



Welsh Government
Consultation - summary of responses

Wales Transport Strategy: final scoping report

Integrated Sustainability Appraisal (ISA) Wales transport strategy

November 2020

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

INTEGRATED SUSTAINABILITY APPRAISAL OF THE WALES TRANSPORT STRATEGY

Final Scoping Report

OCTOBER 2020

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

Arcadis Consulting (UK) Limited is a private limited company registered in England & Wales (registered number: 02212959). Registered office, Arcadis House, 34 York Way, London, N1 9AB. Part of the Arcadis Group of Companies along with other entities in the UK.

VERSION CONTROL

Version	Date	Author	Changes
1	March 2020	OL/NM/PC/ST/DH	First Draft for client comment
2	March 2020	ST/OL/NM/DH	Second Draft for consultation sent to translation
3	April 2020	ST/OL/NM/DH/JE	Third Draft, for consultation, following further internal WG comments.
4	October 2020	ST/OL/NM/DH/JE	Final, amended in light of consultee responses.

This report dated 06 October 2020 has been prepared for Welsh Government (the “Client”) in accordance with the terms and conditions of appointment dated 30 January 2020 (the “Appointment”) between the Client and **Arcadis** for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

CONTENTS

ABBREVIATIONS	I
1 SUMMARY	1
2 BACKGROUND TO THE WALES TRANSPORT STRATEGY AND PURPOSE OF THIS INTEGRATED SUSTAINABILITY APPRAISAL SCOPING REPORT	3
2.1 Introduction.....	3
2.2 What is the Wales Transport Strategy?	3
2.3 What is an Integrated Sustainability Appraisal?	4
2.4 What is the relationship between the Wales Transport Strategy, the Integrated Sustainability Appraisal and the Well-being of Future Generations?	7
2.5 How does the Wales Transport Strategy relate to other Welsh Government strategies?	13
2.6 Will a Habitats Regulations Assessment be undertaken?	14
2.7 What consultation is has been undertaken on the Scoping Report?	15
3 THE INTEGRATED SUSTAINABILITY APPRAISAL PROCESS	16
3.1 Stages in the Integrated Sustainability Appraisal Process.....	16
3.2 An integrated approach to assessing impacts	19
4 REVIEW OF RELEVANT PLANS, PROGRAMMES AND ENVIRONMENTAL OBJECTIVES (A1).....	23
4.1 Introduction.....	23
4.2 Key Themes Resulting from the Review	26
5 BASELINE INFORMATION AND IDENTIFICATION OF KEY SUSTAINABILITY ISSUES AND OPPORTUNITIES (A2 AND A3)	29
5.1 Introduction.....	29
5.2 Methodology	29
5.3 Key Sustainability Issues and Opportunities	30
6 THE APPRAISAL PROCESS AND INTEGRATED SUSTAINABILITY APPRAISAL FRAMEWORK (A4)	49
6.1 Appraisal Process	49
6.2 The Integrated Sustainability Appraisal Framework	51
7 NEXT STEPS	60
7.1 General	60

APPENDICES

Appendix A: Glossary and Plans, Programmes and Environmental Protection Objectives

Appendix B: Baseline Data and Key Issues and Opportunities

Appendix C: Internal Compatibility of ISA Objectives

Appendix D: Response Log

Abbreviations

Abbreviation	Definition
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
CO ₂	Carbon Dioxide
CRIA	Children's Rights Impact Assessment
cSAC	Candidate Special Area of Conservation
DBEIS	Department for Business, Energy and Industrial Strategy
DEFRA	Department for Environment, Food and Rural Affairs
DNS	Developments of National Significance
EqIA	Equalities Impact Assessment
GDP	Gross Domestic Product
GVA	Gross Value Added
HIA	Health Impact Assessment
HRA	Habitats Regulations Assessment
ISA	Integrated Sustainability Appraisal
LNR	Local Nature Reserve
LSOA	Lower Super Output Area
LWS	Local Wildlife Site
NNR	National Nature Reserve
NQF	National Qualifications Framework
SPA	Special Protection Area
pSPA	Potential Special Protection Area
SA	Sustainability Appraisal

Abbreviation	Definition
SAC	Special Area of Conservation
cSAC	Candidate Special Area of Conservation
SEA	Strategic Environmental Assessment
SoNaRR	State of Natural Resources Report
SPA	Special Protection Area
SPP	Statement of Public Participation
SSSI	Site of Special Scientific Interest
UNCRC	United Nations Convention on the Rights of the Child
WSP	Wales Spatial Plan
WTS	Wales Transport Strategy

1 Summary

1.1.1 Arcadis Consulting (UK) Limited (Arcadis) is developing an Integrated Sustainability Appraisal (ISA), which will help to ensure that the Wales Transport Strategy (WTS) makes a positive contribution towards Wales' seven national well-being goals, whilst also embedding the principles of sustainable development at all stages of the WTS-making process. The WTS seeks to provide a long-term vision for transport over the next 25 years and provide the strategic framework within which future decisions on investment options will need to be made.

1.1.2 The ISA incorporates a number of different assessment approaches, including Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) (a European legal requirement). It is best practice to integrate SA and SEA into one coherent process. The Welsh Government has decided to integrate several other impact assessments with the SA/SEA, to form an ISA, including: Equalities Impact Assessment (EqIA); Welsh Language; Rural Proofing; Children's Rights; Climate Change; Economic Development; and Health Impact Assessment (HIA). Some of these are statutory impact assessments and some are required by Welsh Government as described further in Section 2 of this Report.

1.1.3 This Scoping Report represents the first stage of the ISA process. A key output of the ISA Scoping Stage is the ISA Framework. This has been developed through the review of the relevant plans, policies and programmes, as well as a review of the relevant baseline information, and identification of key sustainability issues and opportunities. The ISA Framework is the main assessment tool used during the ISA and comprises a series of 13 ISA Objectives covering social, economic, cultural and environmental issues identified, ensuring that the requirements of each of the integrated assessments are included. This will be used to assess the WTS as it develops. The ISA objectives are:

1. To contribute to an improvement in physical, mental and social health and well-being for all, including contributing towards a reduction in health inequalities across Wales
2. To create the conditions within which an improvement in social cohesion and equality can be achieved
3. To support sustainable economic development and diversity
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces
5. To encourage the protection and promotion of the Welsh Language
6. To reduce greenhouse gas emissions from transport
7. To enable climate change resilience
8. To protect and improve air quality
9. To protect and enhance the local distinctiveness of our landscapes and townscapes
10. To promote the conservation and enhancement of heritage assets
11. To promote the conservation and enhancement of biodiversity and geodiversity

12. To ensure the sustainable use of natural resources
13. To enable the protection of tranquil areas and prevention of noise and light pollution

1.1.4 This Scoping Report has been subject to consultation with the statutory consultees, as well as the wider public. The ISA Objectives above reflect changes made as a result of the consultation responses, which are documented in Appendix D to this report.

2 Background to the Wales Transport Strategy and Purpose of this Integrated Sustainability Appraisal Scoping Report

2.1 Introduction

2.1.1 The Welsh Government is currently preparing a Wales Transport Strategy (WTS) to provide a long-term vision for transport in Wales over the next 25 years. The WTS will have a pivotal role to play in delivering a greener, more prosperous and more equal Wales.

2.1.2 It is important that Welsh Government has a comprehensive understanding of the likely positive and adverse effects of the Wales Transport Strategy (WTS). To achieve this, Arcadis Consulting (UK) Limited (Arcadis) is developing an Integrated Sustainability Appraisal (ISA), which will help to ensure that the WTS makes a positive contribution towards Wales' seven national well-being goals, provided for by the Well-being of Future Generations (Wales) Act 2015, whilst also embedding the principles of sustainable development at all stages of the WTS-making process.

2.1.3 This Scoping Report represents the first stage of the ISA process.

2.2 What is the Wales Transport Strategy?

2.2.1 The Wales Transport Strategy is a statutory document required by the Transport (Wales) Act 2006 (The Act). The Act places a duty on the Welsh Ministers to prepare and publish a WTS setting out its policies and how they will be discharged. Covering all modes, it sets out Welsh Government's strategic priorities and desired outcomes, providing a link to the wider priorities as well as plans at the local authority level. The WTS will need to address all transport modes in Wales, including walking; cycling; public transport modes; electric vehicles; cars; and any other modes.

2.2.2 Section 2(3) of the same Act requires the Welsh Ministers to keep the Wales Transport Strategy under review and provides the ability to revise it from time to time.

2.2.3 The previous Wales Transport Strategy (One Wales: Connecting the Nation) was published in 2008. During the past decade much has changed, including the devolution of more powers to the Welsh Assembly; publication of overlapping legislation (Well-being of Future Generations (Wales) Act 2015, Environment (Wales) Act); while further changes are anticipated arising through Local Government reforms; post-Brexit funding and relationships; and the devolution of further transport related responsibilities, as well as changes resulting from the impact of COVID-19.

2.2.4 It is against this background that the Welsh Government is seeking to develop the new WTS to provide a long-term vision for transport over the next 25 years, which recognises these recent changes and looks to address future opportunities and challenges. The Strategy will provide the strategic framework within which future decisions on investment options will need to be made. It will not identify or present specific projects, schemes, initiatives or interventions, as these will be set out in the 5-year detailed National Transport Delivery Plan and Local Transport Plans.

2.3 What is an Integrated Sustainability Appraisal?

2.3.1 The Welsh Government is committed to improving the social, economic, environmental and cultural well-being of Wales now and over the long term. One of the key methods of achieving this is to take an integrated approach to strategy and policy development. It is noted that the terms IIA (Integrated Impact Assessment) and ISA (Integrated Sustainability Appraisal) are essentially different terms with the same meaning.

2.3.2 Although ISA is a process for predicting and evaluating the likely social, economic and environmental impacts of a plan, and aims to ensure that sustainable development is at the heart of the plan-making process. It can also be used to capture cultural impacts, which enable it to be consistent with the four components of sustainable development in Welsh law.

2.3.3 Strategic Environmental Assessment (SEA) is a requirement of several pieces of legislation including the European Directive 2001/42/EC ‘on the assessment of the effects of certain plans and programmes on the environment’ (The Strategic Environmental Assessment Directive)¹ which was transposed directly into Welsh law through the SEA Regulations². SEA is a systemic process for evaluating the environmental consequences of plans and programmes to ensure that environmental issues are integrated and assessed at the earliest opportunity in the decision-making process. Article 1 of the SEA Directive states that the aim is to:

‘provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development’.

2.3.4 Sustainability Appraisal (SA) is an assessment of the economic, environmental and social effects of a Plan carried out from the outset of the Plan-making process to ensure that decisions are made that accord with sustainable development principles. SA is a systematic and iterative process that identifies and reports on the extent to which implementation of the plan will achieve the environmental, social and economic objectives by which sustainable development can be defined and identifies opportunities for improving plan performance in relation to these.

2.3.5 It is best practice to integrate SA and SEA into one coherent process. The Welsh Government has decided to integrate several other impact assessments with the SA/SEA to form an ISA, including:

- Equalities Impact Assessment (EqIA);
- Welsh Language;
- Rural Proofing;
- Children’s Rights;
- Climate Change;
- Economic Development (including the socio economic duty); and

¹ Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment

² Environmental Assessment of Plans and Programmes (Wales) Regulations (SI 2004/1656 (W/170)) and in England, the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/1633)

- Health Impact Assessment (HIA).

2.3.6 Some of these are statutory impact assessments and some are required by Welsh Government as described further in Section 2 of this Report.

