is a vital part of the Welsh Government's vision to develop the region's economy and links with the Northern Powerhouse.

12.4 Rural Transport

Regarding infrastructure in rural areas, enhanced walking and cycling infrastructure would connect rural communities. However, even with better rural options and services, the private car will continue to be important in rural areas. This means that there is a need to help people make the switch to electric vehicles, including access to charging infrastructure, alongside improvements to rural public transport services.

12.5 Holyhead Port

Holyhead Port has been identified as Strategic Gateways due to its essential role in the international movement of imports and exports and as key transport infrastructure between land and sea. It is an essential part of the local, regional, national and international economy, providing international connectivity for Wales and the UK. It plays a strategic role in transporting people and freight; provides logistical and service hubs for industry; and offers further growth opportunities for tourism and recreation activity. It is active in the cruise market and can be the first experience people have of visiting Wales.

The Welsh Government recognises the importance of Holyhead Port to Anglesey and the region, and it is the most direct strategic link between Wales and Ireland. Holyhead Port is a major national asset and an important international gateway for freight and passengers. The Port has deep water port facilities, existing accommodation, and development opportunities. The Inner Harbour, Salt Island and the Outer Harbour offer marine, leisure, transport, energy (see policy 24 of the National Plan), cruise and other business opportunities with good road and rail links across the region and into England.

12.6 Housing

Policy 7 of 'The National Plan 2040'⁶⁴ sets out the national strategic approach to delivering affordable housing and ensures the focus of funding and housing policies is on driving increased provision. The planning system must facilitate the provision of additional market value and affordable housing. There is a complex picture of housing need and provision with the opportunities people have varying significantly depending on income and where they live in Wales. The Welsh Government 'Estimates of additional housing need (2019-based)'¹⁶³ provides a range of estimates over a 20 year period up until 2038-39 (mid-year to mid-year). The figures for North Wales can be found below in Table 12-1.

Table 12-1 Annual average estimate of additional housing need, variant and 5-yearly periods

Variant	2019/20- 2023/24	2024/25- 2028/29	2029/30- 2033/34	2034/35- 2038/39
Lower variant	968	368	60	-
Central estimate	1,231	810	643	557
Higher variant	1,443	1,148	1,115	1,177

The Welsh Government is committed to increasing the delivery of affordable housing, with a focus on social housing, in the areas where it is needed and will use its funding, land, planning and housing policies to drive delivery. They recognise that the affordability of housing is not uniform across Wales and different responses will be needed in different parts of Wales to meet the needs of local communities.

Figure 12-1 below indicates the number of new dwellings started per 1,000 existing dwellings by local authority, 2022-23 while Figure 12-2 indicates the number of new dwellings completed per 1,000 existing dwellings by local authority, 2022-23. The 2023-24 release of new house

¹⁶³ Welsh Government (2020) *Estimates of Additional Housing Need in Wales (2019-based)*. Available at: https://www.gov.wales/sites/default/files/statistics-and-research/2020-08/estimates-of-additional-housing-need-in-wales-2019-based_0.pdf (Accessed: April 2024).

building is due in July 2024. Figure 12-3 outlines the locations of housing allocations across the study area.

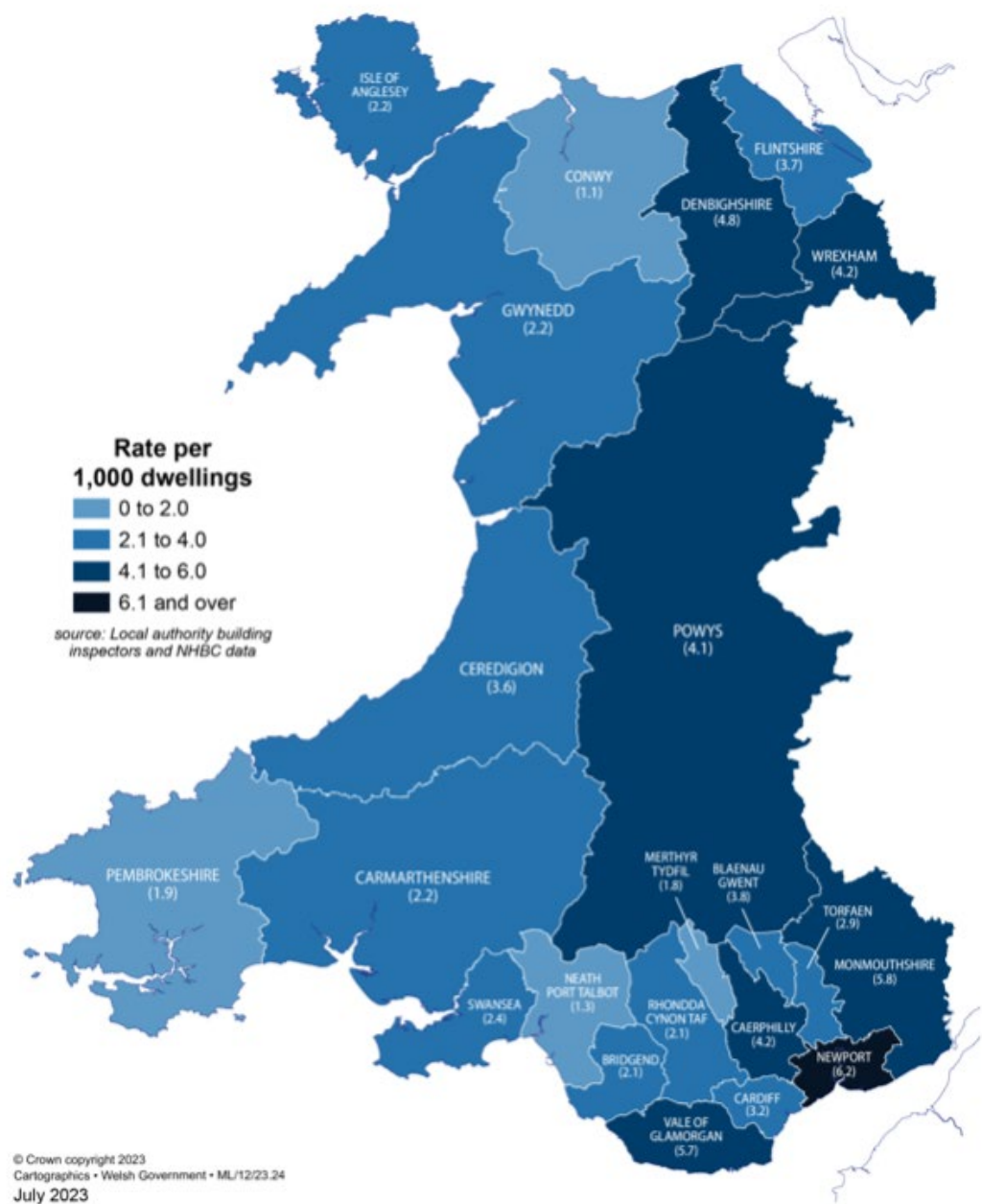


Figure 12-1 Number of new dwellings started per 1,000 existing dwellings by local authority, 2022-23¹⁶⁴

¹⁶⁴ Welsh Government (2023) *New house building: April 2022 to March 2023*. Available at: <https://www.gov.wales/new-house-building-april-2022-march-2023.html> (Accessed: April 2024).

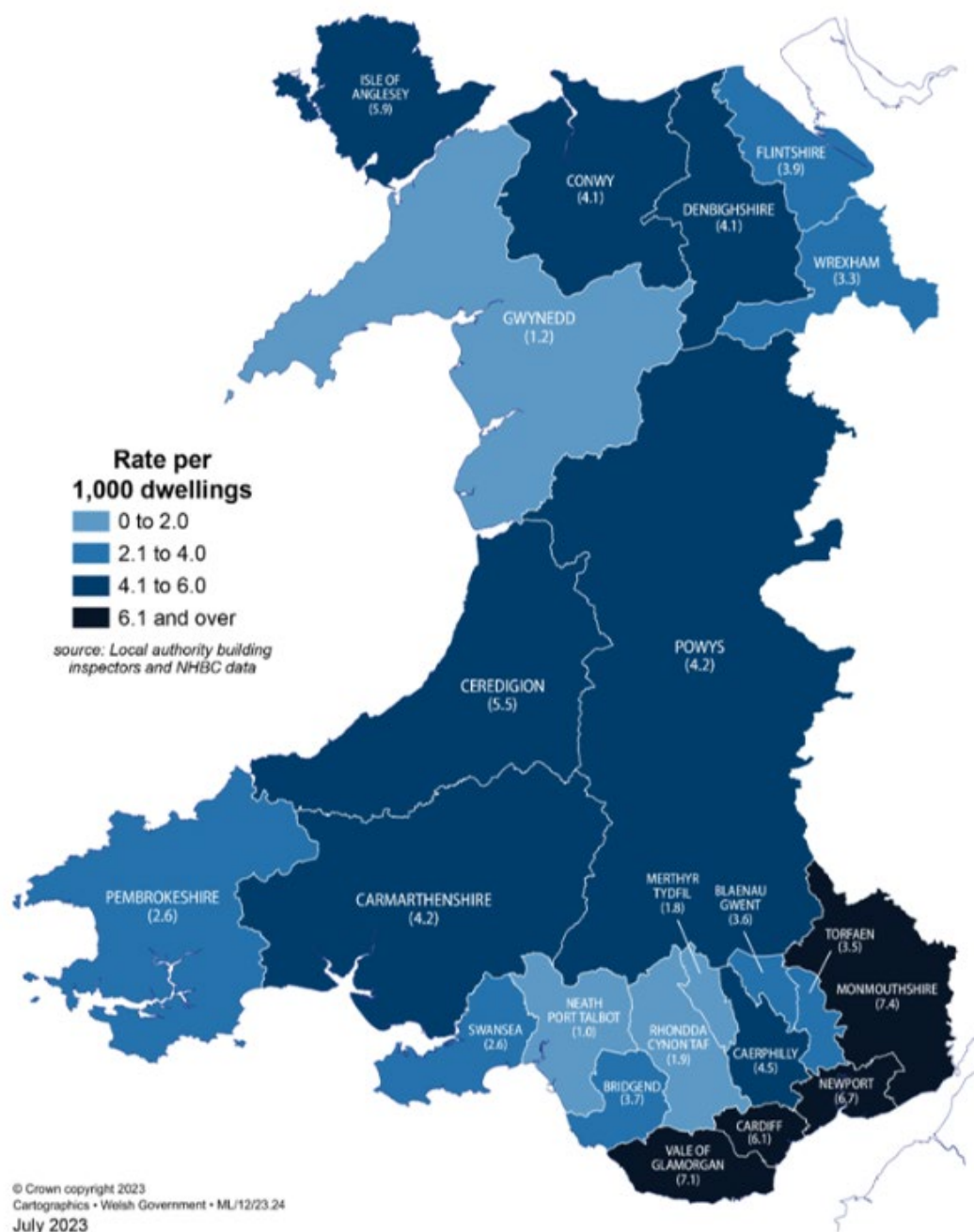


Figure 12-2 Number of new dwellings completed per 1,000 existing dwellings by local authority, 2022-23

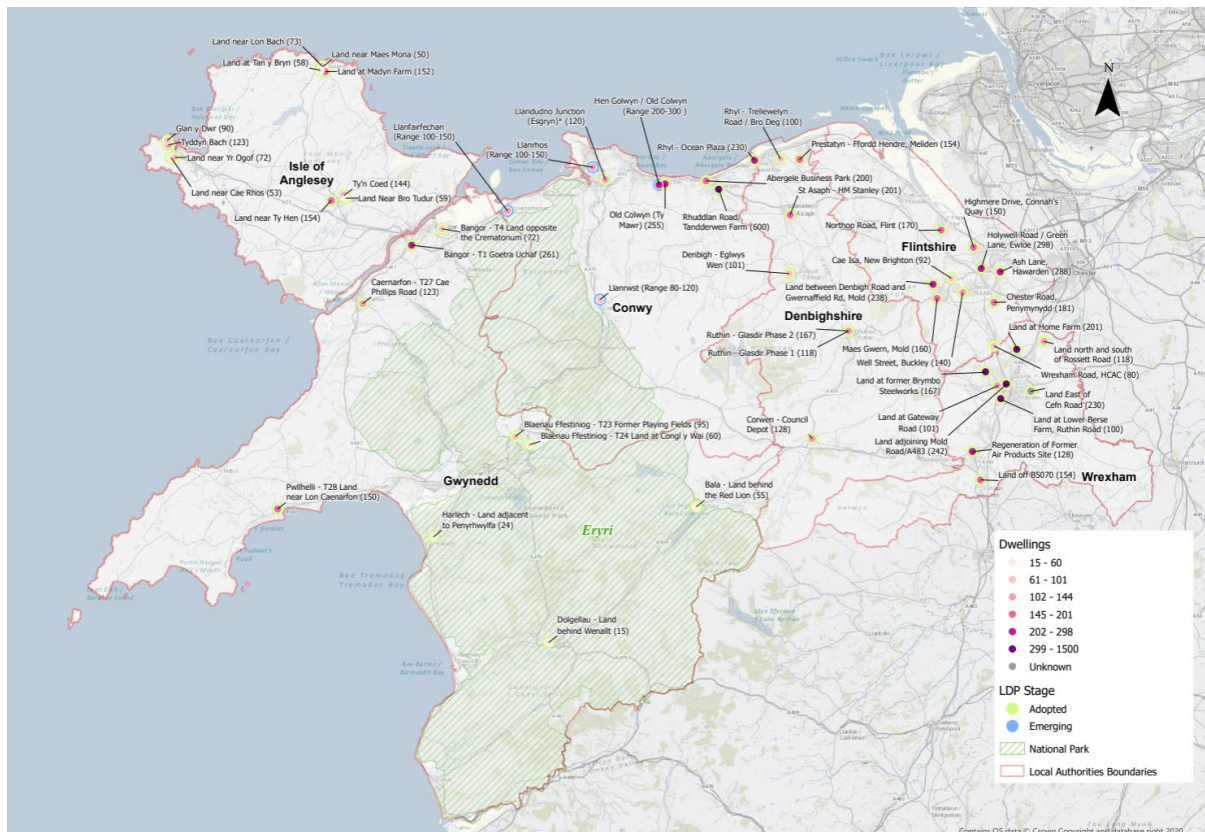


Figure 12-3 Housing allocations within the study area

12.7 Community and educational facilities and services

Educationally, North Wales offers two Higher Education Institutes (HEI's), Prifysgol Bangor University in West and Coleg Glyndwr in the East, both with a wide draw from all over the UK as well as overseas. Two Further Education Institutes (FEI's), Grwp Llandrillo Menai and Coleg Cambria provide strategically situated main sites serving both the urban and rural communities and are supported by conveniently located satellite colleges.

The majority of community facilities such as GP practices, veterinary surgeries, libraries, leisure centres are located in the main towns and cities of north Wales. Similarly, community green spaces such as public parks and sports facilities are located within close proximity of population centres (Figure 12-4).

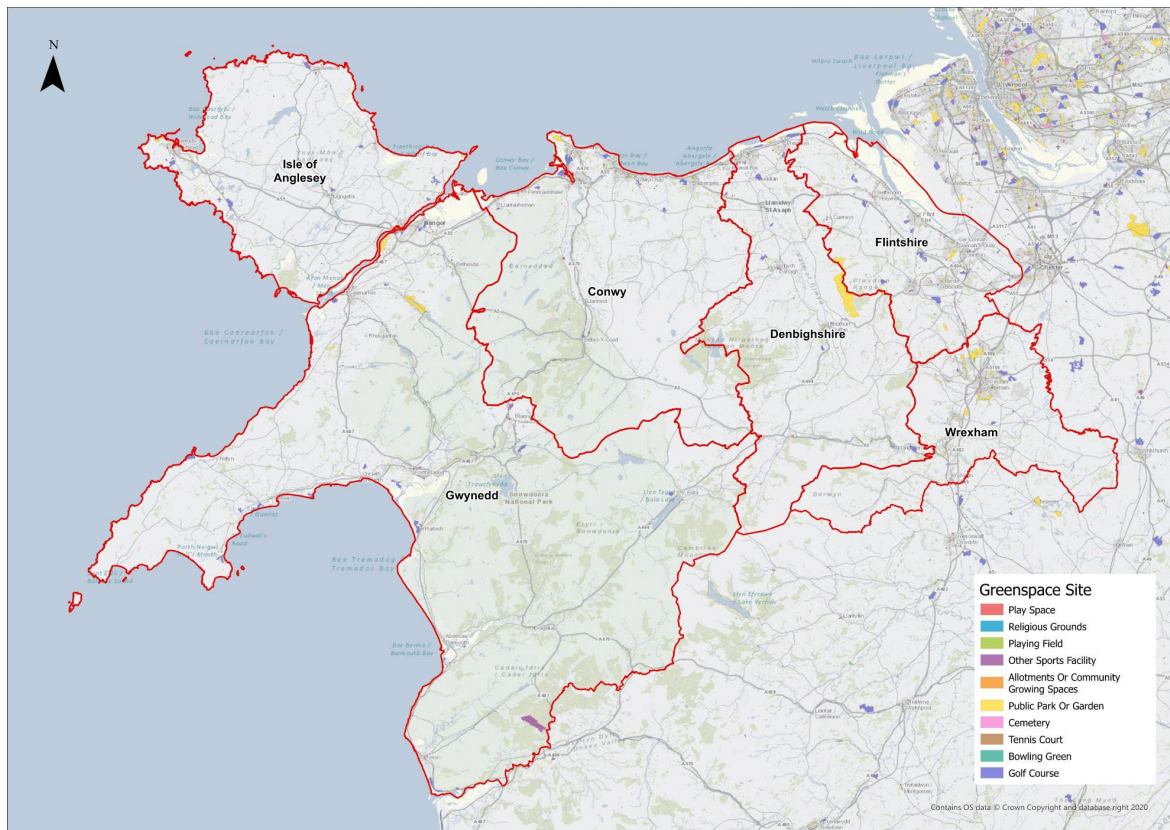


Figure 12-5 Green space sites within the study area

12.8 Utilities

The electricity distribution network operator that supplies power to properties in North Wales is Scottish Power Energy Networks¹⁶⁵. Approximately 295km of overhead lines traverse North Wales¹⁶⁶. The 'Future Energy Grids for Wales – Insight Report'¹⁶⁷ identifies that hydrogen network infrastructure will likely be necessary in North Wales due to siting of industry and heavy users, it also states that hydrogen production in North Wales can be linked to the hydrogen infrastructure in North-West England through a transmission network. Potential production centres in North Wales include Deeside, Connah's Quay or Wylfa regions.

¹⁶⁵Ovo Energy (2020) *DNOs: Who is my distribution network operator?* Available at: <https://www.ovoenergy.com/guides/energy-guides/dno> (Accessed: April 2024).

¹⁶⁶ National Grid (2024) *Network route maps*. Available at: <https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/network-route-maps> (Accessed: April 2024).

¹⁶⁷ Welsh Government (2023) *Future Energy Grids for Wales – Insight Report*. Available at: <https://www.gov.wales/sites/default/files/publications/2023-07/future-energy-grids-for-wales-insights-report.pdf> (Accessed: April 2024).

Policy 17 of 'The National Plan 2040'⁶⁴ relates to renewable and low carbon energy and associated infrastructure while Policy 18 relates to renewable and low carbon energy developments of national significance. The 'Pre-Assessed Areas for Wind Energy' in Figure 12-6 below indicates the two areas in North Wales (one and two) which the Welsh Government has identified as areas within which, in principle, on-shore wind developments would be acceptable. In these areas there is a presumption in favour of large-scale on-shore wind energy development and the associated landscape change subject to the criteria in policy 18.

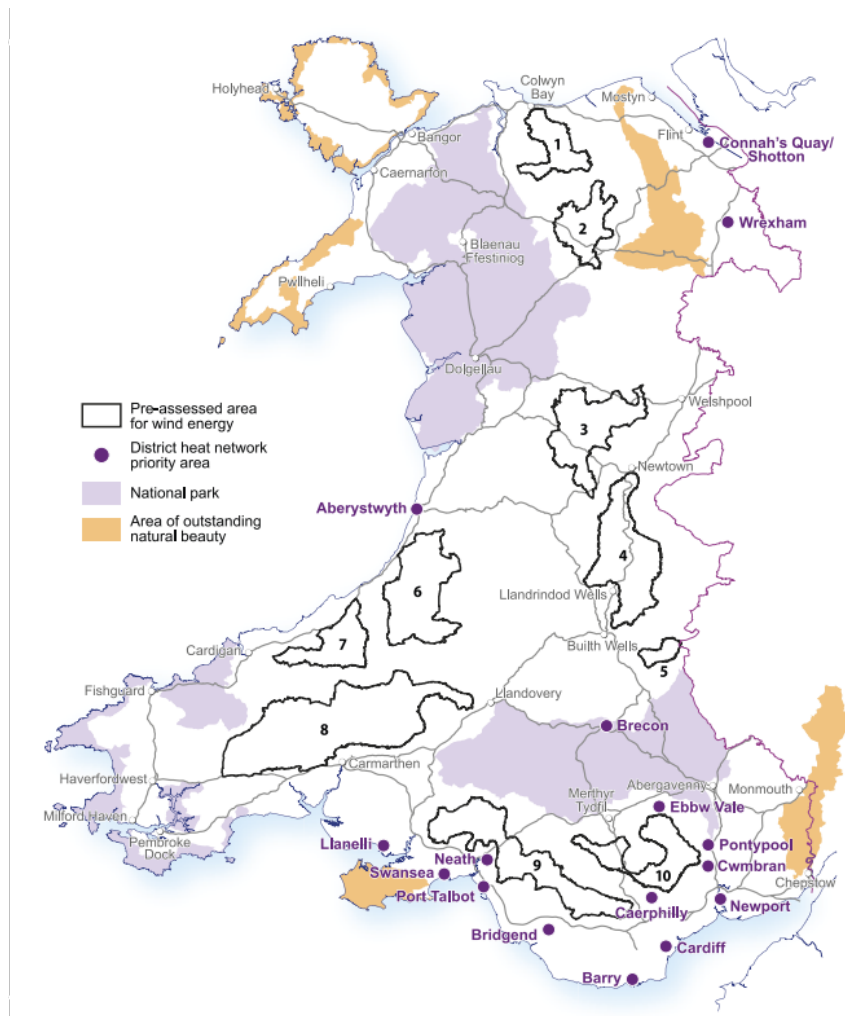


Figure 12-6 Wind energy and heat networks

Two water companies, Dŵr Cymru Welsh Water and Severn Trent Water predominantly supply water in North Wales. The revised draft WRMP24 for Dŵr Cymru Welsh Water¹⁶⁸ identifies a water resource zone deficit in the Lleyen Harlech-Barmouth zone, however this is small and past 2040 to meet the higher level of resilience target. Figure 12-7 below indicates this area.

¹⁶⁸Welsh Water (2024) Revised Draft Water Resources Management Plan 2024. Available at: <https://www.dwrcymru.com/en/our-services/water/water-resources/draft-water-resources-management-plan-2024> (Accessed: April 2024).

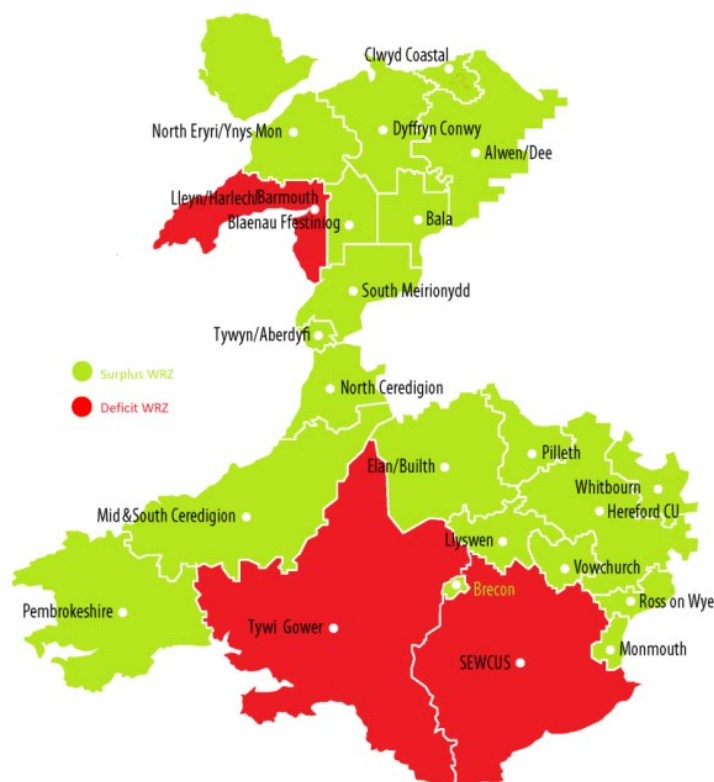


Figure 12-7 Water resource zones deficits

12.9 Historic and likely future trends

In the 2021 Census, for those who were working, the percentage of people travelling to work in North Wales was 65.4% by car, van, motorcycle, scooter, or moped, 8.7% by foot or bike, 2.9% by train, bus, minibus, or coach, and 1.3% by other, meanwhile, 21.7% of respondents worked from home¹⁶⁹. The dominant mode of transport in Wales, for both the number of journeys undertaken and distances travelled, continues to be the private car. The Wales Transport Strategy¹³² target for 2040 is 45% sustainable modes and 55% car, so car will still dominate in 2040 even if that target is reached. However, while the Welsh Government recognises in its National Plan that it will support investment in the road network where necessary to maintain or improve rural accessibility, sustainability and community well-being, focus will be on supporting investment in public transport, active travel and vehicle charging networks to support ultra-low emission vehicles. Furthermore, the National Plan states that road transport is a major cause of air and noise pollution and accounts for the vast majority of greenhouse gas emissions produced from the transport sector.

¹⁶⁹ Office for National Statistics (2024) *Method used to travel to work*. Available at: <https://www.ons.gov.uk/search?topics=9731,6646,3845,9497,4262,4128,7755,4994,6885,9724,7367&filter=datasets> (Accessed: April 2024).

The changes in the way people moved around towns and cities during the COVID-19 pandemic are a sign of the widespread potential to reduce use of cars and to allocate more space for walking and cycling.

In Wales there has been a decline in the delivery of affordable homes. From 2019-2039 the estimate of the additional housing need in Wales, under the central estimate, is around 110,000. Table 12-1 above indicates the annual average estimate of additional housing need, variant and 5-yearly periods for North Wales specifically. The housing need estimates also indicate that the provision of affordable homes should become a key focus for housing delivery.

The UK Climate Change Risk Assessment 2022 assesses the risk of climate change to infrastructure and transport networks and public water supplies as medium to very high¹⁷⁰.

¹⁷⁰ HM Government (2022) UK Climate Change Risk Assessment 2022. Available at: <https://assets.publishing.service.gov.uk/media/61e54d8f8fa8f505985ef3c7/climate-change-risk-assessment-2022.pdf> (Accessed: April 2024).

13. Transport

13.1 Community Need

North Wales has a varied nature of settlements and communities meaning the needs of residents in urban centres and rural communities need consideration. As part of this, improvements in rural areas of North Wales should be made to active travel, public transport, and other sustainable mobility options. A shift to public transport or active travel is not possible for many rural journeys meaning consideration should be given to how to facilitate the switch to electric vehicles for those in rural areas more dependent on use of private cars. Where possible frequent and high-quality rural transport services, and enhanced walking and cycling infrastructure connecting rural communities should be considered.

13.2 Active Travel

An improvement of the active travel network in North Wales would encourage an increase in the number of people choosing to walk or cycle. This should focus on connections to key attractors such as employment and education sites, railway stations and tourist attractions.

Local authorities in North Wales have a duty, under the Active Travel (Wales) Act 2013¹⁷¹, to map existing and future active travel routes and related facilities, with an aim to lead to an integrated network for active travel, and thus achieve modal shift for walking and cycling modes. The Active Travel Network Map can be found on Data Map Wales¹⁷². The Active Travel (Wales) Act 2013 also requires following:

- Welsh Ministers and local authorities to report on levels of active travel
- Welsh Ministers and local authorities to carry out certain functions under the Highways Act 1980, to take reasonable steps to enhance the provision made for walkers and cyclists
- Ministers and local authorities to exercise their functions under this act so as to promote active travel journeys and secure new and improved active travel routes and related facilities.

13.3 Bus Services

Bus has the biggest public transport modal share in Wales. In 2018/19 a total of 101.87 million journeys were made by bus in Wales. Analysis undertaken by Transport for Wales' (TfW) Analytical Unit shows that 68% of the North Wales population live within a quarter of a mile (or 400 metre) walking route of a bus stop where services run at least once per hour. This however does not account for whether the routes take people to desired destinations.

A number of recent improvements have been made in collaboration between TfW, local authorities, and bus operators that have made bus travel more attractive in North Wales:

¹⁷¹ UK Government (2013) Active Travel (Wales) Act 2013. Available at: <https://www.legislation.gov.uk/anaw/2013/7/contents/enacted> (Accessed: April 2024).

¹⁷² DataMap Wales (no date) Active Travel Network Maps. Available at: <https://datamap.gov.wales/maps/active-travel-network-maps/view#/> (Accessed: April 2024).

- The rollout of the 1bws ticket (one ticket across the vast majority of bus services in North Wales)
- T19/Conwy Valley Line return ticket agreements
- Continuous review of the Sherpa Network in Eryri
- Launch of the Traws Cymru T8 service between Corwen and Chester
- Launch of fflecsi demand responsive services, including the zero-emission electric service in Ruthin.

Further work is in development to address long-standing barriers to the uptake of bus travel, such as a Bus Network review and development of a pilot scheme underway between TrawsCymru and Rail to enable use of one ticket for journeys that involve a leg by rail and bus.

Fflecsi is a demand responsive bus service that can be booked by passengers in advance of travel. Fflecsi buses can pick passengers up and drop off in a service area and not just at a bus stop. Locations in North Wales where fflecsi services operate in 2024 are:

- Buckley
- Conwy Valley
- Denbigh
- Holywell
- Llyn Peninsula
- Prestatyn
- Ruthin

The Snowdon Sherpa is a network of bus services that travel around Yr Wyddfa. It has been developed in by a partnership comprising Transport for Wales, Cyngor Gwynedd, the National Park Authority, and Gwynfor Coaches. The creation of the Sherpa network saw the merger of local bus services into one simplified brand and a coordinated network and fare structure. In 2021/22, passenger numbers were up 78% compared to 2020/21 (when figures were affected by Covid), and 22% up on pre-Covid 2019/20 figures.

TrawsCymru longer distance bus services are an important part of the integrated public transport network in Wales. Funded by the Welsh Government, the buses provide vital public transport links for many communities across Wales, integrating with rail journeys and also giving visitors an accessible, affordable and environmentally friendly option for exploring Wales.

13.4 Rail

The national rail network in the region is managed and maintained by Network Rail, with passenger services operated by Transport for Wales and Avanti West Coast via the Wales and Borders and West Coast Partnership franchises. The rail network is reflective of the main population centres. There are 66 rail stations in North Wales, as shown on Figure 13-1. These are located on the following five lines:

- The North Wales Coast Line
- The Shrewsbury—Chester Line
- The Conwy Valley Line
- The Borderlands Line
- The Cambrian Line.

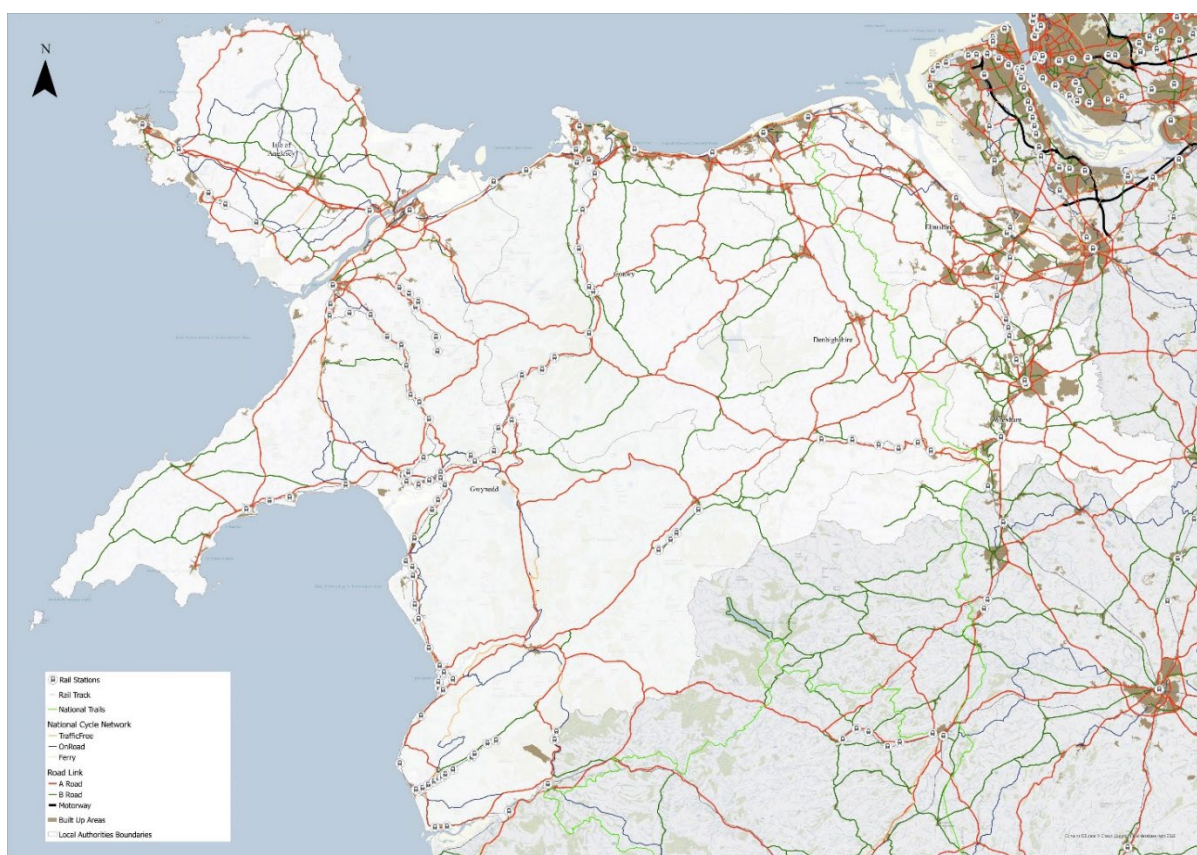


Figure 13-1 Transport

Data from the Office of Road and Rail is collected for estimates of station usage at each station on the network. Figures for the most and least used stations in North Wales are shown in Table 13-1. Figures used in the table are for 2019-20 as this is the last full year not affected by the Covid 19 pandemic. Whilst not in Wales, Chester station is considered the most important station on the North Wales rail network due to its roles as both an attractor, and key interchange location.

Table 13-1: The stations with the highest and lowest number of entries and exits

Station name	2019-20 highest number of entries and exits	Station name	2019-20 lowest number of entries and exits
Chester	5,093,756		
Bangor (Gwynedd)	624,926	Dolgarrog	362
Rhyl	504,244	Pont-y-Pant	498
Wrexham General	501,800	Roman Bridge	720
Prestatyn	324,634	Tal-y-Cafn	812
Llandudno Junction	301,418	Tywyn	1,062

Analysis undertaken by TfW's Analytical Unit shows that only 9% of the North Wales population lives within a half a mile walk (or 800 metres) of a rail station where services run at least once per hour.

Freight paths are in place across the network. There are limited freight services along the mainline, but the route between Shrewsbury and Chester, and the Borderlands Line, which runs from Wrexham to Bidston, see several services a week to the sawmill, steel, and cement plants. For example, this includes Hanson Cement. .

13.5 Road Network

Trunk roads in North Wales are maintained by the North and Mid Wales Trunk Road Agent (NMWTRA).

The main roads in North Wales mostly span east to west, especially along the North Wales coast (Figure 13-1). The busiest road in North Wales is the A55, the "North Wales Expressway", a dual carriageway primarily connecting Chester to Holyhead, along the coast of North Wales and passing Llandudno Junction, Conwy, and Bangor. It is one of Wales' most important roads that runs through to the port of Holyhead.

The crossing of the Menai to Anglesey, and the resilience of this route, is important both locally and strategically. Locally, although separated by the Menai Strait and in different local authority areas, towns on both sides of the Strait form a single economic area. Many people travel between locations across the Strait for employment and to access vital services such as education and healthcare as well as for leisure, shopping and entertainment opportunities.

Strategically, incidents on the Menai Crossings are particularly detrimental for freight operators who are accessing the port at Holyhead. Reliability and predictability of journey time is crucial for freight operators for whom deliveries may be time-critical, or time wasted on congested roads has a financial cost.

The A55 converges for a short distance with the A494 at Ewloe, from which the A494 runs to the North of Chester and the A55 to the South.

The A5 was previously the primary link between North Wales and London. The road crosses the Menai Suspension Bridge, but its importance has been superseded by the A55. Other roads transiting North Wales, from east to west include the A458 from Halesowen to Mallwyd, and the A494 from Dolgellau to Saughall.

The busiest north-south road travelling through the region is the A483 from Chester through Wrexham and onto Swansea via Oswestry, Newtown and Welshpool. Other major north-south roads include the single-carriageways of the A470 from Llandudno to Cardiff via the Conwy valley, and the A487 from Bangor to Haverfordwest via Caernarfon and Eryri.

The majority of the remaining highway network within the region are the responsibility of the relevant Local Highway Authority, in this case, the Local Authority. Significant changes across the Local Highway Network include the 2023 rollout of a 20mph speed limit along restricted roads.

13.6 Electric Vehicles

The number of plug-in vehicles is increasing across the UK, including in North Wales. This is likely due to an increase in environmental awareness, improved zero emission vehicle technology and improved understanding of electric vehicles. Table 13-2 summarises Government showing the number of plug-in vehicles in each local authority area, with 5,510 such vehicles in North Wales.

Table 13-2 Plug-in Vehicles in North Wales

Fuel	Anglesey	Conwy	Denbighshire	Flintshire	Gwynedd	Wrexham
Battery Electric	365	634	592	864	541	607
Plug-in Hybrid electric (diesel)	3	6	6	9	6	9
Plug-in Hybrid electric (petrol)	216	336	233	407	252	343
Range Extended electric	7	12	19	18	12	13
Total	591	988	850	1,298	811	972

13.7 Freight

The Port of Holyhead is identified by Future Wales as a Strategic Gateway for international connectivity. The creation of a Freeport site on Ynys Môn, one of two in Wales, will further enhance Holyhead's role as an international gateway. This will play an important role in strengthening the North Wales economy and creating jobs for local people, but there may be further implications of increased freight movements in North Wales.

The Port of Mostyn also generates freight traffic, with much of its business now dedicated to the offshore renewable energy sector. On the Borderlands Line, Padeswood Sidings creates a significant barrier to increased freight movement, as well as enhanced passenger services.

There is currently little provision for road freight operators seeking a switch to cleaner fuels for their vehicles operating in North Wales, notably charging stations and hydrogen re-fuelling stations.

For more local deliveries, including those to town centre businesses and those deliveries that have resulted from an increase in online retail, there is a local environmental impact caused by emissions from and size of delivery vehicles. Measures to reduce the impact of local deliveries on communities include e-cargo bikes, area delivery and servicing plans, micro-consolidation centres, and delivery lockers at key locations such as transport and/or mobility hubs.

13.8 Menai Crossings

The resilience of the Menai crossings is vital to the continued success of Holyhead as a port, and for connections to Ireland. It is also a significant issue for the people of Anglesey who require access to services including hospitals on the mainland. Holyhead is a strategically important port in the United Kingdom due to its location and transportation connections and is a major gateway for transportation between the United Kingdom and Ireland. Freight accessing Holyhead is required to cross the Menai.

More locally, Anglesey's proximity to Gwynedd has fostered a close relationship between the two areas. Ynys Môn and Gwynedd share deep economic, social and cultural connections and are Welsh language strongholds. There are also, therefore, a large number of local trips that use the Menai crossings.

There are a number of issues that affect the crossings and impact on both local and port traffic. These include resilience, high winds, collisions and incidents, traffic flow, public transport, and active travel.

Events and closures of the bridges have a significant impact on people's ability to cross the Menai Strait to access employment, education, health and other services, and they make it difficult for emergency services and businesses to operate. A closure will typically also lead to congestion on the surrounding road network approaching both bridges. This is exacerbated by the roundabouts on both sides of the A55 at Junction 9.

13.9 Cross Border Travel

North Wales is the region in Wales with the largest number of daily cross-border movements to and from England meaning improving cross-border public transport services should be a priority.

The north-east of the region has strong connections to north-west England, with a larger daily Wales-to-England flow than along the M4 corridor. Being adjacent to the border means this sub-region has different travel patterns in terms of destinations, with a lot more cross-border travel. 18% of journeys from the eastern sub-region are cross-border, with the north-west of England - Merseyside, Manchester and Warrington - as a destination accounting for 15% of all journeys.

Chester's proximity is important as a gateway for North Wales and has strong links to the north-east Wales economy. Therefore, suitable transport infrastructure and services to Chester are an important consideration.

13.10 Visitor Economy

The visitor economy is hugely important to much of North Wales. The region's attractions include beaches, large areas of caravan parks, outdoor pursuits and historically significant sites. The close proximity of these attractions to large urban centres of Northwest England means a large volume of visitors to North Wales from these areas.

Coastal locations such as Prestatyn, Rhyl, Towyn, and Llandudno contribute a huge part of the North Wales economy and visitors to these destinations are part of the continued success or regeneration of those places. This creates a significant demand for public transport journeys by tourists across North Wales.

Many visitor attractions would benefit from the opportunity to improve public transport and active travel access, allowing more people to access these locations, particularly people without access to a car. This might involve seasonal shuttle buses from town centres or rail stations, cycle and e-cycle hire or improving signposting for public transport and active travel information.

The National Park Authority and its partners including Cyngor Gwynedd, Conwy County Borough Council and Transport for Wales are undertaking a significant amount of work to reduce the environmental and social problems associated with car use and parking in the Eryri area. To date, this includes measures to manage parking and an improved public transport offer for visitors to the National Park. This includes the Sherpa'r Wyddfa bus service, a park and ride linked with parking management at Pen-y-pass, and the enforcement of parking restrictions on roads. Further work is required to encourage a higher proportion of trips to the park to use sustainable travel options, including further improvement to services and infrastructure, public education, and more attractive integration with rail services.

13.11 Historic and likely future trends

In the 2011 Census, the percentage of people travelling to work in North Wales was 75.7% by car, van, motorcycle, scooter, or moped, 11.9% by foot or bike, 5.1% by train, bus, minibus, or coach, and 7.2% by other³. The dominant mode of transport in Wales, for both the number of journeys undertaken and distances travelled, continues to be the private car. The Wales Transport Strategy¹³² target for 2040 is 45% sustainable modes and 55% car, so car will still dominate in 2040 even if that target is reached.

The Wales Transport Strategy, Llwybr Newydd, provides the context for the Welsh Government's aim to reduce the need to travel, particularly by private car, and supports a modal shift to walking, cycling and public transport. This is reflected in Planning Policy Wales and Future Wales. The Wales Transport Strategy, sets out the Welsh Government's long-term vision for transport¹³².

The Wales Transport Strategy also sets out three priorities, this includes bringing services to people in order to reduce the need to travel, allowing people and goods to move easily from door to door by accessible, sustainable and efficient transport services and infrastructure, and encouraging people to make the change to more sustainable transport.

14. Resources and Waste

14.1 Minerals

Anglesey County Council, Conwy County Borough Council, Flintshire County Council, Denbighshire County Council, Gwynedd Council, Eryri National Park and Wrexham County Borough Council are the Mineral Planning Authorities that are responsible for resources within the NWTP area. As Mineral Planning Authorities the councils must ensure that sufficient supplies of these minerals are maintained to industry, whilst also ensuring that the environment is protected. The councils have a shared Minerals and Waste Planning Service, that is lead by Flintshire County Council.

There are 43 existing mineral sites located across the NWTP area¹⁷³. These are shown on Figure 14-1 below and summarised in Table 14-1. The North Wales area produces 5.5 million metric tonnes per annum (mtpa), the majority of which is associated with crush rock (including slate)¹⁷⁴. Gwynedd Council host the greatest number of mineral sites; however, Flintshire County Council have historically extracted more aggregates on average. Since 2007, sales of primary aggregate in North Wales have fluctuated, with an overall reduction seen from a high of 7.4 million of tonnes (mt) in 2007 to 5.7 mt in 2016¹⁷⁴. Changes in the volume of aggregate sales are through to be correlation with annual house completion in the local area.

Table 14-1 Mineral sites and aggregate sales in North Wales

Mineral Planning Authority	Number of mineral sites ¹⁷³	10-yr Average Aggregate Sales (total) (mtpa) ¹⁷⁴
Anglesey County Council	6	0.236
Conwy County Borough Council	3	0.955
Eryri National Park	6	
Flintshire County Council	6	2.663
Denbighshire County Council	1	0.329
Gwynedd Council	19	0.868
Wrexham County Borough Council	2	0.435

¹⁷³ Welsh Government (2019) Maps 05 Minerals and Waste Sites. Available at: <https://www.gov.wales/sites/default/files/publications/2019-08/maps-05-minerals-and-waste-sites.pdf> (Accessed: April 2024).

¹⁷⁴ Welsh Government (2020) *Regional Technical Statement for North and South Wales: 2nd Review*. Available at: <https://democracy.carmarthenshire.gov.wales/documents/s47407/RTS%202nd%20Review%20-%20Main%20Document%20-%20FINAL%20version.pdf> (Accessed: April 2024).

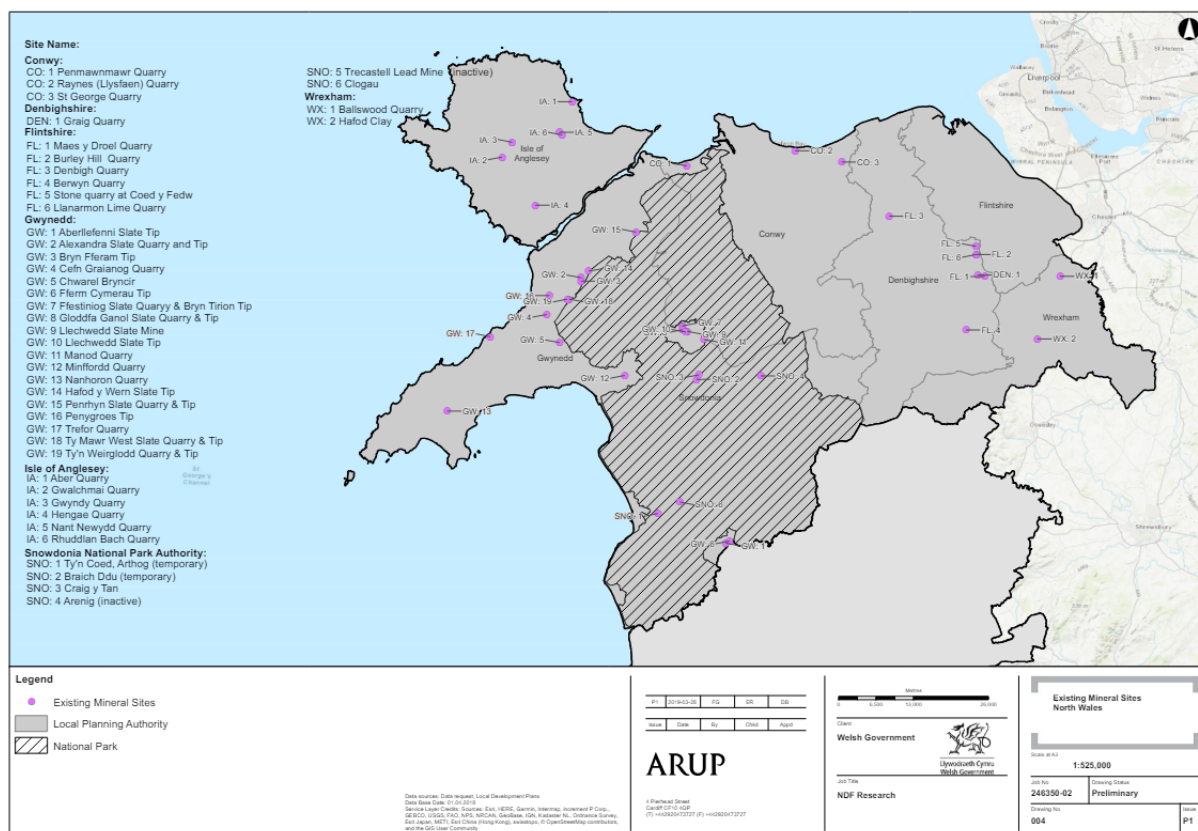


Figure 14-1 Mineral sites in North Wales¹⁷³

14.2 Waste

There are 648 licenced waste sites across the NWTP area that are authorised to treat, keep or dispose of waste¹⁷⁵. Of the sites, 444 are currently operational. There are 10 allocated waste sites in the study area, and these are all located in Wrexham¹⁷³ (Figure 14-2). There are 424 historic waste sites located across the NWTP area, with a higher density of these located in Flintshire and Wrexham near the border with England¹⁷⁶. There are seven closed or abandoned mine waste facilities located across the NWTP area, six of these are located in Conwy, on the northeastern edge of Eryri National Park, and one is located in the Isle of Anglesey. All of these are metalliferous facilities that have been noted as having environmental concerns in relation to water pollution¹⁷⁷.

¹⁷⁵ Natural Resource Wales (2023) *Environmental Permitting Regulations – Waste Sites*. Available at: https://datamap.gov.wales/layers/geonode:nrw_waste_permits (Accessed: April 2024).

¹⁷⁶ Natural Resource Wales (2017) *Historic Landfill Sites*. Available at: https://datamap.gov.wales/layers/inspire-nrw:NRW_Historic_Landfill_Sites (Accessed: April 2024).

¹⁷⁷ Natural Resource Wales (2017) *Inventory of Closed Mining Waste Facilities*. Available at: https://datamap.gov.wales/layers/inspire-nrw:NRW_MINING_WASTE_CLOSED_SITES (Accessed: April 2024).

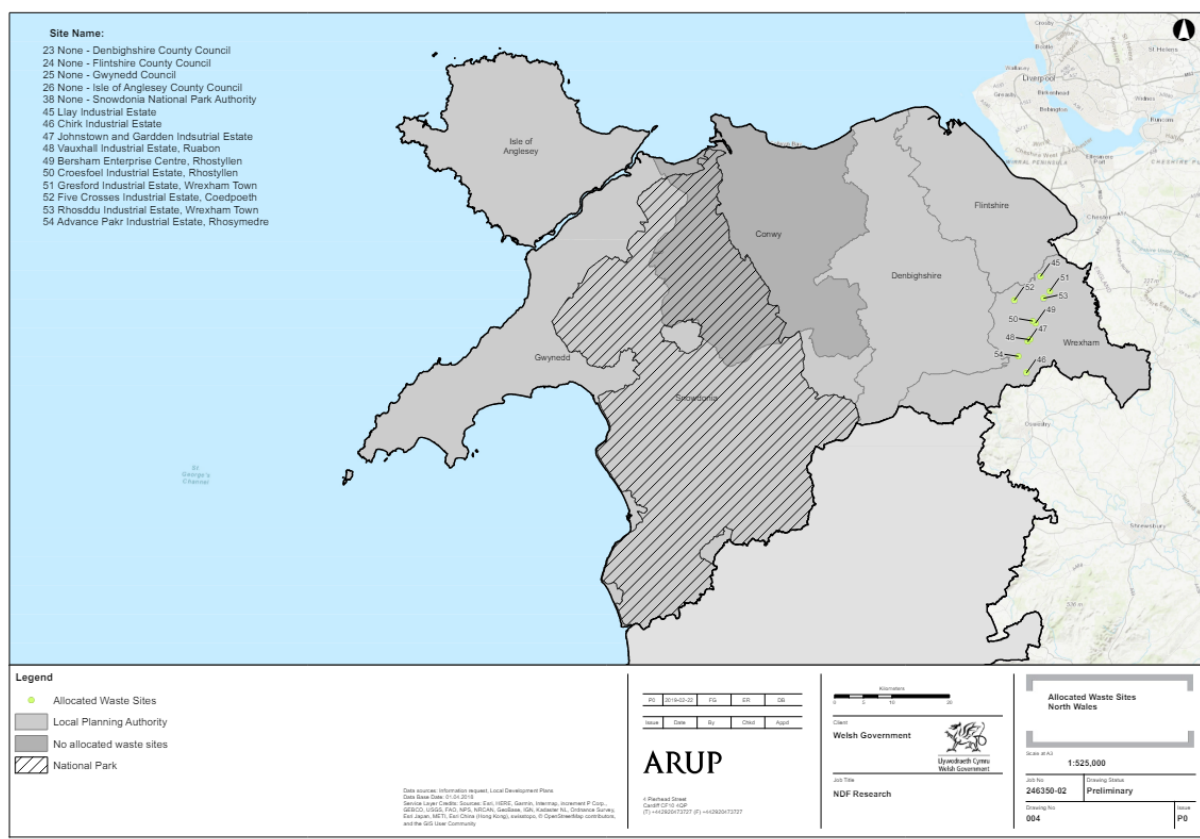


Figure 14-2 Allocated waste sites in north Wales

Approximately 333,300 tonnes of municipal waste was collected/ generated across the LPAs within the NWTP area in the period 2022-23¹⁷⁸. The largest contributions were from Wrexham (21.8%), Flintshire (21.5%) and Gwynedd (19.5%). The Isle of Anglesey has the lowest contribution at 9.9%¹⁷⁸. The majority of LPAs in North Wales produce more household waste per person than the Welsh average (172kg per person) (

Table 14-2). The exceptions to this are Conwy (162kg) and Denbighshire (167kg). Recycling rates vary across the NWTP local authorities (

Table 14-2), with Conwy having the highest recycling rate (69%) and Flintshire the lowest (62%).

¹⁷⁸ Welsh Government (2023) *Annual management of waste by management methods (tonnes)*. Available at: <https://stats.wales.gov.wales/Catalogue/Environment-and-Countryside/Waste-Management/Local-Authority-Municipal-Waste/annualwastemanagement-by-management-year> (Accessed: April 2024).

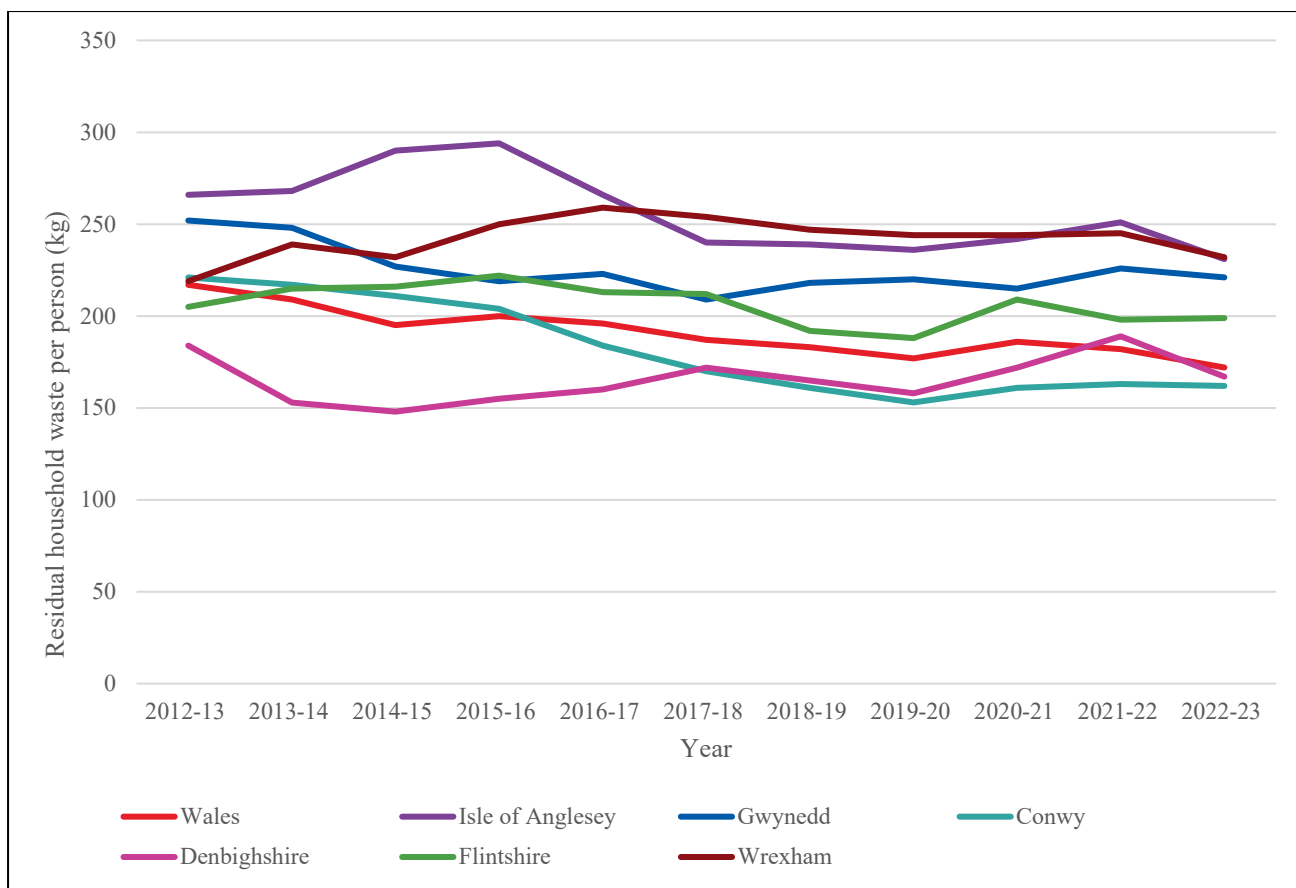


Figure 14-3 Annual residual household waste produced per person (kg)¹⁷⁹

Table 14-2 Annual reuse/ recycling/ composting rates¹⁸⁰

Area	Percentage of Waste Reused/Recycled/Composted
Isle of Anglesey	63.5
Gwynedd	64.7
Conwy	69
Denbighshire	65.9
Flintshire	61.5
Wrexham	65.5
Wales	65.7

¹⁷⁹ Welsh Government (2023) *Annual residual household waste produced per person (kilograms) by local authority*. Available at: <https://stats.wales.gov.wales/Catalogue/Environment-and-Countryside/Waste-Management/Local-Authority-Municipal-Waste/annual-residual-household-waste-produced-per-person-by-local-authority> (Accessed: April 2024).

14.3 Historic and likely future trends

Based on future requirements estimates, it has been identified that new allocations for sand & gravel will be required in Flintshire, Wrexham, Gwynedd and Ceredigion. Flintshire has also been identified as an LPA with a shortfall of permitted crushed rock reserves¹⁷⁴. As well as distribution within the north east and north west sub regions within Wales, aggregate won in the North Wales region (namely the north eastern authorities such as in Flintshire), are also exported to north west England.

Welsh Government have an ambition to achieve zero waste in Wales by 2050 by adopting circular economy principles. The household recycling rate in Wales has increased slightly from 63.8% in 2021-22 to 64.3% in 2022-23. In the same period, the non-household recycling rate increased by 1.7 percentage points to 76.0%. It is anticipated that there will be a reduction in waste and increase in recycling rates over the coming years as Wales moves to meet this target, with a 70% recycling target set for 2024-25¹⁸¹.

¹⁸⁰ Welsh Government (2023) *Annual reuse/recycling/composting rates by local authority*. Available at: <https://statswales.gov.wales/Catalogue/Environment-and-Countryside/Waste-Management/Local-Authority-Municipal-Waste/annualreuserecyclingcompostingrates-by-localauthority-year> (Accessed: April 2024).

¹⁸¹ Welsh Government (2021) *Beyond Waste*. Available at: <https://www.gov.wales/beyond-recycling> (Accessed: April 2024).

15. Economy

15.1 Employment

Within the NWTP area, approximately 54.9% of the adult population are economically active. This is slightly greater than the Welsh average of 54.4%. Of those that are economically inactive, the majority (62.7%) are retired. The proportion of residents retired in the area is approximately 6% greater than the Welsh average and the proportion of students within the area is 2.5% less (10.6%) than the Welsh average¹⁸².

Unemployment rates across the NWTP vary from 2.8% in Denbighshire and Flintshire, to 3.2% in Gwynedd. This is similar to, but slightly lower than the Welsh average (3.1%). Areas with the highest unemployment rates within the NWTP area are generally found within or near to the urban areas including Bangor (8.0%), Holyhead (5.1%) and Wrexham (4.6%)¹⁸³. The proportion of people claiming job seekers allowance or out of work universal credit benefits within the NWTP area is the same as the Welsh average (3.4%). The authority with the highest proportion of claimants is Conwy and Denbighshire (3.8%) compared to 2.8% in Flintshire¹⁸⁴. There was a slight decrease (0.1%) in the proportion of claimants in the area when compared to the previous year.

As illustrated on Figure 15-2 below, the main employment industries in the NWTP area are health and social work, wholesale and retail, manufacturing and education. The NWTP area has a greater proportion of people employed in manufacturing (10.2%) than the Welsh average (8.7%). It also has slightly greater proportions of people employed in accommodation and food services; agriculture, forestry and fishing; wholesale and retail; and administrative and supportive services.

The NWTP area has a slightly lower proportion of people working in financial and insurance activities; professional, scientific and technical activities; and public administration and defence, compulsory social security¹⁸². In comparison to the Welsh average, the NWTP area has a slightly greater proportion of the population working in skilled trade occupations (+1.3%), process, plant and machinery operatives (+0.9%) and caring leisure and other service occupations (+0.7%). There are fewer people working in professional occupations (-1.6%) and associated professional and technical occupations (-0.7%), however there is a slightly greater proportion of people who are managers, directors and senior officials (+0.3%) when compared to the Welsh average¹⁸².

¹⁸² Office for National Statistics (2021) *Census 2021*. Available at: https://www.nomisweb.co.uk/sources/census_2021_bulk (Accessed: April 2024).

¹⁸³ Office for National Statistics (2021) *Census 2021; Census maps*. Available at: <https://www.ons.gov.uk/census/maps/choropleth/work/economic-activity-status/economic-activity-status-4a/economically-active-unemployed-including-full-time-students> (Accessed: April 2024).

¹⁸⁴ Office for National Statistics (2023) *CC01 Regional labour market: Claimant Count by unitary and local authority (experimental)*. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/unemployment/datasets/claimantcountbyunitaryandlocalauthorityexperimental> (Accessed: April 2024).