2.3.7 The SEA Directive specifies certain topics in Appendix 1(f) that require consideration throughout the SEA and will therefore be a key element of this ISA. This includes:

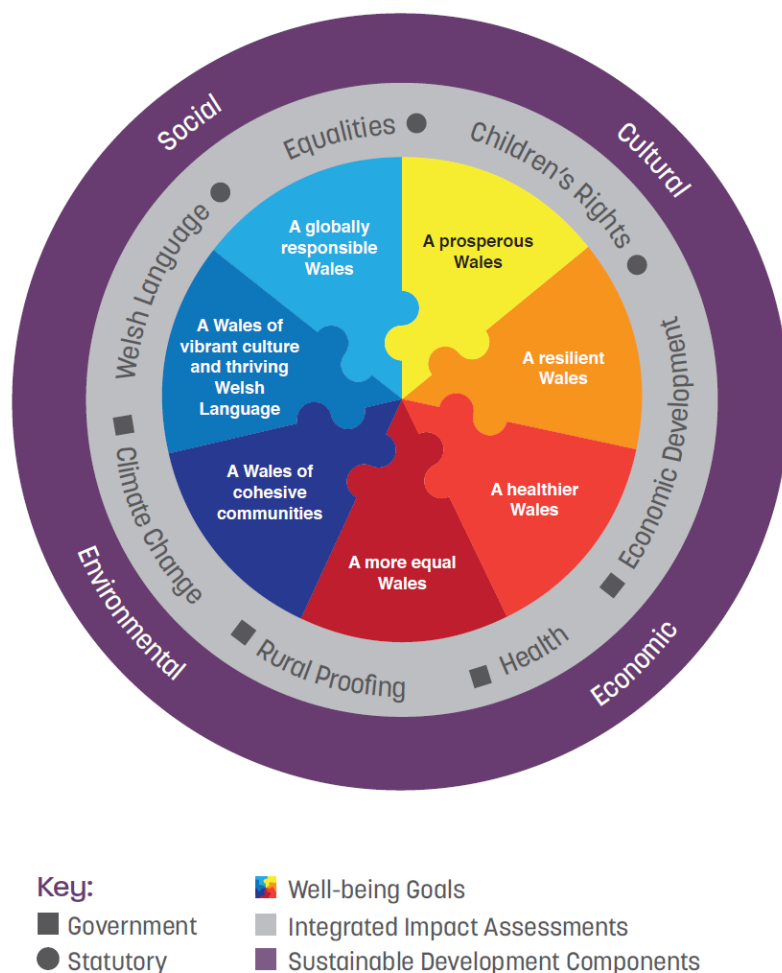
- Biodiversity;
- Population;
- Human health;
- Fauna;
- Flora;
- Soil;
- Water;
- Air;
- Climatic factors;
- Material assets;
- Cultural heritage including architectural and archaeological heritage;
- Landscape; and
- The interrelationship between the above factors.

2.3.8 A Habitats Regulations Assessment (HRA) Screening of the ISA is also underway. This is separate to the ISA. HRA is a process of determining whether the WTS could potentially lead to significant effects on the integrity of internationally designated sites of important biodiversity value.

2.3.9 Integral to the principles of sustainable development is the need to adopt an integrated approach. The integration of these other assessments ensures that a collaborative approach is undertaken on different issues, sharing knowledge and recognising links between topics in a consistent and transparent manner. This provides a robust and thorough mechanism for identifying issues and opportunities, assessing impacts including cumulative and indirect effects and undertaking monitoring in a holistic manner. Overall, the ISA will facilitate a more rounded view of the sustainability implications and opportunities arising from the WTS. Figure 1-1 provides an overview of the impact assessments integrated into this ISA.

Figure 1-1 Impact assessments to be integrated alongside SA/SEA and their status

Integrated Impact Assessments



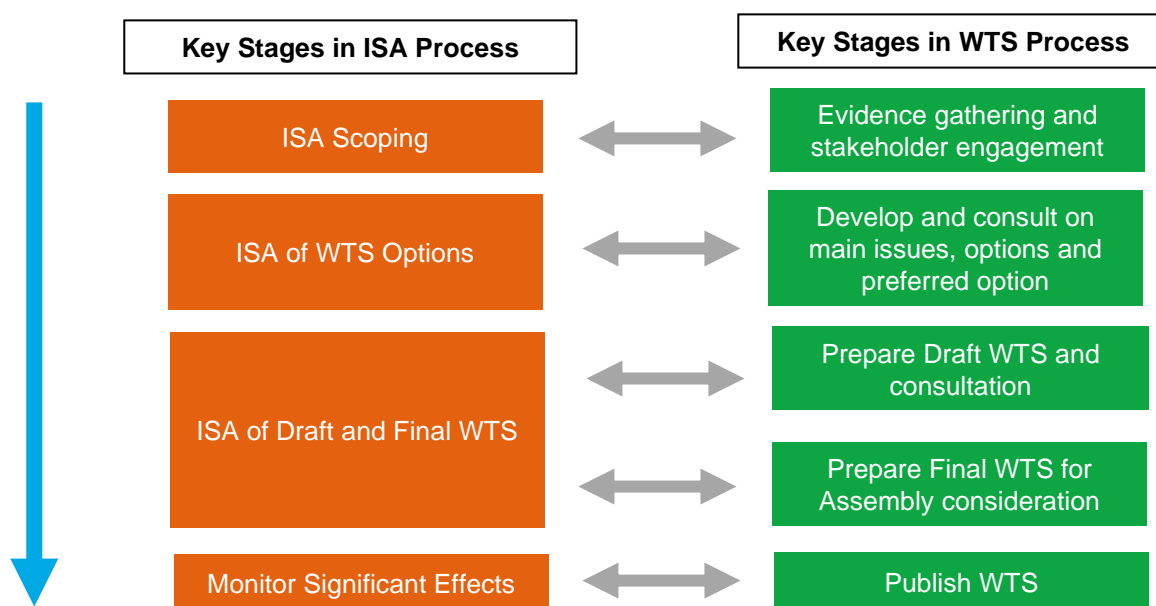
OGL © Crown Copyright 2017 WG21847

2.3.10 Guidance produced by the UK Government³ (see also Section 2 of this Report) presents a series of prescribed stages for SEA. These same stages are adopted for this ISA albeit the coverage is broader than environmental issues. Nevertheless, the principles and legal requirements of the SEA Regulations must be upheld. This Scoping Report identifies and explains the specific requirements of the SEA Directive that need to be fulfilled.

2.3.11 Figure 1-2 illustrates the main stages of the ISA as it fits with the WTS development process. A more detailed explanation is provided in Section 2 of this Scoping Report:

³ <https://www.gov.uk/government/publications/strategic-environmental-assessment-directive-guidance>

Figure 1-2 Outline of ISA and WTS Process



What is the Scoping Report stage of the ISA process?

2.3.12 This Scoping Report represents the initial stage of the ISA and sets the scope for the remainder of the process. It is an integrated approach which has been shaped through engagement and involvement of stakeholders and follows the methodology set out in the published guidance⁴ and seeks to:

- Set the scope and level of detail of the ISA;
- Identify relevant plans, policies, programmes and initiatives that will inform the ISA process and the WTS;
- Identify relevant information about existing social, economic, cultural and environmental conditions in Wales at a national scale of relevance to transport;
- Identify key sustainability issues and opportunities; and
- Present an appraisal framework for the ISA, against which the WTS can be appraised.

2.4 What is the relationship between the Wales Transport Strategy, the Integrated Sustainability Appraisal and the Well-being of Future Generations?

2.4.1 The WTS is the Welsh Government's national 25 year transport strategy. The ISA is the process through which the WTS will be developed. It places sustainable development at the heart of the process and integrates a range of assessments into a simple yet comprehensive assessment tool.

2.4.2 The Well-being of Future Generations (Wales) Act 2015, approved by the National Assembly in March 2015, seeks to directly place Wales on a sustainable path to improving

⁴ ODP (2005) *A Practical Guide to the Strategic Environmental Assessment Directive Practical guidance on applying European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment"*

our well-being. The Act requires that public bodies carry out sustainable development which is defined as:

“Sustainable development” means the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals.

2.4.3 Rather than an end in itself, sustainable development is a way of doing things and the Act guides how public bodies should operate to achieve it. The Act provides for a shared purpose through seven well-being goals for Wales. These well-being goals are indivisible from each other and explain what is meant by the well-being of Wales (see Table 1-1).

2.4.4 Sustainable development is a process which also contributes to improving well-being. It acknowledges that there are many things that determine a person’s quality of life (their well-being), and that these all can broadly be categorised as environmental, economic, social and cultural factors. These are captured in the well-being goals. This means that improving the quality of our environment, our economy, society and culture can improve the well-being of individuals and that of Wales as a whole.

Table 1-1 Definition of Well-being of Future Generations Act Goals

Goal	Description of the goal
A prosperous Wales	An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.
A resilient Wales	A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).
A healthier Wales	A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood.
A more equal Wales	A society that enables people to fulfil their potential no matter what their background or circumstances (including their socio-economic background and circumstances).
A Wales of cohesive communities	Attractive, viable, safe and well-connected communities.
A Wales of vibrant culture and	A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.

thriving Welsh language	
A globally responsible Wales	A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being.

Source: Welsh Government, *Well-being of Future Generations (Wales) Act 2015: The Essentials*⁵

Importance of Integrating the Seven Well-being Goals into the ISA

2.4.5 The WTS will have an important role in contributing to the achievement of well-being goals over the 25-year period, and the approach to appraisal will help Welsh Government to understand where the WTS can maximise that contribution. The well-being goals have been integral to the preparation of the Scoping Report and the ISA Framework (Section 5.2). The well-being goals have also been used to inform the review of the evidence, identify issues and structure the ISA Framework.

Ways of Working

2.4.6 The sustainable development principle defined by the Act is a fundamental part of how public bodies – including the Welsh Government – must now operate. This includes 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, by taking account of the sustainable development principle.

2.4.7 The principle is made up of five ways of working that public bodies are required to take into account when applying sustainable development. These are:

- Looking to the **long term** so that Welsh Government do not compromise the ability of future generations to meet their own needs;
- Taking an **integrated** approach so that public bodies look at all the well-being goals in deciding on their well-being objectives;
- **Involving** a diversity of the population in the decisions that affect them;
- Working with others in a **collaborative** way to find shared sustainable solutions;
- Understanding the root causes of issues to **prevent** them from occurring.

⁵ <https://gov.wales/sites/default/files/publications/2019-08/well-being-of-future-generations-wales-act-2015-the-essentials.pdf>

Figure 1-3 Well-being goals & the Five Ways of Working



Source: adapted from: Welsh Government, Well-being of Future Generations (Wales) Act 2015: The Essentials⁶

The Ways of Working and the Wales Transport Strategy

2.4.8 The five ways of working are integral to the WTS preparation-process and therefore, by association, the ISA. During the work Arcadis and Welsh Government have undertaken, we have considered how the ways of working shape what we do. Table 1-2 sets out an overview of our approach.

Table 1-2: The five ways of working and the WTS/ISA

Looking to the long term
Development of WTS
To ensure we consider the long term, the WTS will be developed to provide a 25-year vision for transport in Wales. Importantly, the WTS will also support thinking beyond 2040 wherever possible, make use of evidence and trends and seek to understand outcomes over the longest timeframes available. Whilst shorter term policies are of interest to the WTS and may inform its approach in some areas, ultimately the WTS supports an approach which is not constrained by short term needs only.
Role of ISA

⁶ <https://gov.wales/sites/default/files/publications/2019-08/well-being-of-future-generations-wales-act-2015-the-essentials.pdf>

The role of the ISA is to support long term policy making in the WTS. It identifies and considers a broad range of social, environmental, cultural and economic evidence. The review of baseline plans and programmes, and the identification of issues and opportunities draws on a detailed body of evidence which consider the short, medium and long term. The testing framework will test emerging policy and assess its ability to deliver the long term objectives. The options that will be developed and tested through the ISA will specifically consider the delivery of long-term strategic change. Appendix B of the ISA sets out the baseline evidence that looks at short, medium and long-term trends. Section 4 for example illustrates the long-term trends around population projections. This feeds into the identification of key issues and opportunities for the WTS to address and shapes the ISA Framework for assessment of the WTS.

Taking an integrated approach

Development of WTS

The WTS will provide a national strategy covering economic, social, environmental and cultural transport issues. The WTS will be consistent with and support the delivery of Welsh Government policies including the National Strategy: Prosperity for All, the Economic Action Plan and the National Development Framework. The WTS will provide the strategic framework within which future decisions on investment options will need to be made. It will not identify or present specific projects, schemes, initiatives or interventions, which will be set out in the 5-year detailed National Transport Delivery Plan and Joint Local Transport Plans.

Its policies will be integrated, maximising the contribution to the well-being goals, and developed through a detailed, evidenced assessment process. The ISA will be the tool through which we test this integration and ensure the contribution to meeting the well-being goals is maximised.

Role of ISA

The ISA is the integrated approach to the development of the WTS and the assessment of its emerging policies. It ensures a holistic approach is undertaken, sharing knowledge and recognising links between the different topic areas and therefore the goals. The ISA process incorporates a review of relevant plans, programmes and environmental objectives at national to international scale. This enables the Welsh Government to take advantage of potential synergies, identify opportunities and deal with any inconsistencies and constraints. As part of the ISA a compatibility assessment of the assessment Framework has also been undertaken to ensure any conflicts are highlighted, resolved or managed as necessary.

The consultation and supporting ISA workshop with key stakeholders ensured that a range of views were gathered on the draft ISA Scoping Report including the draft Framework and proposed integrated approach. This also ensures the identification of synergies and conflicts at an early stage, ensuring a robust approach to the assessment. A cross government approach is being undertaken with the establishment of an ISA Working Group. This comprises expert policy leads covering decarbonisation, transport, marine planning, natural resources, nature conservation, future trends and statistics. The Working Group has been established to support the ISA process throughout the development of the WTS.

It is intended that a collaborative approach will evolve throughout the process to fill data gaps, undertake monitoring and increase engagement with groups such as Public Service Boards.

Involving people
<p>Development of WTS</p> <p>We will involve key stakeholders in the development of the WTS. Engagement on the draft strategy will be held as follows:</p> <ul style="list-style-type: none"> - stakeholder input to the draft strategy, including internal and external consultation with key stakeholders plus the Commissioners’ offices. - consultation and engagement on the draft strategy document. - recording the outputs from the stakeholder consultation exercise. - analyse feedback and produce a consultation report. - stakeholder input to refining the WTS. <p>The objectives of the engagement are:</p> <ol style="list-style-type: none"> 1. To make audiences aware of and seek the views on, the development of the Wales Transport Strategy, priorities and outcomes. 2. To ensure that public and stakeholders have an opportunity to comment on proposals for change, so that feedback can be used to inform the decision-making process. 3. To make sure that the consultation is inclusive and provides opportunities for involvement by a diverse range of stakeholders and the public. 4. To ensure a high level of awareness and understanding of why changes are being proposed.
<p>Role of ISA</p> <p>The ISA provides an important opportunity for people to get involved in shaping the WTS as it progresses. It is a process that tells the story of the plan aiding understanding of its development.</p> <p>Future stages of the ISA work will involve different organisations and individuals to ensure a wide range of views continue to be captured and feed into the development of the WTS. The ISA will involve incorporate the promotion and protection of the Welsh National language.</p>
Collaborating with others
<p>Development of WTS</p> <p>The WTS will not on its own be able to tackle the key transport challenges. Its role is to set out our strategic priorities and desired outcomes providing a link to wider priorities as well as plans at the local authority level, as well as those of other transport stakeholders. Its role is to identify what it can do both directly and in collaboration with others. There is the opportunity for the WTS to facilitate actions by others and to maximise the opportunities to support the delivery of common goals, maximise positive outcomes and help achieve the well-being goals.</p> <p>Importantly, the WTS is interested in supporting delivery at all levels through the planning system. As well as major and one-off projects, the WTS will look to facilitate the delivery of multiple smaller projects, which can help collectively deliver change over the long term.</p> <p>The WTS is interested in working with all. It will have a role co-ordinating the delivery of investment and strategies across Government; it will work with regional and local plan makers; businesses; stakeholders; and a broad range of interests.</p>
<p>Role of ISA</p>

The ISA, through the review of plans, programmes and environmental objectives (Appendix A), baseline evidence (Appendix B), will help to identify the key sustainability issues and sets out opportunities for the WTS (Table 4-1); following engagement and consultation the evidence, plans and programmes etc. have been updated and amended. This has led to the development of the ISA Framework against which the WTS policies and proposals will be tested and will help to maximise collaborative opportunities and ensure the WTS is as sustainable as possible.

Prevention

Development of WTS

The transport strategy is one of the government's levers in identifying future outcomes and measures to monitor success. The WTS will set out the Welsh Government's long-term strategic vision for transport accompanied by a set of outcomes to achieve that vision, as well as measures so that progress can be tracked. This will give a clear basis on which to plan investment and the development of the network in the way best suited to realising collective priorities, as well as to prevent future transport problems and the impacts of transport. The WTS will also provide for the safety and protection of disadvantaged and minority groups within Wales.

The WTS will be evidence based. It will be subject to a programme of monitoring and review, to establish its progress towards meeting its outcomes.

Role of ISA

The ISA is evidence based which feeds through the Scoping Report and shapes the ISA Framework. The review of this evidence identified key issues and opportunities for the WTS to address and ensure the WTS prevents negative outcomes and enhances positive outcomes where possible (Table 4-1). The identification of these issues and trends at this early stage will help in the development of the WTS through shaping the ISA Framework objectives and questions. The ISA process ensures that the WTS will be monitored to ensure the WTS is being successfully implemented and delivering its objectives. Any issues highlighted will feed into the review of the WTS.

2.5 How does the Wales Transport Strategy relate to other Welsh Government strategies?

2.5.1 In addition to supporting the delivery of the well-being goals, the WTS will have an important role in supporting the delivery of key Government policy including a wide range of economic, social, cultural and environmental policies. This includes 'Taking Wales Forward', 'Prosperity for All: the national strategy', 'Prosperity for All: A Low Carbon Wales'; 'Nature Recovery Action Plan'; 'Economic Action Plan' and 'National Development Framework' (soon to be renamed 'Future Wales – the National Plan 2040') and the Climate Emergency, declared by Welsh Government in 2019.

2.5.2 Taking Wales Forward is a five-year plan to deliver more and better jobs through a stronger, fairer economy, improve and reform public services, and build a united, connected and sustainable Wales. Taking Wales Forward sets out how the organisation will work differently across traditional boundaries to deliver priorities. Prosperity for All: the national strategy takes the commitments from Taking Wales Forward and places them in a long-term context; and sets out how they will be delivered by bringing together the efforts

of the whole Welsh public sector. The four key themes within the strategy reflect those within Taking Wales Forward, these are:

- Prosperous and Secure
- Healthy and Active
- Ambitious and Learning
- United and Connected

2.5.3 The strategy also recognises areas which emerged as having the greatest potential contribution to long term prosperity and well-being. It places particular focus on these five priority areas where it is believed that by improving how services are delivered, there can be the greatest initial impact, paving the way for further action over the longer term. The six priority areas are:

- Early Years
- Housing
- Social Care
- Mental Health
- Skills and Employability
- Decarbonisation

2.5.4 The strategy represents a new way of working, one that recognises the challenges faced today, the Wales wanted for the future and the steps that need to be taken to make it a reality.

2.5.5 The Welsh Government's Welsh Language Strategy Cymraeg 2050: A million Welsh speakers will guide the WTS in its aim to promote and protect the Welsh language.

2.5.6 Other key documents reviewed are summarised in Appendix A and Section 3 of this report.

2.6 Will a Habitats Regulations Assessment be undertaken?

2.6.1 The European Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna (the 'Habitats Directive') requires that any plan or programme likely to have a significant impact upon a Natura 2000 site (Special Areas of Conservation (SAC), candidate Special Areas of Conservation (cSAC), Special Protection Areas (SPA), potential Special Protection Areas (pSPA) and Ramsar sites), which is not directly concerned with the management of the site for nature conservation, must be subject to an Appropriate Assessment. The Directive was transposed into Welsh law via the Habitats Regulations⁷. The overarching process is referred to as Habitats Regulations Assessment (HRA).

2.6.2 Following consultation with Natural Resources Wales (NRW), the WTS will be subject to HRA Screening. The outcome of this process will be published alongside the WTS and this ISA.

⁷ The Conservation of Habitats and Species Regulations 2010 (SI 2010/490)

2.7 What consultation is has been undertaken on the Scoping Report?

2.7.1 The Draft Scoping Report for the ISA of the WTS was one of the first stages in engagement and collaboration for the WTS. Consultees included the statutory consultees NRW and Cadw. A workshop, comprising an ISA working group within Welsh Government, was also held. The public consultation lasted for 12 weeks and finished at the end of July 2020.

3 The Integrated Sustainability Appraisal Process

3.1 Stages in the Integrated Sustainability Appraisal Process

3.1.1 The Practical Guide to the SEA Directive subdivides the SEA process into a series of stages. These stages are mirrored in this ISA with additional information provided to ensure each of the integrated assessments are incorporated. The intention is that the process is iterative. Figure 2-1 presents the key stages of the ISA, alongside the WTS key stages of development, and which assessments will be integrated as part of the ISA process. In summary, the ISA will comprise the following process:

Stage A: Setting the Context and Objectives, Establishing the Baseline and Deciding on Scope (This Stage)

3.1.2 This report provides a summary of the Scoping stage of the ISA process. This stage provides the basis on which the subsequent stages of the ISA will be undertaken. The review of other relevant plans and programmes and the development of environmental objectives, including other national and higher-tier policies and plans, establishes the context within which the WTS will sit. To accurately predict how the WTS proposals could affect environmental, social, cultural and economic factors, it is first important to understand the current state of these factors and then examine their likely evolution without the implementation of the Strategy. This baseline is then analysed, to identify the key sustainability issues that will inform the emerging WTS and opportunities that the WTS could influence. Following on from this, the ISA Framework will be established, to determine a set of key objectives and questions, to be used to assess the emerging WTS and how it could improve these environmental, social, cultural and economic factors, within the context of the well-being goals.

3.1.3 The consultation process helps to refine this work so that we have an ISA Framework that is effective in appraising the WTS.

Stages B1 and B2: Developing and refining alternatives and assessing effects (Next Stage)

3.1.4 Following the Scoping Consultation, the ISA will move to Stage B which will involve a high-level appraisal of an initial draft of the WTS policies and proposals against the established ISA Framework. The assessment will enable the draft WTS policies and proposals to be assessed at an early stage, with any potential options identified. Recommendations can be made for improvements or alternatives, as appropriate. This will inform the development of the WTS to be taken forward and refined.

Stages B3, B4, B5 and B6: Predicting and evaluating the effects of the Draft WTS, including alternatives

3.1.5 Following the development of the revised WTS policies and proposals, this stage of the assessment is the evaluation of the predicted significant effects. The evaluation involves forming a judgement on whether or not the predicted effects would be environmentally significant. Stages B5 and B6 are an integral part of this process and comprise the recommendations for an improvement in outcomes and potential monitoring of predicted significant effects (see Stage E).