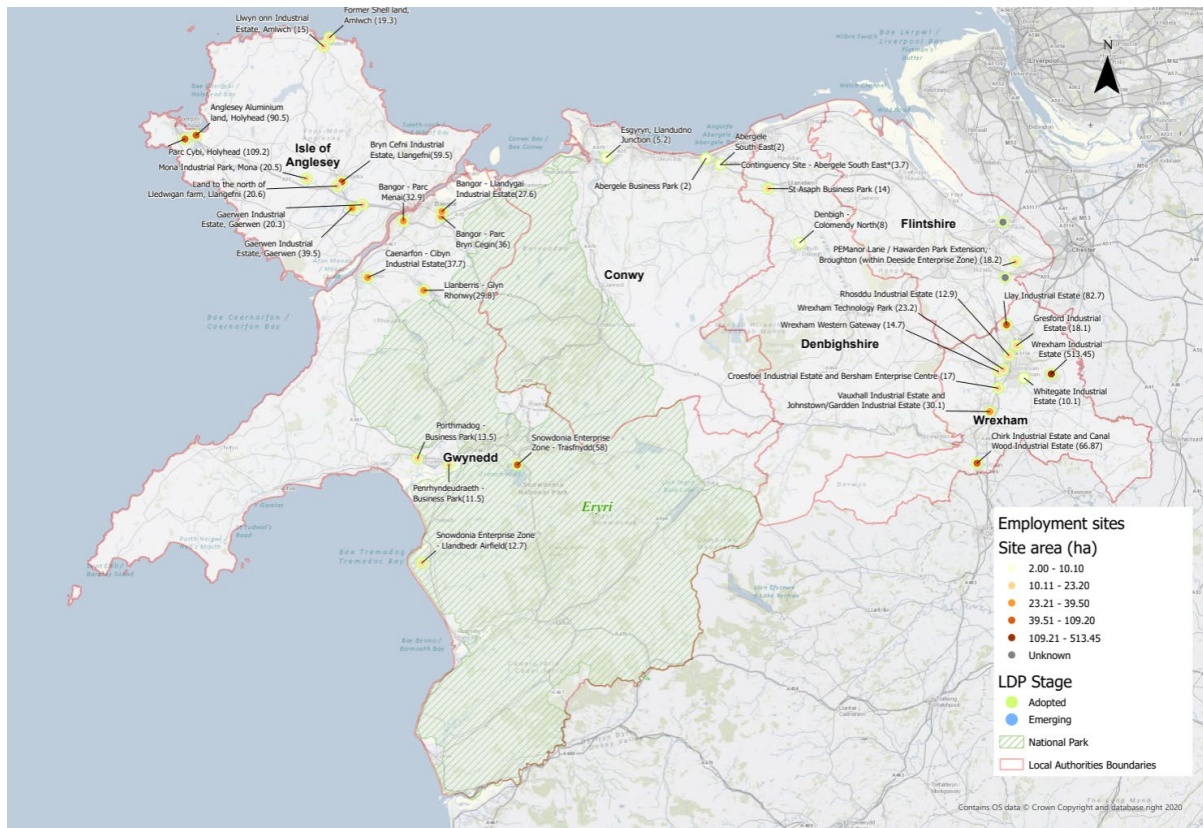


Figure 15-1 Employment sites

There is variation in the importance of different industries across the North Wales region, with agriculture, forestry and fishing sector employment being more prominent in rural areas of North Wales (up to 27.4%), tourism related employment (e.g. accommodation and food services) being more important across Eryri, Llyn Peninsula and coastal areas of Denbighshire, Conwy and Anglesey (up to 35.4%) and manufacturing sector being prominent to the east within Wrexham and Flintshire (up to 33.5%)¹⁸⁵.

Average earnings across the NWTP area are £15.84 per hour, this is £0.65 per hour less than the Welsh average¹⁸⁶. The lowest average wages are found in Gwynedd (£14.78 per hour) and the highest are found in Isle of Anglesey (£16.89 hour).

The proportion of workers who work part time vs full time in the NWTP area is similar to the Welsh average, with the NWTP area having a slightly greater proportion (0.6%) of the population working on a part time basis¹⁸². This is anticipated to be related to the high proportion of people that work in the tourism sector. Of those who do work full time, there is a slightly higher than average proportion of people who work 49 hours or more per week (10.9%) compared to the Welsh average (10.2%).

Significant employment development is planned for North Wales, including in relation to freight, logistics and other associated industries. This includes a new Freeport planned in Anglesey and a new Investment Zone in Wrexham and Flintshire.

¹⁸⁵ North Wales Join Committee (2024) Draft Regional Transport Plan Case for Change.

¹⁸⁶ Nomis (2023) *Labour Market Profile – Local Authority*. Available at: <https://www.nomisweb.co.uk/reports/lmp/la/contents.aspx> (Accessed: April 2024).

The new Freeport is anticipated to attract £1bn of investment and create 3,500-13,000 new high salary jobs across the region¹⁸⁷. It is anticipated that the Investment Zone status will encourage further growth and investment in the region, with up to £160 million of support to protect existing skilled jobs and create thousands more¹⁸⁸.

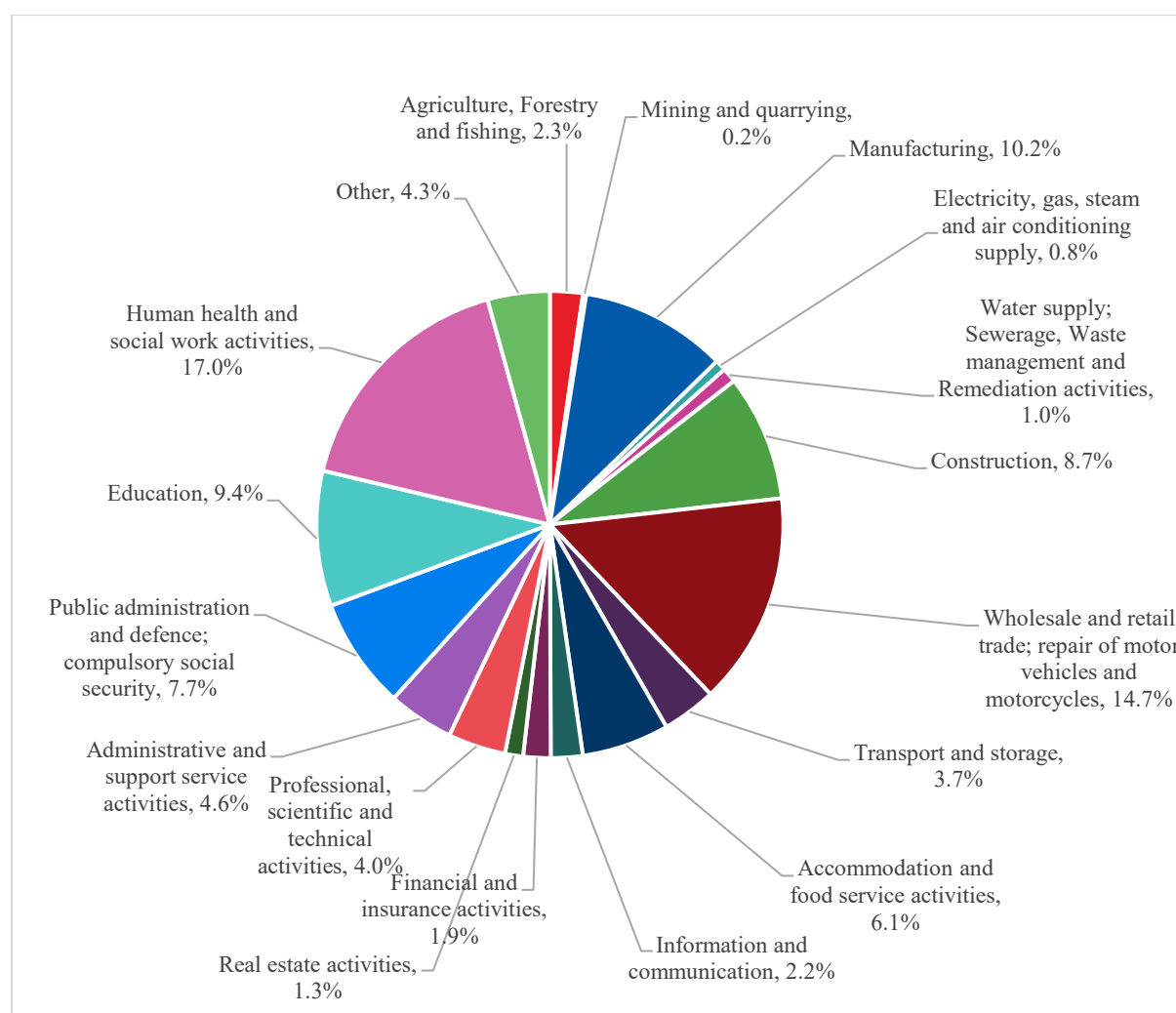


Figure 15-2 NWTP area employment by industry

¹⁸⁷ Isle of Anglesey County Council (2023) *Successful Freeport bid offers North Wales economic boost*. Available at: <https://www.anglesey.gov.wales/en/newsroom/news/successful-freeport-bid-offers-north-wales-economic-boost> (Accessed: April 2024).

¹⁸⁸ Ambition North Wales (2023) *New Wrexham and Flintshire Investment Zone is welcomed by Ambition North Wales*. Available at: <https://ambitionnorth.wales/news/new-wrexham-and-flintshire-investment-zone-is-welcomed-by-ambition-north-wales/> (Accessed: April 2024).

15.2 Gross value added

In 2019, North Wales Gross Value Added (GVA) was valued at £15.4 billion and made up 23% of Wales total GVA¹⁹⁴. GVA per head over the past 10 years is shown on Figure 15-3 below. On average across the NWTP area, GVA has increased by 41.3% since 2012 and in 2022, GVA per head was on average £22,821. This is however less than Welsh average (£23,804) and significantly less than UK average (£33,227). Gwynedd has seen the lowest increase in GVA since 2012 (28.5%) but has the highest GVA of the authority areas in North Wales (£22,206), whereas Isle of Anglesey has seen the greatest increase (56.5%) but has the lowest GVA per head (£19,474). Isle of Anglesey has the 18th lowest GVA per head of all areas of the UK, followed by Conwy and Denbighshire which has the 19th lowest¹⁸².

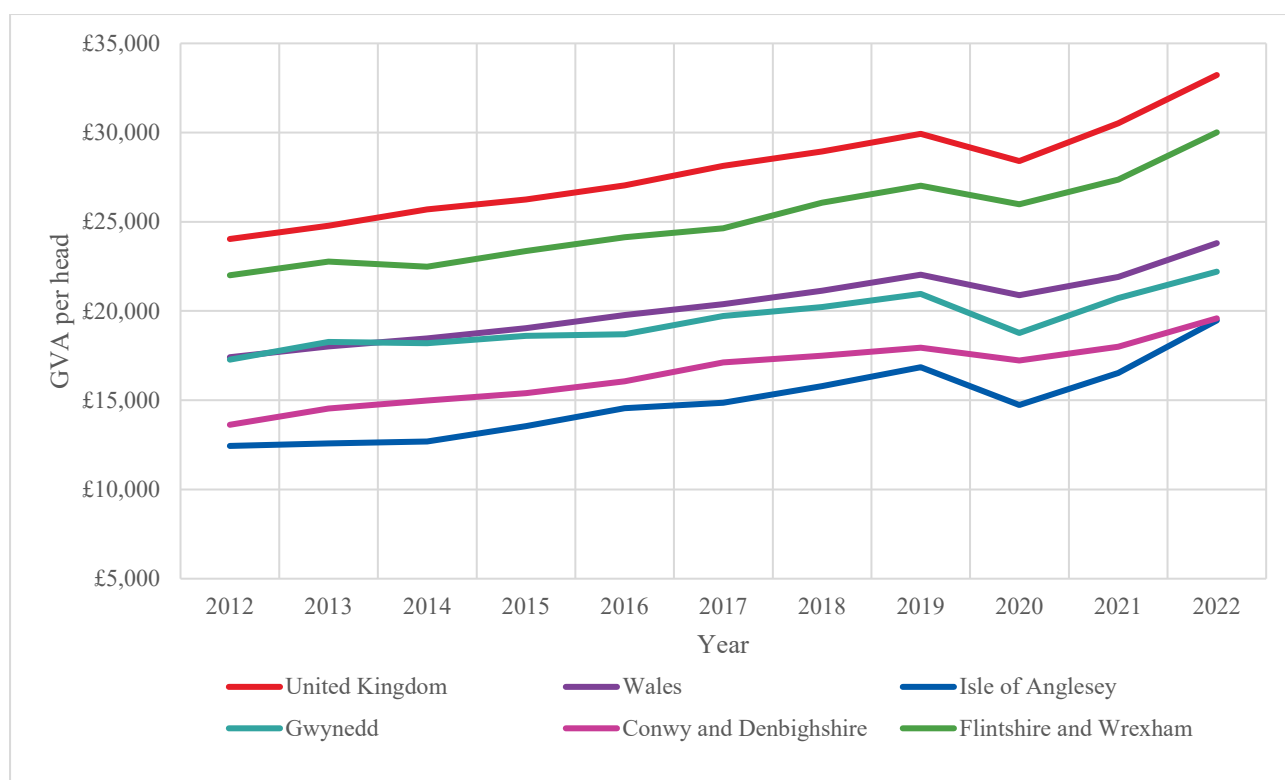


Figure 15-3 GVA per head of population

15.3 Housing

Average house prices in the NWTP area were £199,583 in 2023, over £130,000 less than the Welsh average (£333,000)¹⁸⁹. Highest house prices are found on the Isle of Anglesey (£235,000) and the lowest in Wrexham (£182,000). Housing affordability estimates are calculated by dividing house prices by annual earnings to create a ratio. The housing affordability ratios for the LPA within the NWTP area are shown in Table 15-1 below. Housing ratios for each of the LPAs within the NWTP are higher than the average for Wales in Isle of Anglesey, Gwynedd and Conwy¹⁹⁰. Housing affordability has decreased in Wales over the past 10 years, however in more recent years the housing affordability ratio has decreased from a high of 6.5 in 2021 to 6.2¹⁸⁹.

Table 15-1 Housing affordability ratios¹⁹⁰

Area	Ratio
Isle of Anglesey	7.6
Gwynedd	6.4
Conwy	6.6
Denbighshire	6.0
Flintshire	6.0
Wrexham	5.8
Wales	6.2

Second homes are an issue in North Wales, particularly in the coastal areas of Gwynedd and Anglesey. Gwynedd has the highest percentage of second homes and holiday lets as a percentage of housing stock (10.76%) and Anglesey has the third highest across Wales (8.26%)¹⁹¹. Proportions vary within the community council areas within these local authorities, with Llanfaelog in Anglesey having over a quarter of housing stock as second homes. The other local authorities within the NWTP area have between 0.3% and 3.0% of their housing stock as second homes and holiday lets. The Welsh Government have made a series of changes to help reduce the impact of second holiday homes on local communities, including increasing taxation on holiday homes, launched a grant to help reduce the number of empty homes and introduced new licencing for holiday lets¹⁹¹.

¹⁸⁹ Office for National Statistics (2023) Median house prices for administrative geographies: HPSSA dataset 9. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/medianhousepriceforationalandsubnationalgeographiesquarterlyrollingyearhpssadataset09> (Accessed: April 2024).

¹⁹⁰ Office for National Statistics (2023) *Housing affordability in England and Wales: 2022*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingaffordabilityinenglandandwales/2022n> (Accessed: April 2024).

¹⁹¹ Welsh Government (2021) *Second homes: Developing new policies in Wales*. Available at: <https://www.gov.wales/dwyfor-second-homes-and-affordability-pilot> (Accessed: April 2024).

15.4 Tourism

Tourism plays a key role in the economy of North Wales. In the period 2017-2019 an annual average of 3.7 million overnight domestic trips, 299,000 international visits and 22.7 million day visits were made to North Wales, with an average annual associated spend of £1.47 billion¹⁹². Its proximity to large urban areas in northwest England makes it accessible and attractive for domestic visitors. The annual average for tourism expenditure in North Wales fell by 10% from £1.64 billion in 2016-2018 to £1.47 billion in 2017-2019, this does not account for the impact of COVID-19 from 2020 onwards. It is noted that the COVID-19 pandemic has had an impact on tourism in Wales as well as the rest of the UK and that this sector has still not fully recovered back to pre-pandemic levels¹⁹³.

Over 42,000 people in North Wales are employed in jobs directly related to tourism in North Wales, with the highest proportion of people employed in this sector located in Anglesey, Gwynedd and Conwy¹⁹⁴. Eryri is Wales's largest National Park and a key visitor attraction in North Wales. Of the top 10 paid attractions in Wales, seven were located in North Wales, these were: Bodnant Garden, Caernarfon Castle, Conwy Castle, Great Orme Tramway, Nova Prestatyn, Zip World Fforest, and Zip World Slate Caverns.

15.5 Historic and likely future trends

There has been a decrease in the number of jobs in the region in recent years. In June 2021 there were 315,200 jobs in the North Wales, a decrease of 11,300 on the previous year¹⁹⁴. The North Wales Economic Forum have set out a series of priorities for the area including Skills & Workforce investment in magnets, hubs, supply chains, research and development, innovation and entrepreneurship; balanced support for indigenous and inward investors; foundational economy and a vibrant micro / SME base; connectivity (transport and digital); low carbon energy; and the food and drink industry. This strategy, alongside the new freeport and investment zones will aim to help protect and increase jobs and employment opportunities in the region into the future to create a thriving and resilient economy.

Tourism is recovering from the impacts of the COVID-19 pandemic and will continue to play a key role in the economy of North Wales, however this needs to be managed in a sustainable manner to reduce the impact on North Wales infrastructure and natural assets (such as Eryri National Park) and local communities. Visitor numbers are having an increasing impact on the North Wales landscape and second homes and holiday lets are an ongoing issues in some areas, reducing housing affordability and impact on local industries through seasonal fluctuations.

¹⁹² Welsh Government (2021) *Tourism Profile – North Wales 2017-2019*. Available at: <https://www.gov.wales/sites/default/files/statistics-and-research/2021-03/tourism-profile-north-wales-2017-2019.pdf> (Accessed: April 2024).

¹⁹³ House of Commons (2023) *Wales as a global tourist destination; Fourth Report of Session 2022–23*. Available at: <https://committees.parliament.uk/publications/40824/documents/198909/default/> (Accessed: April 2024).

¹⁹⁴ Welsh Government (2022) *North Wales Regional Economic Forum*. Available at: <https://www.gov.wales/sites/default/files/publications/2023-02/north-wales-regional-economic-framework.pdf> (Accessed: April 2024).



Appendix C

HRA Screening

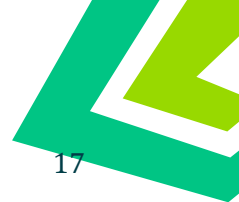


Integrated Well-being Appraisal

Appendix C - Habitats Regulations Screening and Appropriate Assessment

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Executive Summary

This Habitats Regulations Assessment (HRA) screening and Appropriate Assessment (AA) document has been prepared by Arup on behalf of the North Wales Corporate Joint Committee (NWCJC). This report assesses the proposed policies within the Regional Transport Plan (RTP), and potential for effects on internationally important sites as required by Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 (as amended).

The Conservation of Habitats and Species Regulations 2017 state that a HRA must be carried out on all plans and projects that have the potential to impact upon sites designated for supporting habitats or species of international importance, otherwise known as internationally important sites.

This also considers the effects on Ramsar sites which are listed under the Ramsar Convention on Wetlands of International Importance. The RTP addresses current and future local and regional transport issues over the next five years (2025-2030) by providing a framework for decisions on future investment for the region.

There are 61 internationally important sites within the North Wales region, covering approximately 56,000 hectares.

The screening stage provides a high-level assessment to determine whether the RTP could lead to Likely Significant Effects (LSEs) on internationally important sites. The purpose of this stage was to eliminate components of the RTP which would have no conceivable effect on designated sites using the screening assessment categories from David Tyldesley and Associates (DTA) HRA handbook.

Of the 96 policies set out within chapters 4.4 to 4.13, 92 policies can be screened out due to their aspirational nature (category A), general criteria for testing the acceptability of proposals (category B), policies referred to but not proposed by then plan (category C), policies that cannot lead to development or other change (category F) and cannot have any conceivable adverse effect on a site (category G). The remaining four remaining policies (PT8, PF6, PF7 and RS4) are considered to have potential to direct future development such that there could be effects on internationally important sites. These policies were screened in as likely significant effects on a site alone could not be ruled out (category I).

The AA examined the screened in policies to identify potential adverse impacts on the integrity of internationally important sites. Due to the high-level of the RTP and the policies lacking a clear spatial component, potential impacts were not able to be assessed on specific sites and their conservation objectives.

As a result, any effects identified at this point, without a spatial context, should not be viewed as a comprehensive list of all possible impacts. At the strategic level of the RTP, mitigation measures typically involve modifying policy wording. In addition to modifying and strengthening policies, the AA also outlined high-level measures for each policy to avoid or mitigate these impacts to ensure Local Planning Authorities, Strategic Planning Panels and developers must following when preparing lower-tier plans, projects and developments. Future local plan-level or project-level HRAs will need to consider the potential impacts and avoidance, or mitigation measures identified in this HRA.

This will guide their policy development and ensure that mitigation measures are implemented where potential adverse effects are identified.



Adherence to these measures in conjunction with Planning Policy Wales 12, Technical Advice Note 5 provides a comprehensive safeguard. The AA concluded that, provided the avoidance and mitigation measures outlined in the HRA are implemented, there will be no adverse impacts on the integrity of any internationally important sites due to the implementation of the policies in the RTP alone.

The in-combination assessment at this stage is necessarily limited, focussing on predominantly high-level plans and reviews in keeping with high-level nature of the RTP. It is not feasible at this high level to identify a comprehensive list of all plans and projects that may contribute to cumulative effects alongside the RTP.

However, at the lower tier plan level, AAs will provide a transparent understanding of the potential impacts, both individually and in combination with other relevant regional or local plans, on specific internationally important sites and their respective conservation objectives.

The in-combination assessment concludes that assuming the avoidance and mitigation measures outlined in this HRA are implemented, there would be no adverse combined impacts on the integrity of any internationally important sites as a result of implementing the policies set out in the RTP.



1 Introduction

1.1 Purpose of this document

This document has been prepared by Ove Arup and Partners Ltd. (Arup) on behalf of the North Wales Corporate Joint Committee (NWCJC) in relation to the potential for effects on European Sites as required by Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 (as amended¹); hereafter referred to as the 'Habitats Regulations'.

The document informs Stage 1 (Screening) and 2 (Appropriate Assessment (AA)) of the Habitats Regulations Assessment (HRA) process in respect to the proposed policies within the Regional Transport Plan (RTP).

1.2 Ambition North Wales and North Wales Corporate Joint Committee

Corporate Joint Committees (CJCs) are new regional corporate local government organisations with similar powers and duties to local authorities in Wales. Our North Wales Corporate Joint Committee includes representatives from the six councils of Conwy, Denbighshire, Flintshire, Gwynedd, Isle of Anglesey, and Wrexham, as well as Eryri National Park for planning matters.

Our NWCJC has two key duties: to develop an RTP; and a Strategic Development Plan (SDP). These plans are essential for spatial planning at a strategic level, ensuring that our transport infrastructure and land use are aligned with the needs of our communities and the broader region. There is a strong opportunity for a regional approach to development in North Wales, with transport, land use, and economic growth, all intersecting like a well-designed Venn diagram. These components create a cohesive system that aim to ensure that North Wales is well-positioned to provide the skills, employability, and economic opportunities needed for a prosperous future.

Ambition North Wales is a joint committee and decision-making body overseeing the North Wales Growth Deal and will absorb the functions of the NWCJC.

¹ Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.



Figure 1: North Wales Corporate Joint Committee Representatives (With Eryri National Park In Green)

1.3 What is the North Wales Regional Transport Plan

Llwybr Newydd, the Welsh Government's transport strategy, sets out the vision for how transport can help deliver the priorities for Wales, to create a more prosperous, green and equal society. The RTP will help us to address current and future local and regional transport issues over the next 5 years (2025-2030) by providing a framework for decisions on future investment. It sets out how transport can support the delivery of Llwybr Newydd and contribute to the success, regeneration, and development of our region.

The RTP is essential for ensuring that North Wales can contribute to the delivery of national strategies and priorities. The Case for Change, which has been prepared to provide the evidence base in support of this Plan, identifies the links to Welsh Government priorities, considers relevant plans and studies, and outlines the key transport challenges and opportunities that the CJC has sought to address in this Plan. This Plan builds on the extensive work, adopted and emerging, undertaken that links to relevant national and regional strategic plans and policies.

The RTP includes policies that support the vision and ambitions of Llwybr Newydd: The Wales Transport Strategy² and align with the National Transport Delivery Plan³.

The RTP should also be read alongside its [Integrated Well-being Appraisal \(IWBA\)](#), which shows how plans will contribute to well-being, supported by impact assessments undertaken to consider issues such as health, equality, and biodiversity.

This document has been produced in support of the IWBA and its relevant impact assessments.

² [Llwybr Newydd: the Wales transport strategy 2021 | GOV.WALES](#)

³ [National transport delivery plan 2022 to 2027 | GOV.WALES](#)



1.4 Vision and objectives of the Regional Transport Plan

NWCJC have developed a vision statement to help frame the success of the RTP:

“North Wales will have a safe, sustainable, affordable, resilient, and effective integrated transport network that supports economic growth, prosperity for all, inclusivity and well-being.”

- 1) Improve digital connectivity and local services: We will enable 30% or more of people in North Wales to work remotely by 2030 through better land use planning and improved digital connectivity, which should reduce the overall need to travel and enable shorter trips better suited to sustainable modes.
- 2) Improved accessibility and transport choice: We will develop infrastructure and services that provide people with a choice about how they travel for each journey and support sustainable economic growth through improved access to key settlements, employment, educational sites and tourist attractions. The accessibility of each key trip attractor should be improved, supporting the national mode share target of 45% of journeys to be undertaken by walking, cycling and public transport by 2040.
- 3) Enable decarbonisation through transition to a zero-emission fleet: We will develop supporting infrastructure and support incentives to enable at least 50% of motor vehicles and all public buses operating in North Wales to be zero emission by 2035.
- 4) Enable sustainable economic growth: We will develop a resilient, safe, well-maintained, and efficient transport network that delivers sustainable economic growth by improving accessibility to existing and planned employment areas. At least 50% of households in North Wales will have an increased range of travel within one hour by public transport, supporting access to key employment sites and regional centres by 2030.

1.5 Policy themes of the Regional Transport Plan

The vision and objectives are closely aligned to key national and regional policies and strategies, as detailed in the Case for Change, including the priorities and well-being ambitions of Llwybr Newydd, The Wales Transport Strategy. To help frame the policies and interventions as part of this RTP, NWCJC has considered and adapted where appropriate a set of policy themes based on the Wales Transport Strategy's nine mini-plans for each mode of transport. These represent key areas of focus for transport policies, in North Wales. The policies, programmes and projects will set the framework for the schemes to be delivered by our North Wales Local Authorities in the Regional Transport Delivery Plan. This will ensure that what the NWCJC delivering directly contributes to local, regional and national priorities. The policy theme areas include:

- Rail ambitions
- Enabling changes to travel behaviour
- Coach, demand responsive and community transport
- Integration between modes
- Roads, streets and parking
- Digital connectivity
- Strategic road ambitions
- Bus
- Walking, wheeling and cycling
- Ports and freight
- Surface access to aviation
- Land use planning



1.6 Policies and Interventions

A comprehensive review of data, evidence and past and present national, regional and local plans has helped inform a long list of policies and interventions. A collaborative process including stakeholder workshops, impact assessments and focused discussions with local authorities, Transport for Wales and the Welsh Government has helped to agree the policies set out in the RTP.

This screening document considers the policies (which include programmes and projects) set out in the RTP. They are described and considered from Section 6 of this document and are framed around the policy themes outlined above. A full list of the policies and related text can be viewed in Appendix A.

2 Habitats Regulations Assessment Methodology and Guidance

2.1 Background

The Habitats Regulations sets out the stages of assessment which must be undertaken to determine if a development project or plan could significantly harm the designated features of a European site.

As part of the Habitats Regulations 2019 amendment, a National Site Network (NSN) has been created (as UK sites no longer form part of the EU's Natura 2000 ecological network) on land and sea and including inshore and offshore marine areas in the UK. The NSN includes existing Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and new SACs and SPAs designated following the creation of the NSN.

UK Government policy states that proposed SACs, potential SPAs, areas secured as sites compensating for damage to a European site and Wetlands of International Importance designated under the Ramsar Convention (known as Ramsar sites) are afforded the same protection as the NSN in terms of the requirement for HRAs for any plans or projects that may affect them. For the purposes of this document, NSN sites, areas secured as sites compensating for damage to a European site and Ramsar sites are herein referred to as 'internationally important sites'.

The Habitats Regulations state that any plan or project not directly connected with, or necessary to, the management of an internationally important site, but which would be likely to have a significant effect on such a site, either individually or in combination with other plans or projects, must be subject to AA of its implications for the internationally important site in view of its conservation objectives.

2.2 The HRA Process

There are four distinct stages in the HRA process as illustrated in Figure 2 and described below⁴.

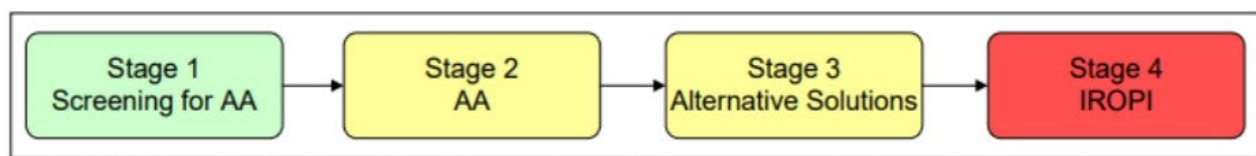


Figure 2: Stages in the HRA process

⁴ Department of Environment, Heritage and Local Government (2009) Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities (2010 Revision).



This HRA report comprises the first and second stages of this process. Providing that it can be demonstrated that there are no likely significant effects, the plan can proceed, and it would not be necessary to consider stages 3 and 4.

Stage 1 – Screening is the process which initially identifies the likely impacts upon an internationally important site of a project or plan, either alone or in-combination with other projects or plans and considers whether these impacts may have a significant effect on the integrity of the site’s qualifying habitats and/or species. There is European Court of Justice case law to the effect that unless the likelihood of a significant effect can be ruled out on the basis of objective information, and adopting the precautionary principle, then an AA must be made.

The April 2018 Court of Justice of the European Union (CJEU) judgement determined that mitigation to avoid or reduce harmful effects of the plan or project on an internationally important site cannot be taken into account at the screening stage (stage 1). Where such measures are required, a plan or project will require AA to be undertaken (stage 2).

Stage 2 – AA is the detailed consideration of the impact on the integrity of the internationally important site of the project or plan, either alone or in-combination with other projects or plans, with respect to the site’s conservation objectives and its structure and function. This is to determine whether or not there will be adverse effects on the integrity of the site. This stage also includes the development of mitigation measures to avoid or reduce any possible impacts.

Stage 3 – Assessment of alternative solutions is the process which examines alternative ways of achieving the objectives of the project or plan that would avoid adverse impacts on the integrity of the internationally important site, should avoidance or mitigation measures be unable to cancel out adverse effects.

Stage 4 – Assessment where no alternative solutions exist and where adverse impacts remain. At Stage 4, an assessment is made with regard to whether or not the development is necessary for imperative reasons of overriding public interest (IROPI). If it is, this stage also involves detailed assessment of the compensatory measures needed to protect and maintain the overall coherence of the network of internationally important sites.

2.3 Pre-Screening Assessment

To support the NWCJC RTP, an initial HRA pre-screening exercise was carried out by Arup to help guide the development of the plan so that negative impacts to internationally important sites are avoided. An HRA pre-screening document was submitted as part of an IWBA Scoping exercise, subject to consultation with Natural Resources Wales and Cadw (in addition to local authorities in North Wales, Welsh Government and Transport for Wales) for five weeks between 15 October and 19 November 2024⁵. The pre-screening assessment has since been updated to a HRA stage 1 screening assessment in this document to consider the updated RTP, as well as comments received from Cadw (Natural Resources for Wales acknowledged the request for an opinion but did not respond to the five-week consultation).

⁵ Arup (2024) North Wales Regional Transport Plan. Habitat Regulation Assessment – Pre-screening Report



2.4 Alignment with Strategic Environmental Assessment / IWBA

The HRA has been completed in parallel with the requirements of the Strategic Environmental Assessment (SEA) process (which is being combined with other statutory assessments for the RTP in the form of an IWBA). Part 3.2(b) of the SEA Directive expressly links to AA.

The outcomes from the HRA pre-screening have also been used to inform HRA screening summaries of each of the shortlisted options being considered for the RTP within the IWBA. These screening summaries would be used to assess the shortlisted options, and performance of the RTP. The HRA pre-screening and options screening summaries will be published alongside the IWBA Report. Therefore, the HRA pre-screening will be the initial deliverable provided in support of the RTP objectives and IWBA report.

The IWBA report will be sent to the competent authorities and public bodies for consultation as per the SEA Directive (as detailed in Section 2.4 of this document), the results of which will be incorporated into the final RTP and detailed within the IWBA post adoption statement. Comments received from statutory bodies will also be integrated into the final version of the HRA. The SEA and HRA consultation process via the IWBA will inform the development of the RTP and any mitigation measures. A public consultation on the draft RTP and its supporting technical documents including the IWBA (with its SEA and HRA appendices) will take place for 12 weeks from 20 January, ending 14 April 2025.

2.5 Guidance

This HRA is has been undertaken with reference to the requirements of the following legislation and guidance:

- The Habitats Regulations Assessment Handbook, David Tyldesley and Associates (DTA) Publications Ltd⁶.
- Tyldesley, D. and Chapman, C. 2018. People Over Wind⁷ – some Implications of the Judgment. The Habitat Regulations Journal, Issue 10, pp. 19 – 23.
- Conservation of Habitats and Species Regulations 2017 (as amended by the EU Exit Regulations 2019)⁸. In 2017, the Conservation of Habitats and Species Regulations 2017 (the “Habitats Regulations 2017”) consolidated and updated the Conservation of Habitats and Species Regulations 2010 (the “Habitats Regulations 2010”). In 2019 these regulations were created to ensure that the habitat and species protection and standards derived from EU law continue to apply after Brexit.
- European Commission, Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC⁹.
- European Commission, Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC¹⁰

⁶ Tyldesley, D. and Chapman, C. (2013) The Habitats Regulations Assessment Handbook. Nov 2019 edition. UK, DTA Publications Ltd <https://www.dtapublications.co.uk/>

⁷ People over Wind, Case C323/17 European Court of Justice, 12th April 2018.

⁸ [The Conservation of Habitats and Species \(Amendment\) \(EU Exit\) Regulations 2019 \(legislation.gov.uk\)](#)

⁹ [Managing Natura 2000 sites — The provisions of Article 6 of the Habitats Directive 92/43/EEC \(europa.eu\)](#)

¹⁰ [Habitats Directive: guidance on the application of article 6\(4\) \(publishing.service.gov.uk\)](#)

- Department for Communities and Local Government (2006), Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents¹¹.

2.6 Identification of Internationally Important Sites

To understand the potential implications for internationally important sites from the RTP it is necessary to identify those sites that are located close to the project or are linked by potential impact pathways, such as hydrological connections. Given the high-level of the RTP, for which policies cover a broad geographical area, this has been restricted to those within or adjacent to the RTP boundary, henceforth referred to as the 'study area'. It is recognised that impacts to internationally important sites can extend well beyond the boundary of a project, and sites that could be impacted beyond this area on a case-by-case basis considering pathways for impact. All internationally important sites, including European Marine Sites, within the study area were identified using Geographic Information System datasets downloaded from the Joint Nature Conservation Committee (JNCC)¹², Multi-Agency Geographic Information for the Countryside (MAGIC)¹³ and Natural Resources Wales (NRW)¹⁴ web portals.

2.7 Stage 1 Screening

The screening stage provides a high-level assessment to determine whether the RTP could lead to significant effects on internationally important sites either alone or in combination with other plans and projects. The RTP is intended to be read as a single document rather than a series of separate policies and has been assessed as such. For instance, proposals/policies in one area of the RTP may mitigate and/or safeguard potentially damaging activities promoted in another area and should be understood in the wider context of the intended outcomes of the plan.

Where possible, every element of the plan has been analysed and screened for likely significant effects and its potential to undermine the conservation objectives for a given designated site. However, the RTP is a high tier plan which solely focuses on addressing transport related issues and challenges on a regional scale. The RTP does not specify particular projects or allocate land for development. Instead, it serves as a framework that will be supported by Strategic Development Plans (SDPs) at the regional level and Local Development Plans (LDPs) at the local authority level. These 'lower tier' plans will offer more detailed information on specific locations and types of infrastructure and development.

Following DTA guidance, to ensure there would be no adverse effect on the integrity of an internationally important site, a plan-making body may only rely on mitigation measures in a lower-tier plan or project level if the following criteria can be met:

- a) That the assessment of a policy can only be deferred down if the policy can be delivered in some shape or form at lower tier plan or project level with no adverse effects on site integrity;
- b) That the AA at plan level should assess policies/proposals as far as is reasonable and meaningful based on the level of detail available;
- c) Where the level of detail is available, the HRA should provide a list of at least the sites that have been taken through to AA, and which therefore are also likely to require assessment in the HRA of lower tier plans and projects (this generally refers to policies with a clear spatial element);
- d) That the AA should provide a list of the potential generic impacts from the policy;

¹¹ Design Manual for Roads and Bridges (DMRB; 2000). Standard LA 115: Habitats Regulations Assessment, Rev 1.

¹² JNCC Website <https://jncc.gov.uk/>

¹³ MAGIC interactive Mapping Application. <http://www.magic.gov.uk/MagicMap.aspx>

¹⁴ Natural Resources Wales Find Protected Areas of Land and Seas <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/designated-sites>



- e) That the AA should provide a list of the generic mitigation measures that ensure that the potential generic impacts (as per the point above) can be avoided, that subsequent lower tier plan and projects can rely on to avoid adverse effects on site integrity (i.e. the mitigation has to be capable of avoiding the adverse effects) – this is necessary in order to provide the confidence that adverse effects can be avoided at lower tier levels;
- f) That it is clearly set out that the conclusion of no adverse effects on site integrity at plan level is based on lower tier plans and projects, having drawn on the generic list of mitigation, undertaking HRA, concluding no adverse effects on site integrity;
- g) That it is clearly set out what the implications are if lower tier plan or project level HRAs cannot rule out adverse effects on site integrity i.e. that the lower tier plan or project will either have to be withdrawn, or amended and re-assessed, or pass the derogations set out under Article 6(4) of the Habitats Directive, namely no alternative solutions, Imperative Reasons of Overriding Public Interest (IROPI) and compensatory measures secured, which the proposal may or may not be able to pass.

Due to the nature of the RTP, it is the lower-tier plans and projects that will provide sufficient detail for a meaningful assessment of the potential impacts on internationally important sites. Consequently, the HRA at this level of the planning hierarchy is necessarily high-level and precautionary.

2.7.1 Criteria for Screening

The screening assessment follows guidance set out in Part F of the DTA HRA Guidance⁶. Each of the policies within the RTP have been reviewed against the following list of screening categories (refer to Table 1). These assessment categories have been specifically designed to identify the different types of policy that could be implemented through high-level planning documents, and to determine whether future actions arising from a policy could lead to development which could in turn affect internationally important site.

Table 1: Screening Assessment Categories (Adapted from Section F.6.3 of the DTA HRA Handbook)⁶

Category	Description	Screening Outcome
A	General statements of policy/general aspirations (screen out). Policies which are no more than general statements of policy or general political aspirations should be screened out because they cannot have a significant effect on a site.	Screen Out
B	Policies listing general criteria for testing the acceptability/sustainability of proposals (screen out). These general policies cannot have any effect on a European site and should be screened out.	Screen Out
C	Proposal referred to but not proposed by the plan (screen out). Screen out any references to specific proposals for projects, such as those which are identified, for example, in higher policy frameworks such as the Wales Spatial Plan or National Policy Statements, relating perhaps to nationally significant infrastructure projects. These will be assessed by the Secretary of State or Welsh Ministers. A useful 'test' as to whether a project should be screened out in this step is to ask the question: 'Is the project provided for/proposed as part of another plan or programme and would it be likely to proceed under the other plan or programme irrespective of whether this subject plan is adopted with or without reference to it?' If the answer is 'yes' it will normally be appropriate to screen the project out in this step.	Screen Out



Category	Description	Screening Outcome
D	General plan-wide environmental protection/site safeguarding / threshold policies (screen out). These are policies, the obvious purpose of which is to protect the natural environment, including biodiversity, or to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any adverse effect on an internationally important site. They can be screened out because the implementation of the policies is likely to protect rather than adversely affect internationally important sites and not undermine their conservation objectives. Depending on the specific proposals however, a HRA may still need to be considered at the project-level, particularly where conflicting priorities are realised.	Screen Out
E	Policies or proposals that steer change in such a way as to protect internationally important sites from adverse effects (screen out). These types of policies or proposals will have the effect of steering change away from internationally important sites whose qualifying features may be affected by the change and they can therefore be screened out.	Screen Out
F	Policies or proposals that cannot lead to development or other change (screen out). Policies that do not themselves lead to development or other change, for example, because they relate to design or other qualitative criteria for development, such as materials for new development. They do not trigger any development or other changes that could affect an internationally important site and can be screened out.	Screen Out
G	Policies or proposals that could not have any conceivable adverse effect on a site (screen out). Policies which make provision for change, but which could have no conceivable effect on an internationally important site, because there is no causal connection or link between them and the qualifying features of any internationally important site and they can therefore be screened out.	Screen Out
H	Policies or proposals the (actual or theoretical) effects of which cannot undermine the conservation objectives (either alone or in-combination with other aspects of this or other plans or projects) (screen out). Policies or proposals which make provision for change, but which could have no significant effect on an internationally important site, either alone or in-combination with other aspects of the same plan, or in-combination with other plans or projects, can be screened out. These may include cases where there are some potential effects which (and theoretically even in-combination) would plainly be insignificant and could not undermine the conservation objectives.	Screen Out
I	Policies or proposals with a likely significant effect on a site alone (screen in). Policies or proposals which are likely to have a significant effect on an internationally important site alone, should be screened in.	Screen In
J	Policies or proposals not likely to have a significant effect alone. These aspects of the plan would have some effect on a site, but the effect would not be likely to be a significant effect; so they must be checked for in-combination (cumulative) effects. They will then be re-categorised as either Category K (no significant effect in-combination screen out) or Category L (likely to have a significant effect in-combination screen in), as explained below.	Check categories K and L
K	Policies or proposals unlikely to have a significant effect either alone or in-combination (screen out after the in-combination test). Those aspects of the plan with no potential for likely significant effect alone or in-combination can be ruled out after the in-combination assessment.	Screened out after the in-combination test
L	Policies or proposals which might be likely to have a significant effect in-combination (screen in after the in-combination test). Those aspects of the plan which would not have a significant effect alone but has been identified as having the potential to impact on internationally important sites in-combination with other plans or projects.	Screen in after the in-combination test



Category	Description	Screening Outcome
M	Bespoke area, site or case specific policies or proposals intended to avoid or reduce harmful effects on internationally important sites (screen in). Policies or proposals which have been included in the plan with the intention of avoiding or reducing effects on specific internationally important sites whose qualifying features may otherwise be affected by the plan being implemented.	Screen in

2.7.2 Precautionary Principle

It is recognised by the UK courts that plan assessments are unlikely to contain the precise and detailed information found at the project application stage, with the extent to which a plan can be assessed depending on the specificity, scope, scale, whether alternatives are still being considered, and its relationship to the overall decision-making framework. As such, the precautionary principle must be applied during the assessment recognising the degree of uncertainty and general nature of these plans.

For these reasons, the ‘precautionary principle’ is applied, which means that likely significant effects (hereafter referred to as ‘LSEs’) must be considered, based on best information available and the precision of the plan. This assessment will therefore need to be updated with increasing specificity to be applied in subsequent stages of the plan.

There is no timescale set out within the Habitats Regulations for undertaking the screening process, to determine whether a plan should be subject to an ‘appropriate assessment’. This must, in accordance with Regulation 105(1), be undertaken ‘before the plan is given effect’.

Assessment of LSE was undertaken for each policy based broadly upon proximity of development areas to internationally important sites and potential pathways for effect. For each policy, consideration was given to how far pathways for effect could exist and still give rise to an LSE, in the absence of any mitigation.

Policies screened out in the initial screening were generally those that could not lead to ‘direct development’ or could have no impact pathway to any internationally important site. This included policies which directly seek to protect the local historic and natural environment, or those which support the implementation of other policies and therefore could not directly affect internationally important site.

The Advocate General’s opinion¹⁰ which informed the judgment of the court acknowledged the difficulties associated with an assessment of the early stages of a plan (such as a pre-deposit proposals paper informing the preparation of a Deposit Plan). In paragraph 49 of her opinion Advocate General Kokott stated that adverse effects:

“...must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure”

Consistently, in the High Court case of Feeney¹¹, in respect of the Oxford City Council Core Strategy in England, the judge said:

“Each appropriate assessment must be commensurate to the relative precision of the plans at any particular stage and no more. There does have to be an appropriate assessment at the Core Strategy stage, but such an assessment cannot do more than the level of detail of the strategy at that stage permits”



It is therefore important, even adopting a precautionary approach, not to assign a 'likely significant effect' to policies and proposals that could not, realistically, have such an effect, because of their general nature. It is important to apply the precautionary principle in the 'likely significant effect test' in the Regulations, but the European Commission in its own guidance on the application of the test¹², accepts that policies in a plan that are no more than general policy statements, or which express the general political will of an authority cannot be likely to have a significant effect on a site. To include such policies or general proposals in a formal 'appropriate assessment' is likely to generate a considerable amount of abortive or unnecessary work. It could even lead to the plan failing the 'integrity test'. Not because, in practice, any policy or proposal might adversely affect the integrity of any European site, but because policies have been 'screened in' which generate no more than theoretical risks, or vague or hypothetical effects, and for which no meaningful assessment can be made at this stage, because no particular significant effect on any particular internationally important site can actually be identified. Such an approach is not believed to be in the interests of the plan or the internationally important sites.

In the Boggis judgment¹³, the Court of Appeal ruled that there should be "*credible evidence that there was a real, rather than a hypothetical, risk*". What the assessment needs to concentrate on are those aspects of the plan that could, realistically, be likely to have a significant effect.

2.7.3 Mitigation Measures

The practical effect of the People Over Wind ruling is that 'mitigation measures' cannot be taken into account in the formal screening decision. Developing mitigation measures will take place as the plan evolves, such that this will be achieved by 'checking, testing and changing the plan'. The consideration of mitigation measures is only applicable as part of any AA that might be required for the plan. Mitigation measures are therefore not considered as part of screening. However, it has been assumed that best practice guidelines would be implemented as part of projects proposed by the plan, including a Construction Environmental Management Plan (CEMP) or similar. This would include the implementation of pollution prevention construction measures and control of invasive species. These measures are considered in the assessment as they are not related to mitigation specifically aimed at alleviating impacts to the sites. Any such, bespoke mitigation that would be required to mitigate significant effects are not considered at this stage, and instead form part of an AA.

2.7.4 In-combination Effects

Where an aspect of a project/plan could have some effect on the qualifying feature(s) of an internationally important site, but the effects of that aspect of the project/plan alone would not be significant, the effects will need to be checked in-combination, firstly with other effects of the same project/plan, and then with the effects of any other plans and projects. Refer to categories J, K and L in Table 1.

If the prospect of cumulative effects cannot be eliminated, it is necessary to consider how the addition of effects from other projects or plans may produce a combined adverse effect on an internationally important site that would be significant.

Taking the effects which would not be likely to be significant alone, it is necessary to make a judgement as to whether these effects would be made more likely or more significant if the effects of other projects or plans are added to them. The following types of plans and projects were considered in the in-combination assessment:

- Applications lodged but not yet determined, including refusals subject to an outstanding appeal or legal challenge;
- Projects subject to periodic review e.g. annual licences, during the time that their renewal is under consideration;
- Projects authorised but not yet started;
- Projects started but not yet completed;

- Known projects that do not require external authorisation;
- Proposals in adopted plans; and
- Proposals in draft plans formally published or submitted for final consultation or adoption.

2.7.5 Stage 2 Appropriate Assessment

High-tier Strategic Plans establish the overarching policy framework that lower-tier plans and projects must follow. Typically, the specific details of development within a plan are not available until after the plan has been adopted. For the RTP, these details will be provided through Strategic Development Plans, Local Development Plans, and other strategic planning documents and projects that emerge during the plan period.

Since the RTP does not specify any particular development allocations or proposals, it is not possible to determine the full range of potential effects on qualifying features or typical habitats/species of internationally important sites at this strategic stage. Consequently, any effects identified at this point, without a spatial context, should not be viewed as a comprehensive list of all possible impacts

In addition to the assessment of the potential for an adverse effect on the integrity of an internationally important site of each of the screened-in policies, the requirement for avoidance / mitigation to ensure such effects would not occur is also included in the assessment. At the strategic level of the RTP, mitigation typically involves modifying policy wording. The various stages of the RTP will facilitate an iterative process, allowing for amendments to policy wording, where necessary and reasonably practicable, to prevent adverse impacts. In addition to modifying and strengthening policies, measures that Local Planning Authorities, Strategic Planning Panels, and developers must follow when preparing lower-tier plans and projects are also included in the AA in Table 15 below. Future local plan-level or project-level HRAs will need to consider the potential impacts and avoidance, or mitigation measures identified in this HRA. This will guide their policy development and ensure that mitigation measures are implemented where potential adverse effects are identified.

2.8 Avoidance / Mitigation Measures

At this high level, specifying the exact details of avoidance or mitigation measures is not feasible. However, the AA outlines the types of measures that Local Planning Authorities, Strategic Planning Panels, and developers must follow to ensure no adverse effect on integrity. It is crucial that this HRA provides high-level policy assurance that future SDPs and LDPs will adhere to the required processes for identifying and assessing potential impacts on internationally important sites when allocating land for development.

Future local plan-level or project-level HRAs will need to consider the potential impacts and the avoidance or mitigation measures identified in this HRA. This will guide their policy development and ensure that mitigation measures are implemented where potential adverse effects are identified. If land allocations and projects, developed as a result of implementing any policies within the RTP, have the potential to adversely impact internationally important sites, these should be withdrawn or amended and re-assessed, or pass the derogations set out under Article 6(4) of the Habitats Directive, namely no alternative solutions, Imperative Reasons of Overriding Public Interest (IROPI), and compensatory measures secured. The RTP does not support any lower-tier plans or projects where adverse effects on internationally important sites cannot be avoided through mitigation and will ensure compliance with Planning Policy Wales 12 (PPW 12) and Technical Advice Note 5: Conservation and Planning (TAN5).



3 Baseline

3.1 Sites within North Wales area

A total of 61 internationally important designated sites were identified within the study area. This includes 7 Ramsar sites, 40 SACs and 14 SPAs. Ramsar sites, SACs, and SPAs cover areas of approximately 8,930 ha, 1,080 ha, and 46,580 ha, respectively. International sites are summarised in Table 2, which are displayed in Figures 4-9 within the respective six local authorities of NWCJC. Appendix B provides a summary of the individual sites and their respective features of designation.

Table 2: Internationally important sites identified within study area

Site name	Representative Local Authority	Site name	Representative Local Authority
Ramsar			
Anglesey and Llyn Fens	Isle of Anglesey, Gwynedd	Midland Meres & Mosses Phase 2 (Wales)	Wrexham
Cors Fochno and Dyfi	Gwynedd	The Dee Estuary (England)	Flintshire, Denbighshire
Llyn Idwal	Gwynedd	The Dee Estuary (Wales)	Flintshire, Denbighshire
Llyn Tegid	Gwynedd		
SACs			
Abermenai to Aberffraw Dunes	Gwynedd, Isle of Anglesey	Glynllifon	Gwynedd
Afon Eden - Cors Goch Trawsfynydd	Gwynedd	Great Orme's Head	Conwy
Afon Gwyrfai a Llyn Cwellyn	Gwynedd	Gwydyr Forest Mines	Conwy
Alyn Valley Woods	Isle of Anglesey	Halkyn Mountain	Flintshire
Anglesey Coast: Saltmarsh	Isle of Anglesey	Holy Island Coast	Isle of Anglesey
Berwyn and South Clwyd Mountains	Gwynedd, Denbighshire, Flintshire, Wrexham	Johnstown Newt Sites	Wrexham
Cadair Idris	Gwynedd	Lleyn Fens	Gwynedd
Cadney Mosses (England)	Wrexham	Lleyn Peninsula and the Sarnau	Gwynedd
Cemlyn Bay	Isle of Anglesey	Llwyn	Denbighshire
Coedydd Aber	Conwy, Gwynedd	Llyn Dinam	Isle of Anglesey
Creuddyn Peninsula Wood	Conwy	Meirionnydd Oakwoods and Bat Sites	Gwynedd
Dee Estuary (England)	Denbighshire, Flintshire	Migneint-Arenig-Dduallt	Conwy, Gwynedd
Dee Estuary (Wales)	Denbighshire, Flintshire	Morfa Harlech a Morfa Dyffryn	Gwynedd



Site name	Representative Local Authority	Site name	Representative Local Authority
Deeside and Buckley Newt sites	Flintshire	North Anglesey Marine	Isle of Anglesey
Dyffryn Alun	Denbighshire, Flintshire	Rhinog	Gwynedd
Dyfrdwy a Llyn Tegid (England)	Denbighshire, Gwynedd, Flintshire, Wrexham	River Dee and Bala Lake	Denbighshire, Gwynedd, Flintshire, Wrexham
Eifionydd Fens	Gwynedd	Seacliffs of Lleyl	Gwynedd
Elwy Valley Woods	Conwy, Denbighshire	Snowdonia	Gwynedd, Conwy
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (Wales)	Wrexham	West Wales Marine	Gwynedd
Glan-traeth	Isle of Anglesey	West Wales Marine	Gwynedd
SPAs			
Aberdaron Coast and Bardsey Island	Gwynedd	Liverpool Bay (Wales)	Conwy, Denbighshire, Isle of Anglesey, Gwynedd, Flintshire
Anglesey Terns	Isle of Anglesey	Migneint-Arenig-Ddualt	Conwy, Gwynedd
Berwyn	Denbighshire, Gwynedd, Wrexham	Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal	Gwynedd
Craig yr Aderyn (Bird's Rock)	Gwynedd	Northern Cardigan Bay	Gwynedd
Dyfi Estuary	Gwynedd	Puffin Island	Isle of Anglesey
Holy Island Coast	Isle of Anglesey	The Dee Estuary (England)	Flintshire, Denbighshire
Lavan Sands, Conway Bay	Conwy, Gwynedd	The Dee Estuary (Wales)	Flintshire, Denbighshire



4 Potential Pathways for Effect

The following section sets out the potential pathways for effects on internationally important sites. Assessing the implications of the policies set out within the RTP on internationally important sites is not only based upon a consideration to the qualifying features within each site, but the distance beyond each site's boundaries over which significant effects could potentially still be experienced.

Broadly, the primary objectives of the RTP are to improve accessibility and transport choice to reduce the need to travel, particularly by private vehicles, and support a modal shift to walking, wheeling, cycling and public transport. Objectively, implementation of the RTP will provide positive environmental outcomes (including positive impacts on internationally important sites) through the reduction of emissions through improvements in air quality, as well as a reduction in non-physical disturbance such as visual, noise and vibration impacts. However, types of potential impact pathways which could result from implementation of the RTP policies are as follows:

- Land-take within an internationally important site (i.e., direct habitat loss);
- Habitat degradation within an internationally important site (i.e., in-direct habitat loss);
- Effects on water quality or quantity;
- Effects as a result of deterioration of air quality;
- Risk of disturbance/displacement to qualifying species of internationally important sites, including within functionally linked land outside sites;
- Risk of mortality (to mobile species); and,
- Severance and fragmentation creating barriers to movement.

Given that a number of these effects can extend well beyond the boundaries of internationally important sites, 'buffer zones' around each internationally important site have been developed. These buffer zones have been established using Wales National Development Framework (NDF) HRA¹⁵ which also adopts a precautionary stance on high-level plans. Detailed consideration of buffers is feasible only when a policy has a clear spatial component. However, the underlying principles can still be broadly applied when assessing the potential impacts of policies. The buffer zones can be viewed in 0.

¹⁵ Arcadis (2020). Wales National Development Framework. Habitat Regulations Assessment. Available from: [national-development-framework-habitats-regulations-assessment_0.pdf](#) [Accessed December 2024]



5 Stage 1 Screening

Chapters 1 and 2 of the RTP listed below are factual and do not in themselves lead to change or development. These sections cannot conceivably have any effects on and are therefore screened out of further assessment (Table 3).

Table 3: Screening of Chapters 1 and 2

Chapter	Section	Screening Justification	Screening Conclusion
1.1	Ambition North Wales and the North Wales Corporate Joint Committee	Introductory text to NWCJC	Screened Out
1.2	Our Regional Transport Plan	Introductory text to RTP	Screened Out
2.1	Our transport network and drivers for change	Contextual information on the main modes of transportation connecting people and places across our NWCJC region.	Screened Out
2.2	Our future needs and aspirations	Contextual information on the key drivers that help frame needs and aspirations for the transport system and network (i.e., acts, strategies, plans, programmes)	Screened Out

Chapter 3 “*A vision for our transport network in North Wales*” comprises the RTP vision and the four supporting objectives to help monitor and evaluate the success, as well as cross-cutting and policy themes. The screening assessment of this chapter (including individual objectives) can be viewed below (Table 4).

Table 4: Screening of Chapter 3

Chapter	Section	Screening Justification	Screening Conclusion
3.1	Vision statement	Vision statement for RTP which considers Case for Change, our existing transport network and future needs and aspirations. This is a general aspiration and would lead to any effects on internationally important sites.	Screened Out (Category A)
3.1	Objective 1: Improve digital connectivity and local services	This objective aims to enable more people in work to remotely by 2030. This is a general aspiration and would lead to any effects on internationally important sites.	Screened Out (Category A)
3.1	Objective 2: Improved accessibility and transport choice	This objective aims to develop infrastructure and services to provide more people with a choice about how they travel. This is a general aspiration and would lead to any effects on internationally important sites.	Screened Out (Category A)
3.1	Objective 3: Enable decarbonisation through transition to a zero-emission fleet	This objective aims to develop supporting infrastructure and support incentives to enable at least 50% of motor vehicles and all public buses operating in North Wales. This is a general aspiration and would lead to any effects on internationally important sites.	Screened Out (Category A)



Chapter	Section	Screening Justification	Screening Conclusion
3.1	Objective 4: Enable sustainable economic growth	This objective aims to develop a resilient, safe, well-maintained, and efficient transport network that delivers sustainable economic growth. This is a general aspiration and would lead to any effects on internationally important sites.	Screened Out (Category A)
3.1	Cross-cutting themes	This section details five cross-cutting themes to help follow through on the wider duties and commitments. This is contextual information and would not lead to any effects on internationally important sites.	Screened Out (Category A)

Chapters 4.1 to 4.3 provide ambitions and aspirational goals for rail and strategic road networks within North Wales and are screened out under Category C. This is because both rail and strategic road networks are non-devolved, meaning that CJC and local authorities in North Wales have no direct influence over rail services or infrastructure, so there are no explicit policies in this plan, or schemes relating to rail in the Regional Transport Delivery Plan (RDTP). Chapter 5 provides contextual information on how the RTP will deliver, monitor and evaluate the plan. This chapter cannot conceivably have any effects on internationally important sites and are therefore screened out of further assessment (Table 5).

Table 5: Screening of Chapters 4.1-4.3 and 5.

Chapter	Section	Screening Justification	Screening Conclusion
4.1	Rail ambitions	Regional aspirations for rail which are key to supporting the wider aspirations for improved connectivity across North Wales and beyond. The plan is not proposing changes/development, but instead setting out aspirations for others to act on, and thus would not lead to any effects on internationally important sites.	Screened out (Category C)
4.2	Strategic road network	Policy ambition and strategic road network aspirations including highway maintenance programmes, capacity and safety improvement projects across and connecting North Wales. The plan is not proposing changes/development, but instead setting out aspirations for others to act on, and thus would not lead to any effects on internationally important sites.	Screened out (Category C)
5	Our plans for delivery, monitoring and evaluation	This chapter provides detail on how the RTP will deliver, monitor and evaluate the plan. This is contextual information and would lead to any effects on internationally important sites.	Screened Out (Category C)



Chapters 4.4 -4.13 contain individual policies attached to a policy theme, which have been individually screened and can be viewed in their respective tables below. All policies and their associated focus area and description of the policy can be viewed in Appendix A.