Stages C and D: Draft ISA Report and Consultation

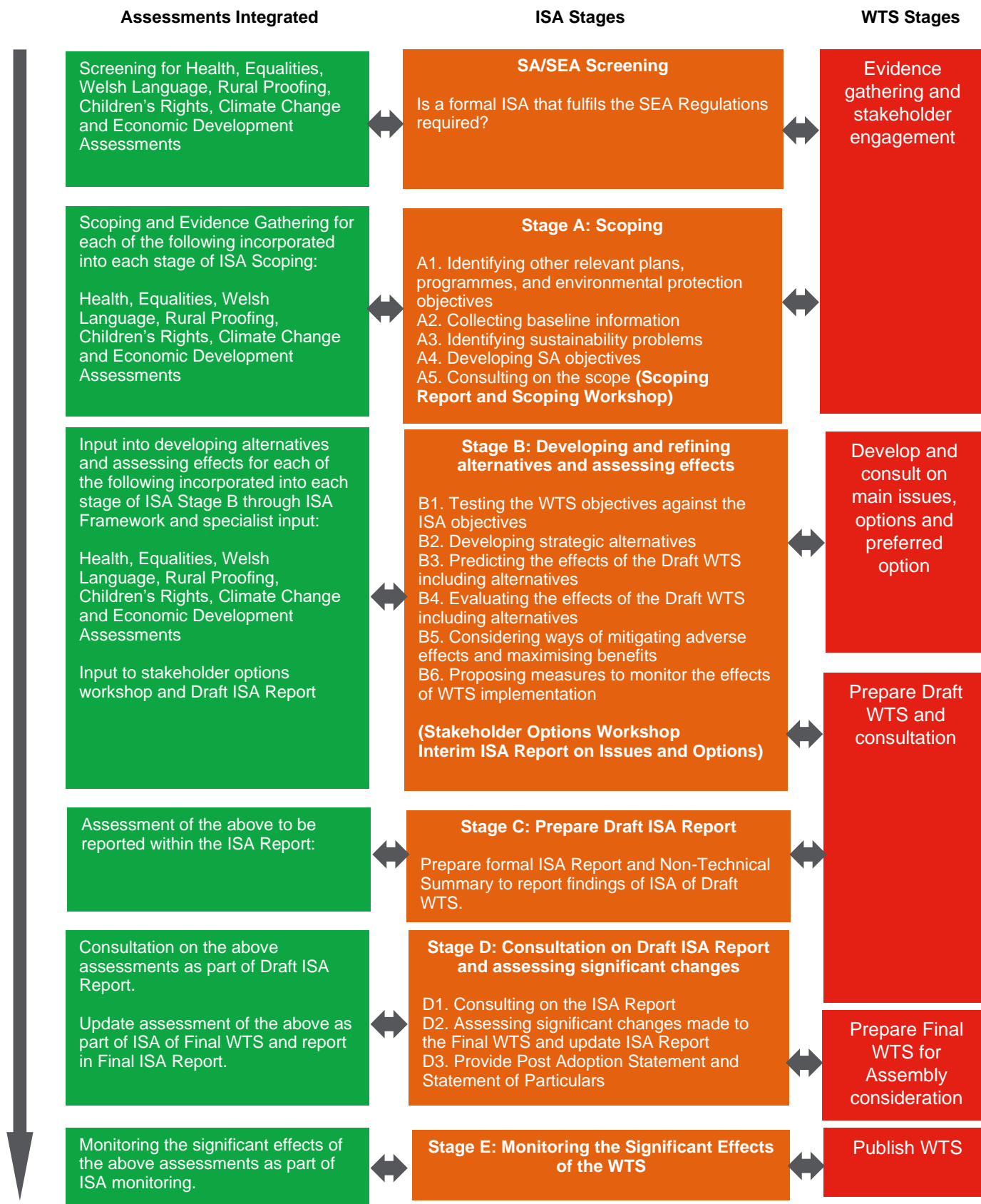
3.1.6 A Draft ISA Report will be published (Stage C) to accompany the Draft WTS consultation (Stage D).

3.1.7 Following the consultation on the Draft WTS the ISA will again be updated to reflect any significant changes in the WTS as a result of the consultation (continuation of Stage D). A Final ISA Report will then be produced to accompany the Final WTS.

Stages E: Monitoring the Significant Effects of the WTS

3.1.8 Stage E of the ISA process includes the finalisation of a monitoring framework that will be used to identify issues, both positive and negative and significant effects of the WTS over time. Following the adoption of the WTS, a post-adoption ISA Statement may be prepared, alongside a Statement of Environmental Particulars, providing detail of how the ISA process has influenced the development of the WTS, the predicted significant effects, as well as the monitoring framework.

Figure 2-1: Stages in the ISA Process (adapted from ODPM 2005)



3.2 An integrated approach to assessing impacts

3.2.1 Section 1 of this report identifies that the ISA will integrate a series of impact assessments, in addition to SA and SEA. The details of the approach to the impact assessments is set out in section 5.1.1; this recognises the wider determinants that overlap between the different impact assessments and enables a holistic view to be taken. Some of the impact assessments are statutory impact assessments and some are required in law by Welsh Government, as described below.

3.2.2 It is important to note that the cross-cutting and overlapping nature of the impact assessments is recognised. The nature of the assessments in the ISA will seek to ensure that topics are ultimately considered as a whole, with repetition across different topics avoided as much as feasible, with no topic area being given greater ‘weight’ over another.

Statutory Impact assessments

3.2.3 The following impact assessments are a statutory requirement.

3.2.4 ***Equalities Impact Assessment*** - Under the equality duty (set out in Section 149 of the Equality Act 2010), many public authorities, including the Welsh Government must have ‘due regard’ to the need to eliminate unlawful discrimination, harassment and victimisation as well as to advance equality of opportunity and foster good relations between people who share a protected characteristic and those who do not, this includes race, sexuality, gender and disabilities.

3.2.5 ***Welsh Language Impact Assessment*** - The Welsh Language (Wales) Measure 2011 and Standards require the following effects to be considered:

- What effect, if any, the WTS would have on the opportunities for other persons to use the Welsh language, or treating the Welsh language no less favourably than the English language;
- How the WTS could have positive effects or increased positive effects on opportunities for other persons to use the Welsh language, or treating the Welsh language no less favourably than the English language; and
- How the WTS could be developed so that it doesn’t have or reduces any adverse effects which the policy decision would have on opportunities for other persons to use the Welsh language or treating the Welsh language no less favourably than the English language.

3.2.6 ***Children’s Rights Impact Assessment*** - The duty placed on Welsh Ministers is to have due regard to the United Nations Convention on the Rights of the Child (UNCRC) when exercising any of their functions. The children’s rights impact assessment is a tool that helps to demonstrate how the legal requirement is met by the Welsh Ministers.

Welsh Government Required Assessments

3.2.7 The following impact assessments are required by Welsh Government to ensure policies and plans have been assessed for their impact and from the earliest stages they are developed with a view to maximising economic, social, environmental and cultural well-being - not just now, but for the long-term. They will take account of coherence with other initiatives and will be the subject of engagement with the people and organisations who will be most affected by them:

- Health;
- Rural Proofing;
- Climate Change; and
- Economic Development.

3.2.8 The impact assessments as identified above have each been screened to establish the potential impact the WTS may have. At this stage, all of the impact assessments have been screened in and are integrated into the ISA. A summary of the findings is set out in Table 2-1. This assessment work will be undertaken as part of an iterative process and will be kept up to date to reflect aspects such as the emerging detail of the WTS; further or updated evidence; and consultation responses.

Table 2-1 Summary of Impact Assessment Screening

Impact Assessment	Summary of Screening Results
Health	At this early stage, it has been concluded that the WTS will have a potential impact on health and well-being. The assessment of health will be based on the broad, participatory and inclusive methodology as advocated in Wales and described in 'HIA: A Practical Guide' (WHIASU, 2012) and it will use the wider determinants of health including well-being as a framework for discussion. The ISA Framework (which will be used to appraise the WTS) encompasses health and well-being objectives that reflect the Public Health Wales indicators.
Equalities	At this early stage, it has been concluded that the WTS will have a potential impact on equalities and human rights. The nine protected characteristic groups as identified in the Equalities Act 2010 have been screened and the following groups have been screened in for further consideration in the assessment process: race, age, disability and sex (gender). These protected characteristics will be incorporated in the objectives and questions within the ISA Framework. Gender is considered an overarching consideration for the WTS. At this stage, all protected characteristics are scoped-in to the assessment. However, it is recognised that this will be reviewed as part of the assessment process, as it is not anticipated that there will be effects on some protected groups, including marriage and civil partnership and religion. The WTS team are developing an engagement plan on equality and diversity, which will ensure that this review process occurs.
Welsh Language	At this early stage, it has been concluded that the WTS will have a potential impact on the Welsh language. Objectives encompassing Welsh language have therefore been incorporated into the ISA Framework. This will ensure opportunities for the WTS to contribute to the future well-being of the Welsh language are considered and identified where possible through this work.
Rural Proofing	At this early stage, it has been concluded that the WTS will have a potential impact on rural communities. Therefore, objectives

Impact Assessment	Summary of Screening Results
	<p>encompassing aspects of rural life such as access to services; and the economy have been incorporated into the ISA Framework.</p>
Children's Rights	<p>At this early stage, it has been concluded that the WTS will have a potential impact on children's rights. The Articles within the UNCRC have been reviewed and the following articles have been identified as the most relevant at this stage – 6, 12, 23, 24, 27, 28, 30, 31, and 36⁸. For these Articles and the 2016 recommendations made by the United Nations Committee on the Rights of the Child, the ISA Framework incorporates objectives covering these areas. Children and young people will be engaged to ensure their voices are heard in the development of the WTS.</p>
Climate Change	<p>At this early stage, it has been concluded that the WTS will have a potential impact on climate change, through vehicle emissions and embodied carbon in the construction of transport infrastructure and vehicles. Objectives encompassing climate change have been incorporated into the ISA Framework to ensure the causes and consequences of climate change are considered and identified where possible through this work.</p> <p>Climate change will also be likely to have an impact on the WTS. The latest UK Climate Change Risk Assessment (CCRA) sets out several risks from climate change to transport.</p>
Economic Development	<p>At this early stage, it has been concluded that the WTS will have a potential impact on the economy. Economic objectives have been incorporated into the ISA Framework to ensure issues and opportunities are considered and identified where possible through this work.</p>

⁸ <http://www.childrensrights.wales/index.php/right>

The Third Sector

3.2.9 The impacts on the Third Sector will also be assessed as part of this ISA. The Welsh Government is committed to recognising and promoting the Third Sector. The Welsh Government values the Third Sector for the contribution which the sector makes to the long term economic, social, cultural and environmental well-being of Wales, its people and communities. Public services are facing significant challenges, with demand and expectations increasing whilst public funding is under continuing pressure. This means that preventative and community services are more important than ever. The Welsh Government believes the Third Sector can help to transform the way that public services meet present and future demands, by treating people and communities as assets and equals in the design and delivery of services, not only as service receivers. The WTS will support the work of the third sector and understands the strong links and expertise that third sector organisations have within communities, particularly in terms of community transport.

4 Review of Relevant Plans, Programmes and Environmental Objectives (A1)

4.1 Introduction

4.1.1 The WTS will be influenced in various ways by other plans or programmes, or by external environmental (or sustainability) protection objectives such as those laid down in policies or legislation. Understanding these relationships can enable the Welsh Government to take advantage of potential synergies, identify opportunities and deal with any inconsistencies and constraints. A large number of other plans and programmes have been reviewed with respect to relevant social, economic, environmental and cultural issues of importance to each of the integrated assessment strands.