4.4 – Enabling changes to travel behaviour: Table 6

4.5 – Bus: Table 7

4.6 – Coach, demand responsive and community transport: Table 8

4.7 – Walking, wheeling and cycling: Table 9

4.8 – Integration between modes: Table 10

4.9 – Ports and freight: Table 11

4.10 – Roads, streets and parking: Table 12

4.11 – Surface access to aviation: Table 13


4.12 – Digital connectivity: Table 14

4.13 – Land use planning: Table 15



Table 6: Section 4.4 – Enabling Changes to Travel Behaviour


Focus area	Policy No.	Policy	Justification and conclusion	Screening Outcome
Providing people with choices about how they travel to work	CB1	Further enhancements to public transport services and active travel routes that provide access to large employment sites will be identified and progressed where funding is available. Enhancements should consider shift work patterns, seasonal working patterns, and where the biggest impact can be delivered.	This policy sets out to identify and progress further enhancement to public transport services and active travel routes to large employment sites where funding is available to improve the public and active travel network and reduce deprivation Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB2	A partnership approach will be taken to identify and progress schemes and initiatives that encourage sustainable travel to work at employment sites close to the border such as Deeside Industrial Park, Wrexham Industrial Estate, Airbus Broughton, Chester Business Park, and Wrexham and Chester city centres	This policy sets out to identify and progress schemes that encourage sustainable travel to work at employment sites close to the border, such as Deeside Industrial Park, Wrexham and Chester city centres, Airbus Broughton, Chester Business Park, and Wrexham Industrial Estate which will reduce number of people that commute to these locations by car, reducing the impact of congestion and delays on longer distance trips on the highway network and having positive environmental impacts. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB3	The Corporate Joint Committee will work with neighbouring Local and Combined Authorities including Cheshire West and Chester and the Liverpool City Region to ensure a complementary approach to Transport Planning, particularly in the Mersey-Dee Sub-Region. This should consider both commuting trips and freight movement.	This policy aims to work with local and combined authorities to ensure a complementary approach to transport planning to ensure commuters making these journeys have a choice about how they travel to work, both to reduce car use, and to ensure that more employment opportunities are accessible for communities. This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A) .	A
	CB4	Commuters to the Flintshire and Wrexham Investment Zone should be able to access jobs using high quality walking and cycling infrastructure, enhanced nearby rail stations, or bus services that are attractive and reflect the working patterns of employers in the Investment Zone	This policy aims to ensure commuters of Flintshire and Wrexham Investment Zone should have access to jobs using a variety of sustainable transport methods, such as walking, cycling, rail and bus services. This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A) .	A
	CB5	Where possible, opportunities will be sought to use Investment Zone funding for sustainable transport schemes that improve access to employment and support the delivery and success of the Investment Zone.	This policy sets out to seek opportunities for sustainable transport schemes to improve access to Investment Zones. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F




Focus area	Policy No.	Policy	Justification and conclusion	Screening Outcome
	CB6	A partnership approach will be taken to identify and progress schemes and smarter choices initiatives that facilitate a more sustainable commute to employment sites in Gwynedd and Ynys Mon.	<p>This policy aims to identify and progress schemes and initiatives that facilitate a more sustainable commute to employment sites in Gwynedd and Ynys Mon using a partnership approach between local authorities on both sides of the Menai, Transport for Wales, private operators, and large employers.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	CB7	The creation of Strategic Transport Partnerships will be investigated at large employment localities.	<p>This policy sets out to investigate a strategic transport partnership at large employment location to identify the measures that can be put in place to reduce car use for commuting at key employment areas and clusters.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Providing people with choices about how they access services	CB8	Priority will be given to funding schemes and services that improve sustainable access to crucial and life-enhancing services such as education, health care, town centres, and community facilities. Once in place, any infrastructure that supports access to these services should be prioritised for maintenance when necessary.	<p>This policy aims to prioritise funding schemes and services that improve sustainable access to important life-enhancing services to give residents and visitors a choice about how they travel to essential services such education, healthcare, shops, etc.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	CB9	The introduction of a Total Services Contract in one local authority area in North Wales will be investigated, with a view to wider roll-out across the region should it be successful.	<p>This policy sets out to investigate the introduction of a Total Services Contract in one local authority area which would involve a contract that combines all of these services to provide a better service to the public and to reduce duplication of resources.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Providing people with choices about how they access education	CB10	Further enhancements to public transport services and active travel routes that provide access to education establishments will be identified and progressed where funding is available. This includes: Higher Education sites (universities in Bangor and Wrexham, but also those in Northwest England); Further Education sites (including Grwp Llandrillo Menai and Coleg Cambria); Secondary Schools; and Primary Schools.	<p>This policy aims to identify and progress further enhancement to public transport services and active routes that provide access to educational establishments to encourage a long-term mindset of choosing active travel for suitable journeys.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F



Focus area	Policy No.	Policy	Justification and conclusion	Screening Outcome
	CB11	Local authorities should expand their work with schools and parents to encourage and support sustainable travel for children, parents and staff.	<p>This policy emphasises the need for local authority to collaborate with schools and parents to encourage and support sustainable travel for children, parents and staff.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A).</p>	A
	CB12	Local authorities will continue to use local datasets and policies such as Learner Travel Measure to prioritise routes to school for safety enhancements	<p>This policy sets out to ensure local authorities continue to use local datasets and policies to prioritise routes to school, to encourage young people and their parents to choose active travel for their journey to school by providing suitable information and infrastructure is in place to allow them to travel safely and sustainably.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Providing people with choices in rural and semi-urban areas	CB13	<p>Opportunities will be sought to deliver the socially necessary transport improvements that prevent rural isolation. This should prioritise better connecting rural communities to:</p> <ul style="list-style-type: none"> • Neighbouring communities • Nearby towns • Nearby community facilities and key services such as health, shops, education; and, transport interchanges for further travel 	<p>This policy sets out to deliver the socially necessary transport improvements to rural isolation, providing connections that can prevent feelings of isolation, and in turn allow residents to safely access the services they need.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A).</p>	A
Providing people with information to make more sustainable travel choices	CB14	Marketing and Communications campaigns will be developed that are meaningful and focus on raising awareness of the benefits of sustainable travel. Campaigns will use innovative techniques to target the right audience, particularly those groups that can be harder to reach. A regional approach should be taken to this where appropriate.	<p>This policy aims to develop marketing and communication campaigns that focus on raising awareness of sustainable travel and its benefits that allow people to make sustainable travel choices.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Helping people enjoy our visitor attractions and supporting the tourism industry	CB15	The Corporate Joint Committee will work with partners and stakeholders in the tourist sector to investigate methods for encouraging visitors to North Wales to travel sustainably whilst also enhancing the visitor experience and boosting the visitor economy.	<p>This policy sets out to work with partners and stakeholders to investigate methods of encouraging visitors to North Wales using sustainable means of travel by providing opportunities to incentivise the use of sustainable modes to access attractions and make our visitor destinations accessible for all groups of people.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F




Focus area	Policy No.	Policy	Justification and conclusion	Screening Outcome
	CB16	Opportunities will be sought to support the visitor economy through management of coach and motorhome parking close to attractors in North Wales. This should consider charging opportunities for zero emission vehicles.	This policy aims to seek opportunities to support the visitor economy through management of coach and motorhome parking close to attraction sites in North Wales. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB17	Opportunities will be sought to make Sherpa'r Wyddfa bus services permanent, with long term funding; and investigating how services can be integrated further with the wider bus and railway networks.	This policy aims to seek opportunities to ensure the Sherpa'r Wyddfa services are permanent, in addition to also investigating how to integrate the service with wider bus and railway networks. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB18	Through partnership working, further improvements will be introduced to encourage visitors to Eryri to travel by means other than the car. These will include enhancement of alternatives, management of facilities, and improved information and education. These could be funded by innovative sources of funding.	This policy aims to introduce further improvements to encourage visitors of Eryri to travel more sustainably through alternatives such as management of facilities, improved information and education. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB19	The Strategic Development Plan will consider land requirements for interchange facilities at gateway sites to Eryri National Park	This policy sets out to consider the land requirements within the Strategic Development Plan for interchange facilities at gateway sites to Eryri National Park within the Strategic Development Plan. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB20	Innovative solutions to providing access to attractions in rural areas will be identified. This should consider, but not be limited to, seasonal bus services, e-bike and other micro-mobility hire, alongside information campaigns.	This policy aims to identify solutions to provide access to attractions in rural areas. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB21	Investigation will be undertaken into the benefits of seasonal and tourist bus services in North Wales to support the visitor economy and promote integration with wider rail and bus networks. This should consider not just the journey to the resort, but onward travel to attractions.	This policy aims to investigate the benefits of seasonal and tourist bus services in North Wales to support the visitor economy and promote integration with wider rail and bus networks. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F



Focus area	Policy No.	Policy	Justification and conclusion	Screening Outcome
	CB22	The Corporate Joint Committee will work with partners and stakeholders in the tourist industry on the coast to identify measures that will support a shift to sustainable modes to access popular attractions whilst continuing to ensure that North Wales remains a destination of choice for holidays and daytrips.	The policy aims to work with partners and stakeholders to identify measures that will support a shift in sustainable modes to popular attractions. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	CB23	A partnership approach will be taken to develop a plan for further improvement to rail services in North Wales that better supports the visitor economy	This policy sets out to develop a plan for further improvement to rail services in North Wales using a partnership approach to bolster the visitor economy. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F

Table 7: Section 4.5 – Bus

Focus area	Policy No.	Policy	Justification and conclusions	Screening Outcome
Bus franchising	PT1	The Corporate Joint Committee and partners will work with TfW and Welsh Government to support the roll-out of bus franchising in North Wales, which should include multi-year funding that would provide certainty for the travelling public, authorities, and operators.	This policy involves a joint partnership approach to roll-out bus franchising in North Wales. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
Decarbonising the bus fleet	PT2	All new buses introduced in North Wales should be Zero Emission. Where new buses are a long term improvement, opportunity should be sought to re-power the existing fleet.	This policy sets out to ensure new buses introduced in North Wales should be zero emissions. This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A) .	A
	PT3	The Corporate Joint Committee will work with partners to seek opportunities to complement the development of hydrogen hubs in North Wales by exploring the introduction of a hydrogen bus fleet.	This policy aims to work with partners to seek opportunities to complement the development of hydrogen hubs in North Wales with the introduction of a hydrogen bus fleet. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F



Focus area	Policy No.	Policy	Justification and conclusions	Screening Outcome
Bus transformation network	PT4	The Bus Service Transformation Network will be rolled out in North Wales. This will include a core network of services between and within major settlements and employment sites with a frequency of two to four buses an hour extending into the evenings.	This policy aims to roll out the Bus Transformation Network in North Wales, which will include core network of services between and within major settlements and employment sites. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	PT5	Future bus services in North Wales will: <ul style="list-style-type: none"> • have a high frequency and long operating hours • have consistent/regular departure times • have Sunday timetables as close as possible to weekday frequency to support commuting, leisure and visitor economy demand • be coordinated to provide a well-spaced timetable • minimise journey times between the origins and destinations with the most demand • take direct routes that remain the same throughout the day • be routed via transport interchanges and railway stations • be integrated with local bus services and dynamic demand responsive transport • be comfortable for long journeys 	This policy aims to ensure future bus services in North Wales will meet a set criteria including greater frequency and longer operating hours, using the most direct routes and integrated with local bus services. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
Improving bus infrastructure	PT6	A partnership approach involving local highway authorities, NMWTRA and TfW will be taken to identifying and implementing bus priority measures that support the roll out of the bus transformation network in North Wales. This may include the re-allocation of road space.	This policy aims to identify and implement bus priority measures to support the roll-out of the bus transformation network in North Wales, including the re-allocation of road space. Implementing the policy itself would not lead to development outside the existing network and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	PT7	All bus stop waiting facilities will be well maintained as far as this can be achieved through local authority revenue budgets	This policy aims to maintain bus stop waiting facilities through local authority revenue budgets. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F

Focus area	Policy No.	Policy	Justification and conclusions	Screening Outcome
	PT8	<p>Key bus stops, such as those in village centres, those with high usage, and those where interchange between modes or services is common, will be prioritised for enhancement to include:</p> <ul style="list-style-type: none"> • Dropped kerbs to access the stop • Raised kerbs to aid boarding • Lighting, or nearby street lighting • Shelters • Seating • Real time information and onward connection information • Cycle storage 	<p>This policy aims to prioritise enhancements to key bus stops with high usage, and those where interchange between modes or services is common. Although the majority of the enhancement works are likely to take place within village centres and areas with high usage and therefore unlikely to overlap with internationally important sites, there is the potential for enhancements projects (i.e., implementation of lighting) to impact internationally important sites, especially those located in coastal or more rural locations. This policy may have a significant effect on a site alone and is therefore Screened In (Category I).</p> <p>The potential implications for internationally important sites as a result of this policy are provided in more detail in the AA.</p>	I
Making bus travel easier	PT9	The Corporate Joint Committee supports Welsh Government's Vision of 'One Network, One Timetable, One Ticket' for a bus system which is governed and designed to serve the public interest, with the widest possible geographic coverage, fully integrated connections between different services, the highest possible service frequencies, and simple unified easy-to-use ticketing and information.	<p>This policy supports the Welsh Government's Vision of 'One Network, One Timetable, One Ticket' for a bus system which is governed and designed to serve the public interest, with the widest possible geographic coverage.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A).</p>	A
	PT10	<p>The Corporate Joint Committee will work with partners including local authorities and operators to make bus travel more accessible for people with restricted mobility or disabilities. Improvements should draw from best practice across the world but should include:</p> <ul style="list-style-type: none"> • Dropped kerbs to access the stop • Raised kerbs to aid boarding • Shelters and Seating at stops • On-board Audio-Visual announcements • Information in accessible formats 	<p>This policy involves working with partners and local authorities and operators to make bus travel more accessible for people with restricted mobility or disabilities.</p> <p>The policy which makes provision for change, but which could have no conceivable effect on an internationally important site give the small-scale nature of the works and is Screened Out (Category G).</p>	G




Table 8: Section 4.6 – Coach, demand responsive and community transport

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Fflecsi and Ring and Ride services	PT11	Successful pilot Fflecsi services should be made permanent, and additional Fflecsi services should be designed with local community involvement and rolled out in other areas in line with bus transformation network proposals	<p>This policy seeks to make successful pilot Fflecsi services permanent and to be designed with local community involvement and rolled out in other areas in line with bus transformation network proposals.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	PT12	The Corporate Joint Committee, local authorities and TfW will collaborate with communities, particularly in rural areas, to help fund and deliver community transport services that meet otherwise unmet needs.	<p>This policy aims to collaborate with local authorities and TfW to help fund and deliver community transport services.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Taxis	PT13	We will work with taxi and private hire vehicle providers to promote safety for passengers and drivers and help increase the availability of low emissions or non-motorised vehicles	<p>This policy aims to work with taxi and private hire vehicles to promote safety and increase availability of low emission or non-motorised vehicles.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Longer distance coach services	PT14	Where funding is available, opportunities will be taken to progress longer distance coach travel, both to connect North Wales and South Wales, and also east-west to connect with economic centres in England.	<p>This policy aims to seek opportunities to progress longer distance coach travel to connect North Wales and South Wales, as well as east-west to connect with economic centres in England.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Community involvement in rail	PT15	The Corporate Joint Committee is supportive of community groups who aim to enhance the rail travel experience for existing and new passengers	<p>This policy supports community groups who aim to enhance the rail travel experience of new and existing passengers.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A).</p>	F




Table 9: Section 4.7 Walking, wheeling and cycling

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Further improving active travel infrastructure	AT1	The quality and extent of infrastructure that is provided for walking, cycling and wheeling in North Wales will continue to be improved in line with the Active Travel Network Map. These could be new or upgraded existing facilities and may include the re-allocation of road space to prioritise sustainable modes.	This policy strives to improve quality and extent of infrastructure for walking, cycling and wheeling in North Wales using new or upgraded existing facilities and may include the re-allocation of road space to encourage more people to walk, cycle, or use other active modes can have wide-reaching benefits for our communities, such as increasing town centre viability, placemaking and improving health and well-being. This policy responds to the Active Travel (Wales) Act 2013 which places a legal duty upon local councils in Wales to map, plan for and promote more walking and cycling for everyday journeys. This policy is also referred to within higher policy frameworks such as the Llwybr Newydd - The Wales Transport Strategy 2021 and Future Wales: the National Plan 2040, both of which have been subject to a HRA. The Active Travel Network Maps (ATNMs) are also connected to the local statutory documents such as the councils' Local Development Plans. Since the development of the active travel routes within North Wales has already been progressed within Local Development Plans and are likely to continue irrespective of whether this policy is adopted, this proposal has been Screened Out (Category C) .	C
	AT2	In non-rural areas, priority will be given to upgrading active travel infrastructure where there is greatest potential for maximising use of the network.	This policy prioritises upgrading active travel infrastructure where there is greatest potential for maximising use of the network to ensure residents and visitors in North Wales are encouraged to rely less on cars, especially for short trips. For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C) .	C
	AT3	Where possible, walking and cycling infrastructure should be accessible for all people, including those with mobility impairments, people in wheelchairs, and people pushing prams.	This policy aims to make walking and cycling infrastructure through more well-designed public spaces taking a place-based approach, that consider the needs of the whole community, including those with mobility impairments, people in wheelchairs and people pushing prams. This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A) .	A
Making active travel more attractive in rural areas	AT4	In rural areas, active travel infrastructure improvement will focus on the community benefit of schemes; improving safety and routes that connect smaller communities with larger settlements and services.	This policy prioritises upgrading active travel infrastructure where there is greatest potential for maximising use of the network in rural areas by improving links between communities and services. For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C) .	C
	AT5	Where there is an active travel benefit, routes forming part of the Rights of Way network will be improved to a standard suitable for everyday active travel journeys.	This policy aims to improve Rights of Way network to a standard suitable for everyday active travel which will play a key role in supporting people to travel more sustainably. For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C) .	C




Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
	AT6	The introduction of Quiet Lanes in North Wales in line with national guidance will be investigated.	<p>This policy aims to investigate Quiet Lanes in North Wales to enable walkers, cyclists, horse riders and people with mobility impairments to enjoy country lanes in safety by encouraging slower traffic speeds and lower traffic volumes.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Leadership and funding	AT7	The Corporate Joint Committee will work with partners to investigate the establishment of a North Wales Active Travel Unit	<p>This policy aims to work with partners to investigate the establishment of a North Wales Active Travel Unit which would facilitate joint working and streamline the delivery of active travel schemes, share expertise and best practice, and better coordinate the resourcing of multi-year delivery and funding programmes.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	AT8	The Corporate Joint Committee support multi-year funding agreements for active travel infrastructure that would facilitate the development and delivery of a multi-year programme of improvements.	<p>This policy supports multi-year funding agreements for active travel infrastructure.</p> <p>For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C).</p>	A
	AT9	The Corporate Joint Committee support changes to active travel funding criteria that would place more emphasis on schemes in rural areas and in residential areas.	<p>This policy supports changes to active travel funding criteria.</p> <p>For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C).</p>	A
	AT10	The Corporate Joint Committee will investigate funding streams additional to the Active Travel Fund that support the delivery of active travel infrastructure improvements in rural area.	<p>This policy aims to investigate funding streams that support the delivery of active travel infrastructure improvements</p> <p>For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C).</p>	F
	AT11	The Corporate Joint Committee will work with partners to develop templates and tool kits to support local communities to develop and implement their own projects where government plays a facilitating and supporting rather than doing or delivering role.	<p>This policy sets out to work with partners to develop templates and tool kits to support local communities which could allow communities to influence in creating and enhancing local routes should they be empowered to do so.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F



Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Cycle hire, e-bikes and e-scooters	AT12	The Corporate Joint Committee will work with partners including the community and voluntary sectors to support community cycle and e-cycle hire schemes that support access to employment or education.	This policy aims to work with partners to support community cycle and e-cycle hire schemes that support access to employment or education to making cycling available to people who do not own a bike, who are considering cycling more frequently or who are visiting an area. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	AT13	The Corporate Joint Committee will work with partners including the commercial sector to introduce a public cycle and e-cycle hire scheme at large transport interchanges or other suitable locations, and at locations where such a scheme supports the visitor economy.	This policy aims to work with partners to introduce public cycle and e-cycle hire scheme at large transport interchanges or other suitable locations. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	AT14	The Corporate Joint Committee will work with partners to develop methods to increase e-cycle ownership, including loan and grant schemes.	This policy aims to work with partners to develop methods to increase e-cycle ownership. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F

Table 10: Section 4.8 – Integration between modes

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Mobility hubs and gateway stations	IN1	The Corporate Joint Committee supports the development and roll-out of Mobility Hubs and Gateway Stations to make it easier to change between sustainable transport modes on a journey.	This policy supports the development and roll-out of Mobility Hubs and Gateway Stations which will create a high-quality welcome to visitors to a town or city, but also make it easier for local people and visitors to change between modes by providing improved connectivity between modes of transport. This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category F) .	A
	IN2	Placemaking and wayfinding at stations and key bus stops will be improved. This should consider onward links to key attractors and be undertaken in consultation with local and community organisations, including groups representing communities with protected characteristics.	This policy aims to improve placemaking and wayfinding at stations which are key contributors to enhancing sustainable transport for people. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F




Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
	IN3	Active Travel Infrastructure improvements identified on Station Network Plans will be delivered, and Station Network Plans will be developed for those stations that do not currently have one.	<p>This policy sets out to deliver active travel infrastructure improvements identified on Station Network Plans which have been produced by local authorities and Transport for Wales which make walking, cycling and wheeling to stations easier and more attractive.</p> <p>Station Network Plans are connected to local statutory documents such as the council's local development plans and will coincide with ATNMs in-line with the Active Travel (Wales) Act 2013. For the same reasons as outlined above with respect to policy AT1, this proposal has been Screened Out (Category C)</p>	C
Improving bus and rail integration	IN4	The Corporate Joint Committee will support the roll-out of integrated ticketing across transport modes that provides best value for passengers.	<p>This policy supports the roll-out of integrated ticketing across transport modes which will simplify travel by allowing passengers to hop on and off buses without worrying about multiple tickets or fares.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Park and ride, and park and share	IN5	Any new park and ride schemes should first seek to encourage the whole journey to be undertaken by sustainable means, should be sited to reduce private vehicle mileage, and to be located at a place that can be served by public transport services with minimal impact.	<p>This policy encourages new park and ride schemes to be undertaken by sustainable means for the entire journey and should be sited to reduce private vehicle mileage in order to intercept car trips in a manner that supports reducing congestion and minimising the impacts of parking at key destinations such as shopping centres, whilst reducing car mileage.</p> <p>This policy is designed to test proposals in the plan, or which may be submitted later, for their general acceptability and is therefore Screened Out (Category B).</p>	B
	IN6	Consideration for strategic park and share sites should be included in the Strategic Development Plan.	<p>This policy encourages the land use requirements of strategic park and share sites to be included in the Strategic Development Plan.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F



Table 11: Section 4.9 – Ports and freights

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Ports	PF1	The Corporate Joint Committee will work with partners to support the growth of our ports and nearby development sites in North Wales, recognising their role as a catalyst for co-location of manufacturing, energy, leisure distribution and tourism. In particular we will prioritise sustainable transport connections to the Anglesey Freeport and ports at Holyhead and Mostyn and support their plans for decarbonisation.	<p>This policy aims to work with partners to supports the growth of ports and nearby development sites in North Wales, as well as further strengthening the economy and creating jobs for local people.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category F).</p>	A
	PF2	The Corporate Joint Committee will work with partners to identify vehicle access improvements at Holyhead Port. This should improve access to the port for all vehicles, including freight, but also improve sustainable access to both the port and rail station.	<p>This policy aims to work with partners to identify vehicle access improvements at Holyhead Port to increase opportunities for workers and visitors to get around more sustainably, whilst giving businesses more certainty about their operations and deliveries.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Road freight	PF3	The Corporate Joint Committee will work with partners to enhance facilities for HGV drivers, particularly on the approach to Holyhead port.	<p>This policy sets out to work with partners to enhance existing facilities for HGV drivers in North Wales, particularly close to Holyhead where incidents and ferries or Meani crossings can result in extended wait times for large number of HGVs.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Low emission HGVs	PF4	The Corporate Joint Committee will work with partners to seek opportunities to complement the development of hydrogen hubs in North Wales by supporting a shift to hydrogen fuels for freight operators in the region.	<p>This policy aims to work with partners to seek opportunities to complement the development of hydrogen hubs in North Wales by supporting hauliers to make the switch to hydrogen, which would reduce the local impact of HGVs in North Wales.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Local deliveries	PF5	The Corporate Joint Committee will work with partners to identify opportunities for the electrification of vehicles for local deliveries.	<p>This policy aims to work with partners to identify opportunities for the electrification of local delivery vehicles which will reduce the impacts of local deliveries on our climate, benefit air quality and reduce noise pollution.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F




Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
	PF6	The Corporate Joint Committee will work with partners to identify solutions to the local impacts of HGV movements. This includes the development of a network of freight consolidation centre should it be demonstrated that one serving North Wales is economically viable.	<p>This policy aims to work with partners to identify solutions to the local impacts of HGV movements, such as the development of freight consolidation centres which should reduce congestion and levels of HGV traffic in the town centre. In the event where consolidation centres are considered economically viable within North Wales, freight consolidation centres are likely to be situated close to town centres, shopping centres or construction sites and unlikely to impact internationally designated sites. However, there is the potential for consolidation centres to impact important sites, especially those located in coastal or more rural locations. Therefore, this policy may have a significant effect on a site alone and is therefore Screened In (Category I).</p> <p>The potential implications for internationally important sites as a result of this policy are provided in more detail in the AA.</p>	I
	PF7	The Strategic Development Plan should consider land requirements for a network of freight consolidation centres.	<p>This policy encourages the land requirements for a network of freight consolidation centres, which could help reduce local impacts of HGV movements to be considered within the Strategic Development Plan. For the same reasons as outlined above with respect to policy PF6, this policy may have a significant effect on a site alone and is therefore Screened In (Category I).</p> <p>The potential implications for internationally important sites as a result of this policy are provided in more detail in the AA.</p>	I
	PF8	The Corporate Joint Committee will work with partners and the distribution sector to identify innovative solutions to reducing the environmental impact of local deliveries.	<p>This policy aims to work with partners and distribution sector to identify innovative solutions such as micro-consolidation areas and provision of e-cargo bikes to reduce the environmental impact of local deliveries.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Rail freight	PF9	The Corporate Joint Committee will work with partners in the rail industry to support a shift to rail for freight movement, including rail based light logistics.	<p>This policy aims to work with partners in the rail industry to support a shift to rail for freight movements using the rail ambition as a facilitator for increased freight movement.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F




Table 12: Section 4.10 – Roads, streets and parking

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Maintenance	RS1	The Corporate Joint Committee will work with partners to secure adequate funding for surfacing and structure maintenance that ensures the ongoing operation and resilience of existing highway assets.	<p>This policy aims to work with partners to secure adequate funding to ensure the resilience of the local highway network is maintained to a good standard, recognising local authority budget constraints.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	RS2	The Corporate Joint Committee will work with partners to secure funding to adapt the existing road infrastructure to better cope with climate change and enhancing biodiversity.	<p>This policy aims to work with partners to secure funding to adapt the existing road infrastructure to better cope with climate change and enhancing biodiversity, ensuring local highway authorities are sufficiently resourced to respond to the challenges of climate change and flood risk from extreme weather events, which requires ongoing drainage maintenance and improvements.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Road safety	RS3	The Corporate Joint Committee is supportive of Welsh Government's Vision Zero approach to road safety and will work with partners to secure adequate funding for road safety measures across North Wales	<p>This policy supports the Welsh Government's Vision Zero approach to road safety which has the long-term goal for a road traffic system, which is eventually free from death and serious injury, based on a guiding 'moral' principle to treat road deaths as unacceptable and avoidable, rather than accidents which we should tolerate.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A).</p>	A
	RS4	The approach to road safety will include delivery of highway improvement schemes that increase safety or perceptions of safety for all road users, and continuing programmes of education aimed at encouraging safer use of the highway and transport networks	<p>This policy aims to deliver highway improvement schemes that increase safety or perceptions of safety for all road users, and continuing programmes of education aimed at encouraging safer use of the highway and transport networks. There is the potential for highway improvement schemes to impact internationally important sites. Therefore, this policy may have a significant effect on a site alone and is therefore Screened In (Category I).</p> <p>The potential implications for internationally important sites as a result of this policy are provided in more detail in the AA.</p>	I
Public car parking in towns and cities	RS5	The role of parking charges and controls will be considered in seeking to manage the demand for parking and discourage unnecessary single-occupancy car use.	<p>This policy considers the role of parking charges and controls to discourage unnecessary single-occupancy car use by implementing charging policies for both on-street and off-street parking, where they have control, to align with their local planning policies and promote the uptake of electric vehicles.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F



Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
	RS6	The Corporate Joint Committee will work with partners to explore options for the reallocation of existing road and car parking space in our key towns, bus stations and depots to enhance the local environment, create more attractive spaces for people to dwell, and make it easier for people to walk and cycle.	<p>This policy aims to work with partners to explore options for the reallocation of existing road and car parking space in key towns, bus stations and depots to create opportunities to benefit the local environments, promote sustainable travel, and create more attractive and functional public spaces.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Low emission vehicles	RS7	The Corporate Joint Committee will support the transition to electric vehicles in North Wales by ensuring that fair and equitable charging infrastructure is available in urban areas and help facilitate private or community-led installation in rural areas.	<p>This policy supports the transition to electric vehicles in North Wales by ensuring fair and equitable charging infrastructure is available in both urban areas and rural areas to support for those drivers seeking a switch to plug-in vehicles.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	RS8	Where possible, opportunities will be sought to unify EV charger providers – or the apps and memberships required - across North Wales to make EV charging more convenient	<p>This policy aims to seek opportunity to unify EV charger providers to make EV charging more convenient across North Wales.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	RS9	The Corporate Joint Committee will work with partners to develop a comprehensive communications campaign to encourage EVBuptake, learning from best practice	<p>This policy aims to work with partners to development a comprehensive communication campaign to facilitate the shift to zero emission vehicles in changing residents' mindsets and addressing some of the barriers or perceived barriers to changing vehicle, such as purchase cost, range anxiety, lack of charging infrastructure, charging time, and general uncertainty.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	RS10	The Corporate Joint Committee and partners will work with the Distribution Network Operator to seek opportunities to enhance grid capacity in locations where there is a barrier to EV charger roll-out. This should also be a key consideration of the Strategic Development Plan when identifying new developments.	<p>This policy aims to work with partners to seek opportunities to enhance grid capacity in locations where there is currently a barrier to EV charger roll-out.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
	RS11	The Strategic Development Plan and Local Development Plans should mandate that new residential and non-residential developments provide sufficient electric vehicle charging points to meet future demand and incentivise electric vehicle uptake.	<p>This policy aims to mandate new residential and non-residential developments to provide sufficient electric vehicle charging points within the Strategic Development Plan and Local Development Plans.</p> <p>This policy is designed to test proposals in the plan, or which may be submitted later, for their general acceptability and is therefore Screened Out (Category B).</p>	F



Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening Outcome
Club cars and car sharing	RS12	Opportunities will be sought to increase the number of car clubs in North Wales through joint working with car club providers, including community car club providers in urban and rural areas; and at stations, in workplaces and at mobility hubs.	This policy aims to seek opportunities to increase number of car clubs in North Wales which support a reduction in car ownership levels, providing an option for people who do not use their car often, and reducing the number of trips by car and increases the number of trips made by other modes. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	RS13	The travel planning process should be used to encourage car share for commuting.	This policy aims to encourage car share commuting within the travel planning process to minimising the number of people driving on their own to work. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F

Table 13: Section 4.11 - Surface access to aviation

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening outcome
Surface access to aviation	AV1	The Corporate Joint Committee will support enhancements to surface access to domestic and international airports, focusing on improving public transport services.	This policy supports enhancement to surface access to domestic and international airports by improving bus, coach and rail travel with more accessible, reliable and regular services connecting key communities to regional airports to maximise the economic activity and tourist potential of North Wales Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F




Table 14: Section 4.11 – Digital connectivity

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening outcome
Digital connectivity	DC1	Opportunities should be sought to work with communities and businesses to promote and facilitate remote working hubs.	This policy aims to seek opportunities to work with communities and businesses to promote and facilitate remote working hubs with the ambition of helping town centres, reduce congestion and cut carbon emissions. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	DC2	Digital literacy training and education should be widely available to assist North Wales residents to get online and find the information they need to make sustainable travel choices.	This policy aims to increase the availability of digital literacy training and education to allow North Wales residents to find the information they need to make sustainable travel choices. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	DC3	A partnership approach will be taken to rolling out digital and real time information about public transport services, prioritising digital displays at key transport interchanges, and working towards real time information at bus stops across North Wales	This policy aims to roll out digital and real time information about public transport services, prioritising digital displays at key transport interchanges, and working towards real time information at bus stops across North Wales, giving people more confidence to travel by bus or rail. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F

Table 15: Section 4.11 – Land use planning

Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening outcome
Transit-oriented development	LU1	The Corporate Joint Committee supports the principal of Transit-Orientated Development for new developments in North Wales.	This policy supports the principal of Transit-Orientated Development for new developments in North Wales to encourage people that live or work in new developments to travel sustainably. Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F) .	F
	LU2	The Sustainable Transport Hierarchy will be used to help ensure developments support walking and cycling, public transport and ultra-low emissions vehicles over other private motor vehicles	This policy aims to ensure that the Sustainable Transport Hierarchy will be utilized to ensure developments support walking and cycling, public transport and ultra-low emissions vehicles over other private motor vehicles. This policy is designed to test proposals in the plan, or which may be submitted later, for their general acceptability and is therefore Screened Out (Category B) .	B



Focus area	Policy No.	Policy	Screening, Justification and broad recommendations	Screening outcome
	LU3	Sustainable transport connections to key areas for future growth and economic activity will be introduced	<p>This policy aims to introduce sustainable transport connections to key areas for future growth and economic activity. The SDP is setting out proposals for progressing strategic regional areas for growth sites in North Wales including key employment sites at the Anglesey Freeport, Wylfa, and the Flintshire and Wrexham Investment Zone (all of which have been initially proposed by higher spatial plans by the UK/Welsh Government). This policy is to ensure the RTP is consistent with emerging spatial planning at regional level in North Wales.</p> <p>Implementing the policy itself would not lead to development and this would have no implications for internationally important sites and is Screened Out (Category F).</p>	F
Breaking the dependency on the private car through sustainable development	LU4	Developments should only be supported where they promote active travel connectivity through safeguarding, enhancing and expanding on the Active Travel Network Maps.	<p>This policy emphasises that developments should only be supported where they promote active travel connectivity through safeguarding, enhancing and expanding on the Active Travel Network Maps.</p> <p>This policy is designed to test proposals in the plan, or which may be submitted later, for their general acceptability and is therefore Screened Out (Category B).</p>	B
	LU5	Development should be encouraged close to public transport facilities, and developments should be designed to help facilitate and improve public transport connectivity in both urban and rural areas.	<p>This policy emphasises that development should be encouraged close to public transport facilities, and developments should be designed to help facilitate and improve public transport connectivity in both urban and rural areas.</p> <p>This policy is designed to test proposals in the plan, or which may be submitted later, for their general acceptability and is therefore Screened Out (Category B).</p>	B
	LU6	The Corporate Joint Committee supports reducing the parking standards for new developments (as required by the Welsh Government), particularly in urban areas where we will be actively improving sustainable transport alternatives.	<p>This policy supports reducing the parking standards for new developments as required by the Welsh Government which do not encourage unnecessary car use.</p> <p>This policy itself is a general aspiration and does not in itself lead to change or development. Therefore, this policy would have no implications for internationally important sites and is Screened Out (Category A).</p>	A



5.1 Screening Conclusion

Chapters 1 to 3, 4.1 to 4.3 and 5 have been screened out. Of the 96 policies set out within Chapter 4.4 to 4.13, 92 policies can be screened out from AA due to their aspirational nature (category A), general criteria for testing the acceptability of proposals (category B), policies referred to but not proposed by then plan (category C), policies that cannot lead to development or other change (category F) and cannot have any conceivable adverse effect on a site (category G).

The remaining policies are considered to have potential to direct future development such that significant effects on internationally important sites could not be ruled out. These policies have therefore been screened in for further AA alone and in-combination, the results of which are outlined in Section 7.



6. Appropriate Assessment

This section contains the AA (Stage 2 of the HRA process) for the four policies that could not be excluded during the screening stage, this can be viewed in Table 16 below.

Table 16: Appropriate Assessment of Screened-in Policies

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
PT8	This policy states that <i>'key bus stops, such as those in village centres, and those where interchange between modes of service is common, will be prioritised and enhanced'</i> , with provisions such as lighting, or nearby lighting to be included where necessary.	Whilst the exact details of these schemes are not currently known, the majority of the improvement works would be located within urban locations, such as key villages and areas of interchange and as such are unlikely to lead to adverse impacts on internationally important sites. Furthermore, the scale of enhancements will likely be small in nature. However, given that the exact scope and locations of the improvements are not currently known, significant effects on internationally important sites cannot be ruled out. The main impact which could arise from these developments would be lighting and the subsequent increase in non-physical disturbance and the displacement of qualifying species, such as bat and birds.	Disturbance and displacement (e.g. noise, visual and vibration effects)	Avoid enhancing bus stops within and/or adjoining internationally important sites or land known to be functionally linked to an internationally important site where the potential for disturbance / displacement effects are likely to be greatest (i.e., implementation of lighting within or adjacent to a bat SAC).	<p>If enhancing bus stops which adjoins internationally important sites or land known to be functionally linked to an internationally important site cannot reasonably be avoided, where possible minimise the footprint of the proposals. Make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.</p> <p>Where potential for disturbance / displacement effects have been identified, measures such as:</p> <ul style="list-style-type: none"> • Buffer zones at the edge of development; • Timing works to avoid sensitive times; • Noise mitigation, visual screening (natural and artificial), • Alterations to lighting design to reduce light spill and disturbance using best practice guidance • An on-site monitoring plan in terms of noise, lighting, etc. combined with behavioural monitoring of the qualifying feature. 	Yes

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
PF6 and PF7	These policies are interconnected, specifically exploring the possibility of implementing a network of freight consolidation centres within North Wales (PF6), with the SDP to consider land requirements (PF7) if deemed economically viable.	Freight consolidation centres are likely to be situated near to town centres, shopping centres or construction sites and thus are unlikely to lead to significant effects on internationally important sites. However, given that the exact details of such proposals are not currently known, significant effects cannot be ruled out. The main impact which could arise from these developments would be habitat loss, disturbance and displacement, changes in water quality, habitat fragmentation and air quality impacts.	Habitat loss	Avoid allocating land / developing for freight consolidation centres within internationally important sites, as well as areas known to be functionally linked to an internationally important site.	If allocating land / developing freight consolidation centres within functionally linked land cannot reasonably be avoided, where possible minimise the footprint of the proposals. Make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified. Habitat creation prior to the commencement of the development to offset functionally linked land habitat loss. Local planning authorities and CJs should consider allocating mitigation land within their emerging plans where significant effects in terms of loss of habitat have been identified.	Yes
			Disturbance and displacement (e.g. noise, visual and vibration effects)	Avoid allocating land / developing freight consolidation centres within and/or adjoining internationally important sites or land known to be functionally linked to an internationally important site where the potential for disturbance / displacement effects are likely to be greatest.	If allocating land / development freight consolidation centres adjoining internationally important sites or land known to be functionally linked to an internationally important site cannot reasonably be avoided, where possible minimise the footprint of the proposals. Make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified. Where potential for disturbance / displacement effects have been identified, measures such as buffer zones at the edge of developments, timing works to avoid sensitive times (such as bird breeding season or fish migration periods), noise mitigation, visual screening (natural and artificial), alterations to lighting design to reduce light spill and reducing access to sensitive habitats could be incorporated into scheme designs to avoid such effects. An on-site monitoring plan in terms of noise, lighting, etc. combined with behavioural monitoring of the qualifying feature.	

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
			Changes in water quality (e.g. run-off from surface water drainage)	Avoid allocating land / developing freight consolidation centres which could lead to adverse impacts on the water quality (for example, not exceeding environmental capacity for nutrients) of internationally important sites	<p>If allocating land / developing freight consolidation centres which could lead to adverse impacts on water quality that cannot reasonably be avoided, make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.</p> <p>Ensure that hydrological assessments are carried out to determine the potential for hydrological links between sites and designated areas. The following measures could be considered: incorporation of Sustainable Drainage Systems (SuDS) and other nature-based surface water drainage solutions into scheme designs; incorporation of water quality protection measures which would be secured through a Construction Environmental Management Plan (CEMP).</p>	

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
			Habitat fragmentation/severance associated with linear development or infrastructure	Identify habitat links through ecological surveys and avoid allocating land / development which could sever these links, cause fragmentation of habitats or impede dispersal of qualifying habitats / species associated with internationally important sites (such as commuting routes of bats, movement of great crested newts between breeding ponds, or otter / fish riverine features, obstructing access between sites and functionally linked land).	<p>Where there is the potential to sever habitat links, cause fragmentation of habitats, make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.</p> <p>Mitigation that could be incorporated into scheme design to mitigation could involve:</p> <ul style="list-style-type: none"> • New planting and habitat linkages integrating with features in the surrounding landscape using priority ecological networks (PENs)¹⁶; • Integrating with existing green infrastructure • Fencing and buffer zones • Implementation of tunnels, green bridges and new landscaping to restore connectivity <p>Make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.</p>	
			Impacts associated with air quality (e.g. increased deposition of air pollutants arising from development, including emissions from increases in traffic)	Avoid allocating land / development which could lead to adverse impacts on air (for example, development which could exceed the critical load of the habitats associated with an internationally important site).	If allocating land / developing freight consolidation centres which could lead to adverse impacts on air quality cannot reasonably be avoided, make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.	

¹⁶ Priority Ecological Networks (PENs) in the terrestrial environment are versions of the all-Wales habitat networks that show areas of connectivity between Protected Sites, and as such provide a framework to inform the location of action to build functional resilient ecological networks based on our most important places for biodiversity.

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
RS4	This policy aims to deliver highway improvement schemes which will increase safety or perception for all road users.	As there is no spatial element to the policy, it is not possible to determine which internationally important sites could be affected by this policy. Objectively the RTP is helping shift to ultra-low or zero emissions vehicles and enabling changes to travel behaviour will reduce the impacts associated with road and highway schemes through a reduction in noise pollution and improvements in air quality. However, this policy does not detail the scale or nature of these highway improvement schemes and therefore the significance of effects cannot be determined. On a precautionary basis, likely significant effects cannot be ruled out.	Habitat loss	Avoid allocating land / developing highway improvement schemes within internationally important sites, as well as areas known to be functionally linked to an internationally important site.	<p>If allocating land / developing highway improvement schemes within internationally important sites and functionally linked land cannot reasonably be avoided, where possible minimise the footprint of the proposals. Make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified. Habitat creation prior to the commencement of the development to offset habitat loss.</p> <p>Local planning authorities and CJs should consider allocating mitigation land within their emerging plans where potential for adverse effects in terms of loss of habitat have been identified.</p>	Yes
			Disturbance / displacement (e.g. noise, visual and vibration effects)	Avoid allocating land / developing highway improvement schemes within and/or adjoining internationally important sites or land known to be functionally linked to an internationally important site where the potential for disturbance / displacement effects are likely to be greatest.	<p>If allocating land / developing highway improvement schemes adjoining internationally important sites or land known to be functionally linked to an internationally important site cannot reasonably be avoided, where possible minimise the footprint of the proposals. Make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.</p> <p>Where potential for disturbance / displacement effects have been identified, measures such as buffer zones at the edge of developments, timing works to avoid sensitive times (such as bird breeding season or fish migration periods), noise mitigation, visual screening (natural and artificial), alterations to lighting design to reduce light spill and reducing access to sensitive habitats could be incorporated into scheme designs to avoid such effects. An on-site monitoring plan in terms of noise, lighting, etc. combined with behavioural monitoring of the qualifying feature.</p>	

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
			Impacts associated with water quality (e.g. run-off from surface water drainage)	Avoid allocating land / developing highway improvement schemes which could lead to adverse impacts on the water quality (for example, not exceeding environmental capacity for nutrients) of internationally important sites	<p>If allocating land / developing highway improvement schemes which could lead to adverse impacts on water quality cannot reasonably be avoided, make certain that impact pathways are well understood and ensure that appropriate mitigation measures can be delivered where potential for adverse effects are identified.</p> <p>Ensure hydrological assessments are carried out to determine the potential for hydrological links between sites and designated areas. The following measures could be considered: incorporation of Sustainable Drainage Systems (SuDS) and other nature-based surface water drainage solutions into scheme designs; incorporation of water quality protection measures which would be secured through a Construction Environmental Management Plan (CEMP).</p>	
			Habitat fragmentation / severance	Avoid allocating land / developing highway improvement schemes which could sever habitat links, cause fragmentation of habitats or impede dispersal of qualifying habitats / species associated with internationally important sites (such as commuting routes of bats, movement of great crested newts between breeding ponds, or otter / fish riverine features, obstructing access between sites and functionally linked land).	<p>If allocating land / developing highway improvement schemes which could sever habitat links, cause fragmentation of habitats cannot reasonably be avoided, make certain that impact pathways are well understood and ensure appropriate mitigation measures can be delivered where potential for adverse effects are identified</p> <p>Where there is the potential to sever habitat links, cause fragmentation of habitats, mitigation could be incorporated into scheme design to mitigation could involve:</p> <ul style="list-style-type: none"> • New planting and habitat linkages to consolidate, extend or link different PENs into wider network • Integrating with existing green infrastructure • Fencing and buffer zones 	

Policy No.	Narrative	Likely significant effects	Proposed avoidance / mitigation requirements in relation to likely significant effects			Can adverse effect on site integrity be ruled out (assuming mitigation is implemented)
			Effect	Avoidance measure	Mitigation measures	
			Impacts associated with air quality (e.g. increased deposition of air pollutants arising from development, including emissions from increases in traffic)	Avoid allocating land / developing highway improvement schemes which could lead to adverse impacts internationally important sites (for example, which could exceed the critical load of the habitats associated with an internationally important site). Locating new roads beyond 200m from internationally important sites that are sensitive to air quality impacts would avoid likely significant effects ¹⁷ .	If allocating land / developing highway improvement schemes which could lead to adverse impacts on air quality cannot reasonably be avoided, make certain that impact pathways are well understood by carrying out the relevant air quality impact assessments and ensuring that appropriate mitigation measures can be delivered where potential for adverse effects are identified. Mitigation measures which could be incorporated into the design could involve encouraging sustainable modes of transport by allocating road for car share clubs, buses and low emission zones.	

¹⁷ Highways Agency (2007) Design Manual for Roads and Bridges: Volume 11, Section 3, Part 1.



6.1 Appropriate Assessment Conclusion (Alone)

The AA examined four screened in policies to identify any adverse effects on the integrity of internationally important sites due to their implementation.

Overall, none of the policies in the RTP direct development to locations, meaning that it has not been feasible to assess effects on specific internationally important sites. Furthermore, at this high level, it is challenging to pinpoint all likely significant effects of policy implementation. However, the AA process has identified the most likely effects and outlined measures for each policy to avoid or mitigate these effects. It is considered that these measures are implementable at the project level to ensure compliance with the Habitats Regulations. Local planning authorities and developers must follow these measures when implementing the policies to ensure that there are no adverse effects on the integrity of internationally important sites.

Policies developed through lower-tier plans (including allocating land) or projects which come forward as a result of implementation of this policy must ensure that there would be no adverse effects on the integrity on internationally important sites (to comply with PPW12 and TAN5). The buffers set out in Appendix C should be used to help identify internationally important sites which could be impacted by development under this policy. Local planning authorities, strategic planning panels and developers must be able to demonstrate that any mitigation measures deemed necessary during lower-tier plan or project level development can be delivered at the plan / project level. If the HRA of a lower-tier plan or project cannot rule out adverse effects on site integrity, the lower-tier plan or project will either have to be withdrawn, or amended and re-assessed, or pass the derogations set out under Article 6(4) of the Habitats Directive (i.e. no alternative solutions, IROPI) and compensatory measures secured. The RTP does not support any proposals associated with this policy where adverse effects on the integrity of internationally important sites cannot be avoided through mitigation.

Adhering to the measures set out by local planning authorities and strategic planning panels when preparing lower-tier plans and strategies and during project-specific implementation of the policy, as well as compliance with Wales National Transport Strategy, Future Wales: the National Plan 2040, PPW12 and TAN 5 would ensure no adverse effect on the integrity of internationally important sites as a result of implementing this policy

The AA concludes that, provided the avoidance and mitigation measures outlined in this HRA are implemented, there will be no adverse impacts on the integrity of any internationally important sites due to the implementation of the policies in the RTP alone.

6.2 Appropriate Assessment In-Combination Effects

Considering the overarching scope of the RTP, there is a possibility of combined effects with other plans and projects during policy implementation. However, for this assessment, and in line with the RTP's broad nature, only significant high-level plans and reviews that might lead to combined effects have been taken into account.

6.2.1 National and Regional Plans

The RTP sites alongside and a number of other Government strategies/plans. The plans considered in this assessment include: Llwybr Newydd: the Wales Transport Strategy, National Transport Delivery Plan, Future Wales: the National Plan, North Wales Transport Commission Reports, Wales Freight Strategy, Welsh Government response to the Roads Review and Union Connectivity Review.

6.2.1.1 Llwybr Newydd: the Wales Transport Strategy (WTS)

The Wales Transport Strategy was produced in 2021, with the vision to have “an accessible, sustainable and efficient transport system”. The three priorities within this plan comprised bringing services to people in order to reduce the need to travel, allowing people and goods to move easily from door to door through accessible, sustainable and efficient transport services and infrastructure, and lastly to encourage people to make the change to more sustainable transport. The strategy outlines a vision for a transport system that is both accessible and sustainable. Such a system provides broad benefits to individuals and communities, the environment, the economy, local areas, and the culture and language of Wales. It supports all seven national well-being goals established by the Well-being of Future Generations (Wales) Act 2015.

The existing Wales Transport Strategy along with the associated transport policies and projects provide an overarching framework for the RTP and have directly contributed to the spatial strategy, outcomes and policies of the RTP, and as such there would be no in-combination effects. Furthermore, this document was subject to a plan-level HRA, which concluded that the policies within the WTS would not in themselves lead to any change or development as the document was screened out under Category A; this was reviewed and agreed with NRW.

6.2.1.2 National Transport Delivery Plan (NTDP) (2022 – 2027)

This NTDP sets out how it will deliver against the priorities and ambitions set out in WTS. This includes the programmes, projects and new policies that we are intending to deliver over the next five years. Similarly to the WTS, the existing NTDP along with the associated transport policies and projects, have directly contributed to the spatial strategy, outcomes and policies of the RTP, and as such there would be no in-combination effects.

6.2.1.3 Future Wales: The National Plan / National Development Framework (NDF)

The NDF sets the direction for development in Wales to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities. The RTP is one of the mechanisms through which the WTS, NTDP and the NDF policies will be implemented. As such, the policies within the NDF have directly contributed to the spatial strategy, outcomes and policies of the RTP, and as such there would be no in-combination effects between the documents. Furthermore, this document was subject to a plan-level HRA and concluded that projects which come through the RTP have to comply with the avoidance/ mitigation measures set out within the NDF to ensure no adverse impact on internationally important sites.

6.2.1.4 Wales Freight Strategy (WFS)

The WFS produced in 2008 outlines the main aims and policies for freight transport in Wales, focusing on the efficient and sustainable movement of goods. It covers various modes of transport, including road, rail, ports, shipping, and airports. The strategy aims to support economic development, reduce environmental impacts, and improve the quality of life for residents by enhancing the efficiency and reliability of freight transport.

The WFS along with the associated transport policies and projects, have directly contributed to the spatial strategy, outcomes and policies of the RTP, and as such there would be no in-combination effects between the documents. The outcome of HRA screening was that AA was not required, as it is a high-level policy document with no implications for specific sites. The Wales Freight Strategy is of a similarly high-level nature, and as such also did not require AA. The Wales Freight Strategy can only be implemented through other strategies and specific plans and projects and, because of its high-level nature, will not constrain or influence those other strategies, plans or projects to an extent capable of increasing their likelihood of adversely affecting any internationally important site.



6.2.1.5 Welsh Government response to the Roads Review

The Roads Review was commissioned due to concerns that some road investment schemes that were in development were no longer consistent with Welsh Government's policies, particularly the declaration of a climate and nature emergency. Within this review, the Welsh Government considered alignment with Net Zero Wales, Future Wales – the National Plan, and the Economic Resilience and Reconstruction Mission. Cross-government discussions were also carried out to ensure the way forward considers impacts across all our wellbeing goals. The Welsh Government accepts the core principles, and a new approach has been set out in the panel's report.

To summarise, the Welsh Government will continue to invest in roads and provide connections to support sustainable social and economic development but will be aligned to Welsh Government policy which prioritising public transport, active travel and support decarbonization and a modal shift.

At this high-level it is not possible to completely rule out potential for in-combination effects, however, the Welsh Government has carefully considered the panel's advice and recommendations in line with Llwybr Newydd, the Wales Transport Strategy, which sets out a vision for an accessible, sustainable and efficient transport system which includes a significant reduction in greenhouse gas emissions, maintains biodiversity and enhances ecosystem resilience and reduces waste.

6.2.1.6 Union Connectivity Review

The Union Connectivity Review was carried out to assess the existing transport network in the United Kingdom and has sought to identify how it can better support these aims in England, Scotland, Wales and Northern Ireland. The Review has considered the impact of devolution on the delivery of transport connectivity and has concluded that devolution has been good for transport with many forward-thinking transport developments taking place regionally in the nations of the UK. To support the network, the Review has identified a series of transport infrastructure enhancements needed to improve capacity, reliability, journey times and sustainability on key strategic links across the UK. The review feeds into the WTS by identifying key areas where improved connectivity can support economic development and sustainability goals. For instance, it highlights the need for better rail infrastructure and integration with other transport modes. The review also emphasizes respecting the devolution settlement, ensuring that the Welsh Government retains control over its transport policies while benefiting from UK-wide improvements. As such, the Union Connectivity Review directly feeds into the WTS, which have directly contributed to the spatial strategy, outcomes and policies of the RTP, and as such there would be no in-combination effects between the documents.

6.2.1.7 Wales/ England border

In addition to the Welsh development plans mentioned earlier, there is also the potential for combined impacts on internationally important sites from the RTP and English plans. Several internationally important sites are located along the Wales-England border, such as the Dee Estuary SPA/SAC/Ramsar site, Midland Meres and Mosses Ramsar sites and Liverpool Bay SPA, among others near the border in both countries. Policies implemented in both Wales and England could potentially impact these sites.

The National Planning Policy Framework (NPPF)¹⁸ outlines the government's planning policies for England and how they should be applied, providing a framework for locally prepared plans for housing and other developments. Policies related to sustainable transport, land use and infrastructure in England could have combined effects with RTP in Wales. These potential impacts cannot be ruled out at this stage due to the high-level nature of the RTP.

6.2.2 Lower-tier Plans

The lower-tier planning documents, such as strategic development plans (SDPs) and their local development plans (LDPs), will specify the locations designated for development. As a result, the potential effects on internationally important sites can only be accurately assessed at this level. It is

¹⁸ [National Planning Policy Framework - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/617353/NPPF-2019.pdf)



not feasible to evaluate in-combination effects between these documents and the RTP, as they are interdependent (particularly since these plans must generally conform to the RTP's policies). LDPs have policies designed to ensure developments protect and safeguard internationally important sites. LDPs are also subject to a plan-level HRA as required by the by Regulation 63(1) of the Habitats Regulations.

Table 17 below identifies the relevant environmental safeguarding policies within the lower-tier plans of the respective NWCJCs members. With the policies described below specifically seeking to manage development to conserve and enhance the natural environment by safeguarding internationally important sites, along with the mitigation provided above in Table 17, will help to ensure that there are no adverse effects on the integrity of internationally important sites.

Table 17: LDP – Environmental policies of representative NWCJC members which ensure adverse impacts of are avoided at lower-tier plans, projects and developments are avoided.

Local authority	Document	Policy/ Objective No.	Description
Wrexham	Local Development Plan 2013-2028 (adopted 20 December 2023) ¹⁹	S09	Conserving and enhancing the natural, landscape and historic environment ensuring appropriate protection is given to designated and non-designated assets, including their wider settings.
		SP14	Development will only be permitted where it seeks to protect, conserve and enhance the natural environment including Special Areas of Conservation, Special Protection Areas, and Ramsar Sites.
		NE1	Development likely to significantly affect any protected site of international importance, either alone or in combination with other plans or projects, will be subject to a Habitat Regulations Assessment (HRA). Development will only be permitted where it is possible to ascertain no adverse effect on the integrity of the habitat or site or where there are Imperative Reasons of Overriding Public Interest and compensatory measures are secured. Permission for development likely to impact the special features of a Nationally Designated Site will only be granted in exceptional circumstances where appropriate compensation can be provided. Development likely to affect any protected species will only be permitted when there is no satisfactory alternative and if there is no detrimental impact to the maintenance of the population concerned at a favourable conservation status in its natural range. The proposals must adequately demonstrate that they are for the purposes of preserving public health or safety or reasons of overriding public interest.

¹⁹ [Wrexham County Borough Council - Adopted Wrexham Local Development Plan](#)



Local authority	Document	Policy/ Objective No.	Description
Flintshire	Local Development Plan (Adopted 24 January 2023) ²⁰	EN6	<p>Development will not be permitted that would result in an adverse effect on the integrity of sites of international nature conservation importance. Proposals where adverse effects on site integrity cannot be ruled out would not be supported.</p> <p>Development likely to impact the special features of a Nationally Designated Site will only be granted in exceptional circumstances where appropriate compensation can be provided.</p> <p>Development proposals that would have a significant adverse effect on locally designated sites or site with other biodiversity and / or geological interest, including priority species, will only be permitted where:</p> <ul style="list-style-type: none"> a) it can be demonstrated that the need for the development outweighs the biodiversity or geological importance of the site; and b) it can be demonstrated that the development cannot reasonably be located elsewhere; and c) any unavoidable harm is minimised by effective mitigation to ensure that there is no reduction in the overall biodiversity value of the area. Where this is not feasible compensation measures designed to create, restore and enhance biodiversity must be provided. <p>Development that results in the restoration, enhancement and creation of habitats will be supported especially where this promotes the resilience of ecosystems</p>
		EN15	<p>Development affecting water resources will only be permitted if:</p> <ul style="list-style-type: none"> a) it would not have a significant adverse impact on the capacity and flow of groundwater, surface water, or coastal water systems; b) It would not pose an unacceptable risk to the quality of groundwater, surface water, or coastal water..
Wrexham	Local Development Plan 2007-2022 (Adopted October 2013) ^{21 22}	S012	Safeguard and enhance the character and appearance of the undeveloped coast and countryside, sites of landscape/conservation importance, features of archaeological, historic or architectural interest and ensure the conservation of biodiversity and protected species.
		NTE/1	Safeguarding the Plan Area's biodiversity, geology, habitats, history and landscapes through the protection and enhancement of sites of international, national, regional and local importance, in line with Policy DP/6

²⁰ flintshire.gov.uk/en/PDFFiles/Planning/Examination-Library-Documents/FINAL-LDP-Written-Statement-English.pdf


²¹ <https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Strategic-Planning-Policy/Adopted-Local-Development-Plan-LDP/Assets-written-proposals-maps/Conwy-Local-Development-Plan-2007-2022.pdf>

²² Conwy are currently carrying out a full review of the Plan and are now working on a new one, which we call the Replacement Local Development Plan (LDP). It is currently on Stage 6 – Deposit Plan



Local authority	Document	Policy/ Objective No.	Description
		NTE/3	<p>New development should aim to conserve and, where possible, enhance biodiversity through:</p> <ul style="list-style-type: none"> • Sensitive siting; avoiding European protected sites or those of national or local importance; • Sensitive layout and design which avoids impacts or mitigates through an agreed programme for any identified adverse impact on biodiversity; • Creating, enhancing and managing wildlife habitats and natural landscapes including connectivity; • Integrating biodiversity measures into the built environment; • Contributing to achieving targets in the Conwy Local Biodiversity Action Plan (LBAP); • Providing for a management agreement with the Local Planning Authority to secure the retention and long term future of biodiversity interests where applicable. <p>All proposals should include a Biodiversity Statement detailing the extent of impact on biodiversity.</p> <p>The Council will refuse proposals which would have a negative impact on a European Site, protected or priority species or habitat unless the impact is adequately mitigated and appropriate remediation and enhancement measures are proposed and secured by planning conditions or obligations</p>
		DP/6	Development proposals must comply with national planning policy and guidance.
Eyri National Park	Local Development Plan 2016 – 2031 Written Statement ²³	SPD	<p>Development proposals which are likely to adversely affect the integrity of European designated sites (either alone or in combination with other plans of projects) will not be permitted unless the requirements of the Conservation of Habitats and Species Regulations 2010 have been fulfilled and hence the following criteria can be met:</p> <ol style="list-style-type: none"> a) There is no alternative solution. b) There are imperative reasons of over-riding public interest for the development. <p>The following requirements will apply to development affecting nationally and locally designated sites</p> <ol style="list-style-type: none"> a) The location, design and construction of the development is such that damage to nature conservation features are mitigated, and opportunities for nature conservation gain are taken. b) Compensatory measures are provided if necessary. c) The remaining nature conservation features are protected and enhanced and provision is made for their management. <p>Development will only be permitted within the Undeveloped Coast where it can be demonstrated that a coastal location is essential.</p> <p>Development which harms the unspoilt landscape character or wildlife habitats will not be permitted. Development proposals which are likely to adversely affect habitats and species listed in the Local Biodiversity Action Plan will be subject to the guidelines of the Supplementary Planning Guidance on Local Biodiversity.</p>

²³ [Cynllun-Datblygu-Lleol-Saesneg.pdf](#)



Local authority	Document	Policy/ Objective No.	Description
Gwynedd & Isle of Anglesey	Current Joint Local Development Plan 2011 – 2026 Written Statement ²⁴ ²⁵	SO17	Protect, enhance and manage the natural and heritage assets of the Plan area, including its natural resources, wildlife habitats, and its landscape character and historic environment
		SPPS19	<p>The Councils will manage development so as to conserve and where appropriate enhance the Plan area's distinctive natural environment, countryside and coastline, and proposals that have a significant adverse effect on them will be refused unless the need for and benefits of the development in that location clearly outweighs the value of the site or area and national policy protection for that site and area in question. When determining a planning application, consideration will need to be given to the following:</p> <ol style="list-style-type: none"> 1. Safeguard the Plan area's habitats and species, geology, history, the coastline and landscapes; 2. Protect or where appropriate enhance sites of international, national, regional and local importance and, where appropriate, their settings in line with National Policy; 3. Have appropriate regard to the relative significance of international, national or local designations in considering the weight to be attached to acknowledged interests, ensuring that any international or national responsibilities and obligations are fully met in accordance with National Policy; 4. Protect or enhance biodiversity within the Plan area and enhance and/or restore networks of natural habitats in accordance with the Local Biodiversity Action Plans and Policy AMG5; 5. Protect or enhance biodiversity through networks of green/ blue infrastructure; 6. Safeguard internationally, nationally and locally protected species; 7. Protect, retain or enhance the local character and distinctiveness of the individual Landscape Character Areas (in line with Policy AMG 2) and Seascape Character Areas (in line with Policy AMG 4); 8. Protect, retain or enhance trees, hedgerows or woodland of visual, ecological, historic cultural or amenity value.

6.2.3 Appropriate Assessment In-combination Conclusion

At this high level, it is not feasible to list all plans and projects that might lead to combined effects with the RTP. However, AA at the lower-tier plan level and project level, will better understand the likely significant effects, both alone and in combination with other regional or local plans, on specific internationally important sites and their conservation objectives. The in-combination assessment at this stage is necessarily limited, and so combined effects cannot be entirely ruled out. However, assuming the avoidance and mitigation measures outlined in this HRA are implemented, there would be no adverse impacts on the integrity of any internationally important sites in combination with other plans and projects.

²⁴ [Anglesey-and-Gwynedd-Joint-Local-Development-Plan-Written-Statement.pdf](#)

²⁵ Following a decision by Isle of Anglesey County Council and Cyngor Gwynedd to cease the joint working agreement on Planning Policy matters on 31 March 2023, Gwynedd Planning Policy Service and Anglesey Planning Policy Team has been established to prepare new LDPs. These are currently in preparation.



7. Conclusion

While this HRA acknowledges the difficulty in determining the impact of strategic policy decisions on internationally important sites at this early stage of development planning, it is crucial to note that potential implications for these sites have been considered throughout the RTP's development. Early issue avoidance and risk reduction have been key elements in policy formulation within the RTP.

It is also important to highlight the legal requirement for lower-tier plans and projects that could impact internationally important sites to undertake HRA, as mandated by the Habitats Regulations, PPW12, and TAN5. Table 16 of the AA outlines potential impacts from policy implementation and specifies avoidance/mitigation measures for lower-tier plans and projects. The RTP does not support lower-tier plans or projects if adverse effects on site integrity cannot be ruled out.

At the lower-tier plan or project stage, it must be demonstrated that there are no significant effects on the features for which an internationally important sites have been designated. If this cannot be concluded, lower-tier plans or projects cannot be approved unless there are no less damaging alternative solutions, IROPI, and appropriate compensatory measures have been secured.

This HRA report provides sufficient safeguards to confirm that no adverse effects on integrity are anticipated from implementing the RTP policies, either alone or in combination.



Figures

Figure 3: Isle of Anglesey: Internationally important sites

Figure 4: Conwy: Internationally important sites

Figure 5: Gwynedd: Internationally important sites

Figure 6: Denbighshire: Internationally important sites

Figure 7: Flintshire: Internationally important sites

Figure 8: Wrexham: Internationally important sites

Appendix A - Regional Transport Plan Policies

Focus Area	Policy No.	Policy	Further description/explanation
Providing people with choices about how they travel to work	CB1	Further enhancements to public transport services and active travel routes that provide access to large employment sites will be identified and progressed where funding is available. Enhancements should consider shift work patterns, seasonal working patterns, and where the biggest impact can be delivered.	<p>The economic well-being of North Wales requires a transport system that provides reliable and convenient access to employment opportunities. Many of us commute by car, either by choice, or due to lack of an attractive alternative. This contributes to traffic congestion, carbon emissions and air quality problems along key corridors such as the A55.</p> <p>It also creates social challenges by restricting access to opportunities for those residents who do not drive, or do not have a car. An attractive, efficient public transport and active travel network can play a vital role in reducing deprivation by providing access to jobs, training, health and wellbeing opportunities and education.</p>
	CB2	A partnership approach will be taken to identify and progress schemes and initiatives that encourage sustainable travel to work at employment sites close to the border such as Deeside Industrial Park, Wrexham Industrial Estate, Airbus Broughton, Chester Business Park, and Wrexham and Chester city centres	<p>There are strong links between the communities and economies of and Northeast Wales and Northwest England. This is reflected in a large number of trips across the border each day, particularly at peak times when a large number of people travel for work. This can result in peak hour congestion on key routes such as the A55, A494, and A483.</p> <p>There are a number of significant employment sites on both sides of the border, including Deeside Industrial Park, Wrexham and Chester city centres, Airbus Broughton, Chester Business Park, and Wrexham Industrial Estate. Reducing the number of people that commute to these locations by car will have positive environmental impacts, but also reduce the impact of congestion and delays on longer distance trips on the highway network. Enhancing sustainable travel links to these sites for North Wales residents, and residents of England who work in North Wales, will require partnership working between local authorities on both sides of the border, Transport for Wales, and transport operators.</p>
	CB3	The Corporate Joint Committee will work with neighbouring Local and Combined Authorities including Cheshire West and Chester and the Liverpool City Region to ensure a complementary approach to Transport Planning, particularly in the Mersey-Dee Sub-Region. This should consider both commuting trips and freight movement.	Beyond those employment sites close the border, there are other large trip attractors in England that are attractive places for work for North Wales residents, and large population bases from where North Wales employers will recruit employees. Commuters making these journeys should be provided with a choice about how they travel to work, both to reduce car use, and to ensure that more employment opportunities are accessible for communities

Focus Area	Policy No.	Policy	Further description/explanation
	CB4	Commuters to the Flintshire and Wrexham Investment Zone should be able to access jobs using high quality walking and cycling infrastructure, enhanced nearby rail stations, or bus services that are attractive and reflect the working patterns of employers in the Investment Zone	Both the UK and Welsh Governments have indicated support for an Investment Zone supporting advanced manufacturing in Flintshire and Wrexham. This is an opportunity that could involve £160m of funding for the region over the next 10 years. This provides a huge opportunity for our people and businesses, particularly our communities in the Flintshire and Wrexham areas. The Investment Zone will support the creation of jobs and help with retention in the region. This provides both a challenge for our transport network and an opportunity to enhance it. Transport will play an instrumental role in supporting the success of the Investment Zone by ensuring that people living in North Wales are able to access the existing and new employment opportunities.
	CB5	Where possible, opportunities will be sought to use Investment Zone funding for sustainable transport schemes that improve access to employment and support the delivery and success of the Investment Zone.	The funding from the Investment Zone potentially provides an opportunity to unlock capital and revenue funding that would support the delivery of improved sustainable access to employment.
	CB6	A partnership approach will be taken to identify and progress schemes and smarter choices initiatives that facilitate a more sustainable commute to employment sites in Gwynedd and Ynys Mon.	Public sector-led employment in the Bangor, Caernarfon, and Ynys Mon area, along with the Anglesey Freeport and emerging Wylfa proposals provide a real opportunity to facilitate a shift to sustainable commuting. The challenges are different here than in the east due to the more rural nature of the surrounding area. This can best be addressed through joint working between local authorities on both sides of the Menai, Transport for Wales, private operators, and large employers.
	CB7	The creation of Strategic Transport Partnerships will be investigated at large employment localities.	A Strategic Transport Partnership, as recommended by the North Wales Transport Commission, is a partnership that would bring together the large employers in sub-regions, along with local authorities and Transport for Wales to identify the measures that can be put in place to reduce car use for commuting at key employment areas and clusters. The Commission recommended that these should initially be focused on Deeside and Wrexham (where there is a cluster of private sector employers), and in the Menai area where this a public-sector dominance in employment opportunities.
Providing people with choices about how they access services	CB8	Priority will be given to funding schemes and services that improve sustainable access to crucial and life-enhancing services such as education, health care, town centres, and community facilities. Once in place, any infrastructure that supports access to these services should be prioritised for maintenance when necessary.	Having a fair and equitable travel network in North Wales will mean that residents and visitors should have a choice about how they travel for each journey. It is particularly important that all residents can access essential services and community facilities such as GP surgeries, dentists, hospitals, schools, colleges, universities, museums, libraries, shops, and places of worship. Easy and reliable access to such destinations will contribute positively to our well-being.
	CB9	The introduction of a Total Services Contract in one local authority area in North Wales will be investigated, with a view to wider roll-out across the region should it be successful.	Transport to many essential services is provided by local authorities through contracts for school travel, social services, and non-emergency patient transport. The North Wales Transport Commission recommended that a 'total transport services contract' could be investigated. A new concept for North Wales, this would be a contract that combines all of these services to provide a better service to the public and to reduce duplication of resources.

Focus Area	Policy No.	Policy	Further description/explanation
Providing people with choices about how they access education	CB10	Further enhancements to public transport services and active travel routes that provide access to education establishments will be identified and progressed where funding is available. This includes: Higher Education sites (universities in Bangor and Wrexham, but also those in Northwest England); Further Education sites (including Grwp Llandrillo Menai and Coleg Cambria); Secondary Schools; and Primary Schools.	An attractive, efficient transport network plays a vital role in reducing deprivation by providing access to training and education. To encourage a long-term mindset of choosing active travel for suitable journeys it is important that young people get into this habit early. Choosing to walk or cycle to school will help with this, and support wider benefits such as: a healthier lifestyle, less congestion and parking issues at school time, improved air quality near schools and reduced vehicle emissions,
	CB11	Local authorities should expand their work with schools and parents to encourage and support sustainable travel for children, parents and staff.	It is essential that we encourage young people to choose active modes for travel to school where possible, and home-to-school transport is a particularly important issue for many parents and children, helping ensure safe and convenient access to learning.
	CB12	Local authorities will continue to use local datasets and policies such as Learner Travel Measure to prioritise routes to school for safety enhancements	If we are to encourage young people and their parents to choose active travel for their journey to school, it is important that suitable information and infrastructure is in place to allow them to travel sustainably and safely.

Focus Area	Policy No.	Policy	Further description/explanation
Providing people with choices in rural and semi-urban areas	CB13	<p>Opportunities will be sought to deliver the socially necessary transport improvements that prevent rural isolation. This should prioritise better connecting rural communities to:</p> <ul style="list-style-type: none"> • Neighbouring communities • Nearby towns • Nearby community facilities and key services such as health, shops, and education <p>Transport interchanges for further travel</p>	<p>This Regional Transport Plan recognises that there is a need to facilitate some modal shift away from private car use and sets out how this can be achieved in North Wales through enhanced public transport and active travel in and between our towns and cities. Whilst acknowledging that reducing car use in rural communities is more challenging, in rural areas we recognise:</p> <ul style="list-style-type: none"> • Services and jobs are often further away from where people live • Walking and cycling on rural routes can feel less safe • Frequent bus services are less common and often do not operate commercially <p>This provides us with an opportunity to provide enhanced sustainable transport options for residents of rural communities and provide the connections that can prevent feelings of isolation, and in turn allow residents to safely access the services they need. This means that more innovative means of serving rural communities can be investigated to provide socially necessary services and infrastructure. Some examples, which are considered as part of the community transport and active travel policies and interventions in this Regional Transport Plan, include:</p> <ul style="list-style-type: none"> • Demand Responsive Transport serving areas not served by fixed route bus services, such as Fflecsi services • Community transport initiatives, such as ring and ride services • Car clubs schemes, which provide an easy and affordable way for people to share the benefits of using a car without the cost of owning one • Delivery of pedestrian facilities as informal routes that link communities <p>The lack of options for travel that residents of rural communities have means that private motor car will be the necessary mode of choice for many journeys made within rural areas. The environmental impact of these journeys could be minimised by encouraging and facilitating a shift to electric vehicles or other Ultra Low Emission Vehicles for rural residents. This is considered further as part of roads, streets and parking in this Regional Transport Plan.</p>

Focus Area	Policy No.	Policy	Further description/explanation
Providing people with information to make more sustainable travel choices	CB14	Marketing and Communications campaigns will be developed that are meaningful and focus on raising awareness of the benefits of sustainable travel. Campaigns will use innovative techniques to target the right audience, particularly those groups that can be harder to reach. A regional approach should be taken to this where appropriate.	<p>Providing the infrastructure and services that allow people to make sustainable travel choices is important but can only be effective if people are aware of them and the benefits of using them. Marketing and communications campaigns are essential and can be tailored to focus on specific target user groups, such as tourists and leisure users, commuters, young people, or older people. North Wales wide projects in support of promotional campaign and travel planning programmes include:</p> <ul style="list-style-type: none"> • Supporting the annual World Car Free Day event in some of our large towns • Public health and air quality awareness materials • Online resources about sustainable transport and travel planning guidance • Promoting applications that offer money-saving vouchers for using public transport, walking or cycling • Advocating the North Wales Healthy Travel Charter and encouraging public, private, and third sector organisations signing up to commit to work towards actions that contribute to promoting healthy travel for their staff and service users • Collaborate with education service providers to facilitate sustainable home-to-school transport choices and independent travel training <p>These interventions will help us to experience streets free of traffic as well as making travel easier for those who rely on private vehicles for health and mobility reasons. As well as offering an opportunity to re-imagine our roads and streets around people, we will empower people to make more sustainable travel choices by improving access to information. This links well to our policies and interventions for access to education, and digital connectivity, as part of this Regional Transport Plan.</p>

Focus Area	Policy No.	Policy	Further description/explanation
Helping people enjoy our visitor attractions and supporting the tourism industry	CB15	The Corporate Joint Committee will work with partners and stakeholders in the tourist sector to investigate methods for encouraging visitors to North Wales to travel sustainably whilst also enhancing the visitor experience and boosting the visitor economy.	<p>The visitor economy is hugely important in North Wales. Our region benefits from a high quality environment and is home to some of the UK's best visitor attractions that appeal to those undertaking short or longer stays. The offer to visitors includes hiking or enjoying the world's fastest zip line in Eryri National Park, seeing the Pontcysyllte Aqueduct, exploring Conwy and its castle, an Italian adventure in Portmeirion, a trip on Porthmadog's Heritage Railway, and climbing the Great Orme to name but a few. Whilst we need to protect and enhance our natural beauty spots such as the Llŷn Peninsula, and the Clwydian Range & Dee Valley (which is being considered as a new National Park) it is vital that our transport network supports the continued success and growth of our tourism industry.</p> <p>Whilst ensuring our transport services and infrastructure helps people get to the places they want to go, there is an opportunity to incentivise the use of sustainable modes to access attractions and make our visitor destinations accessible for all groups of people. One such way that was recommended by the North Wales Transport Commission is a guest card or reward system that offers visitors and local people who travel sustainably to attractions, a package of offers, including reducing attraction entrance costs and reduced travel costs.</p>
	CB16	Opportunities will be sought to support the visitor economy through management of coach and motorhome parking close to attractors in North Wales. This should consider charging opportunities for zero emission vehicles.	Whilst we will encourage visitors to enjoy our places on foot, wheels and by public transport, we recognise that visitors to North Wales will continue to use a range of transport modes to access and explore our region. We will continue to need dedicated areas for the safe and convenient parking of coaches and motorhomes.
	CB17	Opportunities will be sought to make Sherpa'r Wyddfa bus services permanent, with long term funding; and investigating how services can be integrated further with the wider bus and railway networks.	<p>Over recent years, car use and parking has been identified as concern in Eryri. The key issues are:</p> <ul style="list-style-type: none"> • Demand for car-based access to Yr Wyddfa and Ogwen Valley at peak times massively outstrips the amount of available parking • Access to information about alternatives to the private car • Blight, danger and poor visitor experience • Embedded car dependency and expectation of parking • Congestion and inappropriate parking make the roads less attractive for other road users, including cyclists
	CB18	Through partnership working, further improvements will be introduced to encourage visitors to Eryri to travel by means other than the car. These will include enhancement of alternatives, management of facilities, and improved information and education. These could be funded by innovative sources of funding.	

Focus Area	Policy No.	Policy	Further description/explanation
	CB19	The Strategic Development Plan will consider land requirements for interchange facilities at gateway sites to Eryri National Park	<ul style="list-style-type: none"> Risk that the National Park will become increasingly inaccessible to a growing proportion of the UK population who do not drive or have access to a car <p>The Eryri Transport, Parking and Active Travel Delivery Group is made up of the Eryri National Park Authority, Cyngor Gwynedd, Conwy Council, and Transport for Wales. The group works to identify and progress actions that support a shift to sustainable transport in Eryri. We will continue to support the group's work, which includes:</p> <ul style="list-style-type: none"> Pilot funding for enhancement of the Sherpa'r Wyddfa bus services, that provide a way of travelling sustainably once visitors have arrived in the National Park, supported by promotional leaflets, bus stop flags and social media Parking management at Pen-y-pass <p>Enforcement of parking restrictions on roads</p>
	CB20	Innovative solutions to providing access to attractions in rural areas will be identified. This should consider, but not be limited to, seasonal bus services, e-bike and other micro-mobility hire, alongside information campaigns.	The beauty and rural nature of much of North Wales means that there are a large number of attractions that are located in places that can be difficult to access without the use of the private car. If we are to encourage visitors to travel sustainably and make these sites accessible for more people, it is vital that alternatives to the private car are provided.
	CB21	Investigation will be undertaken into the benefits of seasonal and tourist bus services in North Wales to support the visitor economy and promote integration with wider rail and bus networks. This should consider not just the journey to the resort, but onward travel to attractions.	Traditional and emerging seaside attractions are at the heart of the visitor economy for much of North Wales. This is evident in all coastal areas, notably in popular resorts such as Prestatyn, Rhyl, Towyn and Llandudno on the north coast but also in places such as Pwllheli and Newborough in more rural locations. Many of the larger resorts have nearby rail stations and some bus service provision, but huge numbers of people visit these resorts by private car.
	CB22	The Corporate Joint Committee will work with partners and stakeholders in the tourist industry on the coast to identify measures that will support a shift to sustainable modes to access popular attractions whilst continuing to ensure that North Wales remains a destination of choice for holidays and daytrips.	<p>A large and successful market for the tourist attractions in North Wales is Northwest England and the North Midlands. This generates a large movement of people between these English regions and North Wales, particularly in the summer months. The evidence of this movement can be seen on the strategic road network and our rail network at key holiday change over times. This often causes congestion on routes such as the A494 at Deeside, which causes frustration to those travelling.</p> <p>The Welsh Government is planning to give local authorities the ability to charge a visitor levy on overnight stays in their communities. This contribution will be paid by visitors and invested in sustainable tourism, helping to grow our economy, support our communities and preserve the beauty of North Wales for future generations. One option to help encourage sustainable travel by tourists could be to introduce a 'KONUS card' or similar, providing an unlimited travel ticket for those staying in the area and paid for by the visitor levy. This option should be explored by local authorities where managing high volumes of visitors and the way they get around is important, such as at Eryri.</p>

Focus Area	Policy No.	Policy	Further description/explanation
	CB23	A partnership approach will be taken to develop a plan for further improvement to rail services in North Wales that better supports the visitor economy	Our rail service could also better serve the visitor economy. Rail services can be unattractive to visitors due to timetabling, or overcapacity and lack of luggage storage at peak season and change-over times. Reduced services at weekends plays a detrimental role in supporting the visitor economy. There is opportunity to introduce seasonal service changes to increase capacity and/or frequency on the North Wales Main Line, Cambrian Coast Line, and Conwy Valley Line. Helping people choose rail for their trips will in turn help reduce congestion on our roads.
Bus franchising	PT1	The Corporate Joint Committee and partners will work with TfW and Welsh Government to support the roll-out of bus franchising in North Wales, which should include multi-year funding that would provide certainty for the travelling public, authorities, and operators.	<p>The Welsh Government is working to introduce legislation for franchising bus service provision. This will enable bus networks to be designed and operated to target local needs, for example areas of deprivation, and meet the needs of customers rather than the current situation where the emphasis is often on competition considering routes are profitable. The change will also enable integration of timetabling and ticketing, making integration easier.</p> <p>Bus services will be planned and specified within available funding limits by local authorities, the North Wales Corporate Joint Committee, Transport for Wales and the Welsh Government. An improved bus network requires significant additional funding compared to current service provision, and a franchise model would require multi-year funding agreements, which has not been offered for bus subsidy to date. Such multi-year funding would provide certainty for the travelling public, authorities and operators.</p>
Decarbonising the bus fleet	PT2	All new buses introduced in North Wales should be Zero Emission. Where new buses are a long term improvement, opportunity should be sought to re-power the existing fleet.	It is crucial that all parties work to reduce carbon emissions from our entire transport network, including the bus fleet. Alternative fuels for buses that are becoming increasingly common worldwide include battery electric, and hydrogen.
	PT3	The Corporate Joint Committee will work with partners to seek opportunities to complement the development of hydrogen hubs in North Wales by exploring the introduction of a hydrogen bus fleet.	In North Wales, work is ongoing on two projects to introduce hydrogen as a more readily available fuel source. These are the future Hydrogen Hubs at Deeside and Holyhead.
Bus transformation network	PT4	The Bus Service Transformation Network will be rolled out in North Wales. This will include a core network of services between and within major settlements and employment sites with a frequency of two to four buses an hour extending into the evenings.	Transport for Wales has been working with the local authorities in North Wales to develop a bus transformation network that considers the existing network and patronage, in seeking the creation of a single unified network of services which is intuitive, easy to understand, and coordinated. Optimisation of routes and rationalisation of services will help to achieve higher frequencies and more consistent timings.

Focus Area	Policy No.	Policy	Further description/explanation
	PT5	<p>Future bus services in North Wales will:</p> <ul style="list-style-type: none"> • have a high frequency and long operating hours • have consistent/regular departure times • have Sunday timetables as close as possible to weekday frequency to support commuting, leisure and visitor economy demand • be coordinated to provide a well-spaced timetable • minimise journey times between the origins and destinations with the most demand • take direct routes that remain the same throughout the day • be routed via transport interchanges and railway stations • be integrated with local bus services and dynamic demand responsive transport • be comfortable for long journeys 	<p>The development of core services with higher frequencies, longer operating hours, and with better connections to other buses and to rail will help attract people to travel by bus where they may current choose to take their car. The development of secondary and feeder services with regular, consistent 'clockface' departure times where possible will further help give certainty to people wanting to travel by bus.</p>
Improving bus infrastructure	PT6	<p>A partnership approach involving local highway authorities, NMWTRA and TfW will be taken to identifying and implementing bus priority measures that support the roll out of the bus transformation network in North Wales. This may include the re-allocation of road space.</p>	<p>Priority infrastructure for buses is an important element in helping bus journey times be as short as possible and as reliable as possible to help make travel by bus competitive with the private car. There are locations where traffic congestion has an impact on bus services, causing delays which leads to longer journey times and unreliability. Providing bus priority in these locations would improve the attractiveness of travelling by bus. A joined-up partnership approach will help identify where targeting bus priority measures across the network and across local authority boundaries in North Wales will have the most impact. The creation of bus priority measures may require the reallocation of road space away from private vehicles, particularly in more urban areas, and this should be carefully managed as part of a step change in modal shift.</p>
	PT7	<p>All bus stop waiting facilities will be well maintained as far as this can be achieved through local authority revenue budgets</p>	<p>The other element of bus infrastructure that is important for passengers are the facilities that are provided at bus stops and interchanges. These facilities can make bus travel more attractive for passengers, and crucially can also make passengers feel safer whilst waiting for their bus.</p>
	PT8	<p>Key bus tops, such as those in village centres, those with high usage, and those where interchange between modes or services is common, will be prioritised for enhancement to include:</p> <ul style="list-style-type: none"> • Dropped kerbs to access the stop • Raised kerbs to aid boarding • Lighting, or nearby street lighting • Shelters • Seating • Real time information and onward connection information • Cycle storage 	

Focus Area	Policy No.	Policy	Further description/explanation
Making bus travel easier	PT9	The Corporate Joint Committee supports Welsh Government's Vision of 'One Network, One Timetable, One Ticket' for a bus system which is governed and designed to serve the public interest, with the widest possible geographic coverage, fully integrated connections between different services, the highest possible service frequencies, and simple unified easy-to-use ticketing and information.	Things that can help attract people to travel by bus include clear and up-to-date timetable and route information, clear fare structures (especially when interchanging between services and operators), and short waiting times when wanting to change bus services or modes (for example when connecting to another bus route, or rail service).
	PT10	The Corporate Joint Committee will work with partners including local authorities and operators to make bus travel more accessible for people with restricted mobility or disabilities. Improvements should draw from best practice across the world but should include: <ul style="list-style-type: none"> • Dropped kerbs to access the stop • Raised kerbs to aid boarding • Shelters and Seating at stops • On-board Audio-Visual announcements Information in accessible formats	Accessibility of bus stops and vehicles for those with restricted mobility or disabilities is important to helping ensure all groups of people can choose to travel by bus. We must consider the needs of disabled persons (within the meaning of the Equality Act 2010), of persons who are elderly or have mobility problems, those with pushchairs, and more widely consider overcoming barriers to access. This will make bus travel a fairer and more attractive option for all.
Fflecsi and Ring and Ride services	PT11	Successful pilot Fflecsi services should be made permanent, and additional Fflecsi services should be designed with local community involvement and rolled out in other areas in line with bus transformation network proposals	The rural nature of much of North Wales means that fixed route bus services are not always commercially viable. Where this is the case, more flexible alternatives should be provided so that residents and visitors can travel more sustainably. Transport for Wales and local authorities across North Wales have been running a series of 'Fflecsi' pilot services, including in Buckley, Conwy Valley, Denbigh, Holywell, Llyn Peninsula, Prestatyn, and Ruthin. These are flexible services that provide shared transport to people who specify their journey and required time of pick-up and drop-off. Such services can be effective in providing access to key destinations and the rest of the public transport network for people living in more isolated communities.
	PT12	The Corporate Joint Committee, local authorities and TfW will collaborate with communities, particularly in rural areas, to help fund and deliver community transport services that meet otherwise unmet needs.	Community transport services are locally run and managed transport services for specific groups or communities. The services are flexible and accessible and often are community-led initiatives that are satisfying a need that is unmet by conventional transport provision. In some cases, this provision is the only means of transport available for vulnerable and isolated people. Examples include Ring and Ride Services, coordinated by local authorities as door-to-door services for people who are unable to use public transport.
Taxis	PT13	We will work with taxi and private hire vehicle providers to promote safety for passengers and drivers and help increase the availability of low emissions or non-motorised vehicles	Taxis play a crucial role in providing access to services, opportunities and leisure for people in North Wales, particularly for those with no or limited access to a private car, or for those journeys that are currently difficult using public transport.

Focus Area	Policy No.	Policy	Further description/explanation
Longer distance coach services	PT14	Where funding is available, opportunities will be taken to progress longer distance coach travel, both to connect North Wales and South Wales, and also east-west to connect with economic centres in England.	A need has been identified to improve connectivity between North and South Wales, particularly from areas in the west of our region. To address this need, Transport for Wales is considering plans for scheduled coach services between Bangor and Carmarthen. A 'Traws Cymru Express' coach service on this route could deliver a one-and-a-half-hour journey time saving compared to the current five hours and fifty minutes that the Traws Cymru T1 and T2 bus services take. East-west cross-border coach services will also help to complement the rail offer by serving different communities and better connecting key employment and markets such as the Liverpool City Region and its airport.
Community involvement in rail	PT15	The Corporate Joint Committee is supportive of community groups who aim to enhance the rail travel experience for existing and new passengers	A need has been identified to improve connectivity between North and South Wales, particularly from areas in the west of our region. To address this need, Transport for Wales is considering plans for scheduled coach services between Bangor and Carmarthen. A 'Traws Cymru Express' coach service on this route could deliver a one-and-a-half-hour journey time saving compared to the current five hours and fifty minutes that the Traws Cymru T1 and T2 bus services take. East-west cross-border coach services will also help to complement the rail offer by serving different communities and better connecting key employment and markets such as the Liverpool City Region and its airport.
Further improving active travel infrastructure	AT1	The quality and extent of infrastructure that is provided for walking, cycling and wheeling in North Wales will continue to be improved in line with the Active Travel Network Map. These could be new or upgraded existing facilities and may include the re-allocation of road space to prioritise sustainable modes.	Encouraging more people to walk, cycle, or use other active modes can have wide-reaching benefits for our communities, such as increasing town centre viability, placemaking and improving health and well-being. Local cycling parking strategies and stand provision should continue to help integrate cycling with bus and rail stations, as well as support cycling for short trips to local facilities, schools and shops.
	AT2	In non-rural areas, priority will be given to upgrading active travel infrastructure where there is greatest potential for maximising use of the network.	Walking, cycling and wheeling in our urban areas is sometimes unattractive, not convenient, and perceived as not being safe, especially at night. It is vital that we improve the extent and quality of our active travel infrastructure so that residents and visitors in North Wales are encouraged to rely less on cars especially for short trips.
	AT3	Where possible, walking and cycling infrastructure should be accessible for all people, including those with mobility impairments, people in wheelchairs, and people pushing prams.	Our local authorities will continue to plan and design networks of walking and cycling routes, ensuring they are safe and accessible. In our more urban areas, local reviews of pedestrian facilities will help ensure safe crossings and routes within our towns, and street clutter will be considered to make it easier for all groups of people to get around. For example, street furniture plays a crucial role in providing comfort, convenience, and safety to pedestrians, but items like benches, streetlamps, traffic signs, bus stops, post boxes, and litter bins can cause obstructions for those with visual impairments. Inadequate lighting can leave women feeling vulnerable when walking at night. We need more well-designed public spaces taking a place-based approach, that consider the needs of the whole community.

Focus Area	Policy No.	Policy	Further description/explanation
Making active travel more attractive in rural areas	AT4	In rural areas, active travel infrastructure improvement will focus on the community benefit of schemes; improving safety and routes that connect smaller communities with larger settlements and services.	Small improvements to active travel infrastructure can make a significant difference to improving links between communities and services. In more rural areas there is also the opportunity to make use of former railway lines for leisure trips and connecting towns, which should be explored as complementary measures to the delivery of the Active Travel Network Maps
	AT5	Where there is an active travel benefit, routes forming part of the Rights of Way network will be improved to a standard suitable for everyday active travel journeys.	Across North Wales there is a large network of Public Rights of Way, which have a key role in supporting people to travel more sustainably. However, the network is not as fully connected as it could be, some routes cross or follow high speed roads and others are not suitably surfaced, lit or signposted for use for everyday journeys. Local authorities should first focus on routes with the most opportunity to connect communities to local destinations, bringing them up to a standard that could help increase walking, cycling, wheeling and horse-riding in rural areas.
	AT6	The introduction of Quiet Lanes in North Wales in line with national guidance will be investigated.	The Active Travel Act Guidance allows the creation of Quiet Lanes in Wales. These are intended to enable walkers, cyclists, horse riders and people with mobility impairments to enjoy country lanes in safety by encouraging slower traffic speeds and lower traffic volumes. Each local authority in North Wales should consider such opportunities.
Leadership and funding	AT7	The Corporate Joint Committee will work with partners to investigate the establishment of a North Wales Active Travel Unit	Much of the responsibility for the delivery of walking and cycling schemes sits with local authorities. There are a number of different organisations involved in improving walking and cycling infrastructure, including Transport for Wales, the Corporate Joint Committee, Sustrans and the North and Mid Wales Trunk Road Agent, with funding from the Welsh Government. The introduction of an Active Travel Unit for North Wales could facilitate joint working and streamline the delivery of active travel schemes, share expertise and best practice, and better coordinate the resourcing of multi-year delivery and funding programmes.
	AT8	The Corporate Joint Committee support multi-year funding agreements for active travel infrastructure that would facilitate the development and delivery of a multi-year programme of improvements.	The main source of funding for active travel schemes in North Wales is the Welsh Government, currently via the Active Travel Fund, which provides grants to local authorities on an annual basis. The number of active travel schemes supported by the Active Travel Fund in rural areas is limited each year, making it difficult to deliver enhancements between rural communities, links to rural attractions, and links supporting leisure cycling.
	AT9	The Corporate Joint Committee support changes to active travel funding criteria that would place more emphasis on schemes in rural areas and in residential areas.	
	AT10	The Corporate Joint Committee will investigate funding streams additional to the Active Travel Fund that support the delivery of active travel infrastructure improvements in rural area.	

Focus Area	Policy No.	Policy	Further description/explanation
	AT11	The Corporate Joint Committee will work with partners to develop templates and tool kits to support local communities to develop and implement their own projects where government plays a facilitating and supporting rather than doing or delivering role.	There is a greater role that communities could play in creating and enhancing local routes should they be empowered to do so. This is especially the case in rural areas where community-led informal connections between villages and hamlets could help connect to community facilities and bus stops on main roads. This could be achieved through agreements with local landowners.
Cycle hire, e-bikes and e-scooters	AT12	The Corporate Joint Committee will work with partners including the community and voluntary sectors to support community cycle and e-cycle hire schemes that support access to employment or education.	<p>Cycle hire schemes are an effective way of making cycling available to people who do not own a bike, who are considering cycling more frequently, or who are visiting an area. Cycle hire can take a number of forms, such as long-term hire for accessing employment or education. There is a strong link between e-bikes and active travel as more people get comfortable using bikes, and particularly in North Wales where there are also specific benefits in rural communities where longer distances are more common, with e-bikes making cycling more viable for more people.</p> <p>There are already examples of community hire schemes of this nature in North Wales, such as the E-Move scheme operated by Sustrans and Pedal Power's 'See Cycling Differently' and its bike hub in Rhyl.</p>
	AT13	The Corporate Joint Committee will work with partners including the commercial sector to introduce a public cycle and e-cycle hire scheme at large transport interchanges or other suitable locations, and at locations where such a scheme supports the visitor economy.	<p>E-cycle ownership can transform the way people travel for everyday journeys, allowing people to travel further by bike, or making rolling terrain less exerting. There are barriers to ownership and use including cost, lack of secure storage, a greater maintenance requirement and lack of active travel infrastructure. Short term cycle hire for one off trips from a transport interchange to an attractor, or for trips to tourist attractions, are more likely to be commercially operated. Options should be explored with a partnership approach, with potential value and viability at a regionally coordinated scale.</p> <p>The use of private e-scooters on public highways or footpaths is not currently legal, but these also have potential to transform personal travel in the future. E-scooters are considered "powered transporters" and are subject to the same laws and regulations as other motor vehicles. The UK Government has been running trials of e-scooters. You must have the category Q entitlement on your driving licence to use an e-scooters for specified locations in England for people with the correct licences as part of the trial. The Welsh Government and local authorities in Wales should continue to observe the results of the UK trials and provide any updated advice in the future as appropriate.</p>
	AT14	The Corporate Joint Committee will work with partners to develop methods to increase e-cycle ownership, including loan and grant schemes.	

Focus Area	Policy No.	Policy	Further description/explanation
Mobility hubs and gateway stations	IN1	The Corporate Joint Committee supports the development and roll-out of Mobility Hubs and Gateway Stations to make it easier to change between sustainable transport modes on a journey.	<p>If we are to see a sustainable transport network in North Wales that truly provides an attractive alternative to private car use it is vital that people can conveniently change between modes for different legs of their journey. Transport for Wales and local authorities in North Wales are working together to develop proposals for 'gateways' or 'mobility hubs' at locations such as railway stations and major bus stations and stops. Proposals are underway for locations including Wrexham General, Bangor, Colwyn Bay, and Holyhead stations. These locations will create a high-quality welcome to visitors to a town or city, but also make it easier for local people and visitors to change between modes by providing:</p> <ul style="list-style-type: none"> • Good public Wi-Fi • Improved connectivity to town/city centres and bus and rail stations • Better signposting and information for travellers • More and better cycle parking • Improved accessibility
	IN2	Placemaking and wayfinding at stations and key bus stops will be improved. This should consider onward links to key attractors and be undertaken in consultation with local and community organisations, including groups representing communities with protected characteristics.	<p>An important element in making sustainable travel easier for people is by ensuring that they can find their way to their destination using attractive, good quality infrastructure after arriving at a transport interchange such as a railway or bus station. Place-making and attractive wayfinding measures are key contributors to enhancing sustainable transport for people. Effective wayfinding helps people by reducing confusion and stress, making navigation more intuitive and easier.</p> <p>This can include clear and consistent signs that provide directions, identify locations, and offer information about distances and travel times. Use of colours, symbols, and lighting can help to guide people along their routes. Maps that are easy to read and understand can also help, often including landmarks and key points of interest. Digital tools can also be helpful, such as interactive kiosks and mobile apps. Importantly, inclusive design should be adopted, ensuring that wayfinding measures are accessible to everyone, including people with disabilities, by incorporating braille, audio guides, and other assistive technologies.</p>
	IN3	Active Travel Infrastructure improvements identified on Station Network Plans will be delivered, and Station Network Plans will be developed for those stations that do not currently have one.	A series of Station Network Plans have been produced by local authorities and Transport for Wales. These identify a programme of walking and cycling infrastructure enhancements that, when delivered, will make walking, cycling and wheeling to stations easier and more attractive.

Focus Area	Policy No.	Policy	Further description/explanation
Improving bus and rail integration	IN4	The Corporate Joint Committee will support the roll-out of integrated ticketing across transport modes that provides best value for passengers.	The local authorities in North Wales have worked with bus operators to roll-out the '1bws' ticket in 2021, which allows travel on almost all bus services in the region. This ticket simplifies travel by allowing passengers to hop on and off buses without worrying about multiple tickets or fares. This is a significant improvement in cost and convenience for passengers whose journey requires multiple bus operators. A fully integrated transport system in North Wales requires people to be able to use one ticket for all of their travel, regardless of mode, or a contactless system that ensures passengers achieve best value fare for their journey.
Park and ride, and park and share	IN5	Any new park and ride schemes should first seek to encourage the whole journey to be undertaken by sustainable means, should be sited to reduce private vehicle mileage, and to be located at a place that can be served by public transport services with minimal impact.	Facilities such as park and ride, or park and share, are intended to intercept car trips in a manner that supports reducing congestion and minimising the impacts of parking at key destinations such as shopping centres, whilst reducing car mileage. For example, park and ride in Eryri utilising the Sherpa'r bus services can play a key role in reducing vehicle access to the National Park and reducing the impact of cars on the natural environment.
	IN6	Consideration for strategic park and share sites should be included in the Strategic Development Plan.	Park and share car parks are locations where people can meet, leave one car and share another for an onward journey. They can be of greater value in rural areas for longer onward journeys. Park and share car parks currently exist at Gaerwen and Llanfairpwll, on Ynys Môn. They should be considered for other locations, especially where it is known that informal car sharing already takes place.
Ports	PF1	The Corporate Joint Committee will work with partners to support the growth of our ports and nearby development sites in North Wales, recognising their role as a catalyst for co-location of manufacturing, energy, leisure distribution and tourism. In particular we will prioritise sustainable transport connections to the Anglesey Freeport and ports at Holyhead and Mostyn and support their plans for decarbonisation	The Port of Holyhead is identified by Future Wales as a Strategic Gateway for international connectivity. The creation of a Freeport site on Ynys Môn, one of two in Wales, will further enhance Holyhead's role as an international gateway. This will play an important role in strengthening the North Wales economy and creating jobs for local people, but there may be further implications of increased freight movements in North Wales. The Port of Mostyn also generates freight traffic, with much of its business now dedicated to the offshore renewable energy sector.
	PF2	The Corporate Joint Committee will work with partners to identify vehicle access improvements at Holyhead Port. This should improve access to the port for all vehicles, including freight, but also improve sustainable access to both the port and rail station.	Highway infrastructure used by vehicles accessing and egressing the port is constrained, notably the London Road/Black Bridge connection from the A55. As this particularly impacts HGVs using the port, there are significant impacts on the local environmental, and the journey time and reliability of freight movement is affected. By improving access to the port, there will be more opportunities for workers and visitors to get around more sustainably, whilst giving businesses more certainty about their operations and deliveries.

Focus Area	Policy No.	Policy	Further description/explanation
Road freight	PF3	The Corporate Joint Committee will work with partners to enhance facilities for HGV drivers, particularly on the approach to Holyhead port.	Highway infrastructure used by vehicles accessing and egressing the port is constrained, notably the London Road/Black Bridge connection from the A55. As this particularly impacts HGVs using the port, there are significant impacts on the local environmental, and the journey time and reliability of freight movement is affected. By improving access to the port, there will be more opportunities for workers and visitors to get around more sustainably, whilst giving businesses more certainty about their operations and deliveries.
Low emission HGVs	PF4	The Corporate Joint Committee will work with partners to seek opportunities to complement the development of hydrogen hubs in North Wales by supporting a shift to hydrogen fuels for freight operators in the region.	There are currently no facilities in North Wales that would support hauliers in the region who are seeking to switch to low emission vehicles. Supporting hauliers to make this switch would reduce the local impact of HGVs in North Wales. Menter Mon are progressing work to develop a Hydrogen Hub in Holyhead. This is proposed as a facility for the supply of hydrogen for transport. Holyhead is an excellent site for a production facility as it is a busy transport hub with proximity to renewable energy sources. There are also proposals for hydrogen production at Deeside.
Local deliveries	PF5	The Corporate Joint Committee will work with partners to identify opportunities for the electrification of vehicles for local deliveries.	We all rely on day-to-day deliveries to local areas, including those to our homes, places of work and town centre businesses. Those deliveries have resulted from an increase in online retail. There is a local environmental impact caused by emissions from, and size of, delivery vehicles. Helping shift to ultra-low or zero emissions vehicles will reduce the impacts of local deliveries on our climate, benefit air quality and reduce noise pollution.
	PF6	The Corporate Joint Committee will work with partners to identify solutions to the local impacts of HGV movements. This includes the development of a network of freight consolidation centre should it be demonstrated that one serving North Wales is economically viable.	Freight Consolidation Centres are distribution centres situated close to a town centre, shopping centre or construction sites. A number of loads are dropped at the centre to be consolidated onto one lorry for transfer to their final destination. This could potentially reduce congestion and the levels of HGV traffic in the town centre.
	PF7	The Strategic Development Plan should consider land requirements for a network of freight consolidation centres.	
	PF8	The Corporate Joint Committee will work with partners and the distribution sector to identify innovative solutions to reducing the environmental impact of local deliveries.	Other measures that can help to reduce the impact of local deliveries on communities, include e-cargo bikes, area delivery and servicing plans, micro-consolidation centres, and delivery lockers at key locations such as transport and/or mobility hubs.
Rail freight	PF9	The Corporate Joint Committee will work with partners in the rail industry to support a shift to rail for freight movement, including rail based light logistics.	There is a lot of potential for reducing the impact of freight on our roads, urban areas and natural environment through rail freight and logistics networks in North Wales, with capacity for a significant increase in the volume of freight carried on the North Wales Main Line. The desired service levels set out in our rail ambitions includes a freight path each hour. On the Wrexham-Liverpool Line, Padeswood Sidings creates a significant barrier to increased freight movement, as well as enhanced passenger services. Our rail ambitions will facilitate an increase in freight movement.

Focus Area	Policy No.	Policy	Further description/explanation
Maintenance	RS1	The Corporate Joint Committee will work with partners to secure adequate funding for surfacing and structure maintenance that ensures the ongoing operation and resilience of existing highway assets.	Local authorities are responsible for maintaining local roads, while the Welsh Government oversees motorways and trunk roads. The most important thing that can be done to support the resilience of the local highway network in North Wales is keep our roads and streets maintained to a good standard, recognising local authority budget constraints.
	RS2	The Corporate Joint Committee will work with partners to secure funding to adapt the existing road infrastructure to better cope with climate change and enhancing biodiversity.	If the highway network is to continue to be operational in the future, local highway authorities need to be sufficiently resourced to respond to the challenges of climate change and flood risk from extreme weather events, which requires ongoing drainage maintenance and improvements.
Road safety	RS3	The Corporate Joint Committee is supportive of Welsh Government's Vision Zero approach to road safety and will work with partners to secure adequate funding for road safety measures across North Wales	Road safety is a crucial consideration for the management of the highway network. The Welsh Government consulted on a Vision Zero approach to road safety. This has the long-term goal for a road traffic system, which is eventually free from death and serious injury, based on a guiding 'moral' principle to treat road deaths as unacceptable and avoidable, rather than accidents which we should tolerate. It involves an important shift from trying to prevent all collisions to preventing death and mitigating serious injury in road traffic collisions.
	RS4	The approach to road safety will include delivery of highway improvement schemes that increase safety or perceptions of safety for all road users, and continuing programmes of education aimed at encouraging safer use of the highway and transport networks	
Public car parking in towns and cities	RS5	The role of parking charges and controls will be considered in seeking to manage the demand for parking and discourage unnecessary single-occupancy car use.	<p>The local authorities in North Wales manage and operate a range of public car parks that serve the town and city centres in our region. The amount of parking and the charge for parking is determined by the local authorities who must consider the balance between the amount of parking required to support local businesses, encouraging a shift to more sustainable travel, and the operational cost of the parking service.</p> <p>Local authorities have to develop an integrated strategy on parking to support the overall transport and locational policies of their local development plans. Local authorities should consider parking issues on a joint basis with neighbouring authorities. Parking standards should be used with flexibility, seeking lower levels of parking to support the development of high-quality places. Local authorities should implement charging policies for both on-street and off-street parking, where they have control, to align with their local planning policies and promote the uptake of electric vehicles.</p>

Focus Area	Policy No.	Policy	Further description/explanation
	RS6	The Corporate Joint Committee will work with partners to explore options for the reallocation of existing road and car parking space in our key towns, bus stations and depots to enhance the local environment, create more attractive spaces for people to dwell, and make it easier for people to walk and cycle.	<p>Provision of car parking can sometimes dominate our towns and cities, with car parks and on-street parking occupying large amounts of space. This is space could sometimes be better used to enhance placemaking and improve the local environment. The Placemaking Wales Charter emphasises the importance of creating well-designed, sustainable, and inclusive places. It encourages local authorities and developers to consider the broader impacts of car parking and to prioritise placemaking principles in town planning.</p> <p>Transforming underutilised parking areas or changing the way people access our places by car could see more spaces come into better community use as parks or gardens, which can enhance urban biodiversity, provide recreational spaces, and improve air quality. Reducing on-street parking can create more pedestrian-friendly areas, encouraging walking and cycling, which can boost local businesses and create a more vibrant community. By rethinking how car parking is integrated into our towns and cities in North Wales, we can create opportunities to benefit our local environments, promote sustainable travel, and create more attractive and functional public spaces.</p>
Low emission vehicles	RS7	The Corporate Joint Committee will support the transition to electric vehicles in North Wales by ensuring that fair and equitable charging infrastructure is available in urban areas and help facilitate private or community-led installation in rural areas	Across North Wales there is increasing provision of the infrastructure and support for those drivers seeking a switch to plug-in vehicles. This is increasingly important, particularly in rural and remote areas where residents often have less choice about how they travel, making private vehicle use a necessity for many journeys
	RS8	Where possible, opportunities will be sought to unify EV charger providers – or the apps and memberships required - across North Wales to make EV charging more convenient	
	RS9	The Corporate Joint Committee will work with partners to develop a comprehensive communications campaign to encourage EVBuptake, learning from best practice	Across North Wales there is increasing provision of the infrastructure and support for those drivers seeking a switch to plug-in vehicles. This is increasingly important, particularly in rural and remote areas where residents often have less choice about how they travel, making private vehicle use a necessity for many journeys.
	RS10	The Corporate Joint Committee and partners will work with the Distribution Network Operator to seek opportunities to enhance grid capacity in locations where there is a barrier to EV charger roll-out. This should also be a key consideration of the Strategic Development Plan when identifying new developments.	Another important part of facilitating the shift to zero emission vehicles is changing residents' mindsets, and addressing some of the barriers or perceived barriers to changing vehicle, such as purchase cost, range anxiety, lack of charging infrastructure, charging time, and general uncertainty.
	RS11	The Strategic Development Plan and Local Development Plans should mandate that new residential and non-residential developments provide sufficient electric vehicle charging points to meet future demand and incentivise electric vehicle uptake.	To ensure that low emission vehicle use is increasingly convenient in the future, it is vital that new homes are built with adequate provision to support residents who choose to drive a plug-in vehicle.

Focus Area	Policy No.	Policy	Further description/explanation
Club cars and car sharing	RS12	Opportunities will be sought to increase the number of car clubs in North Wales through joint working with car club providers, including community car club providers in urban and rural areas; and at stations, in workplaces and at mobility hubs.	<p>For drivers who do not own a car, car clubs can provide access to a car to make those journeys that are not possible by public transport. Car clubs support a reduction in car ownership levels, providing an option for people who do not use their car often, or who may no longer need a second car. Lower car ownership reduces the number of trips by car and increases the number of trips made by other modes. In more urban areas, there are opportunities for car clubs to be located at railway stations, workplaces and mobility hubs, allowing people access to a car for a journey or onward part of a journey that may not be possible by more sustainable means.</p> <p>There are a number of car clubs in North Wales such as the Ogwen Valley (organised by Partneriaeth Ogwen), in rural Gwynedd (Arloesi Gwynedd Wledig), and in south Denbighshire (run by Partneriaeth Gymunedol De Sir Ddinbych). These examples from rural areas show that car clubs can be effective.</p>
	RS13	The travel planning process should be used to encourage care share for commuting.	<p>Another significant opportunity to reduce the number of miles driven by private cars is increasing car sharing, and the development of park and share sites. By sharing journeys for all or part of their journey, travellers can reduce the cost of car travel, reduce vehicle mileage, and reduce localised congestion. Minimising the number of people driving on their own to work can be supported through an increased number of car sharing schemes. Employers, via their travel plans, have a role to play in promoting and facilitating car sharing. Employers should be encouraged to promote and co-ordinate these schemes and incentivise those choosing to travel in multi-occupancy vehicles.</p>
Surface access to aviation	AV1	The Corporate Joint Committee will support enhancements to surface access to domestic and international airports, focusing on improving public transport services	<p>Access to airports is an important issue for people in North Wales for three main reasons:</p> <ul style="list-style-type: none"> • Connecting businesses to international clients and markets • Connecting international visitors to North Wales attractions • Access to international leisure opportunities for residents <p>We want to see sustainable travel connections between North Wales and nearby airports that are attractive to residents, businesses, and international visitors to our region. We recognise that if we are to maximise the economic activity and tourist potential of North Wales it is important that we have convenient, attractive and reliable connections to key airports serving our region. This includes opportunities for bus, coach and rail travel with more accessible, reliable and regular services connecting our key communities to regional airports.</p>

Focus Area	Policy No.	Policy	Further description/explanation
Digital connectivity	DC1	Opportunities should be sought to work with communities and businesses to promote and facilitate remote working hubs.	<p>Opportunities for remote working have increased in importance significantly since the Covid pandemic, have reduced the number of people that commute during the peaks, and have reduced the number of times that some people commute each week. This positive impact could be increased through the availability of remote working hubs in communities. These hubs provide a professional environment with amenities such as high-speed internet, meeting rooms, and collaborative spaces. Two examples in North Wales of different scales that all local authorities and private sector providers could consider include:</p> <ul style="list-style-type: none"> • M-SParc: Located in Bangor and Pwllheli, offering modern facilities as part of the Menai Science Park. • Costigan's: Situated in Rhyl, providing a coworking space in partnership with Denbighshire County Council
	DC2	Digital literacy training and education should be widely available to assist North Wales residents to get online and find the information they need to make sustainable travel choices.	<p>We all have an important role to play in informing people about the choices that are available for travel for each journey. That can include operator, Transport for Wales and Traveline Cymru websites and mobile apps for journey planning, as well as local authority information available online about community transport and other local services. It is vital that residents have the opportunity to improve their digital literacy, so they know where to access the information they need to help make travel choices.</p> <p>The digital literacy of people as well as businesses and service providers is also important to helping reduce the need to travel. For example, education, healthcare and other service providers can work to facilitate remote access to information and appointments to avoid unnecessary trips.</p>
	DC3	A partnership approach will be taken to rolling out digital and real time information about public transport services, prioritising digital displays at key transport interchanges, and working towards real time information at bus stops across North Wales	Digital connectivity is also key to providing journey information to public transport passengers as they travel. Real time information provides up to date information to passengers, giving people more confidence to travel by bus or rail. Working with service and station operators including Transport for Wales and Network Rail, we want to see improved Wi-Fi for passengers on bus and rail services as well as at transport interchanges, to make it easier and more attractive for people to find their way around and improve the travel experience.
Transit-oriented development	LU1	The Corporate Joint Committee supports the principal of Transit-Orientated Development for new developments in North Wales.	If we are to encourage people that live or work in new developments to travel sustainably, it is crucial that sustainable transport is a key consideration in development planning. Mixed-use developments should combine residential, commercial and recreational spaces within easy walking distances of bus and rail stations. Building more homes nearer to stations will increase accessibility and reduce the reliance on the private car. This must be supported by wider policies and interventions involved in enhancing the frequency, reliability, and coverage of public transport services to make them a viable alternative to car travel, and making our roads, streets and public spaces to feel safe and convenient for walking, cycling and wheeling.

Focus Area	Policy No.	Policy	Further description/explanation
	LU2	The Sustainable Transport Hierarchy will be used to help ensure developments support walking and cycling, public transport and ultra-low emissions vehicles over other private motor vehicles	The Strategic Development Plan will set out proposals for progressing strategic regional areas for growth sites in North Wales including key employment sites at the Anglesey Freeport, Wylfa, and the Flintshire and Wrexham Investment Zone. It is important that the transport related policies in this Regional Transport Plan are considered and consistent with the emerging spatial planning at a regional level in North Wales to help join up transport, land use planning and economic development.
	LU3	Sustainable transport connections to key areas for future growth and economic activity will be introduced	
Breaking the dependency on the private car through sustainable development	LU4	Developments should only be supported where they promote active travel connectivity through safeguarding, enhancing and expanding on the Active Travel Network Maps.	To ensure that the right infrastructure is included in proposals for new developments it is vital that good quality, attractive, convenient, and safe walking and cycling routes are considered as part of any proposals. That will help reduce the reliance on the private car for short trips, and make active travel the preferred choice for accessing local facilities and services.
	LU5	Development should be encouraged close to public transport facilities, and developments should be designed to help facilitate and improve public transport connectivity in both urban and rural areas.	Building on the principles of transit-oriented development it is also crucial that new developments are served by convenient and attractive public transport services. This is most effective when a development is located close to rail station or can be served by an existing bus service.
	LU6	The Corporate Joint Committee supports reducing the parking standards for new developments (as required by the Welsh Government), particularly in urban areas where we will be actively improving sustainable transport alternatives.	It is crucial that new developments do not encourage unnecessary car use. Developments should be served by an appropriate level of parking provision and seek to reduce reliance on the private car, in combination with provision of active travel and public transport alternatives.

Appendix A – Internationally Important Sites

Table 18 - Internationally important sites within the study area

Site name	Site area (ha)	Representative local authority	Description
Ramsar Sites			
The Dee Estuary (Wales)	6636.01	Flintshire, Denbighshire	Designated for extensive intertidal mud and sand flats (20 km by 9 km) with large expanses of saltmarsh towards the head of the estuary; Breeding colony of Natterjack toad (<i>Bufo calamita</i>) present; Supports 20,000 or more waterbirds regularly; and Supports 1% of the individuals of the species/subspecies redshank (<i>Tringa tetanus</i>), shelduck (<i>Tadorna tadorna</i>), teal (<i>Anas crecca</i>), pintail (<i>Anas acuta</i>), oystercatcher (<i>Haematopus ostralegus</i>), grey plover (<i>Pluvialis squatarola</i>), knot (<i>Calidris canutus islandica</i>), dunlin (<i>Calidris alpina</i>), black-tailed godwit (<i>Limosa limosa</i>), bartailed godwit (<i>Limosa lapponica</i>), and curlew (<i>Numenius arquata</i>) regularly. ²⁶
Midland Meres & Mosses Phase 2 (Wales)	772.21	Wrexham	The site comprises a diverse range of habitats from open water to raised bog; Supports a number of rare species of plants associated with wetlands, including the nationally scarce cowbane (<i>Cicuta virosa</i>) and, elongated sedge (<i>Carex elongate</i>). Also present are the nationally scarce bryophytes (<i>Dicranum affine</i>) and (<i>Sphagnum pulchrum</i>). Also supports an assemblage of invertebrates including several rare species. There are 16 species of British Red Data Book insect listed for this site including the following endangered species: the moth (<i>Glyphipteryx lathamella</i>), the caddisfly (<i>Hagenella clathrata</i>) and the sawfly (<i>Trichiosoma vitellinae</i>). ²⁷
Corsydd Môn a Llyn / Anglesey and Llyn Fens	626.08	Isle of Anglesey, Gwynedd	The site supports a suite of base-rich, calcareous fens which is a rare habitat type within the United Kingdom's biogeographical zone. The site supports a diverse flora and fauna with associated rare species and is of special value for maintaining the genetic and ecological diversity of the region. Noteworthy flora include orchids such as <i>Dactylorhiza traunsteineri</i> and <i>Eriophorum gracile</i> and slender stonewort (<i>Nitella tenuissima</i>). Noteworthy fauna include otter (<i>Lutra lutra</i>), and invertebrates such as ground beetle (<i>Chlaenius tristis</i>), fly species <i>Asilus crabroniformis</i> and <i>Stratiomys chamaeleon</i> and leech species <i>Hirudo medicinalis</i> . ²⁸

²⁶ https://naturalresources.wales/media/626250/RAMSAR_UK11082_Citation_EN001.pdf

²⁷ <https://jncc.gov.uk/jncc-assets/RIS/UK11080.pdf>

²⁸ [RAMSAR_UK14005_Citation_EN001 \(naturalresources.wales\)](#)

Site name	Site area (ha)	Representative local authority	Description
Llyn Tegid	481.40	Gwynedd	Largest natural lake in Wales, lying deep in a formerly glaciated trough. Plant species growing in or beside the lake are mudwort (<i>Limosa aquatica</i>), six-stamened waterwort (<i>Elatine hexandra</i>), water sedge (<i>Carex aquatilis</i>) and floating water plantain (<i>Luronium natans</i>), all of which are scarce in Britain. The latter species is regarded as vulnerable on a global scale. This site is also one of only six sites in Britain for the whitefish or gwyniad (<i>Coregonus lavaretus</i>); the Welsh population of this fish is genetically distinct. Llyn Tegid is also an unusual habitat for the normally riverine fish grayling (<i>Thymallus thymallus</i>). The Nationally Rare glutinous snail (<i>Myxas glutinosa</i>) has been rediscovered in the shallow gravels of the lake shore. ²⁹
Cors Fochno and Dyfi	402.46	Gwynedd	The site contains the largest expanse of primary raised mire in lowland Britain; the largest estuarine raised mire, and third-largest 'active' raised mire in Britain ³⁰ .
Llyn Idwal	13.56	Gwynedd	A small, shallow, oligotrophic corrie lake. The semi-circular rock basin (or cwm) containing the lake is one of the finest examples in Snowdonia. Species-rich plant community, including almost all of the species typical of oligotrophic waters in Britain. Notable species include <i>Elatine hexandra</i> and <i>Subularia aquatica</i> (both nationally scarce) and <i>Pilularia globulifera</i> (vulnerable at a European level) ³¹ .
The Dee Estuary (England) Ramsar	12.23	Flintshire, Denbighshire	Refer to The Dee Estuary (Wales) Ramsar description for qualifying features as they are the same.
Special Area of Conservation (SAC)			
Migneint-Arenig-Dduallt	19968.32	Conwy, Gwynedd	Annex I habitats are European dry heath and blanket bogs. Upland heath is predominantly <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath. Another form the <i>Calluna</i> – <i>Vaccinium</i> – <i>Sphagnum</i> heath supports the Red Data Book liverwort <i>Gymnocolea acutiloba</i> ³² .
Eryri / Snowdonia	19736.23	Gwynedd, Conwy	Annex I habitats include alpine pioneer formations of the <i>Caricion colorisatrofuscae</i> , blanket bog, hard-water springs depositing lime and species-rich <i>Nardus</i> grassland on siliceous substrates in mountain areas. Annex II species are slender green feather-moss (<i>Drepanocladus vernicosus</i>) and floating water-plantain (<i>Luronium natans</i>) ³³ .

²⁹ [RAMSAR UK14008 Citation_EN001 \(naturalresources.wales\)](#)

³⁰ [RAMSAR UK14004 Citation_EN001 \(naturalresources.wales\)](#)

³¹ [RAMSAR UK14007 Citation_EN001 \(naturalresources.wales\)](#)

³² [Microsoft Word - Migneint-Arenig-Dduallt.doc \(naturalresources.wales\)](#)

³³ [Microsoft Word - Eryri - Snowdonia.doc \(naturalresources.wales\)](#)

Site name	Site area (ha)	Representative local authority	Description
Berwyn a Mynyddoedd De Clwyd / Berwyn and South Clwyd Mountains	17340.46	Gwynedd, Denbighshire, Flintshire, Wrexham	Annex I habitats are European dry heaths, and blanket bogs ³⁴ .
Dee Estuary / Aber Dyfrdwy (Wales)	6215.32	Flintshire, Denbighshire	Annex I habitats present are estuaries, mudflats and sandflats not covered by seawater at low tide, annual vegetation of drift lines, vegetated sea cliffs of the Atlantic and Baltic coasts, Salicornia and other annuals colonising mud and sand, Atlantic salt meadows (<i>glaucopuccinellietalia maritimae</i>), embryonic shifting dunes, shifting dunes along the shoreline with <i>ammophila arenaria</i> ("white dunes"), fixed dunes with herbaceous vegetation ("grey dunes"), and humid dune slacks. Annex II species are sea lamprey (<i>Petromyzon marinus</i>), river lamprey (<i>Lampetra fluviatilis</i>), and petalwort (<i>Petalophyllum ralfsii</i>) ³⁵ .
Pen Llyn a'r Sarnau / Llyn Peninsula and the Sarnau	4757.23	Gwynedd	Annex I habitats include sandbanks which are slightly covered by sea water all the time, estuaries, coastal lagoons, reefs, large shallow inlets and bays. Annex II species are bottlenose dolphin <i>Tursiops truncatus</i> , otter, and grey seal <i>Halichoerus grypus</i> ³⁶ .
Cadair Idris	3784.63	Gwynedd	Annex I habitats are oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the Isoëto Nanojuncetea, siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), calcareous rocky slopes with chasmophytic vegetation, and siliceous rocky slopes with chasmophytic vegetation. Annex II species are marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> and slender green feather-moss <i>Drepanocladus</i> (<i>Hamatocaulis</i>) <i>vernicosus</i> ³⁷ .
Rhinog	3144.78	Gwynedd	Annex I habitat are European dry heaths and old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles. Annex II species is floating water-plantain ³⁸ .

³⁴ [Microsoft Word - Berwyn a Mynyddoedd De Clwyd - Berwyn and South Clwyd Moun... \(naturalresources.wales\)](#)

³⁵ <https://sac.jncc.gov.uk/site/UK0030131>

³⁶ <https://sac.jncc.gov.uk/site/UK0013117>

³⁷ <https://sac.jncc.gov.uk/site/UK0030104>

³⁸ <https://sac.jncc.gov.uk/site/UK0012945>

Site name	Site area (ha)	Representative local authority	Description
Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	2829.48	Gwynedd, Isle of Anglesey, Conwy	Annex I habitats are sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide, and reefs ³⁹ .
Coedydd Derw a Safleoedd Ystlumod Meirion / Meirionnydd Oakwoods and Bat Sites	2813.02	Gwyned	Annex I habitats include old sessile oak woods, and alluvial forest with an extensive area of alder <i>Alnus glutinosa</i> Annex II species are lesser horseshoe bat (<i>Rhinolophus hipposideros</i>). The site includes most of the known maternity roosts in Meirionnydd and some hibernacula and comprises the centre of distribution for lesser horseshoe bats ⁴⁰ .
Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes	1832.84	Gwynedd, Isle of Anglesey	Annex I habitats are embryonic shifting dunes, white dunes, grey dunes, dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) and humid dune slacks. Annex II species are petalwort and shore dock (<i>Rumex rupestris</i>) ⁴¹ .
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales)	1148.72	Denbighshire, Gwynedd, Flintshire, Wrexham	Annex I habitat are water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. Annex II species include Atlantic salmon (<i>Salmo salar</i>) and floating water-plantain ⁴² .

³⁹ <https://sac.jncc.gov.uk/site/UK0030202>

⁴⁰ <https://sac.jncc.gov.uk/site/UK0014789>

⁴¹ <https://sac.jncc.gov.uk/site/UK0020021>

⁴² <https://sac.jncc.gov.uk/site/UK0030252>

Site name	Site area (ha)	Representative local authority	Description
Morfa Harlech a Morfa Dyffryn	1060.50	Gwynedd	Annex I habitats are embryonic shifting dunes, white dunes, dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) and humid dune slacks. Annex II species is petalwort ⁴³ .
Clogwyni Pen Llyn / Seacliffs of Llyn	1048.82	Gwynedd	Annex I habitats are vegetated sea cliffs of the Atlantic and Baltic coasts. An important feature of the site is that the cliffs are southfacing and the additional solar gain makes them very good for invertebrates, including some threatened and scarce species ⁴⁴ .
Glannau Mon: Cors heli / Anglesey Coast: Saltmarsh	959.18	Isle of Anglesey	Annex I habitats are salicornia spp. and other annuals colonizing mud and sand, and Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) ⁴⁵ .
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (Wales)	690.27	Wrexham	Annex I habitats is active raised bogs. Mire vegetation includes <i>Sphagnum papillosum</i> , <i>Sphagnum magellanicum</i> , <i>Sphagnum pulchrum</i> , all three British species of sundew (<i>Drosera</i> spp.), cranberry (<i>Vaccinium oxycoccos</i>), bog asphodel (<i>Narthecium ossifragum</i>), royal fern (<i>Osmunda regalis</i>), white beak-sedge (<i>Rhynchospora alba</i>) and bogrosemary (<i>Andromeda polifolia</i>), together with the nationally scarce moss (<i>Dicranum affine</i>). Over 1,700 invertebrate species have been recorded here, including 29 nationally rare Red Data Book species ⁴⁶ .
Halkyn Mountain / Mynydd Helygain	609.97	Flintshire	Annex I habitats are Calaminarian grasslands of the <i>Violetalia calaminariae</i> . Annex II species are great crested newt (<i>Triturus cristatus</i>) where they breed in abandoned quarry workings and various other waterbodies across the site ⁴⁷ .

⁴³ <https://sac.jncc.gov.uk/site/UK0030049>

⁴⁴ <https://sac.jncc.gov.uk/site/UK0030271>

⁴⁵ <https://sac.jncc.gov.uk/site/UK0020025>

⁴⁶ <https://naturalresources.wales/media/672011/fenns-and-whixhall-wes-english.pdf>

⁴⁷ <https://sac.jncc.gov.uk/site/UK0030163>

Site name	Site area (ha)	Representative local authority	Description
Corsydd Mon / Anglesey Fens	467.34	Isle of Anglesey	Annex I habitats include hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp</i> , calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> , alkaline fens, Northern Atlantic wet heaths with <i>Erica tetralix</i> and Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) Annex II include Geyer's whorl snail (<i>Vertigo geyeri</i>), southern damselfly (<i>Coenagrion mercurial</i>) and marsh fritillary butterfly (<i>euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i>) ⁴⁸ .
Glannau Ynys Gybi / Holy Island Coast	459.33	Isle of Anglesey	Annex I habitats are vegetated sea cliffs of the Atlantic and Baltic coasts and European dry heaths. The dry heathland is associated with small areas of wet heath and forms part of a complete zonation from maritime grassland through maritime heath to inland heath to inland heath with bracken (<i>Pteridium aquilinum</i>) to bramble (<i>Rubus fruticosus</i>) scrub. The heath is an important locus for spotted rock-rose (<i>Tuberaria guttata</i>) ⁴⁹ .
Coedydd Aber	346.02	Conwy, Gwynedd	Annex I habitat is old sessile oak woods with Ilex and Blechnum in the British Isles. Canopy consists of sessile oak (<i>Quercus petraea</i>) and downy birch (<i>Betula pubescens</i>), with intricate transitions to ash (<i>Fraxinus excelsior</i>), and alder (<i>Alnus glutinosa</i>) woodlands. Diverse ground flora present with rare mosses <i>Fissidens rufulus</i> and <i>Philonotis rigida</i> , and the lichens <i>Degelia plumbea</i> and <i>Lobaria amplissima</i> . The site is also important for its breeding bird assemblage ⁵⁰ .
Great Orme's Head / Pen y Gogarth	302.78	Conwy	Annex I habitats are European dry heath with a small area limestone pavements and semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>). Grassland consists of <i>Xerobromion</i> grassland type which is one of only three selected sites in the UK where this occurs ⁵¹ .
Afon Eden - Cors Goch Trawsfynydd	284.65	Gwynedd	Annex II species are freshwater pearl mussel (<i>Margaritifera margaritifera</i>), and floating water-plantain ⁵² .

⁴⁸ <https://sac.jncc.gov.uk/site/UK0012884>

⁴⁹ <https://sac.jncc.gov.uk/site/UK0013046>

⁵⁰ <https://sac.jncc.gov.uk/site/UK0030118>

⁵¹ <https://sac.jncc.gov.uk/site/UK0014788>

⁵² <https://sac.jncc.gov.uk/site/UK0030075>

Site name	Site area (ha)	Representative local authority	Description
Corsydd Llyn / Llyn Fens	283.83	Gwynedd	Annex I habitat is alkaline fens. Annex II species is Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>). They occur in stands of great-fen sedge (<i>Cladium mariscus</i>) in calcareous fen and is the only locality known for the species in Wales ⁵³ .
Deeside and Buckley Newt sites	207.12	Flintshire	Annex II species is great crested newt. Waterbodies created by the extraction of clay, sand and coal, as well as for agricultural purposes, provide breeding habitat for one of the largest populations of great crested newt in Great Britain. The site also supports considerable numbers of all the widespread amphibian species ⁵⁴ .
Glynllifon	188.77	Gwynedd	Annex II species is lesser horseshoe bat. A maternity and hibernation site comprises 6% of the UK population ⁵⁵ .
Alyn Valley Woods / Coedwigoedd Dyffryn Alun	168.46	Denbighshire, Flintshire	Annex I habitats are Tilio-Acerion forests of slopes, screes, and ravines. Rare or distinctive species include herb Paris (<i>Paris quadrifolia</i>), stinking hellebore (<i>Helleborus foetidus</i>), green-flowered helleborine (<i>Epipactis phyllanthes</i>), toothwort (<i>Lathraea squamaria</i>) and spurge laurel (<i>Daphne laureola</i>). The site also holds the region's largest population of wayfaring tree (<i>Viburnum lantana</i>) ⁵⁶ .
Corsydd Eifionydd / Eifionydd Fens	144.54	Gwynedd	Annex I habitats are transition mires and quaking bogs. Annex II species are marsh fritillary butterfly and slender green feather-moss ⁵⁷ .