4.1.2 It is important to remember that the WTS is a national-scale document so the other plans and programmes of relevance will primarily be national, UK or international-scale documents. The WTS will, in-turn, seek to influence sub-national level planning in Wales. Of particular importance are the following national documents which the WTS will work with and share common aims and objectives:

- The emerging Wales National Development Framework;
- Taking Wales Forward 2016-2021;
- Prosperity for All: The National Strategy;
- Prosperity for All: A Low Carbon Wales;
- Prosperity for All: A Climate Conscious Wales;
- Planning Policy Wales – Edition 10;
- Welsh Government (2020): Advancing Gender Equality in Wales Plan⁹;
- The Natural Resources Policy for Wales, incorporating Sustainable Management of Natural Resources (SMNR) principles;
- Nature Recovery Action Plan; and
- State of Natural Resources Report (SoNaRR)¹⁰.

4.1.3 The iterative nature of this work will ensure new plans, policies and programmes which are published as the WTS develops can and will be taken into account, including the emerging Wales National Development Framework (to be renamed “Future Wales – the National Plan 2040”)

4.1.4 The SEA Directive specifically requires relevant plans and programmes to be considered. Box 2 stipulates the SEA Directive requirements for this stage of the process.

⁹ <https://gov.wales/sites/default/files/publications/2020-03/advancing-gender-equality-plan.pdf>

¹⁰ <http://www.naturalresources.wales/sonarr?lang=en>

Box 2: SEA Directive Requirements for the Review of Plans Programmes and Environmental Protection Objectives

‘...an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes’ (Annex 1 (a)).

‘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’ (Annex 1 (e))

4.1.5 A review of other plans and programmes that may affect the preparation of the WTS was undertaken in order to contribute to the development of both the ISA and the WTS, the full results of which are presented in Appendix A. This included:

- Identification of any social, environmental, cultural or economic objectives that should be reflected in the ISA process.
- Identification of any baseline data relevant to the ISA.
- Identification of any factors that might influence the preparation of the document, for example sustainability issues.
- Identification of any objectives or aims that would contribute positively to the development of the WTS.
- Determining whether there are clear potential conflicts or challenges between other identified plans, programmes or environmental objectives and the emerging WTS.

4.1.6 The review included documents prepared at international, UK-wide and national scale. A brief summary of the documents reviewed, and the main findings are summarised in Table 3-1 and Section 3.2. Further details are presented in Appendix A.

Table 3-1 Summary of the document types reviewed. Full results are presented in Appendix A.

Level	Summary
International and European Plans and Programmes	A review was undertaken of key International Conventions and European Directives that could potentially influence the development of the WTS and the ISA. 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.
UK-wide Plans and Programmes	A review was also undertaken of relevant publications from organisations including, for example, Department for Transport (DfT), the Department of Business, Energy and Industrial Strategy (DBEIS), and the Department for Environment, Food and Rural Affairs (Defra). These publications outline the action plans and strategies across a breadth of topic areas for example The Air Quality Strategy for England, Scotland, Wales and Northern Ireland and the UK National Energy Efficiency Action Plan as well as the Committee on Climate Change (2017) UK Climate Change Risk Assessment 2017 Evidence Report (particularly the ‘Summary for Wales’). The objectives of these plans, as well as some of the challenges they raise need to be taken on board as appropriate.

Level	Summary
Wales Plans and Programmes	<p>A review was undertaken of plans produced at the Wales national level. Many of these are produced by Welsh Government and specifically address strategic issues such as the economy; transport; health; safety; sustainable communities; housing; employment; the Welsh Language; and environmental protection.</p> <p>The Well-being of Future Generations (Wales) Act (2015) identifies seven well-being goals for Wales. In November 2016, the Welsh Government published its initial well-being objectives, designed to maximise its contribution to the seven well-being goals. Other specified public bodies have also set out their well-being objectives for contributing to the well-being goals.</p> <ul style="list-style-type: none"> • The Natural Resources Wales 2016 SoNaRR, together with the Natural Resource Policy (NRP) have also been included. Each has a focus on Welsh natural resources, with SoNaRR providing an assessment of the sustainable management of natural resources and the NRP seeking to set out the national priorities in relation to the sustainable management of natural resources in Wales. These documents, in particular, are key national documents that the WTS will draw from. They contain common goals and a range of evidence is shared between them. These plans should include the main influences of international and UK level plans through the 'trickle-down effect'. They should also provide a strategic Wales focus. It is, through identifying these themes and incorporating them into the WTS that synergies can be achieved with other relevant documents. It is noted that an interim SoNaRR report was published in 2019, which sets out how the second SoNaRR report will develop in 2020. • Advancing Gender Equality in Wales Plan (2020) sets out a commitment to recognise the existing ways in which power structures based on factors such as gender, race, sexuality, disability, class, age and faith interact with each other and create inequalities, discrimination and oppression. The WTS will need to ensure that transport in Wales facilitates economic independence of all people including women and non-binary people, with all forms of unpaid and paid work recognised; facilitates the freedom of women to live their lives as they choose; challenges any existing power structures that may be disadvantaging women; is committed to equality of outcome for all women, men and non-binary people; places a gender perspective at the heart of decision-making; is open, transparent and welcomes scrutiny through a gender-lens; actively monitors progress towards equality; and leads by example for delivering equality. <p>The Nature Recovery Action Plan sets out how Wales will address the Convention on Biological Diversity's Strategic Plan for Biodiversity and the associated Aichi biodiversity targets in Wales. The Nature Recovery</p>

Level	Summary
	Action Plan identifies actions that can be delivered in the short term and sets a course to deliver longer term commitments beyond 2020. These commitments and actions are pertinent to the ISA of the WTS and have informed the ISA Framework Objectives.

4.2 Key Themes Resulting from the Review

4.2.1 There were many common themes identified in the review of plans and programmes. Whilst full results are presented in Appendix A, Table 3-2 provides a summary of the key themes identified. These themes were also considered against the seven well-being goals and where they could make a contribution to the achievement of those goals. It is noted that these are themes arising from the review of plans, programmes, as opposed to the key sustainability issues arising from the review of baseline information.

Table 3-2 Key Themes Resulting from the Review of plans and programmes.

Key Themes from the Review	National Well-being goals (where the themes may make a contribution)
Reduce air pollution and ensure improvements in air quality contributing to a healthier Wales	A resilient Wales A healthier Wales A globally responsible Wales
Promote sustainable patterns of mobility, including active travel and public transport	A prosperous Wales A resilient Wales A healthier Wales A globally responsible Wales
Promote greater equality of opportunity for all citizens. This should include a focus on ensuring equal accessibility for all, including for disabled and vulnerable people, as well as equality of outcome for all women, men and non-binary people.	A prosperous Wales A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
Maintain and enhance biodiversity, habitats and species with healthy functioning and resilient ecosystems, including connected networks of green infrastructure throughout rural and urban areas.	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
Reduce the existing or future risk of flooding and/or coastal erosion by adapting existing infrastructure to the	A resilient Wales A healthier Wales A globally responsible Wales

Key Themes from the Review	National Well-being goals (where the themes may make a contribution)
impacts of climate change and promote protection of floodplains or areas of managed realignment	
Sustainably manage natural resources and tackle the causes of climate change, including a reduction in carbon emissions associated with the transport sector in accordance with Wales' carbon budgets	A prosperous Wales A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities A globally responsible Wales
Protect and improve the quality of the natural environment, including: water resources; soil resources; landscapes; seascapes; and historic assets and their settings.	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
Manage mineral extraction and minimise waste generation and increase levels of reuse and recycling to achieve more sustainable waste management and reduce landfill	A resilient Wales A globally responsible Wales
Relieve pressure on natural resources by increasing energy efficiency, stimulating investment and innovation and promoting the sustainable use of national renewable energy resources	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
Improve the physical and mental health and well-being of the population and reduce health inequalities to create a healthier Wales	A prosperous Wales A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities A globally responsible Wales
Contribute towards the future well-being of the Welsh language, culture and heritage	A prosperous Wales A resilient Wales A more equal Wales A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
Promote sustainable economic growth and business competitiveness through transport and innovation	A prosperous Wales A resilient Wales A more equal Wales A Wales of vibrant culture and thriving Welsh language A globally responsible Wales

Key Themes from the Review	National Well-being goals (where the themes may make a contribution)
Establish a strong tourist economy, sensitively capitalising on environmental, heritage, and leisure assets	A prosperous Wales A resilient Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh language
Improve the connectivity of existing communities and reduce isolation through better planned and designed future communities and more inclusive public transport.	A prosperous Wales A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities

5 Baseline Information and Identification of Key Sustainability Issues and Opportunities (A2 and A3)

5.1 Introduction

5.1.1 Baseline information (social, economic, environmental and cultural) provides the basis for predicting and monitoring environmental effects and helps to identify environmental issues and alternative ways of dealing with them. As the WTS is a national-scale document, baseline evidence gathering has been focussed on national-scale data with some additional sub-national data where appropriate.

5.1.2 The SEA Directive specifically requires this to be considered. The box below stipulates the SEA Directive requirements for this stage of the process.

Box 3: SEA Regulation Requirements for baseline and the identification of key sustainability issues

The SEA Regulations require that the SEA covers:

‘relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme’ and, ‘the environmental characteristics of the areas likely to be significantly affected’ (Schedule 2-2 and 2-3)

‘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(a) and the Habitats Directive’ (Schedule 2-4)

5.1.3 Understanding the characteristics of Wales’ economic, social, cultural and environmental well-being is essential in being able to understand the effects of the WTS. Characterising the environmental and sustainability baseline, issues and context is an important activity in defining the Framework for the ISA. It involves the following elements:

- Characterising the current state of the environmental, social, cultural and economic well-being of Wales;
- Understanding the future trends based on current trends and future projections that may impact on Wales’ economic, social, environmental and cultural well-being; and
- Using this information to identify existing problems and opportunities which could be influenced by the WTS.

5.2 Methodology

5.2.1 The environmental, social, economic and cultural baseline was characterised through the following methods:

- Review of relevant international, UK and national (Wales) plans, strategies and programmes;
- Data research based around a series of baseline datasets developed from the Welsh Government, guidance, previous consultation recommendations from similar SAs and the data available for Wales; and

- The National Indicators for Wales¹¹, which provide national-scale data across 44 indicators of progress against the seven well-being goals.

5.2.2 The full results of this are presented in Appendix B.

5.2.3 A key source of information is the SoNaRR produced by Natural Resources Wales in 2016. An interim SoNaRR report was published in 2019, which sets out how the second SoNaRR report will develop in 2020. Other sources include, for example, the Office of National Statistics and Stats Wales.

5.2.4 Understanding the baseline conditions enabled the identification of the key sustainability issues and opportunities in Wales. These are summarised in Section 4.3 and presented in full in Appendix B. Appendix B also contains key figures showing Wales as a whole, with key features and designations as follows:

- Figure 1 Designated Nature Conservation Sites;
- Figure 2 Landscape Features;
- Figure 3 Heritage Features; and
- Figure 4 Strategic Transport Network (not including active travel routes).

5.2.5 The baseline data has been divided according to the seven Well-being of Future Generations (Wales) Act 2015 goals and then subdivided by topics. There are many overlaps between the baseline sets and topics. Each of the baseline topics identified in the SEA Regulations are represented.

5.2.6 The SEA Regulations also require ‘material assets’ to be considered within the SA/SEA. Material assets refer to the stock of valuable assets within a study area and can include many things from valuable landscapes, natural and cultural heritage through to infrastructure and quality agricultural land. For the purposes of the ISA material assets of Wales are appropriately covered in the following baseline sections, and are not included in their own designated topic:

- Biodiversity, flora, fauna and geodiversity;
- Soil and land quality;
- Cultural heritage;
- Landscape;
- Minerals and waste;
- Housing; and
- Transportation.

5.2.7 It is important to note that baseline data, issues and opportunities for each of the integrated assessment strands has been collated and included as part of this process and is presented under the relevant Well-being goals.

5.3 Key Sustainability Issues and Opportunities

5.3.1 Table 4-1 presents the key sustainability issues and opportunities for Wales identified across the seven Well-being goals and ISA topic subheadings which stem from

¹¹ <http://gov.wales/topics/people-and-communities/people/future-generations-act/national-indicators>

the baseline data (Appendix B). These will be refined and updated alongside the emerging WTS when further details of the content of the WTS are known.

5.3.2 Environmental impacts from transport schemes, whether beneficial and/or adverse, can arise from different sources during the construction phase, from the presence of the infrastructure, and from its operation/use. Typically, impacts are divided into two main categories:

- Use: arising because of changes in traffic (road or rail traffic) such as noise, air pollution and greenhouse gases; and
- Infrastructure: arising from the physical presence of new or improved transport infrastructure and associated development, such as effects on land use, landscape, biodiversity, greenhouse gases, air pollution, heritage and the water environment.¹²

Overarching considerations: Climate Change and Ecosystem Resilience

5.3.3 The review of key sustainability issues and opportunities has sought to integrate, as well as the impact assessments in section 2.2.2, the principles of climate change and ecosystem resilience throughout. Climate change is integral to the Well-being of Future Generations Act (2015). Climate change is at the heart of the Act and integral to each of the seven Well-being Goals. The Resilience Goal specifically highlights the need to adapt to climate change. The overarching risks from climate change, as summarised in the *UK Climate Change Risk Assessment 2017 Evidence Report – Summary for Wales*, should be taken into consideration within the development of the WTS and, as such, are also reflected in Appendix B, Table 4-1 and the ISA Framework. Appendix A provides a comprehensive review of low-carbon documents that should be taken into account.

5.3.4 The term ‘resilience’ relates to a broad range of issues, such as climate change, health, agriculture, community development, financial management, drought and flood risk management. ‘Ecosystem resilience’ is the capacity of ecosystems to deal with disturbances, either by resisting them, recovering from them, or adapting to them, whilst retaining their ability to deliver ecosystem services now and in the future.

5.3.5 As evidenced in the SoNaRR Report (NRW, 2016)¹³, there are a range of activities and direction of improvements that would be likely to improve the resilience of ecosystems. The Environment (Wales) Act takes a pragmatic approach that recognises various attributes (sometimes termed ‘aspects’) as building blocks of resilience, as per Figure 4-1.

Figure 4-1: The seven attributes of resilience, including recovery; resistance; condition; adaptability; extent; diversity; and connectivity.

¹²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/824186/valuation_of_landscape_impacts_of_transport_interventions.pdf

¹³ SoNaRR 2016, available at: <http://naturalresources.wales/media/679405/chapter-4-resilience-final-for-publication.pdf>



5.3.6 A resilient ecosystem only arises as a result of the interplay between these attributes. Any intervention targeted towards these attributes should avoid considering them in isolation from one another. These attributes have been incorporated into the ISA Framework accordingly, in order to ensure the integration of these principles into the WTS.

5.3.7 In addition to enhancing the resilience of communities to the potential impacts of climate change it is also important to make best efforts to reduce the magnitude of these impacts. This was recognised in the Welsh Government’s 2019 declaration of a climate change emergency¹⁴, and can be achieved to some extent by reducing Wales’ contribution towards the causes of climate change, such as by reducing greenhouse gas (GHG) emissions. Under the Environment (Wales) Act 2016, there is a duty on Welsh Ministers to set a maximum total amount for net Welsh GHG emissions (Welsh carbon budgets). The WTS has an opportunity to promote low carbon transport modes, as well as improved standards of energy efficiency in transport infrastructure, and in so doing would help to ensure that greenhouse gas emissions are in accordance with the Welsh carbon budgets. The first carbon budget, for 2016 – 2020, sought a 23% reduction in emissions compared with the 1990 baseline emissions, whilst the budget for 2021 – 2025 is to achieve a 33% reduction¹⁵. The WTS could help to lower greenhouse emissions, particularly those associated with the transport sector, by promoting active travel and Ultra Low Emission Vehicles (ULEVs) as well as implementing the sustainable transport hierarchy:

¹⁴ Welsh Government climate change emergency declaration: <https://gov.wales/welsh-government-makes-climate-emergency-declaration>

¹⁵ Climate Change (Carbon Budgets) (Wales) Regulations 2018: <https://www.legislation.gov.uk/wsi/2018/1303/regulation/2/made>

- Firstly, by reducing the need to travel unsustainably, such as by bringing services closer to people, integrated planning (communities built around transport hubs), ICT, flexible working and homeworking;
- Secondly, by widening and promoting more sustainable travel choices such as through greater integration and a modal shift; and
- Thirdly, by make better use of the existing transport network such as efficiently managing demand, facilities, capacity.

5.3.8 Greenhouse gas emissions are an important element of the ISA Framework such that these low-carbon principles can be integrated into the WTS.

Brexit

5.3.9 It is recognised that although the decision for the UK to leave the EU brings potential policy changes, it also provides the opportunity to shape a new way forward for Wales. The work that the Welsh Government has already done through the Well-being of Future Generations (Wales) Act, the Environment (Wales) Act and the Planning (Wales) Act provides a strong foundation to build Wales' future. Welsh Government is committed to working to make the most of the opportunity to form future programmes, policies and regulations which are tailor made for Wales' unique context and needs. The WTS will take into account the implications Brexit may have, such as on freight, ports, procurement and trade regulations.

COVID-19

5.3.10 The recent COVID-19 pandemic has dramatically altered life in Wales in the short-term. There is uncertainty around its long-term implications, including how the measures put in place to tackle the pandemic may also impact on life in Wales. It is conceivable that some aspects of the way society and the economy, potentially including the transport sector, will be permanently altered. During the preparation of the WTS careful consideration will be given to the potential impacts of COVID-19 including how it could influence the WTS and its implementation.

5.3.11 Placemaking and the COVID-19 Recovery (2020) sets out the priorities and actions for places following the pandemic. The considerations post COVID-19 fall into three categories:

1. How we experienced the direct impacts of the COVID-19 lockdown period and the permanent positive changes we need to see in places and as part of new development.
2. The lessons we have learned over this time and how we can help to make places more resilient and adaptable to future pandemics, should they happen again.
3. Aiding the recovery after the pandemic has passed and restrictions are eased to ensure it benefits all parts of society and helps us to decarbonise, tackle climate change, reverse biodiversity decline and improve health and general well-being.

5.3.12 Transport, across all modes, has been impacted due to COVID-19. There have been large reductions in motorised traffic, reduced patronage of public transport, increased levels of home working and increased levels of active travel modes; walking and cycling.

The WTS will have a key role to play in the future consequences of the pandemic, including reducing the need to travel and promoting sustainable and active travel.

Table 4-1: Key Sustainability Issues and Opportunities arising from review of Baseline

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
<p>1. A prosperous Wales</p>	<p>The economy of Wales is closely aligned with that of the rest of the UK. There has been a move towards service sector employment and a decline in heavy industry; Wales still has a diverse manufacturing sector.</p> <p>There are clear geographical differences in employment activity in Wales with pockets of higher than average deprivation in the South Wales valleys and in some North Wales coastal towns.</p> <p>Key reasons for relatively poor economic performance include:</p> <ul style="list-style-type: none"> • Relatively low skills levels and poor educational attainment levels (although improving), particularly in the more deprived parts of the country. • The largely rural nature of the country results in relatively small urban areas which would otherwise be more strongly associated with agglomeration effects. • There is a relatively high proportion of older people who are retirement age. • There are high levels of congestion which have negative economic impacts including the impact on productivity and freight. <p>The UK Climate Change Risk Assessment 2017: Evidence Report highlights a number of key risks and opportunities facing Wales with regard to business. These could have effects on a number of factors including health and well-being, employment and the economy. Such matters facing Wales can be summarised</p>	<p>The WTS has a role to play in achieving balanced and sustainable growth, and the transition to a low resource use (including low carbon) economy, to enable the population to live within environmental limits. This includes the opportunity to promote sustainable freight transport.</p> <p>The WTS provides an opportunity for the economy to be guided towards a more sustainable future. This can be through the promotion of sustainable travel infrastructure and improvement of access to employment centres. It can also provide a framework that is more responsive to the needs of the economy and able to support new, emerging sectors and support transition of existing ones through the creation and enhancement of networks. Furthermore, it can also help to guide the creation of an environment that is attractive to inward investment and encourages sustainable access to jobs. Similarly, the WTS may facilitate improvements in access to education.</p> <p>The WTS could seek to help address issues related to poverty and inequality through access to better education, better connectivity between communities and access to jobs and the job market.</p> <p>Overall, the WTS could help to achieve the important balance of economic and social improvement that is also sustainable and</p>

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>as risks to business from flooding, loss of coastal locations, water scarcity, reduced access to capital, reduced productivity from disruption to infrastructure etc., disruption to supply chains and changes in demands for goods and services. These should all be taken into consideration in the WTS as they will all influence the habits of transport users.</p> <p>The climate change adaptation plan ‘Prosperity for All: A Climate Conscious Wales’ sets out commitments to respond to the impacts from climate change we already see and those we expect to see in the future. The plan complements the steps being taken to decarbonise the economy of Wales and will be taken into consideration during the preparation of the WTS and ISA.</p> <p>There are issues with provisioning access to schools and employment, as the highest density areas for these are in the urban areas of Wales. These facilities are much more difficult to access by any means other than private owned car in rural Wales. It should be noted that, as per Appendix B, there are data gaps with regards to detailed information on school access.</p>	<p>respects the country’s valuable natural and cultural environment.</p> <p>There is an opportunity for the WTS to support employment through the promotion and support for active tourism, including the designation of the National Cycle Network as a strategic transport facility to encourage active tourism.</p> <p>There is an opportunity to promote the use of active travel to primary and secondary schools through walk to school schemes.</p> <p>There is also an opportunity through improved public transport schemes to enable people to access a wider range of employment and education options.</p> <p>There is an opportunity for the WTS to reduce congestion through promoting active travel and public transport through re-allocation of road space and integrated sustainable travel modes.</p>
2. A resilient Wales	<p>Air Quality</p> <ul style="list-style-type: none"> • Air quality in Wales is generally very good, reflective of its largely rural nature and high-quality natural environment. However, targets are being breached for a number of key pollutants which pose a risk to human health and the natural environment so the transport plan must take this into account. These notably occur in urban areas and adjacent to busy roads. 	<p>Air Quality</p> <ul style="list-style-type: none"> • The transport system is a significant contributor to air pollution at present. An opportunity to reduce this negative effect on air quality could be affected through helping to minimise pollution from transport through minimising the distance travelled and encouraging more sustainable modes of