⁵³ <https://sac.jncc.gov.uk/site/UK0030187>

⁵⁴ <https://sac.jncc.gov.uk/site/UK0030132>

⁵⁵ <https://sac.jncc.gov.uk/site/UK0012661>

⁵⁶ <https://sac.jncc.gov.uk/site/UK0030078>

⁵⁷ <https://sac.jncc.gov.uk/site/UK0030121>

Site name	Site area (ha)	Representative local authority	Description
Coedwigoedd Penrhyn Creuddyn / Creuddyn Peninsula Woods	118.77	Conwy	Annex I habitats are Tilio-Acerion forests of slopes, screes, and ravines. The canopy is primarily of ash and sycamore (<i>Acer pseudoplatanus</i>), with a calcicolous understorey and ground flora. Characteristic species include dog's mercury (<i>Mercurialis perennis</i>), hart's-tongue (<i>Phyllitis scolopendrium</i>) and spurge laurel (<i>Daphne laureola</i>). Yew (<i>Taxus baccata</i>) dominates locally, and there are gradations to oak woodland. In places there are mosaics with rich calcareous grassland containing many rare species ⁵⁸ .
Afon Gwyrfai a Llyn Cwellyn	114.20	Gwynedd	Annex I habitats are oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea and water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation. Annex II species are Atlantic salmon and floating water plantain ⁵⁹ .
Coedwigoedd Dyffryn Elwy / Elwy Valley Woods	82.69	Conwy, Denbigshire	Annex I habitats are Tilio-Acerion forests of slopes, screes, and ravines. The canopy is quite varied: ash is the commonest tree, but there is also occasional small-leaved lime <i>Tilia cordata</i> and wild service-tree (<i>Sorbus torminalis</i>). There is a rich, calcicolous understorey and ground flora, and rare bryophytes include <i>Bryum canariense</i> , <i>Cololejeunea rossettiana</i> , <i>Plagiochila britannica</i> , <i>Platydictya confervoides</i> and <i>Isoetecium striatulum</i> ⁶⁰ .
Johnstown Newt Sites	69.72	Wrexham	Annex II species is great crested newt. One of the largest populations in the UK and Breeding sites are provided in part by a mining subsidence pool, and natural water-filled hollows on clay ⁶¹ .
Bae Cemlyn / Cemlyn Bay	43.45	Isle of Anglesey	Annex I habitat is coastal lagoon. Cemlyn lagoon supports a relatively diverse set of species, several of which are specific to lagoons, including the bryozoan (<i>Conopeum seurati</i>), the lagoon cockle (<i>Cerastoderma glaucum</i>) and the lagoonal mud-snail (<i>Ventrosia ventrose</i>). Cemlyn lagoon is also the only site in Wales where the lagoonal isopod (<i>Idotea chelipes</i>) has been recorded. A number of uncommon plant species are found within the lagoon, including the brackish water-crowfoot (<i>Ranunculus baudotii</i>) and beaked tasselweed (<i>Ruppia maritima</i>).

⁵⁸ <https://sac.jncc.gov.uk/site/UK0030124>

⁵⁹ <https://sac.jncc.gov.uk/site/UK0030046>

⁶⁰ <https://sac.jncc.gov.uk/site/UK0030146>

⁶¹ <https://sac.jncc.gov.uk/site/UK0030173>

Site name	Site area (ha)	Representative local authority	Description
Mwyngloddiau Fforest Gwydir / Gwydyr Forest Mines	39.78	Conwy	Annex I habitats are Calaminarian grasslands of the <i>Violetalia calaminariae</i> . The site is notable for the local frequency of the near-endemic moss <i>Ditrichum plumbicola</i> . Annex II species is lesser horseshoe bat ⁶² .
Llyn Dinam	36.72	Isle of Anglesey	Annex I habitats are Natural eutrophic lakes with Magnopotamion- or Hydrocharition- type vegetation ⁶³ .
Llwyn	22.10	Denbighshire	Annex I habitats are Alluvial forests with alder and ash (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) ⁶⁴ .
Glan-traeth	14.00	Isle of Anglesey	Annex II species is great crested newt. There is a viable and large population occupying water-filled depressions that have resulted from sand extraction from the dune system ⁶⁵ .
Dee Estuary / Aber Dyfrdwy (England)	12.23	Denbighshire, Flintshire	Refer to The Dee Estuary / Aber Dyfrdwy (Wales) description for qualifying features as they are the same.
West Wales Marine / Gorllewin Cymru Forol	9.88	Gwynedd	Annex II species is harbour porpoise (<i>Phocoena phocoena</i>) ⁶⁶ .

⁶² <https://sac.jncc.gov.uk/site/UK0030161>

⁶³ <https://sac.jncc.gov.uk/site/UK0030186>

⁶⁴ <https://sac.jncc.gov.uk/site/UK0030185>

⁶⁵ <https://sac.jncc.gov.uk/site/UK0030042>

⁶⁶ <https://sac.jncc.gov.uk/site/UK0030397>

Site name	Site area (ha)	Representative local authority	Description
North Anglesey Marine / Gogledd Mon Forol	6.63	Isle of Anglesey	Annex II species is harbour porpoise ⁶⁷ .
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (England)	1.53	Denbighshire, Gwynedd, Flintshire, Wrexham	Refer to River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales) description for qualifying features as they are the same.
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (England)	0.50	Wrexham	Refer to Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (Wales) description for qualifying features as they are the same.
Special Areas of Protection (SPA)			
Migneint-Arenig-Dduallt	19968.32	Conwy, Gwynedd	Breeding populations of hen harrier (<i>Circus cyaneus</i>), merlin (<i>Falco columbarius</i>) and peregrine (<i>Falco peregrinus</i>) ⁶⁸ .
Berwyn	12784.71	Denbighshire, Gwynedd, Wrexham	Breeding populations of two to three pairs of red kite (<i>Milvus milvus</i>) (over 1 % of the British population); 14 pairs of hen harrier (over 2% of the British population); 14 pairs of merlin (over 2% of the British population); and 18 pairs of peregrine (1.5% of the British population) ⁶⁹ .

⁶⁷ <https://sac.jncc.gov.uk/site/UK0030398>

⁶⁸ <https://naturalresources.wales/media/672797/MigneintAdd%20WES32%20plan%20English.pdf>

⁶⁹ https://naturalresources.wales/media/632307/SPA_UK9013111_Register_Entry_EN001.pdf

Site name	Site area (ha)	Representative local authority	Description
The Dee Estuary (Wales)	6636.01	Flintshire, Denbighshire	<p>Supports Annex I species of common tern (<i>Sterna hirundo</i>), and little tern (<i>Sterna albifrons</i>) during breeding season, sandwich tern (<i>Sterna sandvicensis</i>) on passage, and bar-tailed godwit over winter.</p> <p>Regularly occurring migratory species are redshank, shelduck, teal, pintail, oystercatcher, grey plover, knot, dunlin, black-tailed godwit, and curlew.</p> <p>Over winter, the area regularly supports 120,726 individual waterfowl (5 year peak mean 1994/951998/99) including: great crested grebe (<i>Podiceps cristatus</i>), cormorant (<i>Phalacrocorax carbo</i>), shelduck, wigeon (<i>Anas penelope</i>), teal, pintail, oystercatcher, grey plover, lapwing (<i>Vanellus vanellus</i>), knot, sanderling (<i>Calidris alba</i>), dunlin, black-tailed godwit, bar-tailed godwit, curlew and redshank⁷⁰.</p>
Anglesey Terns / Morwenoliaid Ynys Môn	2620.92	Isle of Anglesey	Breeding populations of Annex I species roseate tern (<i>Sterna dougallii</i>) (5 % of the British breeding population), common tern (1.5 % of the British breeding population), Arctic tern (<i>Sterna paradisaea</i>) (2.9 % of the British breeding population), and sandwich tern (3.3 % of the British breeding population) ⁷¹ .
Traeth Lafan / Lavan Sands, Conway Bay	2256.86	Conwy, Gwynedd	Qualifying species are 500 great crested grebes (<i>Podiceps cristatus</i>) (about 5% of the British population). In winter, supports oystercatcher (2% of the British wintering population), curlew (2% of the British wintering population), redshank (2% of the British wintering population), and red-breasted mergansers (<i>Mergus serrator</i>) (1% of the British wintering population) ⁷² .
Glannau Ynys Gybi / Holy Island Coast	602.54	Isle of Anglesey	Qualifying species is chough (<i>Pyrrhocorax pyrrhocorax</i>) (6.4 % of the British breeding population and 7 % of the British non-breeding population) ⁷³ .

⁷⁰ https://naturalresources.wales/media/632171/SPA_UK9013011_Register_Entry001.pdf

⁷¹ <https://naturalresources.wales/media/681970/spa-uk9013061-register-entry001.pdf>

⁷² <https://naturalresources.wales/media/675196/spa-uk9013031-register-entry.pdf>

⁷³ https://naturalresources.wales/media/632245/SPA_UK9013101_Register_Entry_EN001.pdf

Site name	Site area (ha)	Representative local authority	Description
Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island	507.49	Gwynedd	Annex I breeding population of chough (3.5 % of the British breeding population and 3.5% of the British non-breeding population over winter). Regularly occurring migratory species is manx shearwater (<i>Puffinus puffinus</i>) during the breeding season ⁷⁴ .
Dyfi Estuary / Aber Dyfi	422.71	Gwynedd	Supports Annex I Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>) (1% of the British wintering population) ⁷⁵ .
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal	369.37	Gwynedd	Supports Annex I species chough (2.6 % of the British breeding population and 2.6% of the wintering British population) ⁷⁶ .
Liverpool Bay / Bae Lerpwl (Wales)	277.03	Conwy, Denbighshire, Isle of Anglesey, Gwynedd, Flintshire	Supports Annex I species little tern (6.8% of the British breeding population), common tern (1.8% of the British breeding population), red-throated diver (<i>Gavia stellata</i>) (6.89% of the British wintering population) and little gull (<i>Hydrocoloeus minutus</i>). Regularly occurring migratory species is common scoter (<i>Melanitta nigra</i>) over winter (at least 10.31% of the wintering northwest Europe population) ⁷⁷ .
Craig yr Aderyn (Bird's Rock)	89.43	Gwynedd	Supports Annex I species chough (1.8 % of the British breeding population and 8% of the wintering British population) ⁷⁸ .

⁷⁴ https://naturalresources.wales/media/632399/SPA_UK9013121_Register_Entry001.pdf

⁷⁵ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020284.pdf>

⁷⁶ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020282.pdf>

⁷⁷ <https://naturalresources.wales/media/683488/spa-uk9020294-register-entry001.pdf>

⁷⁸ https://naturalresources.wales/media/632719/SPA_UK9020283_Register_Entry001.pdf

Site name	Site area (ha)	Representative local authority	Description
Ynys Seiriol / Puffin Island	31.09	Isle of Anglesey	Supports regularly occurring migratory species cormorants (1.35% of the northwest European breeding population) ⁷⁹ .
The Dee Estuary (England)	12.23	Flintshire, Denbighshire	Refer to The Dee Estuary (Wales) description for qualifying features as they are the same.
Northern Cardigan Bay / Gogledd Bae Ceredigion	1.41	Gwynedd	Supports Annex I over winter population of red-throated diver (7% of the British wintering population) ⁸⁰ .

⁷⁹ https://naturalresources.wales/media/632762/SPA_UK9020285_Register_Entry001.pdf

⁸⁰ <https://naturalresources.wales/media/681974/spa-uk9020327-register-entry001.pdf>

Appendix A – Buffer Zones

Table 19: Buffer zones based on NFD's HRA

Receptor	Narrative	Buffer zone
Ramsar and SACs where bats (and birds) are not a qualifying feature	Effects in this category (beyond the obvious direct land-take) are primarily to do with hydrological effects on wetland habitat and potential effects of air quality changes, such as nitrogen deposition. Although the latter can occur over greater distances, especially where the habitat is particularly sensitive to nutrient enrichment, significant effects (e.g. such that individual plants are adversely affected physiologically or that plant communities are altered by increased competitiveness of the more robust species present) are extremely unlikely over greater distances, owing to the dispersal of emissions in the air.	5km
SACs where lesser horseshoe bats are a qualifying feature.	Whilst lesser horseshoe bats can fly distances greater than 10km to access foraging areas, the vast majority of the feeding habitat necessary to resource a roost (i.e. the 'roost sustenance zone (RSZ)') is much closer than this. Although bats can also fly large distances from summer roosts to hibernation sites and between maternity roosts, the risks associated with exposure to any form of development (e.g. wind farms, road schemes, etc.) are much lower given that these journeys tend to be taken less frequently than nightly foraging routes in the RSZs. The SACs which this would be relevant to are: Meirionnydd Oakwoods and Bat Sites; Gwydyr Forest Mines; and Glynllifon.	10km
SACs where barbastelle and greater horseshoe bats are a qualifying feature	Whilst the 10 km buffer is suitable for lesser horseshoe bats, it is considered insufficient to reduce risk to greater horseshoe and barbastelle bat SAC populations given these species regularly travel significant distances (the RSZ for barbastelles is at least 6 km). Many SAC bat populations are also critically supported by surrounding habitats and a range of 'annex' roosts that are not contained within the designation.	20km
SPAs / Ramsar sites where the qualifying feature includes bird species	Certain bird species associated with SPAs and Ramsar sites (e.g. raptors, wildfowl & waders etc.) tend to readily fly greater distances as part of their foraging behaviour. Thus, birds associated with a designated site are certainly not confined to the boundaries of that location and will often fly some distance from it to feed, roost or breed. This is the basis of the concept of 'functionally-linked land' and the fact that HRAs of SPAs/ Ramsar sites need to take into account the fact that birds from the designated population will often spend time outside the boundaries of the designated area. A number of water birds are migratory, and therefore fly much greater distances between their breeding and over-wintering grounds. Whilst it is clearly not practical to account for these distances in establishing buffer zones, it is nevertheless important to consider the potential implications of RTP-facilitated development on internationally important sites even if they are located some distance away (up to 20 km), given the potential for mobile qualifying species. This is because even if a proposal site is many kilometres from a SPA/ Ramsar site boundary, it could still be located directly on the migration flight path for a SPA/ Ramsar site species. That said, migration is often carried out at height, so the risks are likely to be small (other than for airport expansion), but this potential impact will at least need to be considered at screening.	20km
SPAs where qualifying features include cough	The Welsh SPA network supports approximately 30% of the whole of the UK's population), and the fact that juvenile birds are known to disperse over particularly large distances, meant that a larger buffer was required. Evidence suggests that 98% of males disperse up to 35km from the natal site, whilst approximately 82% of females disperse up to 40km. The SPAs where this would be relevant are as follows: Holy Island Coast; Craig yr Aderyn; Mynydd Cilan; Trwyn y Wylfa ac Ynysoedd Sant Tudwal; and Aberdaron Coast and Bardsey Island.	40km

Receptor	Narrative	Buffer zone
Riverine SAC (habitat and associated species)	Riverine SACs which comprise mobile species, such as migratory fish (shad, lamprey, salmon, sea trout and eel) and otter should also be considered beyond the 5km buffer. Where otters are a primary reason for site selection, SACs only support a proportion of the habitat utilised by this species. Whilst it is recognised that SACs encompass important areas of otter habitat, this species is wide-ranging and will use feeding and breeding habitat outside of the SAC. Therefore, wherever a riverine SAC is downstream of a proposed development, potential impacts should be assessed outside of the 5km buffer (i.e. where potential developments are taking place upstream of riverine SACs, watercourses throughout the catchment which includes the SAC must be considered).	N/A
Mobile species	<p>These are species that are interest features of European sites in their own right, but which require consideration beyond European site boundaries because they are migratory, or forage or roost etc. 'off-site', or whose populations require movement and mixing across fragmented sites (at a meta-population scale).</p> <p>Species that fall into this category in Wales include:</p> <ul style="list-style-type: none"> • Bats: • Migratory fish - shad, sea lamprey, river lamprey, salmon, sea trout and eel • Marsh fritillary • Otter • Hen harrier • Wintering birds • Great crested newt • Sea mammals • Seabirds <p>Therefore, internationally important sites whose qualifying features include mobile species, such as those listed above, which may be affected by policies within the RTP, irrespective of the location of the plan's proposals or whether the species would be in or out of the site when they might be affected, may need to be considered through HRA.</p>	N/A
Typical species	Includes those that are not qualifying features of the internationally important site in their own right, but which are the typical species of a habitat which is a qualifying feature, and which are often referred to in the conservation objectives. At the strategic level of the RTP HRA it is not possible to consider them, but it may be necessary to do so in future project-level HRAs.	N/A
Functionally linked land	<p>Refers to the role or 'function' that land or sea beyond the boundary of an internationally important site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified (typically this includes waterbirds associated with SPAs as described in relation to the buffer set for birds within this table, but is also applicable to other species such as great crested newts and bats). Such land is therefore 'linked' to the internationally important site because it performs an important role in maintaining or restoring the population of qualifying species at favourable conservation status. Land which has been identified as functionally linked to an internationally important site holds the same level of protection as the internationally important sites itself, and therefore any adverse effects on such land would need to be mitigated, as appropriate. Functionally linked land may fall within buffers, but it may also lie outside.</p> <p>At the strategic level of the RTP HRA it is not possible to identify specific areas of functionally linked land, but the potential need to consider it in future project-level HRAs has been highlighted, where relevant, to ensure no adverse effects on site integrity.</p>	N/A



Appendix D

HIA/EqIA Screening for Vulnerable Groups and Protected Characteristic Groups



Integrated Well-being Appraisal

Appendix D: Health and Equalities Assessment - Screening





D.1 Introduction

The Integrated Wellbeing Appraisal (IWBA) for the North Wales Regional Transport Plan (NWRTP) includes the use of a set of objectives which are applied against each of the proposed NWRTP policies (or set of policies) to identify any adverse or positive social, cultural, environmental or economic effects of implementation. Health Impact Assessment (HIA) and Equality Impact Assessment (EqIA) are integrated into the IWBA and therefore a screening exercise has been undertaken to set out the health determinants deemed of relevance to the NWRTP and also to identify vulnerable groups within the population, including protected characteristic groups (as defined by the Equality Act 2010¹).

A Health Impact Assessment (HIA) considers how the health and well-being of a population may be affected by a proposed action, be it a policy, programme, plan, project or a change to the organisation or delivery of a public service. The approach to this health assessment screening is based on the Wales Health Impact Assessment Support Unit (WHIASU) Practical Guide to HIA² which sets out a framework for evaluating policies, plans and projects under broad determinants of health and provides a checklist of vulnerable/disadvantaged groups to help in the identification of groups within a specific population that are of relevance to the plan or policy being assessed.

Health determinants

Health determinants are the factors which influence health outcomes within a population and an important step in health impact screening is to consider how the implementation of the policies within the NWRTP are likely to result in changes to health determinants which may then subsequently affect health outcomes of the population. Based on an understanding of the NWRTP and its overarching ambitions, health determinants considered relevant to the NWRTP are identified in

¹ Equality Act, 2010. Available online at: <https://www.legislation.gov.uk/ukpga/2010/15/contents> [Accessed 25/11/24]

² Welsh Health Impact Assessment Support Unit. Health Impact Assessment – A Practical Guide. Available online at: https://whiasu.publichealthnetwork.cymru/files/1415/0710/5107/HIA_Tool_Kit_V2_WEB.pdf [Accessed 25/11/24]

Table 1. These health determinants have been used within the IWBA to consider how the policies of the NWRTP may impact the health of the population.

Table 1 Health determinants of relevance to the NWRTP

Health determinant	Justification
Provision of active travel/public transport between neighbourhoods and other destinations	Use of public transport and active travel (walking, cycling and wheeling) is known to increase levels of physical activity which has beneficial effects for health and wellbeing.
Social connectedness/ access to services and opportunities	Enhanced transport networks, including public transport and active travel infrastructure, offer more convenient, accessible, and cost-effective ways to reach social infrastructure like healthcare, leisure facilities, green spaces, cultural sites, educational institutions, and employment opportunities. This not only promotes physical and mental well-being but also encourages social engagement, helping to reduce loneliness.
Air quality and noise pollution	Enhanced public transport and active travel networks and services which encourage modal shift would support reductions in emissions and reduced levels of traffic, both of which contribute to improvements in air quality and also in levels of traffic noise.

Vulnerable groups and protected characteristic groups

In addition to the identification of relevant health determinants, it is also necessary to identify population groups within the wider population who are likely to be more vulnerable to changes in those health determinants. For example, people who are experiencing socio-economic disadvantage would be more adversely affected by any increases in travel costs than people who are not experiencing socioeconomic disadvantage. The identification of vulnerable groups for the health assessment has been combined with the identification of protected characteristic groups considered in an EqIA and who may be differentially or disproportionately affected by the NWRTP policies:

- Differential effects arise where people with protected characteristics could be **affected differently** from the rest of the population, due to a particular need or sensitivity.
- Disproportionate effects arise when an impact has a **proportionately greater** effect on people with protected characteristics than the rest of the population.

Protected Characteristic Groups are used to refer to specific attributes or characteristics that are legally safeguarded against discrimination in various contexts, such as employment, education, housing, and public services. The protected characteristics or groups considered within the scope of this impact screening are listed below as defined by the Equality Act 2010:

- Age (Older people, children and young people up to the age of 18)
- Disability, including people with long-term health conditions
- Low-income households/people experiencing socio-economic disadvantage
- Pregnancy and maternity
- Race
- Religion, belief, and non-belief
- Gender Reassignments (the act of transitioning and Transgender people)
- Sexual orientation (e.g. Heterosexual, Lesbian, Gay and Bisexual)

- Sex (male/female)
- Marriage and civil partnership (although this are only applicable in relation to discrimination and employment)

For the purpose of assessing health impacts, further vulnerable groups which should be considered include:

- Certain occupational groups (e.g., HGV drivers, bus/train drivers)
- People living in rural or coastal areas

D.2 Impact screening and evidence review

This section highlights potential impacts of changes to health determinants on various vulnerable groups and protected characteristics, considering social aspects such as equality of opportunity and fostering good relations between people who share protected characteristics and those who do not.

As described in Section D.1, there is an overlap between protected characteristic groups defined by the Equalities Act 2010 and vulnerable groups identified for the HIA. Therefore, within the scope of this impact screening, both groups have been merged to eliminate repetition of assessment.

Based on available literature, data, and the stage of impact screening, it is considered the NWRTP would not have disproportionate or differential impacts on some protected characteristics/vulnerable groups including Race, Religion, Belief and non-belief, and Marriage and civil partnership. These groups have therefore been scoped out of the assessment. This has also been noted in the impact screening table below (Table 2).

Table 2 outlines the possible impacts the NWRTP could have on the protected characteristic groups/ vulnerable groups and is based on a literature and evidence review.



Table 2 vulnerable groups and protected characteristics or groups for health and equalities impact screening

Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
Age	Children (under the age of 16) and young people (between ages 16 to 24)	<p>According to the ONS Census 2021³, on average, 17.3% of the population in North Wales is under the age of 16, with the largest proportion in Wrexham (18.4%).</p> <p>The School Health Research Network finds that in Wales, the most common mode of travel to school reported were public transport and walking (34%)⁴. According to the National Survey for Wales⁵, less than 10% of individuals use the bus to travel to primary school, however buses and active travel are the most popular transport options to travel to secondary schools.</p> <p>According to ONS Census 2021⁶, overall, 1.28% of the population uses public transport and 3.84% uses active travel modes to travel to work. However, there are higher proportions of younger people (2.9%) in North Wales aged between 16-24 years old using public transport and 6.9% using active</p>	<p>Active travel, such as walking and cycling, and public transport such as buses and trains, can positively impact children's physical and mental well-being by increasing physical activity. Additionally, reducing car journeys to schools can lower emissions, thereby improving air quality.</p> <p>Use of public transport by young people (aged between 16-24 years) contributes towards their social connectedness and provides independent access to essential services and opportunities such as education and early employment.</p> <p>Active travel also contributes to the development of essential life skills in children such as navigation, road safety awareness and independence. In a survey by Public Health Wales⁷, it was found that parents agreed that active school travel improves health and wellbeing of their children. However, respondents also highlighted concerns about traffic safety and previous negative experiences as well as the need to limit the potential for children to encounter any other forms of danger while travelling to school.</p>

³ Office for National Statistics (2021) TS007- Age by single year. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 25/11/24]

⁴ School Heal Research Network, Student Health and Wellbeing in Wales: Report of the 2021/22, Health Behaviour in School-aged Children Survey and School Health Research Network Student Health and Wellbeing Survey. Available online at: file:///C:/Users/Tarisha.Kaushik/Downloads/SHRN-2021-22-National-Indicators-Report-FINAL-en-V2_corrected_10.10.23.pdf [Accessed 03/12/2024]

⁵ Welsh Government, National Survey for Wales: April 2022 to March 2023. Available online at: <https://www.gov.wales/national-survey-wales> [Accessed 03/12/2024]

⁶ Office for National Statistics (2021) RM075- Method used to travel to work by age. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 25/11/24]

⁷ Active Travel Board by Public Health Wales, Active School Travel 'A route to improvement', 2021. Available at: <https://publichealthnetwork.cymru/wp-content/uploads/2023/05/Active-School-Travel-National-Delivery-Plan-for-Wales-2021-ENGLISH-1.pdf> [Accessed 25/11/24]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
		travel modes (walking or cycling) as their mode of transport to travel to work.	Overall, NW RTP is considered to have the potential to have a positive impact on children and young people due to the improvement of active travel infrastructure and public transport services, which would make them more accessible, affordable and safer. This could have associated health benefits due to increased physical activity, as well as increased independence, socialisation, and access to facilities for children and young people.
	Older people (65 and above)	<p>2021 Census data¹ shows that, on average 23.9% of the population in North Wales is over the age of 65. The local authority of Conwy particularly has the largest proportion of people aged 65+ (27.4%) and 3.9% aged 85 and over in North Wales. In comparison, Wales has a slightly lower proportion of people aged 65 and over (21.4%).</p> <p>A report by Age Cymru finds that 36% of older people in Wales do not hold a valid driver's license, 44% of retired households do not have access to a car and people aged 60+ are twice as likely to travel by bus as younger people⁸.</p>	<p>Physical activity among older people has been linked to increased mental and physical wellbeing¹⁰. NW RTP would likely have a positive impact and improve the walking environment, resulting in more older people potentially choosing to walk in their neighbourhoods and to/from public transport services. This would contribute to an increase in the amount of physical activity undertaken by older people within the community, leading to improved health outcomes.</p> <p>The North Wales population assessment: Older people¹¹, identifies transport as an issue where people can no longer drive or have accessibility needs (such as using a wheelchair).</p>

⁸ Age Cymru, Buses – a lifeline for older people: older people's experiences of bus services in Wales, 2013. Available online at: <https://www.agecymru.wales/siteassets/documents/policy/buses---a-lifeline-for-older-people/buses---a-lifeline-for-older-people.pdf> [Accessed 03/12/2024]

¹⁰ Greater Sport (2021) Active travel and older adults. Available online at: [-evidence-review-active-travel-and-older-adults.pdf \(gmmoving.co.uk\)](https://www.gmmoving.co.uk/evidence-review-active-travel-and-older-adults.pdf) [Accessed 25/11/24]

¹¹ North Wales Regional Partnership Board (2017) North Wales Population Assessment: Older people. Available online at: <https://www.northwalescollaborative.wales/wp-content/uploads/2017/04/3-Older-people-chapter.pdf> [Accessed 02/12/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
		<p>The community calculator survey by Age Cymru⁹ indicates that 22.9% of respondents rated public seating and places to rest a score of three or less (out of ten), with a general lack of public seating in communities being a key issue. Older adults have also raised concerns about the frequency and reliability of bus services and the lack of bus and community transport in the evenings.</p>	<p>One million people aged 65 and over in the UK report that they are often or always lonely¹². Accessible public transport therefore provides connectivity for maintaining community involvement, reducing loneliness while providing older people with an increased sense of agency.</p> <p>Improved active travel and public transport infrastructure would help older people feel safer while using it, encouraging them to use it more. The Centre for Ageing Better states that fear of traffic, safety concerns, and lack of confidence among older people is a barrier to the uptake of walking and cycling¹³. However, evidence does show that older people are more likely to be involved in fatal road traffic collisions; Car occupant fatality rates per million population are particularly high for those age 75 and over and pedestrian fatality rates per million population are particularly high for those age 75 and over¹⁴.</p>

⁹ Age Cymru in partnership with Swansea University (2021) Older people in Wales: Facts and Statistics. Available online at: [age-cymru---older-people-in-wales---facts-and-statistics-2021.pdf](#) [Accessed 02/12/2024]

¹² Social care institute for excellence (2022) Tackling loneliness and social isolation. Available online at: <https://www.scie.org.uk/prevention/connecting/loneliness-social-isolation> [Accessed 25/11/24]

¹³ Centre for Ageing Better (2021) Walking and cycling 'not safe or attractive enough' for many in their 50s and 60s. Available online at: <https://ageing-better.org.uk/news/walking-and-cycling-not-safe-or-attractive-enough-many-their-50s-and-60s> [Accessed 25/11/24]

¹⁴ Welsh Government (2020) Welsh 20mph task Force Group: Final Report. Available online at: <https://www.gov.wales/sites/default/files/publications/2020-07/20mph-task-force-group-report.pdf> [Accessed 25/11/24]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
			Port areas around Holyhead and Mostyn (classified as a rural town ¹⁵) attract HGV movements that would be further facilitated by the NWRTP. This could expose older people living in surrounding areas to disproportionate impacts of freight associated with amenity. However, a shift to cleaner fuels and rail for freight could help mitigate these effects in the long term.
Disability	People who are physically and/or mentally disabled	<p>On average, 20.8% of the people in North Wales are disabled under the Equality Act as compared to 21.6% in Wales in 2021¹⁶.</p> <p>According to ONS Census 2021¹⁷, 11.64% of disabled people in North Wales are in full-time employment (31+ hours) close to Wales' proportion of 12%. There is a considerable disability pay gap in Wales, although this has reduced in recent years. In 2022, the disability pay difference in Wales was 9.7%, compared to 11.4% in 2021. This means that disabled people in Wales earned, on average, 9.7% less per hour than non-disabled people¹⁸.</p>	<p>Active travel, in the form of walking, cycling, and wheeling can contribute to overall health improvements, including cardiovascular fitness, muscle strength, and mental well-being. It can also foster community connections for disabled individual by providing opportunities for social interactions and engagement with the local environment.</p> <p>A recent nationwide study into walking and cycling found that only 12% of disabled people cycle weekly, compared to 19% of non-disabled people²⁰.</p> <p>There are significant disparities between rural transport and urban transport in Wales. In the National Survey for Wales²¹, it was reported that 86% of people in rural areas have use of a car.</p>

¹⁵ Welsh Government (2011) Data Map Wales – Rural-urban classification for LSOAs. Available online at: https://datamap.gov.wales/layers/geonode:rural_urban_classification_of_lsoa [Accessed 02/12/2024]

¹⁶ Office for National Statistics (2021) TS038- Disability. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

¹⁷ Office for National Statistics (2021) RM019- Economic activity status by hours worked by disability. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

¹⁸ Welsh Government (2023) Wellbeing of Wales, 2023. Available online at: <https://www.gov.wales/wellbeing-wales-2023-more-equal-wales-html#:~:text=The%20disability%20pay%20difference%20in,hour%20than%20non%2Ddisabled%20people.> [Accessed 25/11/24]

²⁰ Sustrans (2022) How can we tackle inequity in active travel? Available online at: <https://www.sustrans.org.uk/our-blog/opinion/how-can-we-tackle-inequity-in-active-travel-an-inclusive-design-qa-with-tierney-lovell/> [Accessed 29/11/2024]

²¹ Welsh Government (2014) National Survey for Wales – Transport. Available online at: <https://statswales.gov.wales/Catalogue/Transport> [Accessed 28/11/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
		<p>Additionally, 6.6% of North Wales population are not disabled but have long term physical or mental health conditions. This is the same as the Welsh national proportion (6.6%). Around one third of people in North Wales are living with a chronic condition, such as high blood pressure, asthma, heart failure or diabetes¹⁹.</p>	<p>In North Wales, of households using cars, 17.8% have individuals with physical or mental disabilities²².</p> <p>In Wales, disabled people, particularly those living in rural areas or experiencing socio-economic deprivation, face barriers in access to healthcare (and other social infrastructure) and also have more unmet care needs due to waiting lists or costs, resulting in increased psychological stress²³.</p> <p>NWRTP has the potential to enhance connectivity between urban and rural areas as well as connection between major services such as health, education, and employment opportunities which would positively affect disabled people. Encouraging the option for remote working would be disproportionately beneficial for disabled people for whom travel it difficult, although this may also exacerbate social isolation for this group.</p> <p>The NWRTP would also improve the accessibility of public transport by improvements in design, safety and integration with other modes of transport.</p> <p>However, NWRTP could affect people with mental health difficulties negatively. A survey by Mental Health Foundation²⁴</p>

¹⁹ North Wales Regional Partnership Board (2022) North Wales Population Needs Assessment. Available online at: <https://www.northwalescollaborative.wales/north-wales-population-assessment/> [Accessed 29/11/2024]

²² Office for National Statistics (2021) RM068 - Disability by car or van availability: Census 2021. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 29/11/2024]

²³ Welsh Government (2021) A review of evidence of socio-economic disadvantages and inequalities of outcome (summary). Available online at: <https://www.gov.wales/review-evidence-socio-economic-disadvantage-and-inequalities-outcome-summary-html> [Accessed 28/11/2024]

²⁴ Mental Health Foundation (2022) Public Mental Health and Transport: the challenges and possibilities. Available online at: <https://www.mentalhealth.org.uk/our-work/research/transport-and-public-mental-health> [Accessed 29/11/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
			found that research participants talked about being overwhelmed by the ‘human churn’ of public transport. It is challenging for people with mental health difficulties and/or neurodivergent people to qualify for travel concessions. And those with hidden disabilities or conditions often do not feel comfortable asking for help or using priority seating.
Income-related groups	People within low-income households	<p>Income deprived areas in North Wales include areas around Holyhead, Peblig, Marchog, Colwyn Bay, Rhyl, Shotton and Holywell that lie among the 10% most deprived areas.²⁵</p> <p>Statistics from 2022²⁶ show that median gross weekly pay in the North Wales is £584.30 which is slightly lower than Wales value of £599.70.</p> <p>According to ONS Census 2021²⁷, on average, 17.3% of the households in North Wales have no cars or vans as compared to Welsh average (19.4%).</p> <p>The majority of people in employment in Wales drive to work by car or van (56.5%), 8.2% travel to work by walking or cycling, whilst 2.3% commute</p>	<p>Research suggests that rates of active travel and usage of public transport vary by socio-economic group, with higher rates generally observed among less affluent populations. A report by the Urban Transport Group³¹ published in 2016 also highlights a low level of car ownership amongst the lowest earners in the UK, and that improved public transport services and active travel infrastructure have the potential to provide cost-effective ways of increasing mobility and improving access to local services and opportunities.</p> <p>In 2021, 18% adults in the UK on the lowest incomes report having ‘bad’ or ‘very bad’ health, compared to 1.7% on the</p>

²⁵ Welsh Government (2019) Welsh Index of Multiple Deprivation, Income Deprivation Domain. Available online at: <https://wimd.gov.wales/explore?lang=en#&domain=income&z=11&lat=53.1435&lng=-4.2125> [Accessed 28/11/2024]

²⁶ Stats Wales (2022) Average (median) gross weekly earning by Welsh local areas and year (£). Available online at: <https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/People-and-Work/Earnings/medianweeklyearnings-by-welshlocalareas-year> [Accessed 28/11/2024]

²⁷ Office for National Statistics (2021) TS045- Car or van availability. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

³¹ Urban Transport Group (2016) The Case for Active Travel: How walking and cycling can support more vibrant urban economies. Available online at: https://www.urbantransportgroup.org/system/files/general-docs/The%20Case%20for%20Active%20Travel_0.pdf [Accessed 29/11/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
		<p>by bus in 2021²⁸. There is no regional data for this statistic.</p> <p>According to ONS 2021²⁹, on average, North Wales (21.6%) has a higher percentage of people working outdoors³⁰ than Wales (20.3%).</p>	<p>highest incomes³². The NWRTP has the potential to improve direct access to healthcare as well as recreation activities and green spaces, encouraging physical activity to promote better health.</p> <p>NWRTP would likely have a positive impact on children from low-income households. A research study³³ found that children from less affluent backgrounds are likely to benefit disproportionately from improvements to public transport and active travel infrastructure. Since they are less likely to have access to a car, these improvements are crucial for accessing services and facilities and for enabling social interactions.</p> <p>Furthermore, the NWRTP is also likely to have a positive impact on older people (22.6%)³⁴ and disabled individuals (41.2%)³⁵ from low-income backgrounds by improving wheelchair</p>

²⁸ Office for National Statistics (2021) TS061- Method used to travel to work. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

²⁹ Office for National Statistics (2021) TS064- Occupation-Minor groups. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

³⁰ Note: Occupations that include working outdoors include agriculture, metal industry, construction, drivers and transport operatives, shopkeepers and sales operatives among others.

³² The Health Foundation (2024) Relationship between income and health. Available online at: <https://www.health.org.uk/evidence-hub/money-and-resources/income/relationship-between-income-and-health> [Accessed 28/11/2024]

³³ Government Office for Science (2019) Inequalities in Mobility and Access in the UK Transport System. Available online at: <https://www.gov.uk/government/publications/future-of-mobility-inequalities-in-mobility-and-access-in-the-uk> [Accessed 25/11/24]

³⁴ Office for National Statistics (2021) SG013EW – Approximated social grade by sex by age: Census 2021. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Approximated+Social+Grade> [Accessed 29/11/2024]

³⁵ Office for National Statistics (2021) RM070 – Disability by NS-SEC by age. Available online at: <https://www.nomisweb.co.uk/datasets/c2021rm070> [Accessed 03/12/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
			accessibility, seating, and waiting facilities, making public transport and active travel more accessible.
	People who are economically inactive and unemployed	According to ONS Census 2021 ³⁶ , the economic inactivity rate in North Wales (43.7%) is consistent with Wales at 43.5%. The economically inactive population in North Wales includes students (4.6%), looking after family (3.9%), long-term sickness or disabled (5.0%), retired (27.5%) and other (2.8%).	Low car ownership is likely within the economically inactive group related to a lack of sufficient income to meet the initial high cost (including vehicle purchase and insurance) and running costs. The North Wales Population Needs Assessment ³⁷ (2022) identified through consultation and engagement that accessibility of transport links to those with chronic health needs, physical disability and sensory impairment were especially an issue in more rural areas, where social isolation can be more profound due to lack of public transport infrastructure.
	People living in rural areas who are known to exhibit poor economic and/or health indicators	Welsh Index of Multiple Deprivation (WIMD) ³⁸ overall deprivation finds areas around Sealand, Holywell, Rhyl, Colwyn Bay, Marchog and Holyhead to be among the 10% most deprived areas. Material deprivation, where people are not able to afford basic things like keeping the house warm, in Wales increased in 2022-23 compared to 2021-22,	Residential areas that are socio-economically deprived are more likely to be experiencing socio-economic disadvantages like educational and work opportunities. Figures from 2018 ⁴⁰ (most recent available) show that whilst 35% of households who are in the lowest income group own at least one car, that rises to 93% of households in the highest income group. People who are socio-economically disadvantaged

³⁶ Office of National Statistics (2021) TS066- Economic activity status. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

³⁷ North Wales Regional Partnership Board (2022) North Wales Population Needs Assessment. Available online at: <https://www.northwalescollaborative.wales/north-wales-population-assessment/> [Accessed 29/11/24]

³⁸ Welsh Government (2019) Welsh Index of Multiple Deprivation. Available online at: <https://wimd.gov.wales/explore?lang=en#domain=overall&z=11&lat=53.2879&lng=-4.6061> [Accessed 28/11/2024]

⁴⁰ Office for National Statistics (2018) Percentage of households with cars by income group. Available online at: <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/datasets/percentageofhouseholdswithcarsbyincomegrouptenureandhouseholdcompositionukta47> [Accessed 28/11/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
		from 11% of adults to 16% ³⁹ . The proportion of people who said they had no difficulty keeping up with bills and credit card commitments fell to 63% from 76% during the same time period.	<p>are therefore more likely to rely on active travel and public transport for journeys.</p> <p>Individuals in rural areas without a car have much poorer access to key services, compared with rural car owners and individuals residing in urban areas⁴¹.</p> <p>As such, rural public transport is vital to the development of rural areas because it has a pivotal role in helping ensure people, especially those on low incomes living in rural areas, to access community services, facilities employment opportunities, education and training, and leisure and recreation⁴². Therefore, NW RTP is considered likely to have a positive impact by providing improved access to public transport and active travel options.</p> <p>A study in London, looking to quantify socioeconomic and ethnic inequalities found that socioeconomic inequalities in road traffic noise were generally small.</p> <p>The odds of living within a 50dB contour of rail noise were 19% higher for black compared to white individuals⁴³. According to</p>

³⁹ Welsh Government (2023) National Survey for Wales headline results: April 2022 to March 2023. Available online at: <https://www.gov.wales/national-survey-wales-headline-results-april-2022-march-2023.html#126275> [Accessed 25/11/2024]

⁴¹ University College London, Transport and Poverty: A Review of Evidence, 2014. Available online at: <https://www.ucl.ac.uk/transport/sites/transport/files/transport-poverty.pdf> [Accessed 25/11/24]

⁴² Powell, J., Keech, D and Reed, M., 2018. What Works in Tackling Rural Poverty: An Evidence Review of Interventions to Improve Transport in Rural Areas. Countryside and Community Research Institute, University of Gloucestershire. Available online at: <https://www.wcpp.org.uk/wp-content/uploads/2018/06/An-evidence-review-of-interventions-to-improve-transport-in-rural-areas.pdf> [Accessed 25/11/24]

⁴³ Tonne C, Milà C, Fecht D, et al. (2018) Socioeconomic and Ethnic Inequalities in Exposure to Air and Noise Pollution in London. Environ Int.115:170-179. doi:10.1016/j.envint.2018.03.023



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
			North Wales Regional Partnership Board ⁴⁴ , in 2022, the general trends indicate that people living in the most deprived areas have higher levels of hearing and visual impairment, and also long-term health problems, particularly chronic respiratory conditions, cardiovascular disease and arthritis. With potential reduced noise and air pollution levels achieved through modal shift and remote working, it is considered that NWRTP is likely to have a positive impact on people living in socio-economically deprived areas.
Pregnancy and maternity	People who are pregnant and/or going through first 2 years of maternity	According to Maternity and Birth Statistics ⁴⁵ , 23% of pregnant women in Wales do not receive their initial assessment with maternity services by the 10th completed week of pregnancy. Three out of ten pregnant women reported a mental health condition at initial assessment.	<p>Access to health services is essential for supporting pregnant women, ensuring they receive timely prenatal care and medical advice. Safe and comfortable transportation options further enhance accessibility to healthcare facilities, reducing barriers to care.</p> <p>Additionally, a McKinsey report⁴⁶ found that remote working opportunities and flexible schedules play a significant role in improving maternal well-being by alleviating commute-related stress, reducing exposure to illnesses, and enabling better management of symptoms such as morning sickness for working mothers.</p> <p>Therefore, NWRTP is considered to have the potential to have a positive impact on pregnant individuals and working mothers.</p>

⁴⁴ North Wales Regional Partnership Board (2022) Population Needs Assessment. Available at: <https://www.northwalescollaborative.wales/wp-content/uploads/2023/04/Population-Needs-Assessment-April-2022-pub-20230418-eng.pdf> [Accessed 28/11/2024]

⁴⁵ Welsh Government (2022) Maternity and birth statistics. Available online at: <https://www.gov.wales/maternity-and-birth-statistics-2022.html> [Accessed 25/11/24]

⁴⁶ McKinsey (2021) For mothers in the workplace, a year (and counting) like no other. Available online at: <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/for-mothers-in-the-workplace-a-year-and-counting-like-no-other> [Accessed 29/11/24]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
Race	Black, Asian and other racialised groups (such as Gypsies and Travellers and Migrants, Asylum seekers and Refugees)	According to ONS Census 2021, in North Wales, the largest global ethnic majority group prevalent is Asian, Asian British or Asian Welsh (1.3%). Other groups in the region include Black, Black British or Black Welsh (0.3%) and Mixed or Multiple ethnicities (1%) ⁴⁷ . The ethnic mix in the Region is low compared to the national picture.	<p>In Wales, 19% of households have no cars or vans in their household. However, this rises to 36% of Black, Black British, Black Welsh, Caribbean or African households and 29% of Mixed, or Multiple ethnic group households⁴⁸. This suggest that Black, Asian and other racialised groups have higher rates of bus and coach travel than any other group. According to National Travel Survey⁴⁹, they reported to experience low confidence and concerns over safety in public transport.</p> <p>Therefore, NWRTP is considered to have the potential to have a positive impact on Black, Asian and other global ethnic majority groups in relation to feeling safe and comfortable in their neighbourhood while engaging in active travel activities and while using public transport.</p>
Religion, belief, non-belief	People who have stated themselves from various religious groups or have no religion	ONS Census 2021 data ⁵⁰ shows that 49.8% of people in North Wales are Christians, followed by 41.7% that identify with no religion. Other religious groups include Buddhists (0.3%), Hindus (0.2%), Jews (0.05%), Muslims (0.8%) and Sikhs (0.02%).	No evidence has been identified to suggest that a person would be differentially or disproportionately affected by NWRTP because of their religion or belief.

⁴⁷ Office of National Statistics (2021) TS022 – Ethnic group (detailed). Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 03/12/2024]

⁴⁸ Office of National Statistics (2021) RM130 – Tenure by car or van availability by ethnic group of Household Reference Person. Available online at: <https://www.nomisweb.co.uk/datasets/c2021sg013ew> [Accessed 29/11/2024]

⁴⁹ Department for Transport (2017) National Travel Survey. Available online at: <https://www.gov.uk/government/collections/national-travel-survey-statistics> [Accessed 29/11/24]

⁵⁰ Office for National Statistics (2021) TS030 – Religion. Available online at: <https://www.nomisweb.co.uk/query/construct/submit.asp?forward=yes&menuopt=201&subcomp=> [Accessed 03/12/24]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
Sexual orientation	People who are LGBTQ+	<p>ONS Census data⁵¹ identifies that across England and Wales 89.4% of the population (aged over 16) identify as straight or heterosexual, with 3% identifying as lesbian, gay, bisexual or other. The remaining 7.6% of the population did not provide an answer.</p> <p>The data shows that 16-24-year-olds are the most likely to identify as lesbian, gay or bisexual and a slightly higher proportion of females identify as gay or lesbian 3% compared to 2.7%). There is no data specific to North Wales.</p>	<p>There is a higher propensity of people who are LGBTQ+ to feel less safe in their neighbourhoods than cisgender and heterosexual people⁵². According to a policy paper report⁵³, it was found that LGBTQ+ groups avoid using public transport out of fear of being harassed.</p> <p>Therefore, NWRTP is considered to have the potential to have a positive impact on people who are LGBTQ+ in relation to feeling safe and comfortable in their neighbourhood while engaging in active travel activities and while using public transport.</p>
Gender reassignments	The act of transitioning and Transgender people	<p>According to ONS Census 2021, 0.4% of people aged 16 and over in North Wales identify as non-cisgendered.</p> <p>This includes trans man, trans woman, non-binary, gender identity different from sex registered at birth and all other gender identities.</p>	<p>Similar impacts to those described above in relation to sexual orientation are expected for those experiencing gender reassignment.</p> <p>Additionally, some transgender and non-binary individuals engage in chest binding for gender affirmation. While this prevents mental health issues, it can lead to abnormal lung function, making these individuals more vulnerable to negative health impacts of air pollution.⁵⁴</p>

⁵¹ Office for National Statistics (2021) RM122 – Sexual orientation by age and sex. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 28/11/24]

⁵² Sustrans (2022) Walking and Cycling index 2021. Available online at: <https://www.sustrans.org.uk/media/10527/sustrans-2021-walking-and-cycling-index-aggregated-report.pdf> [Accessed 28/11/24]

⁵³ Equality and Human Rights Commission, Government of United Kingdom (2018) Is Britain Fairer? The state of equality and human rights. Available online at: <https://www.gov.uk/government/publications/is-britain-fairer-the-state-of-equality-and-human-rights-2018> [Accessed 29/11/24]

⁵⁴ American Journal of Public Health (2021) Queering Environmental Justice: Unequal Environmental Health Burden on the LGBTQ+ community. Available online at: <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2021.306406> [Accessed 03/12/2024]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
Sex/ Gender	Women	<p>51.1% of the population of North Wales is female⁵⁵. Of these, 16.8% are under the age of 16 and 8.9% are between ages 16 and 24. Moreover, 24.7% are aged 65 and above.</p> <p>ONS Census⁵⁶ data suggests 48.1% of women in North Wales are in employment.</p> <p>Carers UK⁵⁷ found that 14.3% of people in the UK struggle with juggling work and care. This is more likely to disproportionately impact women who become carers and provide more hours of unpaid care than men with 59% of unpaid carers in England and Wales being women.</p>	<p>According to National Travel Survey⁵⁸, while both men and woman made 61% of their trips by car in 2017, men made a higher share of trips as a driver than women (44% compared to 37%). Furthermore, between ages 30 and 50, women make more trips than men, the most notable difference being for escort education (mostly taking children to school). The second highest reason for travel in this age group is commuting to work and shopping-related activities. However, women in the UK have lower levels of car ownership than men⁵⁹. Therefore, women are more reliant on active travel and public transport for their trips. National Survey for Wales⁶⁰ also found that women generally feel less safe using public transport particularly after dark.</p> <p>Through improvement in active travel infrastructure and public transport services, it is considered that NWRTP will have a positive impact on women in relation to feeling safe and comfortable and by providing better access to services.</p>
	Men	<p>48.9% of the population of North Wales is male⁵⁵.</p>	<p>According to National Travel Survey⁶², older men (above the age 60) make more trips than women, with one-third of these trips being for shopping-related activities.</p>

⁵⁵ Office for National Statistics (2021) TS008 – Sex; RM121 – Sex by age. Available online at: <https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=Topic+Summaries> [Accessed 03/12/2024]

⁵⁶ Office for National Statistics (2021) RM024 – Economic activity status by sex by age. Available online at: <https://www.nomisweb.co.uk/datasets/c2021rm024> [Accessed 03/12/2024]

⁵⁷ Carers UK, Key facts and figures about caring, 2021. Available online at: <https://www.carersuk.org/policy-and-research/key-facts-and-figures/> [Accessed 03/12/2024]

⁵⁸ Department for Transport (2017) National Travel Survey. Available online at: <https://www.gov.uk/government/collections/national-travel-survey-statistics> [Accessed 29/11/24]

⁵⁹ Department for Transport (2021) Vehicle Licensing Statistics: Annual 2020. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/985555/vehicle-licensing-statistics-2020.pdf [Accessed 29/11/24]

⁶⁰ Welsh Government (2014) National Survey for Wales – Transport. Available online at: <https://stats.wales.gov.wales/Catalogue/Transport> [Accessed 29/11/24]

⁶² Department for Transport (2017) National Travel Survey. Available online at: <https://www.gov.uk/government/collections/national-travel-survey-statistics> [Accessed 29/11/24]



Vulnerable Groups / Protected Characteristic Groups		Baseline Summary	Impact Screening
Group	Sub-groups		
		<p>Wrexham 022D has a significantly larger proportion of male population (78.4%).</p> <p>According to the Annual Population Survey⁶¹, 89.9% of HGV drivers in Wales are male.</p>	<p>As mentioned in Age-Older people section, they tend to engage in active travel and use public transport for their travel/trips.</p> <p>No evidence has been identified to suggest that working men would be differentially or disproportionately affected by NWRTP. However, it has been identified that NWRTP will have a positive impact on older men who are more reliant on active travel and public transport.</p>
Marriage and civil partnership	People who are married and/or are in civil partnership in relation to employment law		<p>No evidence has been identified to suggest that a person would be different or disproportionately affected by NWRTP because of their marriage and civil partnership.</p>

⁶¹ Office for National Statistics (2024) Annual Population Survey – SOC2020 Employment by occupation by sex, July 2023 – June 2024. Available online at: <https://www.nomisweb.co.uk/datasets/aps218/reports/employment-by-occupation?compare=W92000004> [Accessed 03/12/24]



D.3 Welsh language

While language is not a vulnerable group or protected characteristics or groups, in line with Welsh Language Act 1993⁶³, the Welsh language and “other” language has been considered as part of this impact screening. The Welsh Language Act 1993 ensures that the Welsh language and the English language are treated on a basis of equality. Additionally, the Welsh government includes a strategy ‘Cymraeg 2050: Welsh language strategy action plan 2024 to 2025’⁶⁴ to increase and encourage the use of Welsh. This incorporates inclusion of favourable conditions and infrastructure to support the Welsh language.

Policies in the NWRTP would likely improve connectivity between Welsh-speaking communities and to educational resources for learning Welsh, which are crucial for promoting the daily use of the Welsh language. Additionally, they help facilitate the use of Welsh language in social and community spaces such as transport interchanges, bus waiting areas, bus stops and buses themselves in verbal and written formats.

D.4 Intersectionality

It is important to note that a person may have several characteristics that have been described. This results in identities overlapping and interacting to compound any positive or negative effects they may experience as a result of a new policy being implemented. For example, a person who experiences socioeconomic disadvantage and is also a woman and disabled, may face distinct barriers that are not fully understood when considering each of the characteristics/vulnerabilities separately. Having an awareness of this intersectionality ensures that these overlapping identities and experiences are considered in the assessment and subsequent decision making.

D.5 Conclusion


In consideration of the evidence presented in this Health and Equalities Impact Screening, it is anticipated that, overall, there are likely to be some effects on vulnerable groups and/or protected characteristic groups. The NWRTP includes opportunities for stakeholder and community engagement, helping understanding of intersectional needs of people with protected characteristics such as older people from low-income backgrounds with physical and mental disabilities.

The benefits relate to more accessible and increased use of active travel and public transport services, and the subsequent increased accessibility to other social infrastructure such as healthcare, educational facilities, leisure opportunities and general access to resources (such as grocery shops), in addition to better access to employment opportunities and social networks. The likely encouraged modal shift which includes more use of public transport and more active travel (through improved safety and better connectivity and better services) would increase levels of physical activity and improve air quality or noise environments (through reduced use of the private vehicle).

Following the impact screening, the IWBA has taken these considerations of vulnerable groups and protected characteristic groups, embedding these in the narratives against each IWBA objective. Particular reference is made against IWBA Objective 2 (reducing inequalities and promoting community cohesion) and IWBA Objective 3 (Improve the health and wellbeing of

⁶³ Welsh Language Act, 1993. Available online at: <https://law.gov.wales/culture/welsh-language/welsh-language-act-1993> [Accessed 29/11/24]

⁶⁴ Welsh Government (2024) Cymraeg 2050: Welsh language strategy action plan 2024 to 2050. Available online at: <https://www.gov.wales/cymraeg-2050-welsh-language-strategy-action-plan-2024-2025-html> [Accessed 29/11/2024]



the local population), but every IWBA Objective considers these groups, and comment is made where relevant.



Appendix E

Full IWBA outcomes

Integrated Well-being Appraisal

Appendix E: Objectives Assessment Tables





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1. Appraisal of Policies within the draft North Wales Transport Plan

1.1 Introduction

The draft North Wales Regional Transport Plan (RTP) sets out proposals for improvements to North Wales transport which aim to contribute to the delivery of national, regional and local transport strategies and priorities. This appraisal considers each of the policies within the draft RTP and assesses them against the Integrated Appraisal objectives which were developed during Scoping Stage of the appraisal process. The appraisal methodology is set out in the main part of the report.

IWBA Score	Definition
++	Likely significant positive effect
+	Likely minor positive effect
0	Likely negligible/neutral effect
-	Likely minor negative effect
--	Likely significant negative effect
?	Likely effect uncertain
+/-	Likely to be a mix of positive and negative effects



Table 1 – 1 Enabling changes to travel behaviour: North Wales residents will have a choice about how they travel

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policy CB1 – CB7: Enhancement of public transport services and active travel routes that provide access to large employment sites would support the needs of local communities by providing transport services that meet specific needs within the communities such as the travel needs of shift workers and seasonal working patterns. This would be particularly beneficial for cross border communities where sustainable travel to employment sites close to the border are enhanced. This includes the encouragement of sustainable transport options to employment sites such as Deeside Industrial Park, Wrexham Industrial Estate, Airbus Broughton, Chester Business Park, and Wrexham and Chester City Centres. The enhancement of sustainable travel options to the city centres would also enhance the access to other services such as education, healthcare, childcare, and grocery shopping options.</p> <p>While the delivery of housing would not be directly affected, improving public transport services between communities and employment sites would likely promote future housing growth in areas with housing needs. This enhancement would provide residents (existing and future) with sustainable transport options for commuting to their workplaces.</p> <p>The collaborative approach to transport planning across North Wales and cross border with neighbouring local and combined authorities (including Cheshire West and Chester, and the Liverpool City Region) would provide a joined-up planning approach that would contribute to the investment in local services.</p>	++	Long term/ Direct



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
2. Reduce inequality and promote community cohesion	<p>Policy CB1 – CB7: Some groups of people are more likely to be reliant on public transport and/or walking for travel. This includes children and young people, older people, women, disabled people¹, socio-economically disadvantaged people, and people from global ethnic majority groups². Enhancement of public transport services and active travel routes would therefore be beneficial for these groups of people, providing them with more choice. Enhancements should include improvements to accessibility which is not the same as enhancement of services which may only relate to increased provision rather than improvements in accessibility for disabled people (for example). This results in an uncertain impact in this regard.</p> <p>Engagement with stakeholders is identified in relation to partnerships with Local Authorities in North Wales, England, Transport for Wales and transport operators. However, opportunities for community participation and engagement is not identified within the policies CB1-CB7, which results in an uncertain impact in this regard.</p>	?	Long term/ Direct

¹ Department for Transport, 2021. Transport: Disability and Accessibility Statistics, England 2020. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019477/transport-disability-and-accessibility-statistics-england-2020.pdf

² Department for Transport, 2021. National Travel Survey 2017. This review noted that Asian and Ethnic minority groups have higher rates of bus and coach travel than any other group, correlated with low car ownership.



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policy CB1 – CB7: Enhancement of public transport services and active travel routes which improves connectivity between residential areas and large employment sites, city centres and cross border areas is likely to increase the likelihood of people choosing to travel by sustainable modes. Whilst public transport itself does not encourage activity, people are required to reach the first access point for public transport, e.g. train station, bus stop, and this first part of the journey is often completed using active travel. Active travel which includes walking, cycling and wheeling increases activity levels by integrating activity into daily travel.</p> <p>This has a number of health benefits:</p> <ul style="list-style-type: none"> - it encourages more people to be active which improves health and wellbeing (mental health) through reductions in risk of major illnesses such as coronary heart disease, stroke, type 2 diabetes and cancer³. - it would contribute to reducing social isolation of people who are more reliant on public transport (older people, disabled people, young people, women, global ethnic majority people) improving mental health. <p>Indirectly the provision of enhanced sustainable travel options which provide people with access to services and employment opportunities would also improve health given that employment has a strong association with maintaining and promoting good health⁴.</p> <p>The policies of CB1-CB7 focus on improving public transport and active travel routes serving employment sites, therefore access to key health services, recreational activities and green spaces, particularly for areas experiencing multiple deprivation such as the coastal areas of Conwy and Denbighshire, the northern borders of Flintshire and areas of Wrexham, all of which contribute to improved health outcomes would experience a neutral effect.</p>	++	Long term

³ World Health Organisation, Physical Activity, June 2024; Available online at: <https://www.who.int/news-room/fact-sheets/detail/physical-activity> (Accessed 25/11/2024)

⁴ The Health Foundation, Relationship between Employment and Health, July 2024; Available online at: <https://www.health.org.uk/evidence-hub/work/employment-and-underemployment/relationship-between-employment-and-health> (Accessed 25/11/2024)



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Policy CB1 – CB7: The physical location of any new infrastructure required for improvements to public transport and active travel routes is not known and therefore the impact is uncertain. Where new active travel routes are planned for, and where new public transport infrastructure (e.g. bus stops) is required, there is a possibility that these would require land take which could, if not done mindfully, adversely impact habitats and biodiversity. This would need to be assessed at project level.	?	
5. Protect and enhance local landscape character, designations and visual amenity	Policy CB1-CB7: Enhancement of public transport services and active travel routes is unlikely, by themselves, to affect the local landscape character, designations and visual amenity. However, indirectly the policies could contribute positively by displacing some of the tourist traffic that has become prevalent, particularly in areas of Eryri National Park where parking can impede on visual amenity. The enhancements would serve areas where there is likely to be employment growth (e.g. within the Flintshire and Wrexham Investment Zone) which itself may adversely affect these characteristics and designations if they are not delivered sensitively.	+/-	Long-term/Indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	Policy CB1-CB7: These policies relate to providing and enhancing public transport service and active travel infrastructure which connect communities with areas of employment opportunities. Where these employment areas also include social infrastructure such as sports and leisure venues, tourist sites (including heritage sites), and other cultural venues such as theatres and music venues, these improvements would positively impact culture. This is because reduced traffic from private vehicles will make visiting the areas more attractive (due to quieter streets, less parked vehicles and improved air quality) and the enhancements will also enable people without access to private vehicles to access these resources more easily. The increase in patronage would therefore help keep cultural assets economically viable. The improved connectivity by public transport and active travel between Welsh speaking communities would help protect and enhance opportunities for day-to-day usage of the language.	+	



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policy CB1-CB7: Enhancement of public transport services and active travel routes would encourage modal shift which reduces the volume of vehicles of the roads. This can have a number of benefits for the health of water resources:</p> <ul style="list-style-type: none"> - Fewer vehicles result in less oil, grease and other pollutants being washed into the waterways during rain events. This reduces the contamination of rivers, lakes and streams, leading to better water quality. - Reducing traffic decreases the volume of airborne pollutants that can settle on surfaces and be washed into waterbodies. This includes nitrogen oxides and sulphur dioxides, which can contribute to nutrient pollution⁵. 	+	Long-term/ Direct.
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policy CB1-CB7: Enhancement of public transport and active travel routes would encourage modal shift which reduces carbon emissions however, these policies do not speculate on whether this includes a shift to zero emission public transport options. There is opportunity to support decarbonisation of the transport sector where public transport upgrades include zero emission vehicles. There is no indication that these policies would have an impact on the resilience of transport infrastructure to the effects of climate change.</p>	+	Long-term/ Indirect.

⁵ Environmental Agency 2019, 2021 River basin management plans – Pollution from towns, cities and transport. Available online at: https://consult.environment-agency.gov.uk/++preview++/environment-and-business/challenges-and-choices/user_uploads/pollution-from-towns--cities [Accessed 25/11/24]



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
9. Protect and enhance local air quality.	Policy CB1-CB7: Enhancement of public transport and active travel routes would encourage modal shift which would remove vehicles from the road and therefore contribute towards an overall trend in improved air quality. This would be particularly beneficial for communities in more urban centres including Wrexham and Bangor, although there are no recorded exceedances of NO ₂ , PM ₁₀ , PM _{2.5} Air Quality Objectives in any of the Local Authority areas. Vulnerable groups which are more sensitive to changes air quality would benefit differentially. This includes children, people with respiratory disease, pregnant women and older people ^{6,7} .	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	Policy CB1-CB7: Enhancement of public transport and active travel routes would encourage modal shift which would remove vehicles from the road and therefore contribute towards an overall trend of reduced noise from vehicles. This would be particularly beneficial for communities that are within noise priority areas in North Wales. This includes stretches of the A55, A47, A4087, A547, A5119, A494, A550, A483 and A5152 ⁸ . More generally, any reductions in transport noise would also contribute to improvements in tranquillity, the measurement of which takes into account the sound environment (in addition to other factors such as visual amenity and night skies). Again, this would be particularly beneficial in areas along the main road network and within the urban centres of the North.	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	The policies support enhancement of public transport services and active travel routes, supporting a modal shift from private vehicles to sustainable transport. This would reduce consumption of raw materials (i.e. fuel).	+	N/A

⁶ World Health Organisation, Health consequences of air pollution on populations, June 2024; Available online at: <https://www.who.int/news/item/25-06-2024-what-are-health-consequences-of-air-pollution-on-populations> [Accessed 14/11/2024]

⁷ European Environment Agency, Health impacts of air pollution in Europe, 2022. Available online at: <https://www.eea.europa.eu/publications/air-quality-in-europe-2022/health-impacts-of-air-pollution> [Accessed 27/11/24]

⁸ Extrium (2024) *Wales Noise and Air Quality Viewer*. Available at: <http://www.extrium.co.uk/walesnoiseviewer.html> (Accessed: 11/11/2024).