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<ul style="list-style-type: none"> 90% of semi-natural nitrogen sensitive Welsh habitats are subject to nitrogen deposition in excess of critical load limits, transport is a significant source of nitrogen pollution. Road transport accounts for nearly a third of all NO₂ emissions in the UK and transport is the biggest source of air pollution in the UK (National Assembly for Wales, 2018). <p>Noise Pollution</p> <ul style="list-style-type: none"> Road noise is focused around the M4 in South Wales and adjoining 'A' roads. The A55 and adjoining 'A' Roads in North Wales, and the A483 in Mid Wales, also contribute to high levels of noise pollution. Noise pollution from railways mostly takes place in the south of Wales around Cardiff. (data from 2018) <p>Biodiversity, Flora and Fauna and Ecosystem Resilience</p> <ul style="list-style-type: none"> Wales has a rich and varied natural environment including a wide representation of important habitats and species. However, the condition of species features in European designated sites in Wales and the condition of priority habitats in Wales remains mostly unfavourable, the transport plan must do its best to not impede on the habitats via habitat fragmentation or indirect effects such as nitrogen deposition, wildlife fatalities or noise disturbance. Terrestrial, freshwater and marine biodiversity is under threat from transport infrastructure development, pollution and climate change, all of which are effects that come from the transport network. 	<p>transport. Sustainable design and landscaping policies could help to provide opportunities for absorbing some pollutants.</p> <p>Noise Pollution</p> <ul style="list-style-type: none"> The WTS can affect noise pollution through ensuring decisions are based on the principle of reducing emissions through the transition to implementing the sustainable transport hierarchy. Sustainable design and landscaping policies could help to reduce the effect of noise and the potential impact from transport on tranquil areas. <p>Biodiversity, Flora and Fauna and Ecosystem Resilience</p> <ul style="list-style-type: none"> The WTS can both benefit and enhance biodiversity through guiding the location and manner in which new transport infrastructure development occurs. It provides opportunities to ensure biodiversity is protected and enhanced through the transport system, not just in terms of protected sites but also in terms of biodiversity and connectivity in general. Other benefits might include improved habitat management; new structures e.g. bridges and tunnels may provide habitats for some species e.g. bats; and habitat creation. There is opportunity for the WTS to promote additional green infrastructure as part of future transport proposals to support

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<ul style="list-style-type: none"> • Even relatively minor habitat loss, fragmentation and indirect impacts of an individual road project can, when added to other past, present and reasonably foreseeable future impacts of other projects and activities, contribute to significant impacts in an area. All relevant types of future projects and activities should be considered (i.e. not just other road projects) including induced development. <p>Flood Risk and Coastal Erosion</p> <ul style="list-style-type: none"> • The effects of climate change are increasing and adaptation and resilience to its effects is an increasing necessity. Notably, flood risk is a significant issue in Wales including coastal, fluvial and surface water flooding that may affect transport infrastructure. This is exacerbated by an increase in extreme weather events and this means that properties and businesses are increasingly becoming at risk. Disruption can disproportionately impact communities with fewer and less resilient transport options. • Climate change will impact on Wales in ways other than just flooding, such as more extreme weather events, an increase in storminess, higher maximum and minimum temperatures, more severe droughts and exacerbated rates of coastal erosion. Climate change will also affect habitats and species throughout Wales. <p>Geology and Soils</p> <ul style="list-style-type: none"> • In the future, geological hazards may change as a response to climate change. For example, coastal erosion, landslides and pollution from former mine 	<p>placemaking as well as biodiversity, flora and fauna.</p> <p>Climate, Flood Risk and Coastal Erosion</p> <ul style="list-style-type: none"> • The WTS has a significant role to play in terms of climate change adaption and resilience. Flooding and coastal erosion are key areas in which the effects of climate change are felt locally and the WTS can help provide guidance on the location and design of infrastructure development to help minimise the risk. It is also an opportunity to further work with partners such as NRW and local authorities in developing flood management and protection schemes as part of encouraging sustainable land and ecosystem management, including the opportunity for the inclusion of SuDS to reduce the impact of new schemes on flood risk. <p>Geology and Soils</p> <ul style="list-style-type: none"> • The WTS has an opportunity to guide the sustainable use of Wales' geology and soils

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>sites. This poses significant risks to the transport system.</p> <ul style="list-style-type: none"> The soils of best quality and most productive agricultural land are a scarce and finite resource in Wales and soil quality has deteriorated over time across all habitats. Only 30% of the Welsh peat soil area is considered to be in 'good condition'. This is important for biodiversity, landscape character, tourism, agricultural productivity and climate change resilience. Topsoil, in particular peaty soils in Wales are a major carbon sink which needs protection. All of this must be taken into account when planning the location of future transport infrastructure. <p>Water Environment</p> <ul style="list-style-type: none"> The quality of Wales' water bodies is still not up to Water Framework Directive requirements with only 42% being of good ecological status in 2014. Transport activities can be a contributor to poor water quality so this must be taken into account when developing the transport network. In many Welsh rivers, flows are particularly vulnerable to climate change because they tend to rise and fall quickly in response to rainfall. Increased flows during winter may also increase pressure upon sewerage and drainage systems and diffuse pollution (which may come from road surface run-off). Whilst Wales is perceived to be water-rich, it is already facing challenges in terms of supply and water resources can become relatively scarce during prolonged warm, dry weather. 	<p>in the transport system in terms of their use in the construction of transport infrastructure.</p> <p>The WTS could also help to avoid future risks by managing or avoiding geological hazards through the planning of the transport system. Exploration for conventional and unconventional sources of oil and gas also remains a possibility in Wales and its consideration will form a part of the emerging Welsh Government Energy Strategy.</p> <p>Water Environment</p> <p>The WTS can help to guide new development of transport infrastructure and transport routes in a manner that seeks to avoid pollution of water bodies. It should also be cognisant of the potential limitations of water supply and should promote measures to reduce water use in developments.</p> <ul style="list-style-type: none"> Minerals and Waste

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<ul style="list-style-type: none"> Run off from roads and spillages on roads and during construction can all lead to pollution in surface waters, ground waters and marine environments (around ports). <p>Minerals and Waste</p> <ul style="list-style-type: none"> The country still has substantial resources if required. However, sustainable management of this extraction is necessary for ongoing or future activity. Minerals safeguarding can sometimes also conflict with other forms of development e.g. new roads. There may be high material requirements for construction of transport infrastructure putting further strain on the limited resources. <p>COVID-19</p> <ul style="list-style-type: none"> The COVID-19 pandemic has impacted most on the most vulnerable individuals and deprived communities. The long-term impacts of the pandemic are currently unknown and, whilst there have been some beneficial impacts, including improved air quality and greater reliance on active travel, the approach to recovery should promote social, health and economic equality 	<ul style="list-style-type: none"> The WTS has a role to play with regard to mineral demand (through their use in construction of transport infrastructure), planning and management. It can help to guide the sustainable use of such resources through its policies. <p>COVID-19</p> <ul style="list-style-type: none"> The WTS has a role to play in the recovery from COVID-19, particularly addressing changes in mobility. The WTS should address inequalities that have been exacerbated by COVID-19 and should promote sustained, equal recovery.
3. A healthier Wales and A more Equal Wales	<ul style="list-style-type: none"> Overall health statistics for Wales are improving with life expectancy increasing and fewer people with reported poor health over the past decade however health gains are not distributed equally across the country and in particular access to services is varied, being good in more urban areas, notably the south, but relatively poor across much of rural Wales. Although the health of those living in rural communities is 	<ul style="list-style-type: none"> Overall, the WTS could help to achieve the important balance of economic and social improvement that is also sustainable and respects the country's valuable natural and cultural environment. The WTS could recognise the potential for natural green spaces as places for health and recreation, connecting habitats and

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>generally good compared to those of urban environments.</p> <ul style="list-style-type: none"> Factors specific to a rural environment compared to those of urban environments that can impact on health more significantly and lead to inequalities and poorer health, such as distance from public services and support, availability of transport, and the ageing population. Access to healthcare can be limited in many parts of rural Wales. Public transport is important for both the sustainability and independence of rural communities. Whilst people are living longer and the rates of some diseases is decreasing, challenges such as living environment and modern lifestyles can contribute towards increasing levels of chronic diseases such as diabetes, joint problems, heart disease and some cancers which in turn can lead to disability and increased demand on health services. In addition, poor mental health can also be an underpinning factor in a number of physical diseases and unhealthy lifestyles. Poor air quality, noise and light pollution as well as road traffic collisions can have direct effects on the physical and mental health of the population. The transport system could be put under strain through a projected increase in net-migration mainly from within the UK and with urban areas projected to see the greatest increase. Increasing levels of those aged 65 and over could present pressures across the country (dependent on whether healthy life expectancy i.e. the number of years you live a healthy life, continues to track overall 	<p>supporting community interaction. Improving the access to green and open spaces, including National Parks, could greatly encourage healthier lifestyles and a healthier population could enable people (including children) to achieve their potential and to make Wales a more equal society.</p> <ul style="list-style-type: none"> Protecting and enhancing green infrastructure throughout Wales is an opportunity to enhance people's access to green and open spaces. Access to a diverse range of semi-natural and natural habitats, as well as providing space for outdoor exercise and community engagement, is fundamental to physical and mental wellbeing. The WTS has an important contribution to make towards ensuring that human health is provisioned through improved access to health facilities, a focus on reducing air pollution emissions, road safety and the encouragement of active travel in order to improve health and well-being and reduce inequalities. (It should be noted that a lot of active travel occurs within the context of trip chaining). Overall, the WTS can help to address issues surrounding the aging population through facilitating the provision of accessible transport services supported by connective infrastructure to meet local population growth needs and the needs of individual groups.

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>life expectancy) e.g. provision of appropriate services for an older generation (e.g. transport).</p> <ul style="list-style-type: none"> Issues relating to young people relate to their transition from dependence to independence, as transport plays an important role at particular ‘trigger points’ such as the move from primary to secondary school, and the move from education to employment. Health inequalities reflect inequalities in the distribution of health determinants, such as access to transport, education and employment opportunities. Disabilities and/or mobility impairments can be both physical and mental barriers to using the transport network across all modes. It is important that the transport system conforms with the Social Model of Disability whereby poor design that acts as a barrier to people’s access to public transport is avoided and removed. Road transport has five main impacts on public health: air pollution, physical inactivity, road safety, noise and the isolation faced by vulnerable people due to fear of road danger, which prevents them accessing employment or educational opportunities, social networks, local amenities and services (including healthcare), adding to the risk of mental and physical ill-health. Issues relating to women specifically can relate to a fear of crime on public transport, as well as a differential reliance on public transport for mobility. Physical accessibility to transport may have an effect on disabled people accessing public transport. 	<ul style="list-style-type: none"> An equal Wales can enable people to reach their full potential whilst addressing social, economic, cultural and environmental inequality. The WTS could provide an opportunity to reduce isolation and encourage the development of integrated and liveable communities through provisioning the inclusivity of public transport to allow everyone to have the same level of access. The transport system should ensure that all groups are able to access public transport and the transport network equally and without fear or prejudice. Reducing inequality can be achieved by increasing access for the most deprived more than the least deprived or increasing access for the most deprived and keeping the least deprived constant, any other form would involve the reduction of access to either or both groups so should not be an aim of the WTS. Health inequalities can also be addressed through policies and infrastructure to promote active travel, thereby increasing physical activity, reducing pollution and noise. Active travel measures should be focussed in areas of deprivation to reduce inequalities. The ISA can help to ensure that the WTS takes into consideration the Social Model of Disability.

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<ul style="list-style-type: none"> Other barriers may be impeding people's access to public transport, including those that are language based (including for users of the three official languages in Wales: Welsh, English and British Sign Language). There is still a high risk of road casualties for younger people which must be addressed by the WTS. There is still a large disparity between the number of drivers' licenses owned by women and men, with women having much fewer, this makes it more difficult for women to have the same access to facilities and amenities as men. Chronically ill or disabled people are extremely sensitive to noise or air pollution in their local environment, with impacts ranging from sleep disturbance to hypertension. People on low incomes (living in a deprived area is used as a proxy for a low income) and without access to a car are likely to walk further. Their lack of transport options, which may include affordability of public transport, may limit life and work opportunities. People living in deprived areas can be particularly vulnerable to road traffic incidents. This group may also have increased stress levels, a poor physical environment can be considered a barrier to active travel. Black and Minority Ethnic Groups (BAME) are more likely to live in a household without a car and so will be more reliant on public transport. 77 racially aggravated offences took place across three years on British 	<ul style="list-style-type: none"> The ISA can help to ensure that the WTS helps to avoid or remove barriers to access to public transport, including for users of the three official languages in Wales (Welsh, English and British Sign Language).