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.4.1 Providing people with a choice about how they commute (Policy CB1-CB7):		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Policy CB1-CB7: These policies aim to support equitable access to employment, education and training opportunities across the region through the provision of sustainable transport options. In particular, employment sites close to the border with England including Deeside Industrial Park, Wrexham Industrial Estate, Airbus Broughton, Chester Business Park and Wrexham and Chester City centres. This would be most beneficial for communities in the coastal towns of Conwy, Denbighshire and Flintshire, as well as the commuters to the Flintshire and Wrexham Investment Zone. This is because these areas experience higher levels of social deprivation and would therefore benefit most from improved economic prosperity in the region.</p> <p>These policies relate predominantly to enhancing economic prosperity being generated from areas of employment in the region but does not specifically identify access to tourist locations or the rural economy.</p>	++	Long-term/Indirect



Table 1 – 2 Enabling changes to travel behaviour – Providing people with choices about how they access services and education

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.2 Providing people with choices about how they access services and education (CB8 – CB12)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies CB8 - CB12 include initiatives to offer viable and sustainable transport options to life-enhancing local services such as education, healthcare, town centres and community facilities. This includes introduction of a total services contract to combine service access, practising funding schemes for improving public transport services and active travel infrastructure and encouraging use of active travel modes to travel to educational sites. These measures help meet local community needs through improved access to services.</p> <p>The actions of Policies CB8-CB12 would be especially beneficial given that according to WIMD Access to services deprivation domain, most areas lie among the 10% most deprived areas in Wales. Within the education deprivation domain, areas around Greenfield, Rhyl and Caernarfon rank among the 10% most deprived⁹.</p> <p>The policies would support delivery of housing in so far as access to services with a choice of travel from any new housing would help meet policy requirements and facilitate the planning process.</p>	++	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>By supporting public transport and active travel uptake that gives people a choice on how to access services, the policies contribute to reduced congestion and parking issues, reduced vehicle emission and improved air quality. This supports the needs of protected characteristics groups such as children, older people, people experiencing socio-economic deprivation and disabled people who are often more reliant on public transport to access key services.</p>	++	Long-term/ Direct

⁹ WIMD, Welsh Index of Multiple Deprivation, 2019; Available online at: <https://wimd.gov.wales/> (Accessed 25/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.2 Providing people with choices about how they access services and education (CB8 – CB12)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies CB8 – CB12 encourage an uptake in active travel for accessing key services like healthcare and educational sites, through improved infrastructure and safety. This would encourage an increase in physical activity leading to improved health outcomes (e.g. such as reduced obesity, reduced risks of cardiovascular diseases and enhanced physical, mental and social health¹⁰), whilst also making it easier for communities to access services that contribute to maintaining good health and wellbeing. The overweight and obesity rate in North Wales is 36% higher in the most deprived areas compared to the least deprived. Therefore, more deprived areas would particularly benefit from improved active travel infrastructure and access to recreation activities like sports facilities and open spaces.</p> <p>The policies would improve connectivity within the communities, with improved sustainable access to town centres and community facilities, resulting in reduced social isolation. By promoting a sense of community cohesion, the policies contribute to improved mental health and overall wellbeing for local communities.¹¹</p>	++	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policies CB8 - CB12 are unlikely to cause harm or deterioration to the condition of designated sites or result in loss of valuable habitats.</p> <p>The policies do not deliver opportunities to restore or create semi-natural habitats.</p> <p>By encouraging sustainable access to services through public transport and active travel, the policies contribute to reduced transport emissions, improved air quality and reduced volumes of pollution being washed into water habitats. This helps protect biodiversity and geodiversity interests from pollution, contributing to ecosystem resilience^{27, 5}. However, the land requirements for any infrastructure improvements are not yet known therefore the impacts are uncertain.</p>	?	Long-term/ Indirect

¹⁰ Public Health England, Cycling and walking for individual and population health benefits: a rapid evidence review for health and care system decision makers, 2018. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757756/Cycling_and_walking_for_individual_and_population_health_benefits.pdf [Accessed 12/11/24]

¹¹ Department for Culture, Media and Sport, Mental health and loneliness, June 2022; Available online at: <https://www.gov.uk/government/publications/mental-health-and-loneliness-the-relationship-across-life-stages/mental-health-and-loneliness-the-relationship-across-life-stages> (Accessed 18/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.2 Providing people with choices about how they access services and education (CB8 – CB12)		
5. Protect and enhance local landscape character, designations and visual amenity	Policies CB8 - CB12 are unlikely to have an effect on designated or protected landscapes or have an impact on BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies CB8 - CB12 are unlikely to cause harm to designated heritage assets.</p> <p>Safe and sustainable access to education sites delivered by the policies, supports equitable access to services, Welsh medium education, and community engagement which provides communities with an opportunity to speak Welsh. Through this measure, the policies encourage continued use of Welsh language, supporting Welsh speaking communities.</p>	+	Long-term/Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Policies CB8 - CB12 encourage sustainable access to services and education through public transport and active travel, contributing to reduced traffic and road runoff of pollutants into water bodies. This protects the water quality and health of aquatic ecosystems from the adverse impacts of pollution ⁵ .	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.2 Providing people with choices about how they access services and education (CB8 – CB12)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policies CB8 – CB12 promote sustainable transport modes to access services, and education increasing modal shift from private cars to public transport and active travel. This supports decarbonisation of the transport sector and contributes to meet Wales targets to be net zero by 2050.</p> <p>Improved active travel infrastructure supported by the policies, contributes towards increasing resilience against effects of climate change by substituting motorised travel and helping reduce carbon emissions.¹²</p>	++	Long-term/ Direct
9. Protect and enhance local air quality.	By supporting sustainable transport access to essential services and education, Policies CB8-CB12 contribute towards reducing emissions and improving air quality for local communities (which improves health outcomes) ^{6, 7} .	+	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	Enhanced sustainable transport options delivered through policy initiatives, would promote a shift from private car to public transport and active travel. This would reduce road traffic and disturbances from transport related noise to local communities.	+	Long-term/ Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	The policies support sustainable travel options, encouraging uptake in public transport and active travel. This would reduce use of raw materials like fuel.	+	

¹² BBC, How our daily travel harms the planet, March 2020; Available online at: <https://www.bbc.com/future/article/20200317-climate-change-cut-carbon-emissions-from-your-commute> (Accessed 19/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.2 Providing people with choices about how they access services and education (CB8 – CB12)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Improved sustainable access to town centres and community facilities by CB8, contributes to an integrated transport system which accounts for the needs of active travel and public transport. This would encourage more movement (and more efficient movement) of people allowing better access to economic opportunities (principally for employment, but also for leisure, tourism and education). Better choice for travel also increases the attractiveness of the region for investment to be made. Policies CB8-CB12 therefore contribute to increased economic prosperity in the region.</p> <p>The policies have no impact on freight transport.</p>	+	Long-term/ Indirect



Table 1 – 3 Enabling changes to travel behaviour – Providing people with choices in rural and semi urban areas

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.3 Providing people with choices in rural and semi urban areas (CB13)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policy CB13 supports the delivery of socially necessary transport options in rural and semi-urban areas to encourage public transport and active travel use.</p> <p>The policy focuses on improving access to key services such as healthcare, education and transport interchanges as well as preventing rural isolation.</p> <p>This policy does not support delivery of housing services.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Policy CB13 prioritises connecting rural communities to neighbouring communities, improving access to community facilities, key services and promoting community cohesion. Where bus services are less frequent, Fflecsi Demand Responsive Transport, community transport initiatives and car clubs will be used to improve connectivity. These measures contribute to improving the quality of life for residents of rural areas, particularly for deprived communities who may not have access to a car.</p> <p>The local authorities of Conwy, Denbighshire, Gwynedd and Isle of Anglesey are identified as predominantly rural areas. Due to geographical dispersion in rural areas, areas of deprivation are too small to be identified by WIMD domains, neglecting deprivation within rural areas. Therefore, it is important to ensure projects and programmes based on this policy account for statistical gap about deprived areas in rural areas.¹³</p> <p>Through these measures, the policy supports the needs of people who have protected characteristics such as people from low-income backgrounds or deprived areas.</p> <p>The policy also supports the needs of all members of society, particularly protected characteristics groups such as children, older people, people with disabilities and pregnant women by connecting them to key services like healthcare, education and employment.</p> <p>By prioritising connecting rural areas to neighbouring communities and community facilities, the policy creates opportunities for social interactions and participation in community events.</p>	++	Long-term/Direct

¹³ Public Policy Institute for Wales, Rural Poverty in Wales: Existing Research and Evidence Gaps, May 2016; Available online at: <https://www.wcpp.org.uk/wp-content/uploads/2018/04/An-introduction-to-Rural-Poverty.pdf> (Accessed 19/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.3 Providing people with choices in rural and semi urban areas (CB13)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policy CB13 encourages uptake in active travel through the delivery of pedestrian facilities as informal routes linking communities. This promotes safe and sustainable travel modes, resulting in increased physical activity. Further, the policy focuses on public transport initiatives that improves connectivity of rural areas to neighbouring communities, improving access to key health services, recreation activities, green spaces and other community facilities.</p> <p>These measures improve connectivity, reducing social isolation and promoting increased physical activity. This provides health benefits such as reduced obesity, reduced risks of cardiovascular diseases, type-2 diabetes, and anxiety, boosting overall physical, mental and social health of communities.^{10,12}</p>	++	Long-term/ Direct
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	The policy does not conserve or enhance biodiversity or geodiversity. However, the encouragement of a modal shift to sustainable transport from private car use in rural areas, Policy CB13 would contribute to a reduction in overall transport emission therefore improving air quality and reducing pollution run off from vehicles into water bodies ^{5,26} . This protects biodiversity and geodiversity interests, contributing to ecosystem resilience.	+	Long-term/ indirect
5. Protect and enhance local landscape character, designations and visual amenity	The policy is unlikely to cause harm to any designated or protected landscapes or impact BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>The policy is unlikely to cause direct or indirect harm to designated heritage assets.</p> <p>Improved connectivity of rural areas to neighbouring communities with transport interchanges would improve sustainable travel access to rural areas, encouraging tourism to local cultural heritage sites and supporting use of Welsh across the region (and between communities).</p>	+	Long-term/ indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.3 Providing people with choices in rural and semi urban areas (CB13)		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Increase in public transport services and active travel would reduce runoff pollutants from road traffic into water bodies. This would protect the water quality and health of aquatic ecosystems ⁵ .	+	Long-term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Policy CB13 promotes a modal shift from private cars to public transport and active travel in rural areas, improving connectivity to neighbouring communities and key facilities. This helps reduce road traffic and transport related emissions thereby supporting decarbonisation of the transport sector and contributes to meeting Wales targets to be net zero by 2050.	+	Long-term/Direct
9. Protect and enhance local air quality.	By supporting sustainable transport access to essential services and education, Policy CB13 contributes towards reducing emissions and improving air quality for local communities (which improves health outcomes) ^{6,7} .	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	Policy CB13 supports a shift from private vehicles to sustainable transport modes like public transport and active travel in rural areas. This helps reduce road traffic and reduce disturbance from transport related noise and vibration, improving local soundscapes.	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.4.3 Providing people with choices in rural and semi urban areas (CB13)		
11. Incorporate circular economy principles to reduce the use of raw materials.	The policy encourages public transport and active travel use in rural and semi-urban areas, resulting in reduced private vehicle use, thereby reducing consumption of raw materials like fuel.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Initiatives like Fflecsi Demand Responsive Transport and car clubs supported by the policy improve the reliance and resilience of the transport network to better support businesses and workers.</p> <p>Improved connectivity to economic hubs can encourage regeneration and investment, particularly in more deprived areas by improving access to education and employment opportunities as well as by encouraging sustainable tourism to areas with tourism potential.</p> <p>Increased sustainable tourism to rural areas in North Wales, supported by initiatives like demand response transport and community transport can increase leisure related spendings, supporting rural economies.</p> <p>The policy does not impact freight transport.</p>	+	Long-term/ Indirect



Table 1 – 4 Enabling changes to travel behaviour – Sustainable travel access

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.4.4 Sustainable travel access (CB14 – CB23)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies CB14 – CB23 focus on promoting sustainable transport options to travel, supporting visitors in accessing tourist destinations like national parks and coastal areas sustainably.</p> <p>The policies do not directly support the delivery of housing and local services to meet local community needs.</p>	0	
2. Reduce inequality and promote community cohesion	<p>Policies CB14-CB23 seek to increase the options for people to travel throughout the region more sustainably and includes consideration of travel costs. Options within the policies to make the cost of sustainable travel more attractive (affordable) would also be beneficial for those who experience socio-economic deprivation, reducing the cost of travel, but also removing the cost barrier to experiencing all that North Wales has to offer.</p> <p>The inclusion of e-bike and micro-mobility hire services within policy initiatives helps support needs of protected characteristics groups such as disabled people for whom even short distances can be a barrier to sustainable travel. Therefore, this service would enable more people to reach their destination without needing to use their car door-to door.</p> <p>Shorter journeys to destinations supported by reduced traffic with a shift to sustainable transport modes would reduce congestion on the strategic road network, enabling people with protected characteristics such as older people, people with disabilities, pregnant women and people with infants to travel with less congestion (and therefore more quickly) to tourist attractions.</p> <p>CB14 focuses on delivering communication campaign tailored to specific groups such as younger people, older people, tourists and people with disabilities to inform as many groups about sustainable travel that best suit or support their needs as possible.</p>	++	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.4.4 Sustainable travel access (CB14 – CB23)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>The policies aim to improve connectivity to popular tourist destinations via public transport such as seasonal buses, improved rail access and as well as consideration of charging infrastructure for zero emission buses and cars.</p> <p>The availability of increased sustainable travel options would help reduce traffic congestion during peak tourism periods, reducing travel time of journeys. This would be beneficial for reducing stress caused by long driving hours.</p> <p>Through these measures, the policies help improve access to recreation activities, green spaces and coastal areas for leisure. Access to leisure opportunities, green spaces such as national parks and coastal areas contribute to reduced stress and anxiety, reducing risks of chronic conditions like obesity and diabetes and helping reduce social isolation through opportunities for social interactions and bonding.¹⁴ This contributes towards improving overall physical and mental wellbeing.</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policies CB14 – CB23 do not directly deliver opportunities to restore or create semi-natural habitats.</p> <p>The policies support the delivery of sustainable travel options to access tourist attractions including national parks and coastal areas, helping maintain air quality conditions and preventing ecological damage caused by inappropriate parking. This helps protect biodiversity and geodiversity interests and contributes to ecosystem resilience.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies CB14 – CB23 are unlikely to cause harm to any designated or protected landscapes or have an impact on BMV land.</p> <p>Increased sustainable travel options - public transport and active travel, to tourist attractions at designated landscapes results in reduced road traffic and congestion. This can reduce adverse impacts of road traffic and inappropriate parking on visual amenity, particularly Eryri National Park (CB19), and improving air quality.</p>	+	Long-term/ Indirect

¹⁴ Cambridge University Press, The Handbook of Wellness Medicine, Chapter 48 – The Role of Leisure, Recreation and Play in Health and Wellbeing, September 2020; Available online at: <https://www.cambridge.org/core/books/abs/handbook-of-wellness-medicine/role-of-leisure-recreation-and-play-in-health-and-wellbeing/7D71DED7477D77085654C7AF4E724AAA> (Accessed 19/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.4.4 Sustainable travel access (CB14 – CB23)		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies CB14 – CB23 are unlikely to cause direct or indirect harm to designated heritage assets.</p> <p>The communication campaign delivered by CB14 to provide information about sustainable travel options includes opportunities to encourage and support use of Welsh language.</p>	+	Long-term/ Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policies CB14 – CB23 support sustainable transport access to attractions, including coastal areas, where policies CB21 – CB23 support initiatives like seasonal bus services and rail improvements, resulting in reduced road traffic. This would reduce runoff pollutants from roads into waterbodies near coastal areas, protecting water quality and the health of aquatic ecosystems⁵.</p>	+	Long-term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policies CB14 – CB23 support a modal shift from private cars to public transport and active travel for travel and leisure. This would help reduce road traffic congestion and emissions, improving air quality.</p> <p>Policy CB16 specifically focuses on supporting decarbonising of the transport sector by considering charging infrastructure for zero emission vehicles near tourist attractions in North Wales.</p> <p>These measures contribute to meeting Wales targets to be net zero by 2050.</p>	+	Long-term/ Direct
9. Protect and enhance local air quality.	<p>By promoting sustainable travel options – public transport services like rail and bus as well as active travel modes and supporting zero emission vehicle use through e-bike hire and charging infrastructure initiatives, the policies CB14 – CB23 help reduce transport related emissions, contributing to the protection of air quality for local communities which improves health outcomes^{6,7}.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.4.4 Sustainable travel access (CB14 – CB23)		
10. Reduce disturbance from transport related noise and vibration to local communities.	The policies support a modal shift from private car to sustainable transport options, helping reduce road traffic and disturbances from transport related noise to local communities. This contributes to improved local soundscapes, particularly for communities located near major roads in North Wales - A5, A55 and A487.	+	Long-term/ Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	The policies support a modal shift from private car to sustainable transport options, promoting sustainable tourism while reducing use of raw materials like fuel.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Sustainable transport connectivity to tourist attractions would encourage investment and regeneration, particularly in rural areas. It would also contribute to more tourism spend within the region as more people are able to access tourist areas and facilities.</p> <p>The policies support multimodal travel through transport interchange facilities, improving access between England and North Wales and between North and South Wales to boost the visitor economy.</p> <p>The policies do not impact freight travel.</p>	+	Long-term/ Direct



Table 2 – 1 Bus, Coach and Community Transport – Bus Franchising

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Certainty of funding provision for bus services – including public, authorities and operators could support the functioning of reliable public transport services, improving access to local services.</p> <p>The integration of elements such as timetabling and ticketing could be beneficial for improving the frequency and reliability of services with improved communication, supporting the creation of communities within and between locations. However, this is subject to how effectively and accessibly timetabling of services is communicated as well as the costs determined by the ticketing system.</p> <p>Areas of relative deprivation such as Holyhead Town, Marchog, Peblig, Glyn and Rhyl that lie within the 10% most deprived areas would benefit most from improved bus services with fairer ticket pricing and more reliable public transport services.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
2. Reduce inequality and promote community cohesion	<p>Bus services in rural areas of North Wales are often infrequent and have been reducing in frequency in recent years. Franchising would contribute to the creation of an improved and integrated bus transport system for people that live in rural areas and who typically rely on the private car for travel. In the National Survey for Wales, it was reported that 86% of people in rural areas have use of a car¹⁵.</p> <p>More reliable bus services would create the opportunity for more people to use sustainable public transport, contributing to improved environmental conditions. It would also contribute towards improving the quality of life of individuals experiencing socio-economic disadvantage (more likely within deprived communities) by improving access to essential services like healthcare, education, employment as well as opportunities for socialising. This would create more opportunities for all people to participate in aspects of community life (employment, education, training, social, cultural and sporting activities), therefore reducing inequality of opportunity.</p> <p>Some groups of people are more likely to be reliant on public transport and/or walking for travel¹⁵. These include groups who share protected characteristics such as children, older people, women, global ethnic majority groups, people with disabilities, socio-economically disadvantaged and LGB and trans people. The policy does not outline any measures for ensuring safety and accessible features in buses, bus stops, service communication or ticketing methods for these groups, therefore equality of accessibility or how safe and comfortable people are likely to feel cannot be assessed. However, the policy does suggest that routes can be designed to meet the travel needs of customers. This would contribute towards improved access to essential services, especially for those protected characteristic groups listed above. It would also contribute to more routes being provided to rural and other areas that are not currently well or sufficiently served by bus services. This would reduce inequalities for these communities in relation to access to transport and the subsequent inequalities of opportunities that are associated with this lack of transport access.</p> <p>The policy suggests that measures such as route design will be suited to meet customer needs, however, it is unclear whether stakeholder engagement with local communities will be undertaken for route design or timetabling and ticketing integration. Where engagement does take place, this would likely improve a sense of community cohesion whilst also practically increasing the likelihood that routes will bring communities together through easy access between them.</p>	++	Long-term/ Indirect

¹⁵ Welsh Government (2014) National Survey for Wales – Transport. Available online at: <https://statswales.gov.wales/Catalogue/Transport>



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>By providing a more connected and reliable bus network that offers affordable ticketing, Policy PT1 would improve access to key health services, recreation activities and green spaces thereby improving the health and wellbeing of the local population.¹⁶ Improving direct access to physical exercise (gyms, parks, natural areas, etc.) would deliver health benefits.</p> <p>Indirectly bus travel has been associated with increased active travel. Improved service provision that meets a wider range of needs, could therefore contribute to more people choosing this mode of transport, increasing physical activity and resulting in associated health benefits. The policy would also contribute towards bettering mental health and wellbeing by reducing social isolation particularly of people who are more reliant on public transport (older people, disabled people, young people, women, global ethnic majority people, socio-economically disadvantaged).</p> <p>The policy does contribute towards improved connectivity between local communities. However, it is unclear how it impacts connectivity to and within more rural areas.</p> <p>The policy could improve the safety of those participating in active travel because more patronage of the buses would contribute to a shift away from private car use and therefore reduce the volume of traffic on the roads.</p>	+	Long-term/ Indirect

¹⁶ Office for National Statistics, Health benefits from recreation, natural capital, UK: 2022; Available online at: <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/healthbenefitsfromrecreationnaturalcapitaluk/2022> [Accessed 29/11/2024]



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>An improved bus network implemented through franchising would offer better connected routes to different destinations, encouraging people to use sustainable transport more frequently, leading to long term environmental benefits such as improved air quality, reduced levels of transport noise, and reduced levels of polluted surface water reaching water bodies (from oils, etc coming from vehicles)^{17,18}.</p> <p>The physical location of any new infrastructure required for improvements to the bus network is not known and therefore the impact in relation to land take and associated impacts on biodiversity and geodiversity is uncertain. However, it is unlikely that significant infrastructure would be required, rather existing roads and bus stops would be utilised by franchising businesses. Unless the chosen bus routes pass through any designated sites or valuable habitats, Policy PT1 is unlikely to have a significant impact on biodiversity, geodiversity or protected habitats and species.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policy PT1 would not directly cause harm or result in the enhancement of the condition and character of any protected or designated landscapes.</p> <p>Improved bus networks would reduce the adverse impacts of road traffic on landscapes and designations, improving visual amenity with reduced private car use as more individuals use sustainable public transport instead.</p> <p>If bus routes provide timely services to tourist destinations such as Eryri National Park and coastal areas, it would reduce the adverse impacts of parking and contribute to more efficient management of travel in tourist areas during peak seasons. Eryri National Park observes illegal and inconsiderate parking problems during peak seasons, endangering pedestrians and other road users but also adversely impacting on visual amenity. This could be mitigated with the implementation of an improved bus network through bus franchising.¹⁹</p>	+	

¹⁷ Department of Transport, Transport and environment statistics 2022, October 2022; Available online at: <https://www.gov.uk/government/statistics/transport-and-environment-statistics-2022/transport-and-environment-statistics-2022>

¹⁸ Climate Nexus, Climate benefits of public transportation, 2022; Available online at: <https://climatenexus.org/climate-issues/energy/public-transit-climate-benefits/> [Accessed 29/11/2024]

¹⁹ North Wales Live, Police warning over 'irresponsible' Easter parking after almost 40 cars towed in Snowdonia, 2023. Available online at: <https://www.dailypost.co.uk/news/north-wales-news/police-warning-over-irresponsible-easter-26658115.amp> [Accessed 04/12/2024]



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policy PT1 would not cause direct or indirect harm to designated heritage assets, mitigate harm to non-designated heritage assets or influence their conditions.</p> <p>The policy does however have potential to implement and encourage use of the Welsh language by enabling better connectivity between Welsh speaking communities, and improved access to educational resources for learning Welsh for all members of society, especially children and younger people who are more reliant on public transport. The policy could also facilitate the use of Welsh language in social and community spaces such as bus waiting areas, bus stops and buses themselves.²⁰</p>	+	Long-term/ Direct
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Rainwater runoff from roads carries pollutants such as chemicals, metals, plastics (micro and litter), oils and lubricants, sediment, nutrients and pathogens into water environments, adversely impacting water quality. The improvement of the public transport network through bus franchising would encourage individuals to use buses more often, reducing the number of vehicles on the road. This would result in reduced pollution from roads to wash into water bodies ⁵ .	+	Long-term/Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Bus franchising aims to promote a modal shift from private car use to public transport but also increase the frequency of bus use by existing bus users. Where franchising results in improved bus connectivity, reliability, and a simple, unified and integrated ticketing system, Policy PT1 would encourage the modal shift from private cars to public transport thereby supporting the shift toward reduced carbon emissions. The policy would indirectly support the transition to zero emissions where franchising leads to the introduction of new buses to the network, because Policy PT2 requires that all new buses introduced in North Wales must be Zero Emission.</p> <p>The policy would not enhance the resilience of transport infrastructure to withstand the effects of climate change because franchising itself is unlikely to make significant changes to any infrastructure.</p>	+	Long-term/ Indirect

²⁰ Welsh Government, 2024. Cymraeg 2050: Welsh language strategy action plan 2024 to 2025. Available online at: <https://www.gov.wales/cymraeg-2050-welsh-language-strategy-action-plan-2024-2025.html> [Accessed 13/11/24]



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
9. Protect and enhance local air quality.	The highest number of pollutants to the air are contributed through vehicular emissions from major roads within the NWTP area which include the A55 "North Wales Expressway, A5, A55 and A483. Policy PT1 could improve air quality for communities where improvements made to bus services through franchising results in an increase in patronage of the buses and a reduction in private transport usage. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women) ^{6,7} . The usage of zero emissions buses would enhance the effect further. This would be particularly beneficial for communities in more urban areas located near the A5, A55 and A483, including Wrexham and Bangor, although there are no recorded exceedances of NO ₂ , PM ¹⁰ , PM ^{2.5} Air Quality Objectives in any of the Local Authority areas.	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>The main sources of noise pollution within the NWTP area are associated with noise from roads, namely the A55, A483, A494 and A487 as well as neighbouring routes. Noise complaints in the NWTP area have been predominantly associated with sections of the A55 and A483¹⁶⁰ and there are a series of noise priority areas located along stretches of the A55, A487¹, A4087, A547, A5119, A494, A550, A483 and A5152⁸. Policy PT1 could contribute to a decrease in noise disturbances to local communities from road transport where there is a modal shift from private car usage to public transport (buses).</p> <p>However, if franchising leads to changes in routes and/or intensification of usage for some routes, this could lead to an increase in noise from buses for some residents. However, in combination with the anticipated reduction in private car use (i.e. shift in transport mode), it is likely that any increase in noise from bus movement would be balanced by a decrease in private car movements.</p>	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	The policy supports a shift to public transport, reducing the consumption of raw materials like fuels.	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.5.1 Bus Franchising (Policy PT1)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>By delivering improved and extended connectivity through an improved bus network, Policy PT1 increases the region's economic and development opportunities.</p> <p>Bus franchising aims to create a network making transferring bus services more efficient, enabling travel on different services with one ticket, integrating real-time information about services on one platform, standardised fares and improved hours of operation, integrating with rail as well. Through these measures, Policy PT1 would improve the reliance and resilience of the transport network to better support economic prosperity by supporting businesses and workers.</p> <p>PT1 has the potential to create a more integrated bus network (including integrating with other transport modes such as rail), with a unified and integrated ticketed system. This, in combination with other policies of the RTP (e.g. PT4, PT5, PT6, PT9, PT14), would facilitate the movement of people between major areas of employment both in North Wales and adjacent areas of Northern England including Chester and Deeside, thereby contributing to the economic prosperity of the region. It also makes access to employment, education and training opportunities more equitable by increasing accessibility for people experiencing socio-economic deprivation and/or living in more deprived areas. Improved connectivity to more deprived areas would also encourage regeneration and investment in those areas.²¹</p> <p>Through franchising, routes can be better designed to meet customer needs. PT1 can therefore enhance sustainable access to tourist facilities and attractions, particularly in rural areas. This focus supports local economies by extending tourism geographies through improved connectivity. Investing in bus connectivity is crucial for rural community development plans, as it provides reliable and affordable transport to those who live in rural areas as well as those wishing to visit them. Additionally, spending by bus passengers on retail, leisure, and commuting services significantly contributes to local economies (both rural and urban) ²².</p> <p>Bus franchising would not have any impact on the level of freight movements.</p>	++	Long-term/ Direct

²¹ S. Rawlinson and R. Jones, How transport infrastructure can unlock regeneration and levelling up; Building. March 2023. Available online at: <https://www.building.co.uk/data/how-transport-infrastructure-can-unlock-regeneration-and-levelling-up/5122309.article> [Accessed 12/11/24]

²² The Economic Impact of Local Bus Services: A Significant Boost for Rural Communities; Rural Services Network, 2024. Available online at: <https://rsnonline.org.uk/the-economic-impact-of-local-bus-services-a-significant-boost-for-rural-communities> [Accessed 12/11/24]



Table 2 – 2 Bus, Coach and Community Transport – Decarbonising the Bus Fleet

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.4.2 Decarbonising the Bus Fleet (Policy PT2 – PT3)		
1. Support the delivery of housing and local services to meet the needs of local communities	Policy PT2 and PT3 do not have direct impact on the delivery of housing and local services to meet the needs of local communities.	0	N/A
2. Reduce inequality and promote community cohesion	<p>Policy PT2 and PT3 contribute towards improving the environmental conditions by focusing on decarbonisation initiatives regarding the bus fleets.</p> <p>Decarbonisation initiatives implemented through PT2 and PT3 would benefit communities living in low-income and deprived areas, reducing health inequalities by improving air quality^{23,7}. Groups who would disproportionately benefit from improved air quality include older people, children, people with existing respiratory health conditions and those experiencing socioeconomic disadvantage who live in areas of higher physical environment deprivation (as described above).</p> <p>Decarbonisation would also marginally reduce transport related noise pollution, improving living conditions for residents living in high noise level areas around the main roads A5, A55 and A4807. These are often the same communities (and groups within communities) as described above for air quality benefits.</p> <p>Decarbonisation is not likely to contribute to improving social cohesion.</p>	+	Long-term/ Direct
3. Improve the health and wellbeing of the local population, including with respect to	Decarbonisation of public transport would contribute to an improvement in air quality. This reduced pollution can encourage people to spend more time outdoors, in green spaces, walking, cycling or partaking in recreational activities. ²⁴ Increased physical activities provide health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health. ¹⁰	+	Long-term/ Indirect

²³ Decarbonising transport, Let's get moving together. London Transport Museum, 2023. Available online at: <https://www.ltmuseum.co.uk/interchange/decarbonising-transport#report> [Accessed on 12/11/24]

²⁴ How the UK's push for net-zero could deliver key health benefits, World Economic Forum, 2023. Available online at: <https://www.weforum.org/stories/2023/01/uk-net-zero-health-benefits-climate-change/> [Accessed 12/11/24]



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
physical and mental health	<p>The overweight and obesity rate in North Wales is 36% higher in the most deprived areas compared to the least deprived. Thus, deprived areas like Greenfield 1, Rhyl and Sealand 2 would likely experience health benefit from decarbonisation measures.</p> <p>COVID-19 has also had an adverse impact on the mental wellbeing of the local populations of North Wales. Reduced air pollution, promoting outdoor, social activities would have beneficial effects on the mental wellbeing of individuals.²⁵</p> <p>Through supporting active travel, PT2 and PT3 contribute towards improving the physical and mental health of local populations.</p>		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Decarbonisation of public transport would contribute to an improvement in air quality and reduce the harmful exposure of habitats and species to nitrogen oxides (NOx) and nitrogen dioxide (NO2) associated with vehicle emissions^{26,27}. Policy PT2/PT3 would therefore contribute towards protecting biodiversity loss and support ecosystem resilience.</p> <p>Policy PT2/PT3 do not directly deliver opportunities to restore or create semi-natural habitats or geodiversity.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	Policies PT2 and PT3 do not cause harm to or result in the enhancement of any designated or protected landscapes.	0	N/A

²⁵ Twohig-Bennet, C., & Jones, A. The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace and health outcomes. *Environmental Res.* 2018. October; 166: 628-637.

²⁶ The ecological effects of air pollution from road transport: an updated review. Natural England Commissioned Report NECR199, 2016. Available online at: <https://publications.naturalengland.org.uk/file/5064684469223424> [Accessed 12/11/24].

²⁷ Air quality impacts in Europe 2022. Impacts of air pollution on ecosystems. Available online at: <https://www.eea.europa.eu/publications/air-quality-in-europe-2022/impacts-of-air-pollution-on-ecosystems> [Accessed 12/11/24]



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	Decarbonization would not have an impact on cultural heritage.	0	N/A
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Fossil fuel powered vehicles contribute to road runoff, carrying pollutants like oil and heavy metals into nearby water bodies. Decarbonisation of bus fleets would contribute to a reduced volume of pollutant road runoff into water bodies, improving the health of aquatic ecosystem and water quality.</p> <p>Policy PT3 has potential to negatively impact water resources as the development of hydrogen hubs would require water for hydrogen production as well as other services like cooling.</p> <p>Hydrogen production, specifically via electrolysis, requires large amounts of water. If this is drawn from freshwater sources, it could add stresses to the local water supply. Ammonia, an energy carrier for hydrogen is highly toxic for humans as well as for aquatic life if leakages occur in water sources. It is also a potential source of nitrogen oxide emissions, if combustion is not perfectly optimised. Hence, there are some associated risks of contamination.²⁸</p>	+/-	Long-term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	With the introduction of new zero-emission buses and exploring the introduction of a hydrogen bus fleet (including re-powering of existing fleet to zero-emissions), policies PT2 and PT3 support decarbonisation of the transport sector and an uptake in cleaner fuels use. Where new fleets are commissioned, it is assumed that these fleets will be more suitable to mitigate the changes in climate (warmer conditions) than the existing fleet. Therefore, these policies would contribute to the resilience of transport infrastructure to the effects of climate change.	++	Long-term/ Direct.

²⁸ Hydrogen: A renewable energy perspective. A report prepared for the 2nd Hydrogen Energy Ministerial Meeting in Tokyo, Japan. 2019. International Renewable energy Agency. Available online at: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Sep/IRENA_Hydrogen_2019.pdf [Accessed 12/11/24]



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
9. Protect and enhance local air quality.	<p>The largest contribution of emissions within the NWTP area are vehicle emissions from the surrounding main roads. Major roads within the NWTP area include the A55 "North Wales Expressway, A5, A55 and A483.</p> <p>Decarbonisation measures of PT2 and PT3 for the bus network system, would contribute to reduced air emissions, leading to positive impacts for human health and wellbeing, especially populations living around the major road areas^{6,7}.</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	These policies are not likely to affect the noise environment.	0	N/A
11. Incorporate circular economy principles to reduce the use of raw materials.	Policies PT2 and PT3 support the transition to cleaner fuels and the development of hydrogen hubs at Deeside and Holyhead would support the use of locally sourced materials and resources.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	Policies PT2 and PT3 would not have an effect on this objective.	0	N/A



Table 2 – 3 Bus, Coach and Community Transport – Bus Transformation Network

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.3 Bus Transformation Network (Policies PT4 and PT5)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies PT4 and PT5 aim to create an improved bus service network with more frequent and consistent services and better connections to other buses and rail. This would improve access to local services with optimised journeys and direct routes.</p> <p>The policies include a core network of services within and between major settlements and employment sites, supporting the creation and/or expansion of communities where routes and bus services are designed to serve these communities. This would increase economic opportunities for individuals living in these settlements.</p> <p>The Welsh Index of Multiple Deprivation (WIMD) finds that the most deprived areas in North Wales are the coastal areas of Conwy and Denbighshire, the northern borders of Flintshire and areas of Wrexham⁹. Targeting these areas for the improvement of bus services would be particularly beneficial in relation to access to employment, education, recreation and social opportunities, thereby contributing the to the needs of these local communities who are more likely to be reliant on public transport.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Some groups of people are more likely to be reliant on public transport for travel. This includes children and young people, older people, women, disabled people¹, socio-economically disadvantaged people, and people from global ethnic majority groups². The development of a bus transformation network (i.e. enhancement of public transport services) would therefore be beneficial for these groups of people, improving their quality of life and providing them with more choice and flexibility in when they choose to travel. Enhancements would aim to be intuitive, easy to understand and with increased frequency of services and better connectivity. With the introduction of longer operating hours, (and along with PT7 which covers introduction of appropriate lighting at bus stops), the policies address customer safety concerns especially for protected characteristics groups such as women, racialised people, children, LGB and trans people¹⁵.</p> <p>Opportunities for community participation and engagement is not identified within the policies PT4-PT5. However, Engagement with stakeholders is identified in relation to partnerships with Local Authorities in North Wales, England, Transport for Wales and transport operators.</p> <p>Where engagement does take place, this would likely improve a sense of community cohesion, bringing communities together through improved and reliable connectivity between them.</p>	+	Long term/ Direct
3. Improve the health and wellbeing of the local population,	<p>Policy PT4 outlines the inclusion of bus services between and within major settlements and employment sites. Subject to the settlements selected for the bus services, this could improve connectivity between rural and urban areas. Whether it will improve connectivity between local communities in rural areas is unclear.</p>	++	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
including with respect to physical and mental health	<p>The policies will improve the frequency and journey times of public transport services to leisure and visitor centres, providing access for individuals to engage in social activities and promoting community participation, reducing social isolation.</p> <p>Increased use of public transport would also result in reduced air pollution and fewer road accidents due to reduced traffic, increasing safety of transport services. This would also increase safety for walking and cycling, encouraging uptake of active travel, further contributing to the health and wellbeing of the population.</p> <p>Transformation of the bus network would improve access to key health services, recreation activities and green spaces through the introduction of new routes, more frequent services and longer operating hours. This would contribute towards improving the health and wellbeing of the population as a result of more participation in activity. Physical activities and active travel provide health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health.¹⁰</p> <p>Improving the bus network would also improve access to employment, training and education which are factors that contribute to maintaining and improving mental and physical health. This would be particularly beneficial in areas which experience socio-economic disadvantage and for population groups which rely more on public transport (i.e. children and young people, older people, women, disabled people¹, socio-economically disadvantaged people, and people from global ethnic majority groups).</p>		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>There is no additional information regarding the locations of the bus routes, so the direct impact of designated sites and valuable habitats is unknown.</p> <p>While policies PT4 and PT5 do not directly deliver opportunities to restore or create semi-natural habitats, an improved bus network would offer better connected routes to different destinations, encouraging people to use sustainable transport more frequently, leading to long term environmental benefits such as improved air quality, reduced levels of transport noise, and reduced levels of polluted surface water reaching water bodies (from oils, etc coming from vehicles)^{17,18}.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>The locations of the bus network are unknown, but an assumption is made that no new road infrastructure would be delivered under PT4 and PT5. No physical harm is therefore expected to designated or protected landscapes and impact on Best and Most Versatile (BMV) land.</p> <p>Improved bus connections to tourist areas would help mitigate parking issues within landscapes such as Eryri National Park. More frequent and better-connected services through PT4 and PT5 would contribute to the</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	<p>efficient management of travel in tourist areas during peak periods (due to modal shift to buses reaching these popular tourist areas).</p> <p>This would improve the visual amenity and local landscape character of sites, protecting them from visual impacts of parking problems.</p>		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>The location of places effected by the bus routes are unknown so the impact on designated heritage assets is unknown.</p> <p>The bus network transformation has the potential to support Welsh speaking communities through the inclusion of initiatives to implement and encourage use of Welsh language by including verbal and written translations for instructions, communication and announcements. A coordinated and reliable bus timetable would also enable more children and young people to access educational resources for learning Welsh, especially as they are more dependent on public transport to access services.</p>	+	Long-term/ Direct
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Rainwater run off roads carries pollutants such as chemicals, metals, plastics (micro and litter), oils and lubricants, sediment, nutrients and pathogens into water environments, adversely impacting water quality. The improvement of the public transport network through a transformed bus network would encourage individuals to use buses more often, reducing the number of vehicles on the road. This would result in reduced pollution from roads to wash into water bodies.⁵</p> <p>Through these measures, PT4 and PT5 would protect the health and quality of water bodies and resources from road run off pollutants.</p>	+	Long-term/Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policies PT4 and PT5, in collaboration with PT2 and PT3 support the transition to zero emission public transport sector, helping meet Wales target to be net zero.</p> <p>The policies facilitate increased bus use and a modal shift from private cars to public transport with an improved bus network offering more frequent, connected services and longer operating hours. This would improve air quality and reduced noise pollution through reduced road traffic, improving road safety for active travel routes like walking and cycles.</p> <p>In collaboration with PT2 and PT3, increased use of decarbonised bus fleets over private cars would support decarbonisation of the transport sectors, reducing carbon emissions and enhancing resilience against adverse effects of climate change.</p> <p>PT4 and PT5 would facilitate a modal shift from private car use to public transport but also increase the frequency of bus use by existing bus users. Where there is improved bus connectivity, reliability, and a simple,</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	<p>unified and integrated ticketing system, Policies PT4 and PT5 would encourage the modal shift from private cars to public transport thereby supporting the shift toward reduced carbon emissions. The policies would indirectly support the transition to zero emissions where, in combination with PT2 and PT3 there is introduction of new zero emission buses to the network.</p> <p>The policies would not enhance the resilience of transport infrastructure to withstand the effects of climate change because these policies relate only to service provision rather than any physical changes.</p>		
9. Protect and enhance local air quality.	<p>The highest number of pollutants to the air are contributed through vehicular emissions from major roads within the NWTP area which include the A55 "North Wales Expressway, A5, A55 and A483. Policies PT4 and PT5 could improve air quality for communities where improvements made to bus services results in an increase in patronage of the buses and a reduction in private transport usage. This would be particularly beneficial for communities in more urban areas located near the A5, A55 and A483, including Wrexham and Bangor, although there are no recorded exceedances of NO₂, PM¹⁰, PM^{2.5} Air Quality Objectives in any of the Local Authority areas. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women)^{6,7}</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>The main sources of noise pollution within the NWTP area are associated with noise from roads, namely the A55, A483, A494 and A487 as well as neighbouring routes. Noise complaints in the NWTP area have been predominantly associated with sections of the A55 and A483¹⁶⁰ and there are a series of noise priority areas located along stretches of the A55, A487¹, A4087, A547, A5119, A494, A550, A483 and A5152⁸. Policies PT4 and PT5 could contribute to a decrease in noise disturbances to local communities from road transport where they result in a modal shift from private car usage to public transport (buses).</p> <p>However, if the bus transformation network leads to changes in routes and/or intensification of usage for some routes, this could lead to an increase in noise from buses for some residents. However, in combination with the anticipated reduction in private car use (i.e. shift in transport mode), it is likely that any increase in noise from bus movement would be balanced by a decrease in private car movements.</p>	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	<p>The policies encourage a shift to public transport, reducing the consumption of raw materials like fuels.</p>	+	Long-term/ Indirect
12. Create an integrated transport system	<p>By delivering improved and extended connectivity through an improved (transformed) bus network, Policies PT4 and PT5 increases the region's economic and development opportunities.</p>	++	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>A bus transformation network would create bus services that are more efficient, enabling travel on different services with one ticket, integrating real-time information about services on one platform, standardised fares and improved hours of operation, integrating with rail. Through these measures, Policy PT1 Policies PT4 and PT5 would improve the reliance and resilience of the transport network to better support economic prosperity by supporting businesses and workers.</p> <p>PT4 and PT5 have the potential to create a more integrated bus network (including integrating with other transport modes such as rail). This, in combination with other policies of the RTP (e.g. PT1, PT6, PT9, PT14), would facilitate the movement of people between major areas of employment both in North Wales and adjacent areas of Northern England including Chester and Deeside, thereby contributing to the economic prosperity of the region. It also makes access to employment, education and training opportunities more equitable by increasing accessibility for people experiencing socio-economic deprivation and/or living in more deprived areas. Improved connectivity to more deprived areas would also encourage regeneration and investment in those areas²¹.</p> <p>A transformed bus network can design routes and services to meet customer needs. PT4 and PT5 can therefore enhance sustainable access to tourist facilities and attractions, particularly in rural areas. This focus supports local economies by extending tourism geographies through improved connectivity. Investing in bus connectivity is crucial for rural community development plans, as it provides reliable and affordable transport to those who live in rural areas as well as those wishing to visit them. Additionally, spending by bus passengers on retail, leisure, and commuting services significantly contributes to local economies (both rural and urban) ²².</p> <p>Improved bus networks would not have any impact on the level of freight movements.</p>		



Table 2 – 4 Bus, Coach and Community Transport – Improving Bus Infrastructure

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.4 Improving Bus Infrastructure (PT6 – PT8)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>The creation of bus priority infrastructure (PT6) focusing on areas of localised congestion to improve bus journey timings would encourage more people to adopt sustainable transport use within and between locations. This would improve access to key local services, particularly for people who are more reliant on public transport.</p> <p>Focused on other bus infrastructure, like facilities provided at bus stops and interchanges, Policies PT7 and PT8 would improve the experience of using sustainable public transport like buses, promoting the shift from private car use to public transport. Key bus stops in village centres with high usage will be focused on for enhancement, supporting the delivery of local services to local communities.</p> <p>These policies would not contribute towards the delivery of housing.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.4 Improving Bus Infrastructure (PT6 – PT8)		
2. Reduce inequality and promote community cohesion	<p>Reducing bus journey times and creating safer experiences of bus use, Policies PT6, PT7 and PT8 contribute towards improving environmental conditions and therefore encouraging a modal shift to public transport.</p> <p>As some people are more reliant on public transport like members of protected characteristics groups such as children, older people, people with disabilities, Creating bus waiting areas that are more accessible (through the addition of features like dropped and raised kerbs, shelters, seating areas and lighting) is beneficial for all people, but differentially and disproportionately beneficial for some groups including older people, parents and carers using pushchairs, disabled people (particularly those who have difficulty standing, or are blind or partially sighted).</p> <p>Certain protected characteristics groups such as woman, racialised groups, LGB and trans people are more vulnerable in public spaces like public transport. The policies include the addition of the following features for the enhancement of bus infrastructure: improving lighting, or nearby street lighting and shelters which enhances safety, benefiting all, especially these more vulnerable protected characteristics groups. These feature along with real time information about services and onward connection makes public transport more accessible and supports protected characteristic groups in accessing key services and participate in community events, promoting community cohesion.</p> <p>Wrexham and Conwy in North Wales accommodate dispersal centres for refugees and asylum seekers. An improved, accessible and safe bus network would be beneficial for them, enabling them to access healthcare services, education, employment opportunity and participate in community activities.</p> <p>Reducing bus journey timings and improving the safety of using the bus improves accessibility of public transport. Increased sustainable public transport use also reduces road traffic and air pollution and with the addition of cycle storage at bus stops, encourages active travel for all members of society.</p>	++	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.4 Improving Bus Infrastructure (PT6 – PT8)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies PT6, PT7 and PT8 contribute towards promoting the use of sustainable public transport, reducing road traffic and air pollution, improving road safety and encouraging uptake in active travel (as people usually travel by foot or bike to the bus stops).</p> <p>Reduced bus journey timings and safer bus waiting infrastructure would encourage the use of buses to travel to community spaces, key health services, recreation activities and green spaces. This would contribute to reducing social isolation, especially for people more reliant on public transport including children, older people, racialised people, people with disabilities and people from low-income backgrounds. Access to these services and resources contributes towards improving the physical and mental health wellbeing for all members of the local population.</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Improved bus infrastructure would likely encourage people to use sustainable transport more frequently, leading to long term environmental benefits such as improved air quality, reduced levels of transport noise, and reduced levels of polluted surface water reaching water bodies (from oils, etc coming from vehicles)^{26,27}.</p> <p>The physical location of any new infrastructure required under PT6-8 is not known and therefore the impact in relation to land take and associated impacts on biodiversity and geodiversity is uncertain. However, it is unlikely that significant infrastructure would be required, rather existing roads and bus stops would be utilised by franchising businesses. Unless the chosen bus routes pass through any designated sites or valuable habitats, Policies PT6-8 are unlikely to have a significant impact on biodiversity, geodiversity or protected habitats and species.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>The locations of infrastructure upgrades are unknown, but an assumption is made that no new road infrastructure would be delivered under PT6, PT7 or PT8. Rather, any bus priority measures would involve existing road footprints. No physical harm is therefore expected to designated or protected landscapes and impact on Best and Most Versatile (BMV) land.</p> <p>This would improve the visual amenity and local landscape character of sites, protecting them from visual impacts of parking problems.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.4 Improving Bus Infrastructure (PT6 – PT8)		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>The location of places the bus routes are unknown so the impact on designated heritage assets is unknown.</p> <p>The bus infrastructure has the potential to support Welsh speaking communities and include initiatives to implement and encourage use of Welsh language by including verbal and written translations for instructions, communication and announcements.</p> <p>It is noted that Anglesey's proximity to Gwynedd has fostered a close relationship between the two areas. Ynys Môn and Gwynedd share deep economic, social and cultural connections and are Welsh language strongholds. Therefore, there are a large number of local trips that use the Menai crossings. Well-connected bus routes between these locations would hence enhance local cultural values, including the Welsh language.</p>	+	Long-term/ Direct
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Rainwater run off roads carries pollutants such as chemicals, metals, plastics (micro and litter), oils and lubricants, sediment, nutrients and pathogens into water environments, adversely impacting water quality. The improvement of the public transport network through improved bus infrastructure would encourage individuals to use buses more often, reducing the number of vehicles on the road. This would result in reduced pollution from roads to wash into water bodies⁵.</p> <p>Through these measures, PT6-PT8 would protect the health and quality of water bodies and resources from road run off pollutants. Any development works required to introduce new physical infrastructure (e.g. road engineering works for bus lane introductions) has the potential to result in adverse effects during construction if not mitigated.</p>	+/-	Long-term/Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>The policies contribute to encouraging a modal shift from private cars to public transport through improved bus journey timings, safer and more accessible bus use, plus enhancements which improve accessibility for many groups of people. This modal shift would remove some private vehicle journeys, shifting them to buses which will be reduced (including zero) carbon emission vehicles.</p> <p>An assumption is made that any infrastructure improvements would be designed to allow for predicted climate change therefore climate resilience would be built into the improvements.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.4 Improving Bus Infrastructure (PT6 – PT8)		
9. Protect and enhance local air quality.	Policy PT6 aims to reduce bus journey times whilst PT7 and PT8 aim to improve safety and accessibility; these improvements encourage a modal shift to sustainable public transport from private car use, resulting in reduced air pollution caused by road traffic. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women) ^{6,7}	+	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>The main sources of noise pollution within the NWTP area are associated with noise from roads, namely the A55, A483, A494 and A487 as well as neighbouring routes. Noise complaints in the NWTP area have been predominantly associated with sections of the A55 and A483160 and there are a series of noise priority areas located along stretches of the A55, A4871, A4087, A547, A5119, A494, A550, A483 and A5152⁸. Policies PT4 and PT5 could contribute to a decrease in noise disturbances to local communities from road transport where they result in a modal shift from private car usage to public transport (buses).</p> <p>However, if PT6-PT8 lead to changes in routes and/or intensification of usage for some routes, this could lead to an increase in noise from buses for some residents (i.e. where bus stops are enhanced with shelters, etc). However, in combination with the anticipated reduction in private car use (i.e. shift in transport mode), it is likely that any increase in noise from bus movement would be balanced by a decrease in private car movements.</p>	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	Information about materials and resources to be used for the bus infrastructure is unknown so the incorporation of circular economy principles is unknown. However, reduced private car use would reduce overall fuel usage.	?	N/A



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.4 Improving Bus Infrastructure (PT6 – PT8)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Policies PT6, PT7 and PT8 create a more attractive bus network with improved journey timings and improved safety and accessibility, thereby making travel by bus more attractive to a wider group of people. This includes for groups who are more reliant on public transport (i.e. children, older people, racialised people, people with disabilities and people experiencing socio-economic disadvantage), but also is likely to attract people new to bus travel (i.e. modal shift for some or all journeys).</p> <p>These improvements will encourage greater connectivity by a sustainable transport mode for communities across the region to employment opportunities. This will be beneficial for economic prosperity across North Wales, and particularly for areas which experience deprivation. Where journey times and frequency to and from rural areas are improved this will benefit economic growth in rural areas, particularly in relation to tourist areas. However, the location of bus routes is unknown and thus, the impact is unclear.</p> <p>The policies have no impact on movement of freight.</p>	+	Long-term/ Indirect



Table 2 – 5 Bus, Coach and Community Transport – Making Bus Travel Easier

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.5 Making Bus Travel Easier (PT9 - PT10)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies PT9 and PT10 aim to make bus travel easier by mitigating issues of accessibility and offering updated, clear timetables, clear fare structures and improved wait times.</p> <p>Making bus use easier and more accessible (inclusive) for everyone, including non-frequent or first-time users, would improve access to local services for all, especially those more reliant on public transport, like people with disabilities (particularly people with restricted mobility), older people, pregnant women and people travelling with infants. Denbighshire and Conwy have the highest proportion of people claiming disability allowance²⁹ therefore these communities would benefit most from these policies (although people across the region would benefit).</p> <p>The policy would not impact the delivery of housing.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>More accessible bus services (through clearer ticketing and inclusive design) would reduce inequality of access to public transport (buses) therefore increasing the opportunity for the whole of society to use sustainable public transport. This would particularly apply to children, older people, disabled people (particularly those with restricted mobility, visual impairments), and people who are not confident in the Welsh or English language because the policies would address access issues experienced disproportionately by these groups.</p> <p>For people who are more reliant on public transport, improvements to how easy it is to use buses would also improve people's access to essential services like healthcare, education, employment as well as opportunities for socialising. This would create more opportunities for all people to participate in aspects of community life (employment, education, training, social, cultural and sporting activities), therefore reducing inequality of opportunity.</p>	++	Long-term/ Indirect

²⁹ Disability benefit claimants, February 2023. House of Commons Library, 2023. ONS data from 2021.



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.5 Making Bus Travel Easier (PT9 - PT10)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies PT9 and PT10 contribute towards promoting an integrated bus network that has a simple unified, easy-to-use ticketing and information. These improvements would likely encourage the use of buses to travel to community spaces, key health services, recreation activities and green spaces. This would contribute to reducing social isolation, especially for people more reliant on public transport including children, older people, racialised people, people with disabilities and people from low-income backgrounds. Access to these services and resources contributes towards improving the physical and mental health wellbeing for all members of the local population.</p> <p>PT9 has potential to improve frequency of bus connectivity between rural and urban areas, as well as between local communities in rural areas. However, no information on this is provided at the time so the impact is unknown.</p> <p>The North Wales Population Needs Assessment (2022) identified through consultation and engagement that accessibility of transport links to those with chronic health needs, physical disability and sensory impairment were especially an issue in more rural areas, where social isolation can be more profound due to lack of public transport infrastructure. Thus, PT9 and PT10 have the potential to significantly improve accessibility of these transport links and reduce social isolation by focusing on more rural areas.</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>PT9 and PT10 are unlikely to cause harm or any deterioration in the condition of any designated sites.</p> <p>However, by contributing to increased public transport use instead of private vehicles, they contribute to protecting valuable habitats and protected species from the adverse impacts of air and noise pollution.</p> <p>Making buses easier to use would likely encourage people to use sustainable transport more frequently, leading to long term environmental benefits such as improved air quality, reduced levels of transport noise, and reduced levels of polluted surface water reaching water bodies (from oils, etc coming from vehicles)^{26,27}.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.5 Making Bus Travel Easier (PT9 - PT10)		
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies PT9 and PT10 do not directly result in the enhancement of protected or designated landscapes but by promoting the shift to sustainable public transport they contribute towards reducing the adverse impacts of road traffic and parking on landscapes and designations, improving visual amenity and local soundscapes.</p> <p>Improved bus timetables, ticketing system, wait times and accessibility features through the policies would make bus travel easier for first time users like tourists, contributing to increased sustainable public transport use and efficient management of travel in tourist areas during peak periods.</p>	+	Long-term/ Indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies PT9 and PT10 are unlikely to have an impact on designated heritage assets.</p> <p>The policy would facilitate the use of Welsh language in social and community spaces such as bus waiting areas, bus stops and buses themselves.²⁰</p>	+	Long-term/ Direct
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Increased public transport use through the implementation of PT9 would reduce road runoff of pollutants into water bodies, improving the health of aquatic ecosystem and water quality.</p> <p>It is unlikely that PT10 would have an impact on the quality and general health of water resources.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.5 Making Bus Travel Easier (PT9 - PT10)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Policies PT9 and PT10 encourage increased sustainable public transport use through improved accessibility and enabling easier bus use practices. This helps meet Wales net zero targets (when considered alongside policies for the introduction of zero and reduced emission buses).	+	Long-term/ Indirect
9. Protect and enhance local air quality.	The highest number of pollutants to the air are contributed through vehicular emissions from major roads within the NWTP area which include the A55 "North Wales Expressway, A5, A55 and A483. Policies PT9 and PT10 could improve air quality for communities where improvements to ease of use and accessibility result in an increase in patronage of the buses and a reduction in private transport usage. This would be particularly beneficial for communities in more urban areas located near the A5, A55 and A483, including Wrexham and Bangor, although there are no recorded exceedances of NO ₂ , PM ₁₀ , PM _{2.5} Air Quality Objectives in any of the Local Authority areas. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women) ^{6,7}	+	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	Policies PT9 and PT10 could contribute to a reduction of road traffic because of the shift from private cars to public transport. This would reduce the disturbances from transport related noise and vibration to local communities, specifically for populations living in areas near major roads like A5, A55 and A4807, mitigating health impacts like stress and disturbed sleep caused by noise pollution.	+	Long-term/ Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	The policies encourage a shift to public transport, reducing the consumption of raw materials like fuels.	+	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.5.5 Making Bus Travel Easier (PT9 - PT10)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Through the delivery of an improved, reliable and efficient bus network, PT9 could increase access to employment opportunities for populations living in previously isolated areas, rural areas or deprived areas that rely on public transport to access essential services.</p> <p>The installation of accessibility features through PT10 would support equitable access to employment, education and training opportunities, especially for people with disabilities.</p> <p>By improving the reliance and resilience of the transport network, supported by other policies as well, PT9 and PT10 better support businesses and workers by providing accessible, timely and affordable transport. By focusing on target areas of concerns like the Menai crossings, the policies could better support local economies and communities.</p> <p>Better transport links to more deprived areas and rural areas could encourage regeneration and investment in the areas as well as support their residents in accessing employment opportunities through reliable and affordable commuting services.</p> <p>This, in combination with other policies of the RTP (e.g. PT4, PT5, PT6, PT14) would facilitate the movement of people between major areas of employment both in North Wales and adjacent areas of Northern England including Chester and Deeside, thereby contributing to the economic prosperity of the region.</p> <p>By creating affordable, easy to use, integrated bus services, the policies encourage sustainable access to tourist facilities and attractions. For rural areas in particular these policies would promote tourism to rural areas, supporting the rural economy through leisure and tourism related spendings.</p>	+	Long-term/ Indirect



Table 3 – 1 Demand Responsive and Community Transport

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6 Demand Responsive and Community Transport (PT11 – PT12)		
1. Support the delivery of housing and local services to meet the needs of local communities	TfW and local authorities in North Wales run a series of Fflecsi Dynamic Demand Responsive Transport pilots in rural areas including Buckley, Conwy Valley, Denbigh, Holywell, Llyn Peninsula, Prestatyn, and Ruthin. PT11 and PT12 aim to make the successful pilots permanent and offer funding for community led initiatives, supporting the creation of communities by supporting viable transport options between locations based on community needs. Since these policies enable flexible services designed by community involvement and are locally run and managed, they would improve access to local services and help meet community needs.	++	Long-term/Direct
2. Reduce inequality and promote community cohesion	<p>These flexible and accessible services delivered by community led initiatives are the only mode of transport for some groups, especially for vulnerable and isolated people. This would include protected characteristics groups like people living in deprived areas (such as some of the locations where the pilots were run for Fflecsi Dynamic Demand Responsive Transport), older people and people with disabilities.</p> <p>These policies support the transport options delivered by community led initiatives, designed by community involvement, improving accessibility to essential services and helping create more opportunities of community participation.</p> <p>These measures delivered through PT11 and PT12 contribute towards improving the quality of life for all members of society, providing agency by supporting community led and flexible transport initiatives in rural areas.</p>	++	Long-term/Direct



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6 Demand Responsive and Community Transport (PT11 – PT12)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies PT11 and PT12 would significantly improve connectivity between local communities in rural areas as well as improve their access to key healthcare services.</p> <p>As the transport links will be designed through community involvement, it will reduce social isolation, resulting in improved mental health for local populations.</p> <p>Through increased public transport use, a decrease in road traffic is expected, improving air quality and road safety. These measures could encourage uptake in active travel such as walking and cycling which are known to increase levels of physical activity and therefore improve health.</p> <p>This flexible demand responsive transport system could also improve access to open, green spaces and recreational activities, which also contribute to increased physical activity. Increased physical activities provide health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health.¹⁰</p> <p>The overweight and obesity rate in North Wales is 36% higher in the most deprived areas compared to the least deprived. Some rural areas where the pilots were run fall within the most deprived areas in North Wales and hence, through increased active travel and improved connectivity to open spaces and recreational activities in these areas, PT11 and PT12 help reduce obesity rates.</p>	+	Long-term/Direct
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>It is unlikely that PT11 and PT12 will cause any harm to designated sites or result in protected habitat.</p> <p>Fflecsi Dynamic Demand Responsive Transport has the potential for contributing to ecosystem resilience through the incorporation of zero emission buses or cleaner fuel use. However, since there is no information available about this, the impact is unknown.</p> <p>Introduction of affordable public transport links in these areas would contribute to reduced private car use, improving air and noise quality and contributing towards protecting biodiversity and geodiversity.</p>	+	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6 Demand Responsive and Community Transport (PT11 – PT12)		
5. Protect and enhance local landscape character, designations and visual amenity	The locations of the bus routes are unknown but are unlikely to require additional road space (rather reallocation of existing road space). Harm to designated or protected landscapes and impact on Best and Most Versatile (BMV) land is therefore unlikely.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	By improving connectivity between local Welsh speaking communities in rural areas, the policies PT11 and PT12 encourage continued use of the Welsh language.	+	Long-term/Direct
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Through the introduction of reliable and affordable public transport links, Policies PT11 and PT12 could reduce private car use, resulting in reduced road traffic and run off of pollutants into waterbodies.	+	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6 Demand Responsive and Community Transport (PT11 – PT12)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Fflecsi Dynamic Demand Responsive Transport delivered through PT11 and PT12 would support the development of a public transport system designed to meet community needs. Where the transport is reduced (or zero) emission, this would contribute to the transition to zero/low emissions across Wales. It is not clear whether community transport will be zero/low emissions, and the impact is therefore uncertain.	?	
9. Protect and enhance local air quality.	As PT11 and PT12 deliver a public transport system that meets community needs, it would encourage more people to shift to public transport use, reducing transport related emissions and improving local air quality. The highest number of pollutants to the air are contributed through vehicular emissions from major roads within the NWTP area which include the A55 "North Wales Expressway, A5, A55 and A483. Policies PT11 and PT12 could improve air quality for communities where community transport results in a reduction in private transport usage. This would be particularly beneficial for communities in more urban areas located near the A5, A55 and A483, including Wrexham and Bangor, although there are no recorded exceedances of NO ₂ , PM ¹⁰ , PM ^{2.5} Air Quality Objectives in any of the Local Authority areas. As the emissions from community transport are not specified (and can be quite high if older community vehicles are used) the impact on air quality is uncertain.	?	
10. Reduce disturbance from transport related noise and vibration to local communities.	A shift from private cars to public transport delivered through PT11 and PT12, would lead to reduced disturbance from transport related noise and vibration to the local communities. However, this is likely to be marginal.	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6 Demand Responsive and Community Transport (PT11 – PT12)		
11. Incorporate circular economy principles to reduce the use of raw materials.	Delivery of demand responsive transport and community led initiatives would encourage sustainable travel use, particularly in areas with reduced public transport connectivity. This would contribute to reduced use of raw materials like fuels.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Community involvement in designing the transport network, would ensure their reliance for local communities and improve resilience through community led management. This would better support businesses and workers by enabling individuals from rural areas to commute to workplaces and contribute to local economies.</p> <p>Improved links to rural areas, including those that lie within more deprived areas would encourage regeneration and investment in those areas through increase in tourism and leisure related spending and increased employment opportunities for residents.</p> <p>The policies have potential to improve access between North and South Wales, subject to community needs. As there is no more information about this, the impact is unclear.</p> <p>Improved public transport links to and between rural areas would encourage tourism to cultural heritage sites and attractions due to easier access to the locations. This would support rural economies while protecting the natural beauty of the area by mitigating any adverse impacts of transport related air pollution by providing reliable public transport links.</p>	+	Long-term/ Direct



Table 3 – 2 Demand Responsive and Community Transport – Taxis

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6.1 Demand Responsive and Community Transport - Taxis (PT13)		
1. Support the delivery of housing and local services to meet the needs of local communities	By promoting safety for passengers and drivers, and improving taxi provisioning, PT13 supports access to essential services, employment opportunities and leisure activities, particularly for people who with no access to a private car and for those for whom travel by public transport is difficult. This includes disabled people and vulnerable people such as children, people with cognitive disabilities and mental health challenges. Through these measures, PT13 contributes towards meeting the needs of the local communities.	+	Long-term/ Direct
2. Reduce inequality and promote community cohesion	<p>Improved safety for taxi passengers will be disproportionately beneficial for people who do not have access to a private car. This includes those experiencing socio-economic disadvantage, and for groups who find using other forms of public transport challenging such as people with mobility difficulties or those who experience social anxiety. Taxis can also be a preferred form of transport (especially at night) for vulnerable groups who have experienced hate crimes on other forms of public transport. This includes the LGBTQ+ community³⁰, but also applies to women and young people. This would improve access to employment, education and training opportunities and enhance community cohesion.</p> <p>PT13 also aims increase the availability of low emissions or non-motorised vehicles, improving environmental conditions reduced air and noise pollution which is often experienced more in deprived areas.</p>	+	Long-term/Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>PT13 supports improved access to healthcare services for individuals who do not have access to a private car.</p> <p>It also includes increasing the availability of low emissions or non-motorised vehicles which would contribute to improved air quality. This would contribute towards mitigating the adverse health impacts of air pollution which includes respiratory infections, heart disease, stroke, and lung cancer, that disproportionately affects some protected characteristics groups such as people who are already ill, children, older people, and people living in deprived areas (which are disproportionately affected by poor air quality).^{6,7}</p> <p>Improving air quality could encourage uptake in active travel such as walking and cycling, contributing to improved physical and mental health. Increased physical activity provide health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health.¹⁰</p>	+	Long-term/Indirect

³⁰ Out in London: LGBTQ+ People's Safety on London's Transport Network. London Travel Watch, 2023. Available online at: <https://www.diversitytrust.org.uk/2023/11/new-study-lgbtq-people-feel-threatened-and-face-abuse-on-london-public-transport/> [Accessed 15/11/24]



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6.1 Demand Responsive and Community Transport - Taxis (PT13)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>It is unlikely that PT13 will cause any harm to designated sites or result in valuable habitat loss.</p> <p>Through the provisioning of low-emission or non-motorised taxis, PT13 would contribute to improved air quality, contributing towards protecting biodiversity and geodiversity.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	P13 would have a neutral effect on protected landscapes and adversely impact Best and Most Versatile (BMV) land.	0	N/A
6. Protect and enhance the local cultural heritage, including the Welsh language	P13 would improve connectivity for areas where public transport routes are scarce or in circumstances where public transport use is difficult. This would contribute towards improved connectivity between local Welsh speaking communities, especially in areas of Gwynedd and Anglesey that consist of the highest proportion of Welsh speaking people, encouraging continued use of the language.	+	Long-term/ Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	This policy is unlikely to have any effect on the health of groundwater, surface and coastal waterbodies, water quality and water resources.	0	N/A



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6.1 Demand Responsive and Community Transport - Taxis (PT13)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>PT13 promotes the use of low emission or non-motorised vehicles for taxi services, contributing towards reducing transport related carbon emissions.</p> <p>The use of low emission vehicles would also improve the climate resilience of the transport infrastructure, as it is not be impacted by disruptions caused to fossil fuel value chains³¹.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	<p>PT13 promotes the use of low emission or non-motorised vehicles for taxi services, contributing towards reducing transport related emissions and therefore contributing to improved air quality.</p> <p>This would be particularly beneficial for communities in more urban centres including Wrexham and Bangor, and for areas of the WIMD which have high deprivation in relation to the physical environment⁹, although there are no recorded exceedances of NO₂, PM¹⁰, PM^{2.5} Air Quality Objectives in any of the Local Authority areas. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women).^{6,7}</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	This policy is unlikely to have any impact on transport related noise and vibration.	0	N/A
11. Incorporate circular economy principles to	PT13 supports the use of low emission or non-motorised vehicles for taxi services, supporting the transition to cleaner/renewable fuels which reduces the use of raw materials.	+	Long-term/ Indirect

³¹ International Renewable Energy Agency (IRENA), Bracing for Climate Impact: Renewables as a Climate Change Adaptation Strategy, August 2021; Available online at: <https://www.irena.org/publications/2021/Aug/Bracing-for-climate-impact-2021> (Accessed 25/11/2024)



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6.1 Demand Responsive and Community Transport - Taxis (PT13)		
reduce the use of raw materials.			
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Improved safety for taxi passengers and drivers would encourage more patronage of taxis, enhancing accessibility to economic opportunities for both drivers (due to more fares), for passengers (to reach employment, training), and the wider economy (more people being economically active and spending). This would be particularly beneficial for people without access to private cars.</p> <p>Promotion of low-emission or non-motorised vehicles strengthens the transport network's resilience, mitigating risks from fossil fuel disruptions³¹.</p> <p>Safer taxi and PHV services encourage sustainable tourism, benefiting rural economies through increased leisure spending.</p>	+	Long-term/Indirect



Table 3 – 3 Demand Responsive and Community Transport – Longer Distance Coach Services

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6.2 Demand Responsive and Community Transport - Longer Distance Coach Services (PT14)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>PT14 aims to improve connectivity for longer distance coach services between North and South Wales, saving one-and-a-half-hour journey time. This would be beneficial for local communities who wish to travel between areas of North Wales providing better connectivity for educational and employment opportunities, as well as leisure, also helping support tourism economies. However, without having a clear understanding of what the interregional travel needs are it is not possible to conclude whether this would meet local needs.</p> <p>The policy would not support the delivery of housing.</p>	0	
2. Reduce inequality and promote community cohesion	<p>By reducing coach journey times between North and South Wales, PT14 would contribute to a reduced reliance on private car journeys. This would contribute to improved air quality for communities living along the main roads connecting North and South Wales. Additionally, it improves accessibility for those that don't have access to private vehicles or those that rely more on public transport modes. This includes protected characteristics groups such as older people, young people, racialised people, people with disabilities, people from low-income or more deprived areas.</p> <p>PT14 has the potential to improve accessibility of the public transport services, however the inclusion of accessibility features is not outlined in the policy, thus the impact is uncertain.</p> <p>Better connectivity between areas would contribute to community cohesion as people are able to build relationships more easily through the improved public transport links.</p>	+	Long-term/ Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Better coach connectivity (through greatly reduced travel times) between areas would contribute to people being able to travel more easily, facilitating relationships people have with people in different areas of the country. This would contribute to better mental and social health.</p> <p>Some people may need to travel by public transport to access medical services that are not available in their area. Improved access to tertiary health centres for resources, specialised health services in other areas of Wales and in England (where relevant) would therefore contribute to improved health for this group of patients.</p> <p>Better connectivity by coach would contribute to a reduced number of private car journeys. This would reduce emissions and result in fewer vehicles on the roads which could encourage uptake in active travel such as walking and cycling, contributing to improved physical and mental health. Increased physical activity provides health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health.¹⁰</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	PT14 would have a neutral effect on designated sites or result in valuable habitat loss.	0	
5. Protect and enhance local landscape character, designations and visual amenity	P14 would have a neutral effect on protected landscapes and adversely impact Best and Most Versatile (BMV) land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	P14 aims improve connectivity between North and South Wales and connections to major economic centres in Northern England. This would contribute towards improved connectivity between Welsh speaking and non-Welsh speaking communities, providing opportunities for increased exposure to the Welsh language and other local cultural heritage sites. This could also increase tourism to sites of cultural significance, enhancing local cultural heritage by fuelling the tourism economy.	+	Long-term/Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Better connectivity by coach would contribute to a reduced number of private car journeys which could contribute to the reduction of pollution from roads washing into water bodies ⁵ .	+	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Improving journey timings for long distance coach services connecting North and South Wales and connections to England could increase coach use over private vehicle. This would result in reduced emissions.</p> <p>It is uncertain whether this policy would encourage the transition to zero emission coaches.</p>	+	Long-term/Indirect
9. Protect and enhance local air quality.	<p>As PT14 delivers more efficient and fast long-distance services, it contributes to reducing transport related emissions caused by private vehicles and improving local air quality.</p> <p>This would be particularly beneficial for communities in more urban centres including Wrexham and Bangor, and for areas of the WIMD which have high deprivation in relation to the physical environment⁹, although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women)^{6,7}</p>	+	Long-term/Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	This policy is unlikely to have an effect on transport related noise and vibration for local communities.	+	Long-term/Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	The provision of improved longer distance coach services would encourage sustainable transport use over private vehicles. This would reduce the use of raw materials like fuels.	+	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Through improved coach journey timings between North and South Wales and better connections to England's economic centres provided through PT14, more individuals would be able to access employment opportunities, especially people from low-income backgrounds or deprived areas that don't have access to a private vehicle.</p> <p>By enabling people without access to a private car to commute for employment, it would support the economies of more deprived areas. By supporting people to access employment and improving links to major economic hubs, PT14 supports the regeneration of more deprived areas.</p> <p>Improved coach journey timings delivered through PT14 would also make them an attractive travel option for tourism and leisure, encouraging sustainable access to tourist facilities and attractions in North Wales, particular in areas such as Eryri National Park, Anglesey AONB, Llŷn AONB, and Clwydian Range and Dee Valley AONB. Sustainable access to tourist attractions in rural areas would also support rural economies through leisure related spending.</p>	+	Long-term/ Indirect



Table 3 – 4 Demand Responsive and Community Transport – Community Involvement in Rail

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.6.3 Demand Responsive and Community Transport - Community Involvement in Rail (PT15)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policy PT15 aims to connect communities in North Wales to their railways and promote rail as a way of visiting North Wales. This would be delivered through community groups who aim to enhance the rail travel experience for existing and new passengers.</p> <p>This would support the creation of communities for enhancing the rail travel experience and also provide more opportunities for community building through the improved rail travel experience.</p> <p>It would also improve access to key services within and between local communities for employment, education and training opportunities. Given the collaborative nature of this policy with heavy community involvement, PT15 is likely to meet the needs of local communities well.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Improved rail services would also support members of society with protected characteristics such as those more reliant on public transport such as people from more deprived and low-income backgrounds. This would improve accessibility for all and support equitable access to employment, educational and training opportunities. Through these measures, PT15 could improve the quality of life for deprived communities.</p> <p>The cost of rail travel can make it inaccessible for low-income groups that would benefit from it the most. However, this could be mitigated through community involvement initiatives supported by PT15.</p> <p>PT15 creates more opportunities for community participation through stakeholder participation of community groups in enhancing rail travel experiences and further, creating more opportunities for community participation by connecting communities in North Wales through improved rail services.</p>	+	Long-term/ Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Improved rail travel experiences through PT15 would encourage rail travel over private vehicle use, reducing air and noise pollution caused by road traffic. On the assumption that trains are low emissions, this would contribute towards mitigating the adverse health impacts of transport related air pollution, by reducing respiratory infections, heart disease, stroke, and lung cancer, that disproportionately affects some protected characteristics groups such as people who are already ill, children, older people, and people living in deprived areas^{6,7}.</p> <p>Improved rail travel experiences which encourage people to engage with social activities would also bring mental health benefits. This is also the case for the people who contribute their time to the community groups who support their railways.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>It is unlikely that PT15 will cause any harm to designated sites or result in valuable habitat loss.</p> <p>The natural environment is being enhanced at 25 railway stations in Wales through the Transport for Wales Green Routes project, creating green spaces and enhancing biodiversity.³² Through PT15, community groups could advocate for their local railway stations to be included in the project, enhances biodiversity and geodiversity interests.</p>	+	Long-term/Direct
5. Protect and enhance local landscape character, designations and visual amenity	P15 is unlikely to cause harm to designated or protected landscapes and adversely impact Best and Most Versatile (BMV) land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policy PT15 is unlikely to cause any direct or indirect harm to designated heritage assets. In some circumstances, community groups may be able to improve the appreciation of the heritage value of railway stations.</p> <p>Improving rail connectivity within local Welsh speaking communities in North Wales, would support the continued use of Welsh language. Community participation opportunities supported by PT15 would also encourage and support the use of Welsh language in areas with larger Welsh speaking communities such as of Gwynedd and Anglesey.</p>	+	Long-term/Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	PT15 is unlikely to have any effect.	0	

³² Welsh Government, Climate Action Wales - Green Travel Choices, June 2024; Available online at: <https://www.climateaction.gov.wales/green-travel-choices/> (Accessed 27/11/2024)



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>PT15 supports the improvement of rail travel services by community involvement, ensuring rail services are well suited to the needs of local communities. This could encourage more people to travel by rail instead of cars, resulting in reduced emissions (assuming the trains are low emissions). This would improve air quality and local soundscapes of communities affected by road traffic.</p> <p>Through these measures, PT15 supports the transition to a sustainable public transport sector with reduced carbon emissions.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	PT15 supports increased rail travel by bettering rail experiences, leading to reduced road traffic. This reduces the negative impacts of road traffic which includes traffic related emissions. This effect would be particularly beneficial along the communities along the coastal roads (A55) of North Wales which represents the journeys which the rail would displace. This would help improve health, particularly for vulnerable groups who are more affected by poor air quality (children, older people, people with respiratory disease, pregnant women) ^{6,7}	+	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	PT15 is unlikely to have an effect on transport related noise.	0	
11. Incorporate circular economy principles to reduce the use of raw materials.	<p>By encouraging rail travel, the policy contributes to reduced road traffic and reduced consumption of raw materials like fuels.</p> <p>Community groups could advocate for locally and sustainably sourced material use, where required supporting the inclusion of circular economy principles.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Improved rail services within and between locations in North Wales could enable more individuals to access employment opportunities, especially people experiencing socio-economic deprivation who do not have access to a private vehicle. Rail services can provide a reliable commute for individuals to access workplaces. This would support equitable access to employment, education and training opportunities.</p> <p>By enabling people without access to a private car to commute for employment, it would support the economies of more deprived areas. Improving rail links to locations that lie within more deprived areas could drive investment and the regeneration of these deprived areas. It would also support the local economies by providing access for residents to travel to workplaces efficiently.</p> <p>PT15 provides the potential to improve access between England and North Wales and North and South Wales through improved rail connectivity, subject to local community needs.</p> <p>Improved rail journeys through PT15 would also be an attractive travel option for tourism and leisure, encouraging sustainable access to tourist facilities and attractions in North Wales, although lines only serve a limited number of tourist destinations. Increased sustainable tourism to these areas would also support rural economies through leisure related spending.</p>	+	Long-term/ Indirect



Table 4 – 1 Walking, Cycling and Wheeling – Further improving infrastructure

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.7.1 Walking, Cycling and Wheeling – Further improving infrastructure (AT1 – AT3)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>AT1 aims to improve infrastructure in accordance with the Active Travel Network Map, including new or upgraded existing facilities and may include the re-allocation of road space to prioritise sustainable modes. AT2 focuses on prioritising the upgrade of active travel infrastructure in non-rural areas where there is greatest potential for maximising network use. AT3 addresses accessibility concerns surrounding active travel infrastructure for people with mobility impairments, people in wheelchairs, and people pushing prams.</p> <p>Policies AT1-AT3 support improving access to local services, especially in rural areas where people use active travel modes to access further public transport services. Additionally, active travel delivers viable and sustainable transport options within and between local communities and services.</p> <p>The policies would not support the delivery of housing but would contribute to providing any new housing with appropriate active travel connections.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Active travel is a cost-effective mode of transport, making it accessible to people from low-income or more deprived communities. AT3 is specifically focused on improving accessibility of active travel for people with disabilities or mobility impairment, older people and other wheelchair users and people with infants in prams. Therefore, active travel infrastructure improvement supports the needs of all members of society, especially benefitting protected characteristics groups such as children, those from deprived communities, carers, and disabled people.</p> <p>A recent nationwide study into walking and cycling found that only 12% of disabled people cycle weekly, compared to 19% of non-disabled people.³³ The implementation of policy AT3 is therefore essential for creating equity in active travel.</p> <p>Through these measures, the policies make active travel accessible for all, creating equitable access to employment, education and training opportunities as well as opportunities for community participation.</p>	++	Long-term /Direct
3. Improve the health and wellbeing of the local population,	<p>The improvement of active travel infrastructure through improved facilities, better network connectivity and improved accessibility, would strongly encourage uptake in active travel in all areas of North Wales, but particularly in urban areas/within rural settlements where shorter journeys are more likely to be undertaken using active travel (if the infrastructure is considered appropriate and safe).</p>	++	Long-term /Direct

³³ Sustrans, How can we tackle inequity in active travel? (2022); Available online at: <https://www.sustrans.org.uk/our-blog/opinion/how-can-we-tackle-inequity-in-active-travel-an-inclusive-design-qa-with-tierney-lovell/> [Accessed 29/11/2024]



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.7.1 Walking, Cycling and Wheeling – Further improving infrastructure (AT1 – AT3)		
including with respect to physical and mental health	<p>Improved infrastructures for active travel like walking and cycling, especially with better links to further public transport, would result in improved access to key health services, recreational activities and open, green spaces. Implementation of AT3 would improve accessibility for people with infants in prams, people in wheelchairs, people with disabilities and mobility impairments, promoting active travel modes, increasing agency and community interaction, associated with mental and social health benefits.</p> <p>Increased physical activity through walking or cycling provides health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health.¹⁰ This has significant implications for communities in deprived areas of North Wales, where the overweight and obesity rate is 36% higher in comparison.</p> <p>By improving active travel accessibility through AT1, AT2 and especially AT3, the policies increase accessibility for people without access to private vehicles to community centres and social opportunities. These include protected characteristics groups such as children, older people, people with disabilities and people from low-income or deprived areas. This provides more equitable access to economic and social engagement opportunities, reducing social isolation and improving physical and mental health.</p>		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>AT1, AT2 and AT3 are unlikely to cause any harm or deterioration to any designated sites or result in valuable habitat loss.</p> <p>By delivering an improved active travel infrastructure, the policies encourage a switch from private vehicle use to active travel modes such as walking and cycling. This would reduce the adverse impacts of road traffic related air and noise pollution.</p> <p>North Wales identifies areas of significant natural heritage with internationally important wetlands, blanket bogs, ancient woodlands and meadows that support unique biodiversity.</p> <p>Improved air quality and local soundscapes would contribute towards protecting species and their habitats, contributing to ecosystem resilience.</p> <p>It is not known whether any active travel infrastructure would require land take which may lead to detrimental impacts on biodiversity and geodiversity if not sensitively designed. The overall impact is therefore considered to be mixed.</p>	+/-	Long-term/ Indirect
5. Protect and enhance local landscape	<p>Policies AT1-AT3 are unlikely to have an impact on landscape and visual amenity. Whilst improvements to active travel infrastructure make active travel easier and more accessible, even to tourists, the policies are unlikely to reduce vehicle usage in more remote areas which are noted for their special landscape character. This includes</p>	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.7.1 Walking, Cycling and Wheeling – Further improving infrastructure (AT1 – AT3)		
character, designations and visual amenity	tourist areas such as Blaenau Ffestiniog, Creuddyn and Conwy, Dinorwig, Hollywell Common and Halkyn Mountain, Lleyn and Bardsey Island and Lower Conwy Valley among others.		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>The policies are unlikely to cause any harm to designated heritage assets across North Wales.</p> <p>Active travel modes such as walking and cycling can be social activities, supporting increased community engagement and continued use of the Welsh language among Welsh speaking communities such as in Gwynedd and Anglesey. Providing opportunities for social interactions among Welsh speaking local communities encourages a continued use of the language.</p>	+	Long-term/ Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Enhancement of active travel infrastructure would encourage modal shift which reduces the volume of vehicles of the roads. This can have a number of benefits for the health of water resources:</p> <ul style="list-style-type: none"> - Fewer vehicles result in less oil, grease and other pollutants being washed into the waterways during rain events. This reduces the contamination of rivers, lakes and streams, leading to better water quality. - Reducing traffic decreases the volume of airborne pollutants that can settle on surfaces and be washed into waterbodies. This includes nitrogen oxides and sulphur dioxides, which can contribute to nutrient pollution.⁵ 	+	Long-term/ Direct.
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the	<p>AT1-AT3 encourage a modal shift from private cars to active travel, by delivering improved infrastructure, connectivity and accessibility. Through policy implementation, they support the decarbonisation of the transport sector by reducing transport related emissions.</p> <p>This helps to meet Wales targets to be net zero by 2050, by supporting the development of a transport system that promotes active travel and road safety, and which minimises pollution.³⁴</p> <p>While the policies do not include direct measures to increase the resilience of infrastructure of the effects of climate change, they contribute towards improving environmental conditions and reducing effects of climate change by lowering harmful emissions.</p>	++	Long-term/ Direct

³⁴ Climate Change Committee, Advice Report: The Path to a Net Zero Wales, December 2020; Available online at: <https://www.theccc.org.uk/wp-content/uploads/2020/12/Advice-Report-The-path-to-a-Net-Zero-Wales.pdf>



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.7.1 Walking, Cycling and Wheeling – Further improving infrastructure (AT1 – AT3)		
effects of climate change.			
9. Protect and enhance local air quality.	<p>Uptake in active travel supported by AT1-AT3 policies could improve air quality for local communities. Increase in active travel through increased accessibility, better infrastructure and potentially re-allocated road space would reduce road traffic related emissions.</p> <p>This would be particularly beneficial for communities in more urban centres including Wrexham and Bangor, although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas.</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>Reduced road traffic as a result of increased active travel uptake could result in a decrease in traffic related noise and vibration disturbances. This would be particularly beneficial for communities that are within noise priority areas in North Wales. This includes stretches of the A55, A47, A4087, A547, A5119, A494, A550, A483 and A5152⁸. More generally, any reductions in transport noise would also contribute to improvements in tranquillity, the measurement of which takes into account the sound environment (in addition to other factors such as visual amenity and night skies). Again, this would be particularly beneficial in areas along the main road network and within the urban centres of the North.</p>	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	<p>The development of new infrastructure or improvements to old active travel infrastructure could use locally sourced materials to incorporate circular economy principles but there is no additional information provided on the subject, so the impact is uncertain. New infrastructure developments could however result in an active travel uptake, reducing use of raw materials like fuels.</p>	+	
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic	<p>Active travel infrastructure improvements alone are unlikely to facilitate the mass movement of people from communities to the large-scale employment sites because of the larger distances may people who work there need to travel. However, improvements to active travel routes that people use to reach public transport hubs/stops is likely to encourage more active travel (including more public transport uptake). These improvements therefore contribute to increased economic prosperity where it improves options for people across the region to travel to economic, education and training opportunities.</p> <p>Policies AT1-AT3 will have no impact on movement of freight.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.7.1 Walking, Cycling and Wheeling – Further improving infrastructure (AT1 – AT3)		
prosperity in the region.			



Table 4 – 2 Walking, Cycling and Wheeling – Active Travel Infrastructure in Rural Areas

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.7.2 Walking, Cycling and Wheeling – Active Travel Infrastructure in Rural Areas (AT4 – AT6)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies AT4-AT6 would support viable and sustainable transport options within and between locations, especially connecting rural areas to larger settlements for access to services like healthcare, employment or education opportunities. It also improves access to local services for all by enabling safer and more accessible travel by improving surfaces, lighting and sign postage which would encourage a wider range of people to use the routes.</p> <p>The policies would not support the delivery of housing but would contribute to providing any new housing with appropriate active travel connections.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Delivering better lighting, sign postage and suitable surfaces for active travel routes, makes the experience of walking, cycling or other active travel modes safer and more accessible. This has benefits for all, especially protected characteristics groups like women, children, older people, people with disabilities, people with mobility impairments, people with infants in prams, people who use wheelchairs and people from low-income or deprived communities who rely more on public transport and active travel^{1,2}.</p> <p>Where possible, engagement with community stakeholders would create opportunities for community participation and ensure equitable considerations of accessibility for all members.</p>	++	Long-term /Direct



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.7.2 Walking, Cycling and Wheeling – Active Travel Infrastructure in Rural Areas (AT4 – AT6)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>The improvement of active travel rural infrastructure would strongly encourage uptake in active travel within and between rural areas, where shorter journeys are more likely to be undertaken using active travel (if the infrastructure is considered appropriate and safe).</p> <p>Improved infrastructure for active travel like walking and cycling, especially with better links to further public transport, would result in improved access to key health services, recreational activities and open, green spaces. Implementation of AT4-AT6 would improve accessibility for people with infants in prams, people in wheelchairs, people with disabilities and mobility impairments, promoting active travel modes, increasing agency and community interaction associated with mental and social health benefits. The policies would also improve the standard of Rights of Way where these can be used for everyday active travel journeys, and introduce Quiet Lanes, therefore increasing uptake of active travel. Increased physical activity through walking or cycling provides health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health¹⁰. This has significant implications for communities in deprived areas of North Wales, where the overweight and obesity rate is 36% higher in comparison to other areas.</p> <p>By improving active travel infrastructure in rural areas Policies AT4-AT6 increase access to community centres and social opportunities for people without access to private vehicles. These include protected characteristics groups such as children, older people, people with disabilities and people from low-income or deprived areas. This provides more equitable access to economic and social engagement opportunities, reducing social isolation and improving physical and mental health.</p> <p>The North Wales Population Needs Assessment (2022) identified through consultation and engagement that accessibility of transport links to those with chronic health needs, physical disability and sensory impairment were especially an issue in more rural areas, where social isolation can be more profound due to lack of public transport infrastructure. Thus, by improving accessibility of active travel, AT4 – AT6 help mitigate negative impacts of social isolation. However, active travel may be considered inaccessible to people with certain chronic health conditions, excluding them from the benefits delivered by the policies.</p>	++	Long-term /Direct



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.7.2 Walking, Cycling and Wheeling – Active Travel Infrastructure in Rural Areas (AT4 – AT6)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policies AT4 – AT6 are unlikely to cause any harm or deterioration to designated sites or result in valuable habitat loss.</p> <p>The policies deliver opportunities to contribute to ecosystem resilience through improved air quality and local soundscapes through the reduction of traffic related air and noise pollution. This is estimated to be a result of active travel uptake. This helps mitigate negative impacts of air pollution and noise disturbances from road traffic on protected species and valuable habitats, helping protect biodiversity.</p> <p>It is not known whether any active travel infrastructure would require land take which may lead to detrimental impacts on biodiversity and geodiversity if not sensitively designed. The overall impact is therefore considered to be mixed.</p>	+/-	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies AT4 – AT6 are unlikely to have an impact on landscape and visual amenity or on BMV agricultural land.</p> <p>Whilst improvements to active travel infrastructure make active travel easier and more accessible, even to tourists, the policies are unlikely to reduce vehicle usage in more remote areas which are noted for their special landscape character. This includes tourist areas such as Blaenau Ffestiniog, Creuddyn and Conwy, Dinorwig, Hollywell Common and Halkyn Mountain, Llyn and Bardsey Island and Lower Conwy Valley among others.</p>	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies AT4 – AT6 are unlikely to cause any harm to designated heritage assets.</p> <p>The social opportunities provided by active travel modes in rural areas, especially delivered through the introduction of Quiet Lanes, could encourage the continued use of Welsh among Welsh speaking communities.</p>	+	Long-term / Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.7.2 Walking, Cycling and Wheeling – Active Travel Infrastructure in Rural Areas (AT4 – AT6)		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Enhancement of active travel infrastructure would encourage modal shift which reduces the volume of vehicles of the roads. This can have a number of benefits for the health of water resources⁵:</p> <ul style="list-style-type: none"> - Fewer vehicles result in less oil, grease and other pollutants being washed into the waterways during rain events. This reduces the contamination of rivers, lakes and streams, leading to better water quality. - Reducing traffic decreases the volume of airborne pollutants that can settle on surfaces and be washed into waterbodies. This includes nitrogen oxides and sulphur dioxides, which can contribute to nutrient pollution⁵. 	+	Long-term/ Direct.
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>AT4-AT6 encourage a modal shift from private cars to active travel, by delivering improved infrastructure in rural areas, and improved connectivity and accessibility. Through policy implementation, they support the decarbonisation of the transport sector by reducing transport related emissions.</p> <p>This helps to meet Wales targets to be net zero by 2050, by supporting the development of a transport system that promotes active travel and road safety, and which minimises pollution³⁴.</p> <p>While the policies do not include direct measures to increase the resilience of infrastructure of the effects of climate change, they contribute towards improving environmental conditions and reducing effects of climate change by lowering harmful emissions.</p>	++	Long-term/ Direct
9. Protect and enhance local air quality.	<p>Uptake in active travel supported by AT4-AT6 policies could improve air quality for local communities. Increase in active travel through increased accessibility, better infrastructure and potentially re-allocated road space would reduce road traffic related emissions.</p> <p>Although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas, air quality would still improve in rural areas, albeit marginally.</p>	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.7.2 Walking, Cycling and Wheeling – Active Travel Infrastructure in Rural Areas (AT4 – AT6)		
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>Reduced road traffic as a result of active travel uptake promoted by policies AT4 – AT6, could lead to reduced noise and vibration disturbances from transport related noise to rural communities.</p> <p>This improvement in local soundscapes could be particularly beneficial for people who live in communities located near main roads.</p>	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	<p>The policies support active travel infrastructure development in rural areas, supporting a shift from private vehicles to active travel modes. This would reduce use of raw materials like fuels.</p> <p>However, there is no information available about the materials and resources to be used for infrastructure improvements, so the impact is unknown.</p>	?	
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Active travel infrastructure improvements alone are unlikely to facilitate the mass movement of people from communities to the large-scale employment sites because of the larger distances may people who work there need to travel. However, improvements to active travel routes that people use to reach public transport hubs/stops is likely to encourage more active travel (including more public transport uptake). These improvements therefore contribute to increased economic prosperity where it improves options for people across the region to travel to economic, education and training opportunities.</p> <p>Policies AT1-AT3 will have no impact on movement of freight.</p>	+	Long-term/ Indirect



Table 4 – 3 Walking, Cycling and Wheeling – Leadership and Funding

IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.3 Walking, Cycling and Wheeling – Leadership and Funding (AT7 – AT11)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies AT7-AT11 support the creation of communities, offering sustainable transport options within and between locations. They deliver this by establishing an active travel unit, supporting multi-year funding for multi-year infrastructure development, supporting changes to funding criteria to emphasise on active travel schemes in residential areas, investigated additional funding streams and developing toolkits to support local communities in developing and implementing their own projects.</p> <p>This would contribute towards meeting the needs of local communities through the delivery of an improved active travel network and by supporting community involvement in developing and implementing projects to improve local transport and meet developing community needs.</p> <p>Through these measures, the policies also improve access to essential local services.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>By improving active travel network and infrastructure, the policies encourage an uptake in active travel, helping reduce road traffic related air pollution and contributing to improved environmental conditions.</p> <p>Policies AT9, AT10 and AT11, specifically contribute towards improving connectivity and accessibility of active travel infrastructure in rural areas and in residential areas, supporting the needs of all members of society, particularly those who do not have access to a private vehicle. Infrastructure improvements could result in increased safety, accessibility and better connectivity within and between locations, such as larger settlements, providing more opportunities for employment, education and training. It could also improve access to key health services and open, green spaces.</p> <p>Policies AT7 and AT11 include working with partners and supporting community involvement in developing local initiatives and establishing an active travel unit. AT11 particularly aims to create opportunities for community participation in areas where governments play a more supporting and facilitating role than a developing role, especially in rural areas. This would support community cohesion.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.3 Walking, Cycling and Wheeling – Leadership and Funding (AT7 – AT11)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies AT7 – AT11 aim to improve funding and infrastructure development for active travel, encouraging uptake in active travel through improved connectivity and accessibility.</p> <p>The policies could improve connectivity between local communities, particularly in rural areas (AT9, AT10) by supporting changes to funding criteria as well as exploring additional funding opportunities for infrastructure improvements.</p> <p>Infrastructure improvements could result in increased safety, accessibility and better connectivity within and between locations, such as larger settlements, providing more opportunities for employment, education and training which are determinants of health. It could also improve access to key health services, recreational opportunities, open/green spaces, as well as opportunities for increased levels of recreational. Increased physical activities provide health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health¹⁰.</p> <p>The overweight and obesity rate in North Wales is 36% higher in the most deprived areas compared to the least deprived. Thus, individuals in these areas would especially benefit from the active travel infrastructure improvements delivered through AT9 and AT10.</p> <p>The social nature of active travel modes and improved accessibility could contribute to increased opportunities for socialisation and community interaction, reducing social isolation. With infrastructure improvements delivered by the policies, these benefits would extend to those more likely to experience social isolation due to inaccessibility issues such as older people, people with disabilities, people with mobility impairments and people who use wheelchairs. It would also benefit those who rely on public transport or active travel as they do not have access to private transport such as people from experiencing socio-economic disadvantage.</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Policies AT7 – AT11 are unlikely to have an impact on this objective.	0	



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.3 Walking, Cycling and Wheeling – Leadership and Funding (AT7 – AT11)		
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies AT7 – AT11 are unlikely to cause harm to any designated or protected landscapes or impact BMV agricultural land.</p> <p>Whilst improvements to active travel infrastructure make active travel easier and more accessible, even to tourists, the policies are unlikely to reduce vehicle usage in more remote areas which are noted for their special landscape character. This includes tourist areas such as Blaenau Ffestiniog, Creuddyn and Conwy, Dinorwig, Hollywell Common and Halkyn Mountain, Lleyn and Bardsey Island and Lower Conwy Valley among others.</p>	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies AT7 – AT11 are unlikely to cause any harm to designated heritage assets.</p> <p>The social opportunities provided by active travel modes in rural areas, especially delivered through the introduction of Quiet Lanes, could encourage the continued use of Welsh among Welsh speaking communities.</p>	+	Long-term / Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Funding for the enhancement of active travel infrastructure would indirectly encourage modal shift which reduces the volume of vehicles of the roads. This can have a number of benefits for the health of water resources⁵:</p> <ul style="list-style-type: none"> - Fewer vehicles result in less oil, grease and other pollutants being washed into the waterways during rain events. This reduces the contamination of rivers, lakes and streams, leading to better water quality. - Reducing traffic decreases the volume of airborne pollutants that can settle on surfaces and be washed into waterbodies. This includes nitrogen oxides and sulphur dioxides, which can contribute to nutrient pollution 	+	Long-term/ Indirect.



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.3 Walking, Cycling and Wheeling – Leadership and Funding (AT7 – AT11)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>AT7-AT9 would indirectly encourage a modal shift from private cars to active travel, by delivering funding and leadership that delivers improved infrastructure, and improved connectivity and accessibility. Through policy implementation, this indirectly supports the decarbonisation of the transport sector by reducing transport related emissions.</p> <p>This helps to meet Wales targets to be net zero by 2050, by supporting the development of a transport system that promotes active travel and road safety, and which minimises pollution³⁴.</p> <p>While the policies do not include direct measures to increase the resilience of infrastructure of the effects of climate change, they contribute towards improving environmental conditions and reducing effects of climate change by lowering harmful emissions.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	<p>Increased uptake in active travel supported by funding and leadership of AT7-AT9 policies that deliver active travel schemes could improve air quality for local communities. Increase in active travel through increased accessibility, better infrastructure and potentially re-allocated road space would reduce road traffic related emissions.</p> <p>Although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas, air quality would still improve.</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>Reduced road traffic as a result of active travel uptake due to improved active travel networks and infrastructure delivered by policies AT7 – AT11, could lead to reduced noise and vibration disturbances from transport related noise to local communities.</p> <p>This improvement in local soundscapes could be particularly beneficial for people who live in communities located near main roads and routes with heavy traffic congestions such as A5, A55 and A4807.</p>	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	Policies AT7 – AT11 support infrastructure development for active travel, supporting a modal shift from private vehicles to active travel, resulting in reduced use of raw materials like fuels.	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.3 Walking, Cycling and Wheeling – Leadership and Funding (AT7 – AT11)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Active travel infrastructure improvements alone are unlikely to facilitate the mass movement of people from communities to the large-scale employment sites because of the larger distances may people who work there need to travel. However, improvements to active travel routes that people use to reach public transport hubs/stops is likely to encourage more active travel (including more public transport uptake). These improvements therefore contribute to increased economic prosperity where it improves options for people across the region to travel to economic, education and training opportunities.</p> <p>Policies AT1-AT3 will have no impact on movement of freight.</p>	+	Long-term/ Indirect



Table 4 – 4 Walking, Cycling and Wheeling – Cycle hire, E-bikes and E-scooters

IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.4 Walking, Cycling and Wheeling – Cycle hire, E-bikes and E-scooters (AT12 – AT14)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>These policies would provide sustainable transport options within and between locations and improve access to key local services. Through these measures and collaboration with partners, the policies contribute towards meeting the needs of local communities.</p> <p>The policies would not support the delivery of housing but would contribute to providing any new housing with appropriate cycling and wheeling options.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Fair cycle hires costs (AT12) and the provisioning of loans and grants for cycle purchase, delivered through AT14 could mitigate cost barriers for people experiencing socio-economic disadvantage, and for those who are unwilling to make an initial investment in bike equipment before trying it out through hiring options. It is also beneficial for young people who may also not have the financial means to purchase a bike/scooter. This would make cycling and wheeling more accessible, improving access to education and employment, and contributing towards improving quality of life.</p> <p>Policies AT12 – AT14 outline collaborative approaches of working with partners, creating opportunities for engaging with stakeholders and encouraging community participation.</p>	++	Long-term/ Direct
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies AT12 – AT14 encourage uptake in active travel by providing cycle hire measures and providing support to purchase e-bikes. Improved transport accessibility through cycle hires and cycle purchase initiatives implemented through policies AT12 – AT14 could enable improved access to key health services, recreation activities and open, green spaces.</p> <p>Better accessibility of transport also contributes to reducing social isolation, especially as AT13 aims to provide hire services at locations like transport interchanges and community centres to support visitor economy. This would connect more people to community centres and events, particularly individuals who do not own cycles and do not have access to a private vehicle.</p> <p>Through these measures, policies AT12-AT14 would encourage active travel uptake, providing important health benefits for local communities. Increased physical activity through cycling provides health benefits such as reducing obesity, reduced risks of cardiovascular diseases and boosts physical, mental and social health¹⁰. These policies would particularly be beneficial for communities living in more deprived areas according to the WIMD health deprivation domain which includes the coastal communities of North Wales.⁹</p>	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.4 Walking, Cycling and Wheeling – Cycle hire, E-bikes and E-scooters (AT12 – AT14)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Policies AT12 – AT14 are unlikely to cause any harm or deterioration to designated sites or result in loss of valuable habitats.	0	
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies AT12 – AT14 are unlikely to cause harm to any designated or protected landscapes or impact BMV agricultural land.</p> <p>Whilst increasing hiring options makes active travel easier and more accessible, even to tourists, the policies are unlikely to reduce vehicle usage in more remote areas which are noted for their special landscape character. This includes tourist areas such as Blaenau Ffestiniog, Creuddyn and Conwy, Dinorwig, Hollywell Common and Halkyn Mountain, Lleyn and Bardsey Island and Lower Conwy Valley among others.</p>	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies AT12 – AT14 are unlikely to cause any harm to designated heritage assets.</p> <p>Policies AT12 – AT14 aim to develop initiatives for cycle hire and purchase in collaboration with stakeholders, including community involvement. This creates opportunities for community engagement that could support Welsh speaking communities, by encouraging continued use of the Welsh language.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.4 Walking, Cycling and Wheeling – Cycle hire, E-bikes and E-scooters (AT12 – AT14)		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Policies AT12-AT14 are unlikely to have a measurable effect on water resources.	0	
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Policies AT12-AT14 are unlikely to contribute to a transition towards a reduced/zero carbon emission transport sector because people who use hire bikes/scooters are likely to be doing so for recreational purposes (that would not get travelled by other transport modes) rather than a shift in their usual transport mode.	0	
9. Protect and enhance local air quality.	Policies AT12-AT14 are unlikely to contribute to noticeable changes in air quality because people who use hire bikes/scooters are likely to be doing so for recreational purposes (that would not get travelled by other transport modes) rather than a shift in their usual transport mode.	0	
10. Reduce disturbance from transport related noise and vibration to local communities.	Policies AT12-AT14 are unlikely to contribute to noticeable changes in transport related noise because people who use hire bikes/scooters are likely to be doing so for recreational purposes (that would not get travelled by other transport modes) rather than a shift in their usual transport mode.	0	



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.7.4 Walking, Cycling and Wheeling – Cycle hire, E-bikes and E-scooters (AT12 – AT14)		
11. Incorporate circular economy principles to reduce the use of raw materials.	Initiatives outlined by the policies encourage an uptake in active travel modes, resulting in reduced private vehicle use and reduced consumption of raw materials like fuels. However, it is likely that people will have travelled to these hire locations by private vehicle so any benefits would be marginal.	0	
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	Policies AT12- AT14 would contribute to efficient and safe movement of people, but the context is not likely to be for trips to employment sites/centres. However, where cycle/scooter hire is commercially operated this would generate income for these businesses therefore contributing to the overall economy of the region albeit in a small way.	+	Long-term/Indirect



Table 5 – 1 Interaction between Modes – Gateway Stations and Mobility Hubs

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.8.1 Interaction between Modes – Gateway Stations and Mobility Hubs (IN1 – IN3)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policy IN1 supports the development and roll-out of mobility hubs and gateway stations at railway stations and major bus stops to enable easier changes between different modes of transport. The policy focuses on the locations including Wrexham General, Bangor, Colwyn Bay, and Holyhead stations. Policy IN2 further aims to improve placemaking and wayfinding as well as onward links to key destinations.</p> <p>Policy IN3 focuses on active travel infrastructure improvements identified in Station Network Plans and developing new Station Network Plans, where missing. This would improve accessibility, sustainability, capacity planning and ultimately the passenger experience, therefore encouraging modal shift to sustainable travel.</p> <p>With regards to access to services WIMD deprivation domain, there are areas in across North Wales that are within the 10-20% most deprived⁹. The development of accessible modes of public transport could improve access to local services significantly, particularly for people who find navigating between services a challenge.</p> <p>Through these measures, policies IN1-IN3 support the delivery of sustainable transport options within and between locations, by improving connectivity through easier changes between different modes of transport and making stations more accessible to all. The inclusion of consultations with local and community organisation under IN2 could contribute towards better meeting the needs of local communities.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.8.1 Interaction between Modes – Gateway Stations and Mobility Hubs (IN1 – IN3)		
2. Reduce inequality and promote community cohesion	<p>Policies IN2 – IN3 help improve environmental conditions by enabling the shift to sustainable public transport and active travel, by bettering infrastructure for easier change between different modes of travel. This would increase the geographic reach of sustainable transport modes, making them more accessible and contributing to reduced road traffic. This could result in improved air quality and improve the quality of life for most deprived communities with cleaner local air quality and better transport services to access healthcare, employment, education or training opportunities.</p> <p>The provisioning of good public Wi-Fi, improved connectivity to town and city centres, bus and rail stations, better cycle parking, signposting and information and improved accessibility delivered through policies IN1 – IN3 aim to improve accessibility of public transport and active travel for all members of society. Improved connectivity to central locations would enable more individuals from previously disconnected areas to access employment, education, training and participate in community events. This is disproportionately beneficial for those who rely more on public transport such as older people, children, people experiencing socio-economic disadvantage.</p> <p>Features such as better cycle parking and improved accessibility promote active travel links to public transport (bus and rail), improving accessibility to longer distance transport services as well.</p> <p>Policy IN2 specifically aims to engage with local and community organisations in consultations to better represent communities with protected characteristics, also creating more opportunities for community participation.</p> <p>Improvements made to stations and hubs would make these spaces nicer and more attractive to use. This would enhance the sense of community, reducing the inequality that can often be experienced between areas where investment has been made and where it has not.</p>	+	Long-term/ Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>The policies IN1- IN3 help improve connectivity between local communities by making it easier to change and transfer among different modes of public transport, providing extended connectivity for potentially longer operating hours. This would contribute towards reducing social isolation particularly for areas that were previously disconnected without the integration of different modes.</p> <p>This network of integrated transport modes, with connections to town and city centres would improve access to key health services, recreational activities and access to green spaces, thereby increasing the likelihood that people will participate in physical activity reducing risks of obesity, cardiovascular diseases and boosting physical, mental and social health¹⁰. People would also be more likely to obtain the healthcare they need. Both of these would improve health and wellbeing outcomes.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.8.1 Interaction between Modes – Gateway Stations and Mobility Hubs (IN1 – IN3)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>The policies are unlikely to cause any harm or deterioration to designated sites or result in loss of valuable habitats.</p> <p>By improving connectivity between the public transport and active travel network, policies IN1-IN3 enable easier transfers between modes, promoting sustainable transport and facilitating modal shift. This would result in reduced road traffic related air and noise pollution, mitigating their adverse effects on protected species and habitats.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies IN1 – IN3 are unlikely to cause harm to designated or protected landscapes or result in loss of BMV land. The landscapes located in proximity to proposed mobility hubs locations include Conwy Valley LCA, Deeside and Wrexham LCA, Arfon LCA and Anglesey Coast LCA. Conwy has increased parking charges³⁵, Wrexham is removing free parking after 11am³⁶ and Anglesey has a beach of special scientific interest - Lleiniog beach, is facing safety and erosion concerns due to car parking on beach area³⁷. The provisioning of better public transport links in these areas could encourage a shift from cars to public transport and active travel, reducing the adverse impacts on traffic and parking on landscapes and designations.</p> <p>An accessible transport network with easy transfers between different sustainable transport modes, with extended links to town and city centres could be a popular option among tourists in these areas. This could contribute to efficient management of travel in tourist areas during peak periods.</p>	+	Long-term/ Indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies IN1 – IN3 are unlikely to cause harm to designated heritage assets.</p> <p>Policy IN2 encourages stakeholder consultation with local and community organisations, providing opportunities for encouraging and supporting use of the Welsh language. Signposting and information for travellers at mobility hubs will include use of Welsh, supporting Welsh speaking communities.</p>	+	Long-term/ Direct

³⁵ North Wales Live, Council responds as 'tax on motorists' parking charges coming to seafront, November 2024; Available online at: <https://www.dailypost.co.uk/news/north-wales-news/council-responds-tax-motorists-parking-30289924>

³⁶ Wrexham.com, Wrexham Council to remove free after 11am parking scheme next spring, December 2023; Available online at: <https://wrexham.com/news/wrexham-council-to-remove-free-after-11am-parking-scheme-next-spring-244343.html> [Accessed 29/11/2024]

³⁷ BBC News, Lleiniog beach parking prompts safety and erosion fears, 2023; Available online at: <https://www.bbc.co.uk/news/uk-wales-65664407> [Accessed 29/11/2024]



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.8.1 Interaction between Modes – Gateway Stations and Mobility Hubs (IN1 – IN3)		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Policies IN1 – IN3 are unlikely to have a negative impact on the health and quality of water resources, rather they encourage use of sustainable transport – including public transport and active travel, by enabling improved transfers between different modes of transport. This would result in reduced road traffic caused by private vehicles, reducing runoff of pollutants from the road into water resources ⁵ .	+	Long-term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policies IN1-IN3 enable easier transfers between different sustainable travel modes – bus, rail and active travel. This provides improved connectivity to essential services and amenities for all members of society. Increased accessibility and connectivity could increase a modal shift from private cars to integrated sustainable travel via bus, rail and active travel. This would contribute towards reducing the carbon emission of the transport sector, helping Wales meet net zero targets.</p> <p>Active travel infrastructure improvements like cycle storage, to and within station network and mobility hubs would increase the accessibility to further public transport links. A mobility hub facilities various transfers could also better maintain transport services when particular route/s are adversely impacted by the effects of climate change.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	<p>A modal shift from private cars to sustainable public transport supported by policies IN1- IN3 would contribute towards improving air quality of local communities.</p> <p>Improved air quality could contribute towards mitigating the adverse health impacts of air pollution, by reducing respiratory infections, heart disease, stroke, and lung cancer, that disproportionately affects some protected characteristics groups such as people who are already ill, children, older people, and people living in deprived areas⁹.</p> <p>Although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas, air quality would still improve.</p>	+	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.8.1 Interaction between Modes – Gateway Stations and Mobility Hubs (IN1 – IN3)		
10. Reduce disturbance from transport related noise and vibration to local communities.	A modal shift from private cars to sustainable public transport – bus, rail and active travel, supported by policies IN1- IN3 would contribute towards reducing noise pollution for local communities. This could contribute towards improving local soundscapes, although this is only likely to be marginal.	+	Long-term/ Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	A modal shift from private cars to sustainable public transport supported by the policy would result in reduced use of raw materials like fuels.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Integrated networks of public transport and active travel would increase the geographic reach of accessibility to employment development opportunities, particularly for areas previously disconnected from key economic centres.</p> <p>Mobility hubs delivered by IN1-IN3 facilitating transfers between modes, would increase accessibility and support equitable access to employment, education and training opportunities for all members of society, but particularly those that don't have access to private vehicles such as people from low-income backgrounds or more deprived areas. This would be particularly beneficial for areas that have previously had few public transport links to areas of employment and mobility hubs have the potential to improve the reliance and resilience of the transport network, with more alternative options in case of service delays or cancellations, better supporting businesses and workers.</p> <p>Policies IN1 – IN3 would simplify transferring between different modes of travel and improve accessibility, potentially increasing their popularity among tourists. This would expand the reach of the area to tourists who choose to travel by sustainable modes, thereby bringing this additional economic spend to areas.</p> <p>Mobility hubs would also help improve connectivity between rural areas and larger settlements, connecting individuals in rural areas to employment opportunities in larger settlements and economic centres and encouraging tourism to rural areas, support rural economies through leisure related spendings.</p> <p>These policies would not affect freight travel.</p>	+	Long-term/ Indirect



Table 5 – 2 Interaction between Modes – Improving Bus and Rail Integration

IWBA Objective	Appraisal	Score	Duration/ direct or Indirect
	4.8.2 Interaction between Modes – Improving Bus and Rail Integration (IN4)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policy IN4 focuses on the integration of bus and rail network, with the aim to create an integrated ticketing system or introducing contactless pay, helping provide best fare value for individuals travelling across transport modes. It has been shown that integrated ticketing schemes increase patronage of public transport³⁸. In addition to improved costs and convenient transfers between modes, improved bus and train timetables could further enhance the experience of using multiple transport modes. This improves connectivity, making travel easier and serving more designations than before, allowing more people to access services like healthcare, employment, education and training opportunities.</p> <p>Through the integration of bus and rail networks, policy IN4 supports the delivery of sustainable transport options within and between locations, by offering better costs for travelling with different modes of transport.</p>	+	Long-term/ Direct
2. Reduce inequality and promote community cohesion	<p>Improved costs and better integration for bus and rail travel would make them accessible and more attractive to more people, especially those from protected characteristics groups such as people from low-income backgrounds and more deprived communities. An integrated public transport system would also make it easier to reach further destinations, which is beneficial for people who rely on public transport including older people, disabled people, racialised people, children and those experiencing socio-economic deprivation⁹.</p> <p>Increased public transport use could also create new opportunities for community engagement and interactions for people who are more reliant on public transport – this would promote community cohesion and reduce social exclusion that people may otherwise experience through a lack of transport options.</p> <p>Increased patronage of public transport would result in reduced use of personal transport, therefore improving air quality and mitigating the adverse impacts of air pollution such as risks of respiratory infections, heart disease, stroke, and lung cancer, that severely affects people who are already ill, such as children, the elderly, and poor people^{6,7}.</p>	++	Long-term/ Direct

³⁸ The benefits of simplified and integrated ticketing in public transport. Passenger Transport Executive Group, October 2009. Available online at: www.urbantransportgroup.org/system/files/general-docs/integratedticketingreportFINALOct09.pdf [Accessed 18/11/24]



IWBA Objective	Appraisal	Score	Duration/ direct or Indirect
	4.8.2 Interaction between Modes – Improving Bus and Rail Integration (IN4)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policy IN4 improves connectivity and makes travel more affordable between local communities and larger settlements. This would contribute towards reducing social isolation particularly for rural areas and areas that have previously been disconnected without the integration of different modes and improve access for people from low-income and more deprived backgrounds. This would improve access to key health services, recreation activities and green spaces, for all members of society.</p> <p>Improvements in the integration of transport modes, would improve access to key health services, recreational activities and access to green spaces, thereby increasing the likelihood that people will participate in physical activity reducing risks of obesity, cardiovascular diseases and boosting physical, mental and social health¹⁰. People would also be more likely to obtain the healthcare they need. Both of these would improve health and wellbeing outcomes.</p>	++	Long-term/ Direct
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>The policy is unlikely to cause any harm or deterioration to designated sites or result in loss of valuable habitats.</p> <p>By improving bus and rail integration, Policy IN4 promotes sustainable transport and facilitates modal shift. This would result in reduced road traffic related air and noise pollution, mitigating their adverse effects on protected species and habitats²⁶.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policy IN4 is unlikely to cause harm to designated or protected landscapes or result in loss of BMV land. However, the integration of bus and rail services with integrated ticketing would encourage a shift from cars to public transport, reducing the adverse impacts of traffic and parking on landscapes and designations throughout the region (and particularly in rural tourist hotspots).</p>	+	Long-term/ Indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policy IN4 is unlikely to cause harm to designated heritage assets.</p> <p>Opportunities for more community interaction offered through improved integration of services would be beneficial for encouraging the use of Welsh within and between communities.</p>	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ direct or Indirect
	4.8.2 Interaction between Modes – Improving Bus and Rail Integration (IN4)		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policy IN4 is unlikely to have a negative impact on the health and quality of water resources.</p> <p>IN4 encourages use of sustainable transport – bus and rail, by enabling more efficient transfers between different modes of transport with better costs. This contributes to improved could result in reduced road traffic caused by private vehicles, reducing runoff of pollutants from the road into water resources.</p> <p>This helps mitigate the adverse impacts of road runoff pollutants like chemicals, metals, plastics (micro and litter), oils and lubricants, sediment, nutrients and pathogens on water quality and health⁵.</p>	+	Long-term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policy IN4 enables more efficient transfers between different sustainable travel modes (bus and rail) with better fare values. Increased accessibility, cost-effectiveness and connectivity would encourage modal shift from private cars to integrated sustainable travel via which would contribute towards reducing the carbon emissions of the transport sector, helping Wales meet net zero targets.</p> <p>An integrated network of bus and rail services could also be more resilient to the effects of climate change, offering links to alternative services when particular route/s are affected by extreme weather events such as flooding.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	<p>A modal shift from private cars to sustainable public transport supported by the initiatives of IN4 would contribute towards improving air quality of local communities.</p> <p>Improved air quality could contribute towards mitigating the adverse health impacts of air pollution, by reducing respiratory infections, heart disease, stroke, and lung cancer, that disproportionately affects some protected characteristics groups such as people who are already ill, children, older people, and people living in deprived areas⁹.</p> <p>Although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas, air quality would still improve.</p>	+	Long-term/Indirect



IWBA Objective	Appraisal	Score	Duration/ direct or Indirect
	4.8.2 Interaction between Modes – Improving Bus and Rail Integration (IN4)		
10. Reduce disturbance from transport related noise and vibration to local communities.	A modal shift from private cars to sustainable public transport – bus and rail, supported by Policy IN4 would contribute towards reducing noise pollution for local communities. This could contribute towards improving local soundscapes, although this is only likely to be marginal.	+	Long-term/ Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	A modal shift from private cars to sustainable public transport supported by the policy would result in reduced use of raw materials like fuels.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Policy IN-4 improves fare values and facilitates efficient transfers between modes, increasing accessibility and supporting equitable access to employment, education and training opportunities for all members of society, but particularly those that do not have access to private vehicles such as people from low-income backgrounds or more deprived areas. Having more links between rail and bus services would also improve the reliance and resilience of the transport network, with more alternative options in case of service delays or cancellations, better supporting businesses and workers.</p> <p>Many areas in North Wales lie within more deprived areas with regards to poor access to services. Thus, a strong affordable public transport system would improve access to services, leisure, employment and training opportunities for local communities, contributing to the economic prosperity of the region, and encouraging regeneration and investment in these areas that were previously under served by public transport.</p> <p>Policy IN4 has the potential to improve access between North Wales and South Wales, by connecting local communities to bus and rail links, connecting longer distances between North and South Wales and even England and North Wales. This would also enhance economic prosperity between regions.</p> <p>Where Policy IN4 applies to routes that are used extensively by tourists, this would increase the patronage of public transport routes serving tourist locations and may increase visitor numbers as people who previously could not reach these destinations are now able to visit. This would bring a boost to the tourist economy of North Wales.</p> <p>This policy does not impact movement of freight.</p>	++	Long-term/ Indirect



Table 5 – 3 Interaction between Modes – Park and Ride or Park and Share

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.8.3 Interaction between Modes – Park and Ride or Park and Share (IN5 – IN6)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Park and Ride, and Park and Share schemes increase access to services where public transport options are scarce or in circumstances where public transport is not suitable and/or where there may be high parking charges or limited parking available. The park and share policy (IN6) also supports different accessibility needs where car travel might be essential for some people, e.g. disabled people.</p> <p>These policies do not support the delivery of housing.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Policies IN5 and IN6 support the reduction of car mileage and a reduction in congestion. This would contribute to reduced traffic related emissions, improving air quality, particularly in urban centres.</p> <p>The policies support the needs of protected characteristics groups such as older people, people with disabilities, pregnant women or people with prams or other mobility aids, where travelling by car for a part of longer journeys or entire journeys is more convenient. P&R and P&S schemes would enable individuals to avoid high parking charges where these are in place, providing an alternative sustainable travel measure for areas where public transport connectivity is otherwise scarce. This would benefit those experiencing socio-economic disadvantage, making it more likely that they can access services, community events and leisure activities with reduced parking charges.</p> <p>Increased public transport use and car sharing would create opportunities for community engagement and social interaction – this would promote community cohesion and reduce social exclusion that people may otherwise experience through a lack of transport options.</p> <p>Conversely these policies could result in further social exclusion when P&R (or P&S) facilities are developed at the expense of investment in conventional public transport and if services are exclusively aimed at motorists (i.e. people can only use the bus service when they have parked their car, because this excludes people who do not own a car)³⁹.</p>	+/-	Long-term / Indirect

³⁹ Parkhurst, G. Social inclusion implications of park-and-ride. *Municipal Engineer* 156, 2003



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.8.3 Interaction between Modes – Park and Ride or Park and Share (IN5 – IN6)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies IN5 and IN6 would unlikely contribute to improved health and wellbeing, although they may conceivably increase access where parking has been restricted, reducing stress and anxiety. They would be unlikely to increase participation in physical activity.</p> <p>The provisioning of proper P&R and P&S facilities could help alleviate these issues, delivering improved access to healthcare. For example, Wrexham Maelor Hospital experiences parking concerns, often resulting in staff, patients and visitors being late for work and appointments. The solution of a multistorey car park was rejected by the Betsi Cadwaladr Health Board, who advocated for alleviating parking pressures instead. Anecdotally, it was learnt that people were leaving their cars at the hospital all day to travel together to other places of work.⁴⁰</p>	0	
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policies IN5 and IN6 may result in harm or deterioration to designated sites or result in loss of valuable habitats, depending on the location of P&R and P&S schemes and whether new infrastructure (parking areas) is required.</p> <p>However, the policies may also help mitigate adverse impacts from parking pressures near designated sites, safeguarding biodiversity and geodiversity interests at important sites.</p>	+/-	Long-term / Direct (and indirect)
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policies IN5 and IN6 are unlikely to cause harm to designated or protected landscapes or result in loss of BMV land.</p> <p>P&R and P&S schemes located to serve popular tourist destinations, would make them a popular option among tourists in these areas. This could contribute to efficient management of travel in tourist areas during peak periods, mitigating the adverse visual impacts of inappropriate parking in these areas.</p>	+	Long-term/ Indirect

⁴⁰ Wrexham: Maelor Hospital parking concerns raised by residents | The Leader, February 21st 2024



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.8.3 Interaction between Modes – Park and Ride or Park and Share (IN5 – IN6)		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies IN5 and IN6 are unlikely to cause harm to designated heritage assets.</p> <p>Opportunities for more community interaction offered through public transport and car sharing between Welsh speaking communities, supports the continued use of the Welsh language.</p>	+	Long-term/ Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policy IN5 and IN6 are unlikely to have a negative impact on the health and quality of water resources.</p> <p>IN5 and IN6 encourage the use of sustainable travel through park and ride and park and share schemes. This contributes to reduced road traffic caused by private vehicles, mitigating the adverse impacts of road runoff pollutants like chemicals, metals, plastics (micro and litter), oils and lubricants, sediment, nutrients and pathogens on water quality and health⁵.</p>	+	Long-term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>P&R and P&S schemes support sustainable travel, contributing towards reducing the carbon emissions of the transport sector, helping Wales meet net zero targets.</p> <p>Reducing carbon emissions could contribute towards mitigating the effects of climate change.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	IN5 and IN6 support sustainable travel, reducing road traffic and traffic related emissions, contributing to improved air quality. However, this is likely to be marginal given that people are still driving their cars and the last part of the journey after the parking facilities is usually only a short distance.	0	



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.8.3 Interaction between Modes – Park and Ride or Park and Share (IN5 – IN6)		
10. Reduce disturbance from transport related noise and vibration to local communities.	The policies IN5 and IN6 are unlikely to have an effect on transport related noise and vibration experienced by local communities.	0	
11. Incorporate circular economy principles to reduce the use of raw materials.	The policies encourage increased public transport use and carsharing practices, resulting in reduced private vehicle use, thereby contributing to reduced use of raw materials (i.e. fuel).	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Whilst lower congestion reduces travel time (and therefore frees up time for more productive work) and may encourage businesses to locate in an area (due to better local amenity), it may have the opposite effect if subsidies are required from the local economy, therefore stifling economic growth⁴¹. However, it has also been shown that P&R projects are most successful where they are explicitly for providing more parking for economic growth or traffic management reasons, rather than to enhance sustainable mobility⁴². Economic outcomes would therefore depend on the location and intention of the P&R and P&S facilities.</p> <p>These policies do not impact the movement of freight.</p>	+/-	Long-term/ Indirect

⁴¹ Park and Ride first principles assessment, University of Leeds. Available online at: https://its.leeds.ac.uk/projects/konsult/private/level2/instruments/instrument035/l2_035b.htm [Accessed 27/11/24]

⁴² Parkhurst, G. & Meek, S. (2014). The effectiveness of park-and-ride as a policy measure for more sustainable mobility. Chapter 9 in Ison, S. & Mulley, C. (Eds) Parking Issues and Policies. Emerald, 185-211.



Table 6 – 1 Ports and Freight – Ports

IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.9.1 Ports (Policy PF1-PF2)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Areas in Holyhead rank within the 10% most deprived areas according to WIMD Employment deprivation domain. By supporting the development of ports and nearby sites and improving sustainable access to the area, the policies could result in improved access to employment opportunities. Additionally, Mostyn ranks in the 10-20% most deprived areas within the WIMD Access to services deprivation domain⁹. Thus, through improved sustainable transport options supported by the policies, the areas of Holyhead, Mostyn and Anglesey could experience improved access to local services.</p> <p>Policies PF1/PF2 do not support the delivery of housing and local services.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Policies PF1 and PF2 support the delivery of sustainable transport options for access to ports and rail stations, contributing to improved environmental conditions with reduced road traffic related air pollution. Improved access to the port and development sites could improve the quality of life for more deprived communities, by providing access to employment opportunities. Areas of Holyhead and Mostyn lie among the most deprived areas with regards to employment and income deprivation domains and thus, could significantly benefit from better access to ports and nearby development for employment.</p> <p>The policies focus on improving vehicle access for all by mitigating adverse impacts of HGVs, resulting in improved sustainable public transport that supports the needs of members of society with protected characteristics. Some protected characteristics groups like children, people from low income or more deprived areas, rely on public transport more than others to access key services. Through improved access of sustainable transport options, the policies better accessibility for all members of society.</p> <p>Policy PF1 and PF2 outline working with partners, creating opportunities for stakeholder engagement and community participation.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.9.1 Ports (Policy PF1-PF2)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Improved vehicle access and sustainable transport connectivity to ports and nearby developments could result in an uptake in public transport. The policies could then contribute to reduced road traffic related air and noise pollution by private car. Improved vehicle access could also lead to reduced road accidents and better road safety.</p> <p>However, these policies support growth at the ports which would result in an increase in HGV movements around the local areas of Holyhead and Mostyn. This would adversely impact local air quality, and noise and vibration levels in areas which already lie within the 10 to 20% most deprived areas according to WIMD health deprivation domain⁹.</p>	+/-	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Due to their indirect support for further development within the ports, policies PF1 and PF2 may contribute to the pressures on a number of protected areas. This includes the Anglesey Tern Special Protection Area (SPA) which is designated for Annex I breeding birds such as Roseate tern, common tern, Arctic tern, and sandwich tern, and the North Anglesey Marine / Gogledd Môn Forol Special Area of Conservation (SAC) which is designated for harbour porpoise.</p> <p>Policy PF1/PT2 do not directly deliver opportunities to restore or create semi-natural habitats or geodiversity.</p>	--	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>The policies PF1 and PF2 are unlikely to cause harm to any designated or protected landscapes or result in loss of BMV land.</p> <p>The policies focus on improving vehicle access and sustainable travel options to ports and rail stations, which would contribute towards improving the visual amenity of the Anglesey Coast LCA and Deeside and Wrexham LCA.</p>	+	Long-term/ Indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies PF1 and PF2 are unlikely to cause harm to designated heritage assets.</p> <p>The policies outline that the Corporate Joint Committee will work with partners to implement the plans detailed in PF1 and PF2. This could include initiatives to support Welsh speaking communities and encourage the use of Welsh language.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.9.1 Ports (Policy PF1-PF2)		
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policies PF1 and PF2 focus on port developments and transport to the port areas for employment, tourism and leisure. This has the potential to adversely impact the health (through increased air pollution and noise) and quality of water bodies nearby (through pollution runoff). Since, there are no additional details about policy implementation, the impact is uncertain.</p> <p>By supporting sustainable travel options to ports and rail stations, policies PF1 and PF2 could help reduce runoff of road pollutants into water bodies. This would contribute towards protecting the health and quality of water resources.</p>	?	
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>By supporting decarbonisation plans at Holyhead and Mostyn ports, and prioritising sustainable transport connections to ports and rail stations, the policies help reduce carbon emissions from the transport sector. However, with an expanded port facility this is likely to increase numbers of HGVs which are not likely to be reduced/zero emissions (at least in the short-medium term).</p> <p>Supporting sustainable travel options as well as managing efficient freight movements to the offshore renewable energy sector in North Wales could contribute towards reducing the impacts of climate change.</p>	+/-	Long-term/ Direct
9. Protect and enhance local air quality.	<p>Policies PF1 and PF2 support decarbonisation plans and promote sustainable travel options. This could help reduce road traffic related emissions and improve air quality that is beneficial to health, particularly for vulnerable groups who are more sensitive to changes in air quality^{6,7}. Conversely, the increase in HGVs would likely contribute to adverse air quality impacts for local communities surrounding the ports.</p>	+/-	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>An uptake in sustainable travel options (modal shift from private vehicles) supported by policies PF1 and PF2 would contribute to a reduction in transport related noise and vibration disturbances and contribute towards improving local soundscapes.</p> <p>However, increased economic, tourism and leisure related activities in the port and nearby development areas may lead to some increased noise from other sources.</p>	+/-	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or indirect
	4.9.1 Ports (Policy PF1-PF2)		
11. Incorporate circular economy principles to reduce the use of raw materials.	Policies PF1 and PF2 support growth at the ports which could result in an increase in HGV movements around the local areas of Holyhead and Mostyn. This would result in increased consumption of raw materials (i.e. fuels). Additionally, whilst there is no information available on the source of raw materials to be used in the development of port areas, it is likely that this would also increase.	-	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Policies PF1 and PF2 support the growth of ports and nearby development sites in North Wales to strength the economy and provide more employment opportunities. This would encourage regeneration and investment in areas around ports of Holyhead, Anglesey and Mostyn. This would be disproportionately beneficial for those areas which currently rank within the 10% most deprived areas according to the WIMD overall deprivation domain⁹.</p> <p>The focus on freight and improving connectivity beyond the ports would help to boost economic development throughout the region (and beyond).</p>	++	Long-term/ Direct



Table 6 – 2 Ports and Freight – Road Freight

IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.9.2 Ports and Freight – Road Freight (PF3)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policy PF3 focuses on enhancing facilities for HGV drivers, particularly on the approach to Holyhead port. This could contribute towards reducing traffic wait times for HGVs (which currently impact road conditions for local residents), improving road conditions. Adequate parking spaces for HGVs could help balance use of road space for freight transport and public transport usage. This would help improve sustainable transport options between locations as travel times along these less congested routes is reduced. Whilst not directly providing services for local community needs, the enhanced facilities for HGV drivers would improve the amenity of existing local services as HGVs are displaced to more appropriate and targeted HGV driver services.</p> <p>This policy would not affect delivery of housing.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Efficient freight movements would make the region attractive for business investments, supporting the local economy and providing employment opportunities for local communities. Areas in Holyhead lie within the 10% most deprived areas whereas Mostyn lies within the 20-30% most deprived according to the WIMD Employment deprivation domain⁹. Increased economic opportunities and investment in the areas could significantly improve the quality of life for local communities if this business investment was realised.</p> <p>The majority of HGV drivers are above the age of 50 and male. A lack of rest facilities and longer wait times could negatively impact their health. Policy PF3 therefore, disproportionately supports the needs of these groups.</p> <p>Improved parking facilities for HGV drivers delivered through PF3 could help improve traffic congestion and road conditions for public transport services, contributing towards improving accessibility of public transport with better journey times.</p> <p>The policy aims to work with partners to implement initiatives for enhancing facilities, providing opportunities for stakeholder engagement and community participation. This could help achieve a balance between economic prosperity and quality of life for local communities by accounting for the needs of local communities.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.9.2 Ports and Freight – Road Freight (PF3)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policy PF3 would support better management of freight movements by enhancing facilities like parking and rest stops for HGV drivers. This would positively impact the health and wellbeing of HGV drivers who otherwise rely on services that are not designed for the number of HGVs currently using them. Reduced congestion would result in improved road safety and facilities.</p> <p>Long journeys with extended wait times without rest stops could increase the risk of accidents involving HGVs. Through improved facilities, Policy PF3 could help mitigate risk of road accidents. Driving for long hours without rest stops can cause fatigue and is associated with health risks such as high blood pressure, musculoskeletal disorders, heart attacks, flu, increased anxiety and depression.⁴³ Given that majority of HGV drivers are over the age of 50, the health impacts of long driving hours could be even more severe. Adding rest facilities for HGV drivers through PF13 would help significantly mitigate these adverse effects (although this would not be in relation to the local population, but rather HGV driver populations).</p> <p>Policy PF3 would help improve traffic congestion and road conditions, especially along the Menai crossings, reducing air pollution and associated health impacts. The reduced congestion would be beneficial for improving connectivity between Isle of Anglesey and the mainland, reducing social isolation and the associated mental health impacts.</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policy PF3 is unlikely to cause harm to the designated sites or result in valuable habitat loss. However, details regarding implementation of initiatives such as parking and rest facilities development is unknown, so the impact is uncertain.</p> <p>Policy PF3 does not directly deliver opportunities to restore or create semi-natural habitats or geodiversity.</p>	?	

⁴³ Safe Workers – UK Workplace Safety Advice, Long Commutes to Work; February 2023. Available online at: [Long Commutes to Work - How Far is Too Far to Drive or Travel?](#) (Accessed on 12/11/2024)



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.9.2 Ports and Freight – Road Freight (PF3)		
5. Protect and enhance local landscape character, designations and visual amenity	<p>Policy PF3 is unlikely to harm the designated/protected landscapes. However, details regarding implementation of initiatives such as parking and rest facilities development is unknown, so the impact is uncertain.</p> <p>Enhancing facilities like parking and rest stops for HGV drivers could help improve traffic congestion conditions, improving road safety and public transport services. This could contribute towards reducing adverse impacts of road traffic on the designated landscapes.</p> <p>Improved traffic conditions and better journey timings for public transport supported by initiatives of PF3, could contribute to efficient management of travel in coastal tourist areas during peak periods.</p>	?	
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>There are various buildings and structures of national importance or historic interest that can be found around areas of Holyhead and Mostyn.</p> <p>Policy PF3 is unlikely to cause harm to these designated heritage assets or contribute towards enhancing their condition.</p> <p>The policy includes a collaborative approach of working with partners to deliver its initiatives for enhancing facilities, providing opportunities for encouraging and supporting use of the Welsh language.</p>	+	Long-term/ Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policy PF3 supports the delivery of infrastructure for improving HGV movements and providing specific HGV facilities which would result in an intensification of HGVs in some locations and therefore an intensification of pollution and carbon emissions from HGVs that result in the runoff of road pollutants into water bodies.</p>	-	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.9.2 Ports and Freight – Road Freight (PF3)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Policy PF3 aims to enhance facilities for HGV drivers with improved infrastructure for parking and rest facilities. This could improve freight movement to Holyhead and Mostyn ports. This can help manage traffic congestion and encourage use of public transport, although impacts are uncertain.	?	
9. Protect and enhance local air quality.	Policy PF3 would have the potential to improve air quality for some areas as a result of reduced congestion caused by HGVs, but also the potential to reduce air quality in the areas to which HGVs are directed (e.g. parking specifically for HGVs would concentrate a large number of HGVs in one location).	+/-	Long term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	HGV vehicles produce significant amounts of noise and vibration, that can disturb local communities. Where facilities for parking and rest for HGV drivers is limited, this can result in appropriate parking and noise in areas that cause noise disruption for local communities (e.g. in residential areas). Provision of more suitable facilities would increase noise in these location due to the intensification of use by HGVs, however, it is assumed that these would be located in suitable places that would not impact local residents. Policy PF3 would therefore reduce HGV noise for local communities.	+	Long term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	Policy PF3 likely has a neutral impact on the incorporation of circular economy principles.	0	



IWBA Objective	Appraisal	Score	Duration/Direct or Indirect
	4.9.2 Ports and Freight – Road Freight (PF3)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	PF3 does not contribute to this IWBA objective.	0	



Table 6 – 3 Ports and Freight – Low Emission HGVs

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.9.3 Ports and Freight – Low Emission HGVs (PF4)		
1. Support the delivery of housing and local services to meet the needs of local communities	Policy PF4 would not contribute to the delivery of local service for local communities or to the delivery of housing.	0	
2. Reduce inequality and promote community cohesion	<p>A shift to hydrogen fuels for freight movements, would improve air quality, helping reduce the air pollution caused by emissions transmitted by HGV vehicles. This could help improve the quality of life for individuals who are differentially impacted by changes in air quality (e.g. people with respiratory disease, young children, and pregnant women, (increasing risks of stillbirth, miscarriage and neurological conditions in the unborn child)⁶. It would disproportionately benefit communities along the coast of North Wales which is the route that most HGVs must take to/from the ports.</p> <p>Policy PT4 also outlines a collaborative approach of engaging with stakeholders and partners, creating opportunities for community participation and including public opinion to reduce unequal impacts across local communities.</p>	+	Long term/ Direct
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	A shift to hydrogen fuels for freight movements, would improve air quality, helping reduce the air pollution caused by emissions transmitted by HGV vehicles. This could help improve the quality of life for individuals who are differentially impacted by changes in air quality (e.g. people with respiratory disease, young children, and pregnant women, (increasing risks of stillbirth, miscarriage and neurological conditions in the unborn child) ⁶ . It would disproportionately benefit communities along the coast of North Wales which is the route that most HGVs must take to/from the ports.	+	Long term/ Direct
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policy PF4 is unlikely to cause any harm or deterioration to designated sites or result in loss of valuable habitats around Mostyn and Holyhead.</p> <p>Policy PT4 does not directly deliver opportunities to restore or create semi-natural habitats or geodiversity.</p>	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.9.3 Ports and Freight – Low Emission HGVs (PF4)		
5. Protect and enhance local landscape character, designations and visual amenity	Policy PF4 is unlikely to cause any harm to the designated/ protected landscapes or result in loss of BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	Policy PF4 is unlikely to cause harm to designated heritage assets or provide opportunities for enhancing the Welsh language.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>By supporting a shift to hydrogen fuels, policy PF4 helps reduce carbon emissions and runoff of pollutants from roads to water bodies. This helps protect the health and quality of water resources and aquatic ecosystems.</p> <p>The policy also supports the development of hydrogen hubs at Holyhead and potentially Mostyn to support a shift to cleaner fuels. Hydrogen production, specifically via electrolysis, requires large amounts of water. If this is drawn from freshwater sources, it could add stresses to the local water supply. Ammonia, an energy carrier for hydrogen is highly toxic for humans as well as for aquatic life if leakages occur in water sources. It is also a potential source of nitrogen oxide emissions, if combustion is not perfectly optimised. Hence, there are some associated risks of contamination.²⁸</p> <p>Therefore, PF4 is associated with some potential adverse effects and other benefits concerning water health.</p>	+/-	Long term/ Indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Policy PF4 supports a shift to hydrogen fuels for freight vehicles, providing opportunities that encourage decarbonisation of the transport sector.</p> <p>A shift to hydrogen fuels could also contribute to increased resilience of transport infrastructure against impacts of climate change as it would be independent of the effects of climate driven disruptions to the fossil fuel value chain³¹.</p> <p>By supporting the development of a hydrogen hub in Holyhead, that is a busy transport hub for freights, policy PF4 helps reduce the need to transport fuels across long distances.</p>	++	Long term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.9.3 Ports and Freight – Low Emission HGVs (PF4)		
9. Protect and enhance local air quality.	PF4 contributes to improved air quality for communities by supporting the shift to hydrogen fuels for freight operators.	+	Long term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	PF4 is unlikely to have an impact on transport related noise and vibration.	0	
11. Incorporate circular economy principles to reduce the use of raw materials.	PF4 aims to complement the development of hydrogen hubs in North Wales by supporting a shift to hydrogen fuels for freight operators. This encourages use of locally sourced fuels for freight vehicles.	+	Long-term/Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>PF4 helps improve the reliance and resilience of the freight transport network, as it is independent of the effects of climate driven disruptions to the fossil fuel value chain.</p> <p>By supporting the development of hydrogen hubs, PF4 contributes to increased employment opportunities in North Wales as well as encourage further regeneration and investments in areas surrounding Holyhead and Mostyn ports.</p>	+	Long-term/ Direct



Table 6 – 4 Ports and Freight – Local Deliveries

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.9.4 Ports and Freight – Local Deliveries (PF5 – PF8)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies PF5 – PF8 focus on reducing the environmental impact of increased local deliveries on local communities through initiatives like electric vehicles, freight consolidation centres to reduce congestion and HGV traffic, and reduce the overall environmental impact of deliveries. Improved local deliveries does not automatically mean improved services, but it is likely to result in some benefits such as quicker response times. Reduced congestion and HGV traffic would also help improve public transport access to services.</p> <p>Through these measures, the policies support the needs of local communities by improving the local delivery system and reducing congestion and impacts on the local environment.</p> <p>These policies would not support the delivery of housing.</p>	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Policies PF5 – PF8 improve general amenity of the road network by introducing freight consolidation centres which reduce local HGV traffic and encouraging electrification of delivery vehicles and other initiatives like e-cargo bikes etc. which further reduce HGV traffic in local areas. This would contribute to a reduced congestion in town centres, improving road safety for walkers and cyclists. This would support an uptake in active travel (modal shift), particularly for more vulnerable groups such as children, and older people who are more likely to be intimidated by larger vehicles on local roads.</p> <p>The policies outline a collaborative approach of working with partners to implement the policy initiatives. This provides opportunities for engaging with stakeholders and creates opportunities for community participation.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.9.4 Ports and Freight – Local Deliveries (PF5 – PF8)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies PF5 – PF8 improve general amenity of the road network by introducing freight consolidation centres which reduce local HGV traffic and encouraging electrification of delivery vehicles and other initiatives like e-cargo bikes etc. which further reduce HGV traffic in local areas and reducing transport related emissions. This would contribute to reduced congestion in town centres, improving road safety for walkers and cyclists and also reduce anxiety for active travellers. However, increased use of e-cargo bikes can cause anxiety for some pedestrians if they are ridden on shared spaces and cyclists of e-bikes themselves can experience increased anxiety levels when cycling in busy urban areas⁴⁴.</p> <p>Reduced traffic and congestion along with an uptake in active travel, supported by the policies could help improve connectivity between local communities, reducing social isolation and increasing levels of physical activity which contributes to improved health^{3,10}.</p>	+/-	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Policies PF5 / PF6/ PF8 are unlikely to cause harm or deterioration to the condition of designated sites or result in loss of valuable habitats. PF7 however has the potential to harm biodiversity and/or geodiversity depending on the land requirements and their location. However, this is uncertain as the location of any freight consolidation centres (PF7) is unknown.	?	
5. Protect and enhance local landscape character, designations and visual amenity	Policies PF5 – PF8 are unlikely to cause harm to designated or protected landscapes or result in loss of any BMV land. However, this is uncertain as the location of any freight consolidation centres (PF7) is unknown.	?	

⁴⁴ Pejhan, S., Agelin-Chaab, M., Yusuf, M., & Eng, D. Analysis of ebike dynamics and cyclists' anxiety levels and interactions with road vehicles that influence safety. *Accident Analysis & Prevention*, Volume 159, 2021.



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.9.4 Ports and Freight – Local Deliveries (PF5 – PF8)		
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>Policies PF5 – PF8 are unlikely to cause harm to designated heritage assets. However, this is uncertain as the location of any freight consolidation centres (PF7) is unknown.</p> <p>The policies outline a collaborative approach to deliver its initiatives by working with partners, providing opportunities for community engagement, supporting and encouraging continued use of Welsh language.</p>	?	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policies PF5 – PF8 are unlikely to have a negative impact on water resources. However, this is uncertain as the location of any freight consolidation centres (PF7) is unknown and development in some locations may result in harm.</p> <p>The policies focus on opportunities for use of electric vehicles and e-bikes for local deliveries, helping reduce traffic related pollution. This could contribute towards reducing runoff of traffic related pollutants from roads into water bodies, mitigating adverse impacts of pollution. Through these measures, the policies contribute towards protecting water quality and the health of aquatic ecosystems.</p>	+/-	Long-term/ indirect
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>PF5 and PF8 focus on initiatives like using electric vehicles and e-cargo bikes to help reduce the environmental impact of increased local deliveries, supporting the decarbonisation of the transport sector through an uptake in use of electric vehicles.</p> <p>In addition, PF6 – 7 would contribute to a reduction in congestion and HGV traffic, improving travel times for public transport services and resulting in increased road safety. These factors could encourage an uptake in public transport and active travel modes.</p> <p>Use of electric vehicles for local deliveries could also increase the resilience for providing access to amenities as deliveries would not be adversely impacted by the effects of climate change of the fossil fuel supply chain.³¹</p>	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.9.4 Ports and Freight – Local Deliveries (PF5 – PF8)		
9. Protect and enhance local air quality.	<p>Policies PF5 – PF8 support a shift to electric vehicles for local deliveries and reduce HGV traffic in town centres. This would help improve air quality for local communities. This would result in health benefits, particularly for vulnerable groups who are more sensitive to changes in the air quality (children, older people, people with respiratory disease, pregnant women)^{6,7}.</p> <p>Improved air quality and road safety through reduced HGV traffic, would improve amenity thereby encouraging uptake in active travel which would further improve air quality through modal shift from private vehicles.</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	Policies PF5 – PF8 help reduce HGV traffic in town centres and an uptake in electric vehicles, contributing towards reducing traffic related noise and vibration disturbances.	+	Long- term/ Indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	By encouraging increased use of electric vehicles and e-cargo bikes, the policies support a reduction in raw material (fossil fuels) consumption.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>The introduction of freight consolidation centres through PF6 – 7, could create new employment opportunities. Reduced HGV traffic in town centres as result of this would improve the amenity of town centres encouraging people to visit and improving economic spend.</p> <p>Reduced traffic congestion and use of electric vehicles for local deliveries could improve the reliance and resilience of the transport network with improved journey times and reduced environmental impacts. This could contribute towards supporting businesses and their workers.</p> <p>Reduced carbon emissions from transport sector providing improved air quality and local soundscapes with use of electric vehicles, could contribute towards protecting the natural beauty of the areas, supporting continued tourism and associated economic benefits.</p>	+	Long-term/ Indirect



Table 6 – 5 Ports and Freight – Rail Freight

IWBA Objective	Appraisal	Score	Duration/ direct or indirect
	4.9.5 Ports and Freight – Rail Freight (PF9)		
1. Support the delivery of housing and local services to meet the needs of local communities	PF9 is unlikely to support the delivery of housing or local services.	0	
2. Reduce inequality and promote community cohesion	<p>Reduced road freight would result in reduced congestion, improved air quality and better road safety, encouraging an uptake in public transport and active travel. Main road transport routes in North Wales pass through some of the most deprived areas, therefore removing some of the freight transport from the road network would bring disproportionate benefits to these communities.</p> <p>A reduction in road freight vehicles with a shift to rail supported by PF9 could lead to loss of employment for HGV drivers. This would disproportionately impact men who are more likely to be employed in the sector.</p> <p>The policy suggests a collaborative approach of working with partners, creating opportunities for community participation, that could contribute to better representation of protected characteristics groups.</p>	+/-	Long-term/ Direct
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>PF9 supports a shift to rail for freight movements, reducing emissions caused by road freight movements, and therefore contributing to improved air quality. This would be particularly beneficial for communities in more urban centres including Wrexham and Bangor, supporting improvements in health outcomes for people vulnerable to poor air quality including older people, children, pregnant women, and people with increased risks of respiratory infections, heart disease, stroke, and lung cancer. Poor air quality also risks of stillbirth, miscarriage, and neurological conditions in unborn children^{6,7}.</p> <p>Reduced traffic congestion and better road conditions as a result of reduced HGV vehicles, could improve public transport services with shorter and safer journeys, contributing to improved connectivity between local communities. This, in addition with increased active travel, creates more opportunities for social and community interactions, resulting in reduced social isolation and more employment and training opportunities, both of which are beneficial to health and wellbeing.</p> <p>PF9 contributes to improved safety of transport services and infrastructure with a shift to rail for freight movements. This would reduce the number of accidents that have negative consequences on health.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ direct or indirect
	4.9.5 Ports and Freight – Rail Freight (PF9)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Policy PF9 is unlikely to cause or deterioration to the condition of designated sites or result in loss of valuable habitats.	0	
5. Protect and enhance local landscape character, designations and visual amenity	Policy PF9 is unlikely to cause harm to designated or protected landscapes or result in loss of BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	Policy PF9 is unlikely to cause harm to designated heritage assets or present opportunities for protecting/enhancing the Welsh language.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	The policy supports a shift to rail for freight movements, reducing road freight vehicles and associated pollution. This can help reduce runoff of pollutant from the road into water bodies, protecting water quality and the health of aquatic ecosystems from pollutants like nitrogen oxides, sulphur dioxides, chemicals, metals, plastics (micro and litter), oils and lubricants, sediment, nutrients and pathogens. ⁵	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ direct or indirect
	4.9.5 Ports and Freight – Rail Freight (PF9)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>A shift from road to rail for freight movements supported by PF9 helps reduce carbon emissions and improve road safety, air quality and local soundscapes.</p> <p>Better road conditions and air quality could also encourage an uptake in public transport and active travel modes like walking and cycling.</p> <p>Through these measures, PF9 provides opportunities that support the decarbonisation of the transport sector, helping Wales meet net zero targets.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	<p>PF9 supports a shift to rail for freight movements, reducing emissions caused by road freight movements, and therefore contributing to improved air quality. This would be particularly beneficial for communities in more urban centres including Wrexham and Bangor, although there are no recorded exceedances of NO₂, PM₁₀, PM_{2.5} Air Quality Objectives in any of the Local Authority areas.</p> <p>Improved air quality contributes to better health for everyone, but improved air quality differentially benefits those groups who are more vulnerable to poor air quality. This includes older people, children, pregnant women, people from low-income backgrounds and people with respiratory or chronic illness. Poor air quality also risks of stillbirth, miscarriage, and neurological conditions in unborn children^{6,7}.</p>	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>With PF9 delivering a shift to rail for freight movements, there could be reduced HGV vehicles and associated noise and vibration disturbances to local communities.</p> <p>Additionally, the proposal set to increase freight movements also has the potential to enhance passenger services. This could encourage an uptake in public transport (rail) services as well, further reducing traffic related noise (although this would only apply to certain routes).</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ direct or indirect
	4.9.5 Ports and Freight – Rail Freight (PF9)		
11. Incorporate circular economy principles to reduce the use of raw materials.	A shift from road to rail for freight movements supported by PF9 would reduce fossil fuel powered HGV vehicles on the road, thereby reduce the use of raw materials (i.e. fuels).	+	
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	Rail freight could improve reliance and resilience of the transport network (through improved rail freight reliability, capacity and frequency, and also reducing congestion on the roads) better supporting businesses and workers and encouraging investment in the region.	+	Long-term, direct

Table 7 – 1 Roads, Streets and Parking – Maintenance

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.1 Roads, Streets and Parking – Maintenance (RS1 – RS2)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Keeping roads in good maintenance facilitates the delivery of housing and access to existing and future services.</p> <p>A climate resilient highway network that has been maintained to become resilient to climate change (i.e. more extreme weather) would ensure that communities have ongoing access to services, mitigating adverse impacts such as delays and closures caused by infrastructure damages during such events.</p> <p>The policies contribute towards delivering resilience that can help reduce accidents and related risks to housing in high-risk areas.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.1 Roads, Streets and Parking – Maintenance (RS1 – RS2)		
2. Reduce inequality and promote community cohesion	<p>An improved and more resilient highway network would improve the quality of life of communities, especially those living in deprived areas. Climate change effects such as flooding, extreme heat or storms can damage infrastructure that has disproportionate impacts on vulnerable communities such as those from low-income backgrounds or more deprived areas who are less resilient to such impacts. A climate resilient highway network could ensure continued access to essential services during extreme weather events.</p> <p>More resilient and improved infrastructure delivered through RS1 – RS2 would also help prevent accidents and improve access for individuals who rely more on public transport to reach employment, educational, and training opportunities as well as to reach services such as health care. This includes children, older people, people from low-income or more deprived areas, for accessing education, employment opportunities and key services.</p> <p>The policies outline a collaborative approach of working with partners to deliver the outlined initiatives, creating opportunities for community participation and better representation of people with protected characteristics.</p>	+	Long- term/ Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>RS1 – RS2 would enhance the safety and accessibility for pedestrians and cyclists which would encourage uptake of active travel. Increased physical activity contributes to improved physical, mental and social health of local populations while supporting decarbonised modes of transport, contributing to better air quality, which also contributes to improved health^{26,27}.</p> <p>RS1 – RS2 would improve connectivity between local communities in rural areas as well that are connected through highway networks. This would contribute to reducing social isolation, especially during extreme weather events like flooding. This would contribute to more resilience in mental health.</p> <p>A highway network that is more resilient to damage would improve the safety of transport services and infrastructure, resulting in reduced risk of traffic incidents. This would prevent delays and closures caused by extreme weather events, maintaining access to key health services, recreation activities and access to green spaces by reliable transportation links during these times.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.1 Roads, Streets and Parking – Maintenance (RS1 – RS2)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>RS1 – RS2 are unlikely to cause harm or any deterioration to the condition of designated sites or result in loss of valuable habitats. The policies aim to build a more climate resilient transport infrastructure, supporting public transport and encouraging active travel modes through the provisioning of safe and accessible infrastructure along highway networks.</p> <p>Additionally, RS2 particularly focuses on enhancing biodiversity interests to contribute to climate and ecosystem resilience.</p>	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	<p>RS1 – RS2 are unlikely to cause harm to designated or protected landscapes or result in loss of BMV land.</p> <p>Reduced delays and closures on highway networks with improved road conditions delivered through regular maintenance and climate resilient features could mitigate issues of congestion, helping reduce adverse impacts of road traffic on landscapes and contributing to efficient management of travel in tourist areas during peak periods.</p>	+	Long-term/Indirect
6. Protect and enhance the local cultural heritage, including the Welsh language	<p>RS1 – RS2 are unlikely to cause direct or indirect harm to designated heritage assets.</p> <p>These policies could improve connectivity to tourist areas with sites of local cultural heritage, improving visitor experiences.</p> <p>The policies outline a collaborative approach of working with partners. This could support and encourage continued use of the Welsh language for decision making and policy implementation.</p>	+	Long-term/ Indirect
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	RS1 – RS2 are unlikely to have a negative impact on the health and quality of water resources.	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.1 Roads, Streets and Parking – Maintenance (RS1 – RS2)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	RS1 – RS2 could contribute towards building climate resilience by enhancing biodiversity interests. The policies aim to increase the resilience of existing and new infrastructure to better withstand effects of climate change. The introduction of more climate resilient highway assets would also help reduce the impact of extreme weather events on the transport network.	+	Long-term/ Indirect
9. Protect and enhance local air quality.	These policies are unlikely to have an effect on air quality.	0	
10. Reduce disturbance from transport related noise and vibration to local communities.	These policies to maintain the highways in good condition would reduce noise and vibration caused by poorly maintained roads.	+	Long-term/ indirect
11. Incorporate circular economy principles to reduce the use of raw materials.	RS1 – RS2 likely have no effect on this objective.	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.1 Roads, Streets and Parking – Maintenance (RS1 – RS2)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Whilst not directly contributing to an integrated transport system, RS1 – RS2 aims to improve highway assets, increasing resilience whilst also enhancing biodiversity. This would support more reliable transport links between locations, improving access between areas and specifically to areas of employment, education and training opportunities, and wider social infrastructure and services. Better connectivity (regionally but also between North Wales and England, and North Wales and South Wales) would also encouraging regeneration and investment, particularly in more deprived areas that are connected to highway networks, but which have experienced infrastructure damage.</p> <p>The policies would help improve the resilience of the transport network to the effects of climate change and extreme weather events such as floods, extreme heat and storms, thereby increasing reliability of the network. This supports businesses and workers, mitigating adverse impacts of extreme weather events on economic activity.</p> <p>Better maintained highways assets would encourage more tourism to North Wales. Travellers by private and public transport would be more will to travel if routes are predictable, safe and well maintained. This improved connectivity across and to North Wales, including rural areas through the highway network, would help support the rural economies through travel and leisure related spending.</p>	+	Long-term/ indirect



Table 7 – 2 Roads, Streets and Parking – Road Safety

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.2 Roads, Streets and Parking – Road Safety (RS3 – RS4)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies RS3 – RS4 focus on achieving road safety and preventing death and serious injury caused by road accidents. This is aimed to be delivered through funding acquisition for road safety measures and delivering highway improvement schemes and education programmes encouraging safer use of transport networks.</p> <p>Improved road safety could support safe public transport use, improving sustainable transport access between locations and local communities. It could also promote better access to services with more reliable and safer modes of transport, helping meet the needs of local communities.</p> <p>These policies do not support the delivery of housing.</p>	++	Long- term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Approximately 30% of all road traffic deaths in Great Britain occur among pedestrians and cyclists⁴⁵. Thus, by improving road safety, policies RS3 and RS4 would help reduce the risk of death and injury to this vulnerable group of road users. Where there are obvious improvements in safety such as segregated cycle lanes and pedestrian routes, active travel would become a more attractive mode of transport for more people. A study by Living Streets found that ethnic minority pedestrians are three times more likely to be casualties on Britain's roads compared to white pedestrians in non-deprived areas. Additionally, white pedestrians living in deprived areas are more than twice as likely to be casualties compared to their counterparts in non-deprived areas⁴⁶. Improving road safety would therefore reduce inequalities in safety experienced by different communities.</p> <p>Safer public transport access supported by improved road safety helps meet the needs of people with protected characteristics who are more likely to use public transport such as children, older people, people with disabilities and people from low-income background or deprived communities. Safer active travel could also support more equitable access to key services like healthcare and employment.</p> <p>Education programmes aimed at encouraging safer use of the highway and transport networks delivered by RS4, provides opportunities for community engagement and participation.</p>	+	Long-term/ Indirect

⁴⁵ Department for Transport, 2024. Reported road casualties Great Britain: road user risk, 2023 data. Available online at: <https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-road-user-risk-2023> . [Accessed 22/11/24].

⁴⁶ Walking and inequality, Living Streets. Available online at: <https://www.livingstreets.org.uk/policy-reports-and-research/walking-and-inequality> [Accessed 22/11/24].



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.2 Roads, Streets and Parking – Road Safety (RS3 – RS4)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Incidents on the roads not only cause physical harm but also psychological harm. Therefore, safety improvements from Policies RS3-RS-4 which reduce the severity of any collisions would improve mental health and well as physical health of the populations in North Wales.</p> <p>Improved road safety would also contribute to safer journeys for cyclists which would encourage more uptake of this mode of transport (more likely in urban areas but also in some circumstances within rural communities). Better road safety would also provide more reliable and safer public transport services, promoting sustainable transport access between local communities.</p> <p>These changes would improve connectivity between local communities, particularly within rural areas, reducing social isolation, increasing community engagement, and improving physical activity levels which is beneficial to health. It would also improve access to key health services, recreation activities and green spaces. This, in addition with active travel uptake, could result in increased physical activity, providing various health benefits such reduced risks of obesity and improved physical, mental and social health to the local communities.</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	RS3 – RS4 are unlikely to impact designated sites or result in loss of valuable habitats.	0	
5. Protect and enhance local landscape character, designations and visual amenity	RS3 – RS4 are unlikely to impact designated or protected landscapes or adversely impact BMV land.	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.2 Roads, Streets and Parking – Road Safety (RS3 – RS4)		
6. Protect and enhance the local cultural heritage, including the Welsh language	RS3 – RS4 are unlikely to cause harm to designated heritage assets or contribute to the use of the Welsh language.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Policies RS3 – RS4 are unlikely to have an impact on the health and quality of water resources (except where highway improvement works also include drainage improvements which prevent flooding of the highway).	0	
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>Improved road safety for all users could result in a modal shift to more sustainable transport options such as active travel and public transport which supports decarbonisation of the transport sector. This aligns with Wales targets to be net zero by 2050.</p> <p>RS3 and RS4 would help increase resilience of existing and new transport infrastructure to withstand effects of climate change and extreme weather events. Additionally, the educational programmes encouraging safer use delivered through RS4, could further improve road safety with guidance on how to navigate in extreme weather events, improving resilience to the effects of future climate change.</p>	+	Long-term/ Indirect
9. Protect and enhance local air quality.	Increased public transport use and active travel uptake as a result of improved road safety supported by RS3 – RS4 would help support modal shift, reducing traffic related emissions and air pollution. This could contribute to improved air quality, mitigating negative impacts of air pollution for local communities, particularly those located near major roads in North Wales including the A55 "North Wales Expressway, A5, A55 and A483. Improved air quality would be particularly beneficial for vulnerable groups who are more sensitive to changes in air quality improving health outcomes for these groups ^{6,7} .	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.2 Roads, Streets and Parking – Road Safety (RS3 – RS4)		
10. Reduce disturbance from transport related noise and vibration to local communities.	Better maintained roads reduce the levels of transport related noise and vibration therefore Policies RS3 and RS4 would have a positive impact.	+	Long term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	Improved road safety contributes to delivering a modal shift to more sustainable transport options such as active travel and public transport. This would contribute to reducing the use of raw material (i.e. fuel) consumption.	+	
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Better road safety delivered by RS3 – RS4 contributes to the safe and efficient movement of all modes of transport. Better roads, which are more reliable and safer are able to offer safer and more reliable travel opportunities and would likely encourage the movement of people more equitably across the region for employment, training and touristic opportunities, whilst also making the region more attractive for further economic investment.</p> <p>Improved safety on highway networks connecting longer distances could improve access between England and North Wales and North and South Wales, mitigating risks of road accidents and reducing congestion.</p> <p>Better road safety would also encourage tourists to visit the region, bringing economic benefits to local economies through leisure and tourism related spending.</p>	+	Long-term/ Indirect



Table 7 – 3 Roads, Streets and Parking – Public car parking in towns and cities

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.3 Roads, Streets and Parking – Public car parking in towns and cities (RS5 – RS6)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>By increasing parking charges and reallocation of road and parking space, Policies RS5 and RS6 encourage a shift to more sustainable transport option within and between locations. This improves access to local services through active travel modes, increasing accessibility for individuals from low-income backgrounds or deprived communities, who rely more on public transport, walking or cycling. Where parking spaces/car parks are removed to improve local placemaking, this could have a positive effect on local communities which become more inclusive and attractive for people to visit by walking and cycling.</p> <p>However, adverse effects may arise where there is not sufficient or frequent enough public transport for communities to take them to the services that they need to access, when they need to access them. Increasing parking charges and/or reducing the amount available may adversely impact communities who have no genuine alternatives to the car to reach such services. The policies may deter people from visiting some towns as they try to avoid the additional costs of parking or avoid the anxiety of finding parking.</p> <p>These policies have no impact on the delivery of local housing.</p>	+/-	Long term/Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.3 Roads, Streets and Parking – Public car parking in towns and cities (RS5 – RS6)		
2. Reduce inequality and promote community cohesion	<p>Reduced single occupancy car use and improved active travel infrastructure delivered by policies RS5 and RS6 could result in a shift to carpooling and active travel modes such as walking and cycling. This contributes to better air quality and road safety, improving environmental conditions. Supporting active travel modes also contributes to improved access for people who have no alternative mode of transport to services like healthcare, education, employment opportunities and social events.</p> <p>Air pollution can have disproportionate impacts on certain protected characteristics groups such as children, older people, people with disabilities, pregnant women and people from low-income backgrounds and deprived areas, making them more vulnerable to the negative health effects of poor air quality⁶. By aiming to reduce air pollution by discouraging single occupancy car use and supporting active travel modes, the policies support the needs of protected characteristics groups.</p> <p>Reallocation of road and parking space could reduce road traffic, resulting in reduced congestion and thus, better journey timings through public transport. Additionally, increased road safety and air quality conditions could lead to improved accessibility of public transport and active travel for all members of society including protected characteristics groups like children.</p> <p>RS6 outlines a collaborative approach of working with partners to explore options regarding reallocation of road space, providing opportunities to engage with stakeholders and creating opportunities for community participation.</p> <p>However, there would also likely be disproportionate adverse effects on people who experience socio-economic disadvantage because parking charge increases would impact them more than people who are not experiencing socio-economic disadvantage. It would also impact disabled people and people from rural areas more who are more reliant on their car to travel around North Wales. Rural communities often do not have a reasonable choice to use alternative modes of transport (e.g. the bus) and therefore increased parking charges would impact them disproportionately.</p> <p>It is important that reallocation of road and parking space is implemented along with initiatives to provide better public transport or carpooling infrastructure to prevent any adverse impacts on access to essential services like healthcare, recreation activities and access to green spaces to mitigate these adverse equality impacts.</p>	+/-	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.3 Roads, Streets and Parking – Public car parking in towns and cities (RS5 – RS6)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policy RS6 would encourage better placemaking, improving the quality of the environment in towns and cities across North Wales and encouraging people to spend more time in the reallocated (from parking) outside spaces. This would increase levels of physical activity resulting in improved physical health, whilst also positively impacting on mental health as a result of people having more opportunities for social interaction.</p> <p>Reduced traffic, improved air quality and better road safety delivered through RS5 and RS6 would also improve health outcomes (particularly for vulnerable groups including children, older people, people who have respiratory disease) and improve connectivity between local communities by improving travel times and accessibility for active travel. This would contribute to improved connectivity within local communities.</p> <p>However, conversely impacts from reduced car parking and increased parking charges may affect mental health as people may become anxious about being able to find somewhere suitable to park and about the additional costs involved. This may deter people from accessing the towns and cities which would have an adverse effect on physical and mental health.</p>	+/-	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>Policy RS5 and particularly RS6 would contribute to enhancing biodiversity where parking is replaced by high quality place-making that includes ecological enhancement (net benefit for biodiversity).</p> <p>The policies would not impact geodiversity.</p>	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.3 Roads, Streets and Parking – Public car parking in towns and cities (RS5 – RS6)		
5. Protect and enhance local landscape character, designations and visual amenity	<p>The policies RS5 and RS6 are unlikely to cause harm to designated or protected landscapes or have an impact on BMV land.</p> <p>Reallocation of road and parking space and discouraging single occupancy car use through parking charges, could result in reduced road traffic and parking pressures, enhancing the visual amenity of towns and cities. This would be further enhanced where parking areas are reallocated to the development of high-quality places.</p>	+	Long-term/ Direct
6. Protect and enhance the local cultural heritage, including the Welsh language	Policies RS5 and RS6 are unlikely to cause harm to designated heritage assets or have an effect on the use of Welsh.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	<p>Policies RS5 and RS6 are unlikely to have a negative impact on the health or quality of water resources.</p> <p>Reduced road traffic and increase in active travel supported by RS5 and RS6, would reduce road runoff of pollutants into water bodies, improving the health of aquatic ecosystem and water quality.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.3 Roads, Streets and Parking – Public car parking in towns and cities (RS5 – RS6)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Policies RS5 and RS6 support a shift to carpooling, public transport and active travel which contribute towards helping meet Wales targets to be net zero by 2050.	+	Long-term/Direct
9. Protect and enhance local air quality.	Policies RS5 and RS6 help reduce road traffic and encourage active travel uptake, resulting in reduced traffic emissions and better air quality for local communities.	+	Long-term/
10. Reduce disturbance from transport related noise and vibration to local communities.	Policies RS5 and RS6 help reduce road traffic and encourage active travel uptake, resulting in reduced traffic noise and vibration for local communities.	+	Long-term/ Direct
11. Incorporate circular economy principles to reduce the use of raw materials.	By increasing parking charges and reallocation of road and parking space, the policies encourage a shift to more sustainable transport option, contributing to reduced use of raw materials like fuels.	+	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.3 Roads, Streets and Parking – Public car parking in towns and cities (RS5 – RS6)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	Policies RS5 and RS6 do not in themselves create an integrated transport system. However, they would contribute to improved place-making that could encourage business investment into the region as a result, increasing economic prosperity.	+	Long-term/ Indirect

Table 7 – 4 Roads, Streets and Parking – Low Emission Vehicles

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.4 Roads, Streets and Parking – Low Emission Vehicles (RS7 – RS11)		
1. Support the delivery of housing and local services to meet the needs of local communities	Policies RS7 – RS11 would contribute to providing the EV infrastructure required to meet the demand in North Wales (both for residents and visitors). These policies would therefore be meeting the EV charging needs of local communities. The policies would not support the delivery of housing.	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.4 Roads, Streets and Parking – Low Emission Vehicles (RS7 – RS11)		
2. Reduce inequality and promote community cohesion	<p>Policies RS7 – RS11 contribute towards improving environmental conditions by focusing on promoting EV uptake through improved charging infrastructure.</p> <p>Statistics from 2021 suggest that the transport sector was the largest emitting sector of the UK economy, where 52% of the transport emissions came from cars⁴⁷. The shift to electric vehicles would contribute to the reduction in greenhouse gas emissions. However, the cost of EV cars can be prohibitively high for some groups of people, particularly those on lower incomes, therefore the benefits of EV infrastructure would only benefit those able to switch to EV vehicles.</p> <p>Certain groups with protected characteristics are more vulnerable to the negative impacts of poor air quality including children, older people, pregnant women and people with respiratory and cardiovascular illness⁶. Improvements in air quality would differentially benefit these groups.</p> <p>Policy RS9 and RS10 outlines a collaborative approach of working with partners, providing opportunities for stakeholder engagement.</p> <p>RS9 aims to develop a communications campaign to encourage EV uptake, that may create opportunities for community participation.</p>	+	Long-term/ Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Policies RS7 – RS11 aim to improve access to electric charging infrastructure which would encourage more people to choose EVs and improve connectivity between local communities via use of EVs. This would reduce 'range anxiety', improving mental health.</p> <p>A shift to EV is beneficial for environmental and human health, as it contributes to reducing greenhouse gas emissions, improving air quality. Negative impacts of air pollution on health include increased strokes, heart diseases, lung cancer, and acute and chronic respiratory diseases.⁴⁸ Thus, by encouraging an uptake in EV, the policies help mitigate the adverse impacts of air pollution.</p>	+	Long-term/ Indirect

⁴⁷ UK Parliament, House of Commons Library, July 2024; Available online at: <https://commonslibrary.parliament.uk/research-briefings/cbp-7480/> (Accessed 18/11/2024)

⁴⁸ World Health Organisation, How air pollution is destroying our health, 2024; Available online at: <https://www.who.int/news-room/spotlight/how-air-pollution-is-destroying-our-health> (Accessed 18/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.4 Roads, Streets and Parking – Low Emission Vehicles (RS7 – RS11)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	An uptake of EVs would help reduce transport related greenhouse gas emissions, resulting in improved air quality. This helps protect biodiversity and geodiversity interests and contribute to ecosystem resilience. The policies do not directly deliver opportunities to restore or create semi-natural habitats or geodiversity.	+	Long-term/ Indirect
5. Protect and enhance local landscape character, designations and visual amenity	Policies RS7 – RS11 are unlikely to cause harm to designated or protected landscapes or result in loss of BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	Uptake in EV and improved charging infrastructure would likely have no impact on cultural heritage or the Welsh language.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Fossil fuel powered vehicles contribute to road runoff, carrying pollutants like oil and heavy metals into water bodies. ⁵ By encouraging a shift to electric vehicles, the policies would result in reduced runoff of pollutants into water bodies, protecting water quality and the health of aquatic ecosystems.	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.4 Roads, Streets and Parking – Low Emission Vehicles (RS7 – RS11)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	<p>RS7 – RS11 encourage and support the shift to EV by improving EV charging infrastructure across locations. This contributes to the decarbonisation of the transport sector, supporting other zero emission initiatives and helping Wales meet net zero targets.</p> <p>Supporting EV uptake would reduce carbon emissions, which are a major contributor to climate change.⁴⁹</p> <p>Supporting EV infrastructure contributes to building resilience against impacts of climate change and extreme weather events by reducing vulnerabilities caused by fossil fuel value chains and geopolitical risks³¹.</p>	+	Long-term/ Direct
9. Protect and enhance local air quality.	<p>Uptake in EV would contribute to reduced air emissions, leading to positive impacts for human health and wellbeing, especially populations living around the major road areas. This would be particularly beneficial for vulnerable groups who are more sensitive to changes in air quality. This includes young children, older people, people with respiratory disease and pregnant women^{6,7}. The largest contribution of emissions within the NWTP area are vehicle emissions from the surrounding main roads. Major roads within the NWTP area include the A55 "North Wales Expressway, A5, A55 and A483.</p>	+	Long-term/ direct
10. Reduce disturbance from transport related noise and vibration to local communities.	<p>These policies are not likely to affect the noise environment.</p>	0	

⁴⁹ UN Environment Programme, Supporting the global shift to electric mobility, 2024; Available online at: <https://www.unep.org/topics/transport/electric-mobility/supporting-global-shift-electric-mobility-0> (Accessed 18/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.10.4 Roads, Streets and Parking – Low Emission Vehicles (RS7 – RS11)		
11. Incorporate circular economy principles to reduce the use of raw materials.	Policies RS7 – RS11 would support the transition of waste collection fleets to cleaner fuels, such as use of EV through the provisioning of improved EV charging infrastructure across locations. It would also reduce the use of raw materials like fossil fuel consumption by supporting an uptake in EV.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>The policies contribute to improved reliance and resilience of the transport network to better support businesses and workers, with reduced dependence on fossil fuels and disruptions to their supply chains, considering the shift to EV. It also helps business and individuals to be able to rely on the EV infrastructure (especially charging points) giving them more confidence that they can move easily around the region without 'charge anxiety'.</p> <p>The policies are unlikely to have an impact on movement of freight.</p>	+	Long-term/Direct



Table 7 – 5 Roads, Streets and Parking – Car Clubs and Car Sharing

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.10.5 Roads, Streets and Parking – Car Clubs and Car Sharing (RS12 – RS13)		
1. Support the delivery of housing and local services to meet the needs of local communities	Policies RS12 and RS13 support local need for car hire which would enable more people to reach the local services that they need without a need for their own personal car (or second car). Car clubs/sharing can also support people in the 'first and last' mile of a journey between home and public transport and/or public transport and place of work. Whilst the policies do not directly support the delivery of housing and local services, they do support access to local services not accessible by public transport, for individuals who do not own cars.	+	Long-term/ Indirect
2. Reduce inequality and promote community cohesion	<p>Policies RS12 and RS13 contribute to reducing cost of car travel, reduce per person vehicle mileage, and reduce localised congestion. This would increase travel options (both mode and journeys) for people who do not own their own car, particularly those experiencing socio-economic deprivation, therefore making access more equitable. It would also help facilitate more equitable access to services like healthcare, employment, education and training opportunities.</p> <p>The policies could promote a sense of community cohesion by supporting the practice of car sharing.⁵⁰</p>	++	Long-term/ Direct
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>The policies would be especially beneficial for communities in rural areas where public transport connectivity is very low. In such circumstances, the policies would contribute to improved access to key health services, recreation activities and green spaces, particularly for people who do not own their own car. This access would encourage increased physical activity as well as provide mental health benefits, reducing stress and risks of anxiety and depression.⁵¹</p> <p>Policies RS12- RS13 also contribute towards reducing social isolation as journey sharing offers opportunities for social interactions, resulting in improved mental health and overall wellbeing.¹¹</p>	+	Long-term/ Indirect

⁵⁰ Department for Transport UK, Lift Sharing: local authority toolkit, April 2022; Available online at: <https://www.gov.uk/government/publications/lift-sharing-local-authority-toolkit/lift-sharing-local-authority-toolkit> (Accessed 18/11/2024)

⁵¹ National Institute for Health and Care Research, Local green spaces are linked with better mental health, November 2024; Available online at: <https://evidence.nihr.ac.uk/alert/local-green-spaces-are-linked-with-better-mental-health/> (Accessed 18/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.10.5 Roads, Streets and Parking – Car Clubs and Car Sharing (RS12 – RS13)		
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	The policies are unlikely to impact biodiversity or geodiversity.	0	
5. Protect and enhance local landscape character, designations and visual amenity	Policies RS12 and RS13 are unlikely to cause harm to designated or protected landscapes or result in loss of BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	The policies are unlikely to cause harm to designated heritage assets or have an impact of local cultural heritage and Welsh language.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	The policies are unlikely to have a negative impact on the health and quality of water resources.	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.10.5 Roads, Streets and Parking – Car Clubs and Car Sharing (RS12 – RS13)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Car clubs and car sharing help reduce transport related emissions, supporting initiatives to decarbonise the transport sector and helping meet Wales targets to be net zero.	+	Long-term/ Indirect
9. Protect and enhance local air quality.	The initiatives of RS12 and RS13 could result in reduced road traffic and transport related emissions, contributing to improved air quality for local communities, particularly those living near the major roads including the A55 "North Wales Expressway, A5, A55 and A483. This would be particularly beneficial for vulnerable groups who are more sensitive to changes in air quality including children, older people, people with respiratory disease and pregnant women ^{6,7} .	+	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	Policies RS12-RS13 are unlikely to have an impact on transport related noise and vibration.	0	
11. Incorporate circular economy principles to reduce the use of raw materials.	The policies encourage partial public transport use and carsharing practices, reducing per person vehicle mileage and contributing to reduced use of raw materials (i.e. fuel).	+	



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.10.5 Roads, Streets and Parking – Car Clubs and Car Sharing (RS12 – RS13)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Car clubs at employment sites, stations, and mobility hubs can expand the areas accessible for job opportunities. The RS12 and RS13 initiatives promote equitable access to employment, education, and training by lowering travel costs and offering transport options for those without cars.</p> <p>These initiatives enhance the reliability and resilience of the transport network, supporting businesses and workers with multimodal transport options, including cars and public transport.</p> <p>RS12 specifically extends multimodal transport options by incorporating car clubs at mobility hubs and stations, facilitating sustainable access to tourist facilities and attractions not directly linked to public transport. This also benefits rural tourism destinations, where increased tourism, supported by RS12, can boost local economies.</p> <p>The policies will have no impact on movement of freight.</p>	+	Long-term/ Indirect



Table 8 – 1 Surface Access to Aviation

IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.11 Surface access to aviation (AV1)		
1. Support the delivery of housing and local services to meet the needs of local communities	Policy AV1 would provide local transport services for communities to be able to reach regional airports via public transport. It would not support the delivery of housing.	+	Long-term/ Direct
2. Reduce inequality and promote community cohesion	Policy AV1 improves public transport services to domestic and international airports. This would be beneficial for everyone, but particularly for people who are entirely reliant on public transport. This is more likely to be people who experience socio-economic disadvantage, older people, disabled people and people from global majority backgrounds.	+	Long-term/ Indirect
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	Policy AV1 is unlikely to result in any health impacts.	0	
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	Policy AV1 is unlikely to have an impact on biodiversity, or geodiversity.	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.11 Surface access to aviation (AV1)		
5. Protect and enhance local landscape character, designations and visual amenity	Policy AV1 is unlikely to have an impact on designated or protected landscapes or result in loss of BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	The policy does not have an impact on local cultural heritage or the Welsh language.	0	
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Policy AV1 is unlikely to have an impact on groundwater, surface and coastal waters, or water quality.	0	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.11 Surface access to aviation (AV1)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	AV1 promotes a shift to public transport to access airports, by focusing on improving public transport connectivity to airports. However, arguably, improved access to airports would encourage more people to fly which significantly contributes to transport related emissions. This would be an adverse effect.	- -	Long-term/ Indirect
9. Protect and enhance local air quality.	By focusing on improving public transport connectivity to airports, policy AV1 helps reduce ground transport emissions and improve air quality for local communities in affected areas. This would be particularly beneficial for vulnerable groups who are more sensitive to changes in air quality including children, older people, people with respiratory disease and pregnant women ^{6,7} .	+	Long-term/ Direct
10. Reduce disturbance from transport related noise and vibration to local communities.	Policy AV1 would not impact transport related noise and vibration experienced by local communities	0	
11. Incorporate circular economy principles to reduce the use of raw materials.	By encouraging increased sustainable transport access to airports, the policy contributes to reduced private vehicle use and thus, a reduction in the use of raw materials (i.e. fuel) being consumed.	+	



IWBA Objective	Appraisal	Score	Duration/ Direct or indirect
	4.11 Surface access to aviation (AV1)		
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Improved public transport connectivity to airports would support businesses seeking international clients and markets, providing increased employment opportunities and encourage economic development.</p> <p>As the closest international airports are located in England - Liverpool John Lennon Airport, Manchester Airport and Birmingham Airport, the policy would improve public transport access between England and North Wales.</p>	+	



Table 9 – 1 Digital Connectivity

IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.12 Digital Connectivity (DC1 – DC3)		
1. Support the delivery of housing and local services to meet the needs of local communities	<p>Policies DC1-DC3 would contribute to the provision of local facilities to support remote working hubs with high quality digital connectivity. This would meet the needs of those within communities who are unable to work from home but would like to have reduce distances to travel to locations where they are able to work.</p> <p>Providing digital literacy training would meet a local need, particularly for some members of the community who may not be sufficiently digitally literate to be able to access information about public transport (e.g. bus routes and timetables) and therefore currently be unable to use public transport confidently.</p> <p>The policies would not contribute to supporting the delivery of local housing.</p>	+	Long-term/ Indirect



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.12 Digital Connectivity (DC1 – DC3)		
2. Reduce inequality and promote community cohesion	<p>Policy DC1 would increase the local provision of digital connectivity increasing the opportunity for people to access employment, training and education. This would be particularly beneficial for people experiencing socioeconomic deprivation (and therefore potentially excluded from employment because of transport costs), and those less able to travel such as disabled people, pregnant people and young people. It also supports workers, primarily women, with caregiving responsibilities for sick or elderly relatives, increasing equity to employment with flexible schedules supported by remote working.⁵²</p> <p>Policies DC2 and DC3 improve accessibility of public transport for all, making real time information about services available. Digital literacy training and education delivered through DC2 could particularly support the needs of protected characteristics groups like older people. A recent analysis by Age UK finds that more than 33% of people aged over 65 are unable to complete fundamental tasks using the internet such as entering account logins, set up connection to Wi-Fi, open applications and internet browsers.⁵³ Additionally, people also experience digital exclusion as a result of socioeconomic status, disabilities and educational attainment. It is important for the digital training and education delivered by DC2 to incorporate the different learning needs of people with physical or mental disabilities to overcome barriers to digital inclusion.⁵⁴</p> <p>Policies DC1 and DC2 outline collaborative approaches of working with communities to promote remote working hubs and increase availability of digital training and education. This creates opportunities for community participation and engagement with local communities.</p>	+	Long-term/ Indirect

⁵² Association for Psychological Science, Healthier at Home, June 2021; Available online at: <https://www.psychologicalscience.org/observer/remote-benefits> (Accessed 19/11/2024)

⁵³ Age UK, More than 1 in 3 over 65s lack the basic skills to use the internet successfully, April 2024; Available online at: <https://www.ageuk.org.uk/latest-press/articles/2024/more-than-1-in-3-over-65s-4.7-million-lack-the-basic-skills-to-use-the-internet-successfully/#:~:text=New%20analysis%20by%20Age%20UK%20has%20found%20around,fundamental%20tasks%20required%20to%20use%20the%20internet%20successfully.> (Accessed 19/11/2024)

⁵⁴ House of Commons, Digital Exclusion, 2023; Available online at: <https://publications.parliament.uk/pa/ld5803/ldselect/ldcomm/219/21905.htm#footnote-285> (Accessed 19/11/2023)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.12 Digital Connectivity (DC1 – DC3)		
3. Improve the health and wellbeing of the local population, including with respect to physical and mental health	<p>Remote working can reduce stress associated with commuting and reduce associated transport costs. It also saves time taken in commuting which can be used pursuing healthy activities such as sport, recreation and socialising, all of which improve health outcomes.</p> <p>Policies DC1-3 would improve connectivity between local communities, including in rural areas, providing people with better access to information regarding services. This would enable people to plan travel more efficiently, and more likely to choose sustainable travel options more often.</p> <p>Enhancing digital literacy to encourage more sustainable travel choices could allow people previously experiencing digital exclusion such as older people, people with disabilities as well as people from low-income backgrounds and deprived areas to travel more confidently using public transport. This is particularly important as these groups of people rely more on public transport to access essential services like healthcare, recreation, green spaces as well as education and employment opportunities, all of which would improve physical and mental health. Improved digital literacy can then contribute to reduced social isolation and improve connectivity to key amenities, services and opportunities, contributing to better overall wellbeing and quality of life.⁵⁵</p>	+	Long-term/ Indirect
4. Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats.	<p>By promoting remote working hubs, DC1 reduces the need to travel, contributing to reduced transport emissions. Policies DC2 and DC3 improve accessibility of public transport services through digital means such as providing real time information, making it easier to plan journeys using public transport, encouraging more frequent use of sustainable transport options. These measures contribute to an overall reduction in transport emissions, which can harm biodiversity and degrade habitats. The policies are unlikely to impact geodiversity.</p>	+	Long-term/ Indirect

⁵⁵ Lopez et al., Digital literacy as a new determinant of health, October 2023; Available online at: <https://journals.plos.org/digitalhealth/article?id=10.1371/journal.pdig.0000279> (Accessed 19/11/2024)



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.12 Digital Connectivity (DC1 – DC3)		
5. Protect and enhance local landscape character, designations and visual amenity	Policies DC1 – DC3 are unlikely to cause harm to designated or protected landscapes or have an impact on BMV land.	0	
6. Protect and enhance the local cultural heritage, including the Welsh language	Policies DC1 – DC3 are unlikely to cause harm to designated heritage assets. Digital literacy training and education delivered by DC2 includes opportunities to support and encourage use of Welsh language.	+	Long-term/ Direct
7. Protect and enhance the health of groundwater, surface and coastal waterbodies, water quality and water resources.	Policies DC1-DC3 would contribute to a reduction in road traffic as a result of a reduced need to travel ⁵⁶ , and improved information about public transport services making it more likely that people choose public transport options. This reduced road traffic would help reduce road runoff of pollutants into water bodies. This contributes to protecting water quality and the health of aquatic ecosystems ⁵ .	+	Long-term/ Indirect

⁵⁶ Caulfield, B. & Charly, A., Examining the potential environmental and travel time saved benefits of remote working hubs. *Transport Policy*, Volume 127, October 2022, pp 139-147. Accessible online at: <https://www.sciencedirect.com/science/article/pii/S0967070X22002360> [Accessed 24/11/24].



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.12 Digital Connectivity (DC1 – DC3)		
8. Support a transition toward a transport sector with reduced (including zero) carbon emissions and enhance the resilience of transport infrastructure to withstand the effects of climate change.	Policy DC1-DC3 contribute towards reducing carbon emissions from the transport sector, helping meet Wales targets to be net zero. This is by promoting opportunities for remote working (thereby reducing the need to travel) ⁵⁶ and improving digital literacy so that people have better access to information about public transport.	++	Long-term/ Direct
9. Protect and enhance local air quality.	Policies DC1-DC3 contribute to reduced transport emissions by supporting reduced need of travel and an uptake in public transport. This contributes to improved air quality conditions, particularly for local communities located near major roads in North Wales like A5, A55 and A487. This would be particularly beneficial for vulnerable groups who are more sensitive to changes in air quality including children, older people, people with respiratory disease and pregnant women ^{6,7} .	+	Long-term/ Indirect
10. Reduce disturbance from transport related noise and vibration to local communities.	Reduced road traffic as a result of the initiatives supported by DC1 – DC3, could lead to reduced disturbances from transport related noise and vibration to local communities living near major roads.	+	Long-term/ Direct



IWBA Objective	Appraisal	Score	Duration/ Direct or Indirect
	4.12 Digital Connectivity (DC1 – DC3)		
11. Incorporate circular economy principles to reduce the use of raw materials.	Policies DC1-DC3 would encourage less travel by private car thereby reducing the amount of fuel being used in transportation. This contributes to a reduction in the use of raw materials (i.e. fuel) being consumed.	+	Long-term/ Indirect
12. Create an integrated transport system that facilitates efficient and safe movement of both people and freight, contributing to increased economic prosperity in the region.	<p>Remote working opportunities extend employment opportunities across locations in North Wales with reliable internet access. Policies DC2 and DC3 contribute to improve the reliance and resilience of the transport network to better support businesses and workers, with online access to information and real time information at transport interchanges and bus stops, supporting better journey planning via sustainable transport modes. The policies therefore facilitate economic activity in the region, particularly encouraging those who were previously excluded from the job market to become economically active.</p> <p>Exploring more remote working hubs with reliable internet access in more deprived areas, could support equitable employment and potentially encourage investment in the areas, improving quality of life.</p> <p>Access to online and real time information about public transport services, makes travel easier for visitors and tourists, encourage sustainable access to tourist facilities and attractions. This helps support local economies with tourism attractions through leisure related spending.</p> <p>These policies would not affect freight transport.</p>	+	Long-term/ Indirect