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>railways. The WTS must provision for the safety and inclusion of minorities across all modes of public transport.</p> <ul style="list-style-type: none"> • Women and minority groups are more likely to travel by bus, however more investment is being put into rail as a method of public transport. The WTS must provision for a more equal Wales by placing the necessary investment in the public transport most used by these groups or removing any potential barriers to other types of transport to these groups. • Levels of noise pollution around key roads within Wales are high. Noise can have multi-ranging effects, including on landscape receptors, ecological resources and human health. • The gender pay gap overall is increasing within Wales. The WTS must ensure that men and women working for the transport system are paid equally for carrying out the same job. 	
4. A Wales of cohesive communities	<ul style="list-style-type: none"> • Bus fares are rising in cost at a rate higher than inflation, this could exclude some people or communities from this form of transport due to a price barrier. • The number of deaths on the road is remaining consistent year to year when it should be improving, more efforts should be made to provision the safety of drivers and other road users as much as possible. • Levels of noise pollution around key roads within Wales are high. Noise can have multi-ranging effects, including on landscape receptors, ecological resources and human health. 	<ul style="list-style-type: none"> • The WTS could support the creation of connections between and within safe and well-maintained communities through public transport opportunities and active travel opportunities including foot and cycle paths. The WTS could also plan for reducing the need to travel; and provide opportunities to access new and existing development and services by a range of sustainable travel modes and or improvements to digital connectivity. By reducing the amount of single-occupancy car journeys, the risk to

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<ul style="list-style-type: none"> Rural Isolation and loneliness can lead to mental health problems, this can be caused by a less accessible transport system reducing access to communities, but also cars travelling through communities can sever communities and promote isolation. When people are travelling, they should be able to do so without the fear or threat of crime. 	<p>non-motorised users could be reduced and the issue of isolation be lessened.</p> <ul style="list-style-type: none"> The WTS could consider strategic transport proposals in terms of the opportunities they present to encourage regional equality as well as improving human health, landscape and nature conservation from a reduction in noise and light pollution.
5. A Wales of vibrant culture and thriving Welsh language	<p>Welsh Language</p> <ul style="list-style-type: none"> There has been an upward trend since the 1990s in the number of people using the Welsh language, noting large regional variations; there are opportunities to increase levels of fluency. In some cases, opportunities to use the Welsh language when utilising public transport is limited, such as due to customer service staff not speaking Welsh. <p>Landscape and Townscape Character</p> <ul style="list-style-type: none"> Wales is renowned for its high-quality landscapes with over 50% of the land area being nationally valued for its scenic quality and character. National Parks and Areas of Natural Beauty are internationally recognised Designated Landscapes and cover 25% of Wales. This has implications for new transport infrastructure development within these areas with a key challenge for sustainable management being to enable appropriate levels of growth whilst retaining the distinctiveness of places and landscapes. This must also recognise that the natural and historic 	<p>Welsh Language</p> <ul style="list-style-type: none"> The WTS has an opportunity to protect and promote the use of the Welsh language through the transport system through encouragement of its use in sign posting and employees of bus and train stations. The WTS could seek to ensure that access to Welsh-Medium education facilities is targeted as part of this aim, to support the strategy seeking to expand Welsh-Medium education provision. The WTS could also seek to support the aim to increase the range of services offered to Welsh speakers, and an increase in use of Welsh-language services. The WTS could seek to ‘support the socioeconomic infrastructure of Welsh-speaking communities’ through its policies, helping to support the aim of ‘Develop[ing] a new regional focus to economic development to help all parts of Wales to benefit from prosperity and support each area to develop its own distinctive identity.’ Within the WTS there will be opportunities to promote the

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>components of landscape are important to both place and the cultural value of landscape.</p> <ul style="list-style-type: none"> • The loss of visual amenity and character could have impacts on local people and tourists. • Motor traffic, parking and associated impacts can blight the character of landscapes and townscape <p>Historic Environment, Cultural Heritage and Assets</p> <ul style="list-style-type: none"> • Wales has a wealth of historic and cultural assets which are important components of national cultural identity. Many such assets are at risk from, for example, decay, climatic factors, neglect and inappropriate development. As with other environmental factors, protecting and provisioning fair access to cultural heritage assets is a key challenge for sustainable planning of the transport system. • New development can have a range of direct and indirect effects on heritage assets which need to be avoided or mitigated. This includes effects from noise and air pollution from construction of busy traffic routes in close proximity to culturally significant areas which may make them less appealing to visit or decrease their visual amenity (indirect effects), it also includes the physical removal of heritage assets as this may be required for the development of new travel infrastructure. Impacts on the historic environment can include the intensification of existing traffic or the construction of new road or rail. Increasing levels of congestion can affect historic towns, cities and the countryside, while development of new transport 	<p>Welsh language through its use in station announcements, road signs and signs within rail and bus stations.</p> <p>Landscape and Townscape Character</p> <ul style="list-style-type: none"> • The transport system has a major role to play in how future transport infrastructure development will affect landscape, townscape, and sense of place in general. • There is an opportunity for improved access to valued landscapes, townscapes and viewpoints, including by sustainable and active travel modes to reduce the impact of motor traffic • The WTS has an opportunity to provide high quality transport connections to National Parks for both tourists/visitors and local leisure users, as well as improve the management of travel within tourist areas. <p>Historic Environment, Cultural Heritage and Assets</p> <ul style="list-style-type: none"> • As with landscape, the WTS has a major role to play in the protection and enhancement of cultural heritage, as well as the accessibility of heritage assets, through guidance to the transport system. This could include the recognition that non-designated heritage assets are also an important part of the make-up of cultural identity and sense of place and that indirect effects on the setting

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<p>infrastructure can affect historic landscapes and may cause direct damage to heritage assets.</p>	<p>of assets are also important considerations e.g. noise and air pollution from traffic.</p> <ul style="list-style-type: none"> • Opportunities also exist for the WTS to promote awareness of cultural heritage and encourage the enhancement of access to cultural education centres • The WTS should seek to identify and protect transport infrastructure that may be of heritage value in its own right. • The WTS has the opportunity to contribute towards the efficient management of the transport system during major events, including sporting, leisure and recreational activities and cultural events
<p>6. A globally responsible Wales</p>	<ul style="list-style-type: none"> • Wales' ecological footprint must be reduced and not compromised by transport developments. • Measures must be taken to provision the safety of pedestrians and cyclists on the road in order to promote active travel as a viable form of transport. <p>Carbon emissions</p> <ul style="list-style-type: none"> • The Welsh Government declared a climate change emergency in 2019. • Greenhouse gas emissions have been steadily falling in Wales; there is still a long way to go to meet the emissions targets. This reduction is partly as a result of a gradual shift in energy generation to renewable and cleaner fuels together with technological and efficiency improvements in industry. However, again there are challenges to maintain these positive trends. 	<ul style="list-style-type: none"> • The WTS has a focus on significantly reducing greenhouse gas emissions from transport, through the promotion of more sustainable transport methods such as public transport and active travel. • The WTS has an opportunity to help promote low carbon transport modes and improved standards of energy efficiency in transport infrastructure. • The WTS should aim to reduce the growth of motor traffic. • The WTS must promote sustainable transport modes (including active travel and also Ultra Low Emission Vehicles (ULEVs) as an alternative to petrol/diesel).

Well-Being goals	Summary of Key Issues	Opportunities for the WTS to address
	<ul style="list-style-type: none"> • The UK Climate Change Risk Assessment 2017: Evidence Report highlights a number of key risks and opportunities facing Wales with regard to transport, including the need to transition towards low-emission vehicles and enhanced active travel options. • The estimated global footprint of Wales is high compared with other developed countries. There is a challenge to reduce this whilst also accommodating new development and economic growth. 	<ul style="list-style-type: none"> • The WTS presents an opportunity to reduce the need to travel unsustainably: <ul style="list-style-type: none"> – To widen and promote more sustainable travel choices, and – To make better use of the existing transport network.

6 The Appraisal Process and Integrated Sustainability Appraisal Framework (A4)

6.1 Appraisal Process

6.1.1 Section 2 of this Report describes the stages in the ISA Process with Stage B corresponding to the appraisal of the potential effects of the WTS. At this stage, the precise content or structure of the WTS has not yet been developed although it is anticipated that it may include a series of policies which will provide the context for the delivery of development and national policy.

6.1.2 The approach to appraising the elements of the WTS will, therefore, need to retain an element of flexibility until the actual content is developed in more detail. However, it is possible to outline the basic principles of the approach, including the ISA Framework that will be used. The following principles underpin the appraisal approach:

- It will be primarily a qualitative appraisal (SEA Practical Guide paragraphs 5.B.10 and 5.B.11).
- It will be undertaken by professional SA practitioners, supported by specialist EqIA and HIA practitioners (SEA Practical Guide paragraphs 5.B.10 and 5.B.11).
- The appraisal will follow an integrated and iterative assessment approach (SEA Practical Guide Figure 6 and paragraphs 2.26-2.28).
- Engagement on the ISA on the WTS including a series of workshops will also be held to enable other specialist stakeholders (alongside the statutory consultees) to contribute to the appraisal (SEA Practical Guide chapter 3).
- The ISA Framework of appraisal objectives (Table 5-3) will be the primary appraisal tool (SEA Practical Guide paragraphs 5.1.12 and 5.1.13).
- The appraisal will be evidence-based (using qualitative and quantitative data sets) and will consider the likely effects of the WTS on the sustainability (social, economic, environmental and cultural well-being) baseline of Wales (SEA Practical Guide paragraphs 5.A.5-9).
- The appraisal will include coverage of the effects of the strategy and will draw upon evidence of physical, social and economic constraints, sensitivities and opportunities (SEA Practical Guide paragraphs 5.A.5 and 5.A.6).
- The appraisal will utilise matrices to help describe the potential effects of the WTS against the ISA Framework (SEA Practical Guide Appendices 6 and 7).
- As required by the SEA Regulations, the appraisal will consider direct/indirect effects; secondary, cumulative and synergistic effects (see Table 5-1); effects over space and time (long, medium and short-term); the reversibility of effects; transboundary effects and the level of confidence in the appraisal (SEA Practical Guide Appendices 7 and 8).
- The appraisal will be iterative and will include feedback of recommendations to the WTS team to identify measures to mitigate for any negative effects identified or to further enhance any positive effects (SEA Practical Guide Appendix 7).
- Both preferred options for WTS elements and their reasonable alternative options will be appraised (SEA Practical Guide Appendix 6).

6.1.3 It is noted that the following approach is reflective of the requirements of the SEA Regulations. Where relevant, the appropriate part of ‘A Practical Guide to the Strategic Environmental Assessment Directive’¹⁶ has been included in brackets in the above list. Table 5-4 demonstrates how the requirements of the SEA Directive have been included within the ISA Framework of objectives to be used to appraise the WTS.

Table 5-1 Definitions of Secondary, Cumulative and Synergistic Effects

Type of Effect	Definition
Secondary (or indirect)	Effects that are not a direct result of the plan (WTS); but occur away from the original effect or as a result of a complex pathway.
Cumulative	Effects arise, for instance, where transport in particular locations has an insignificant effect, but together has a significant effect; or where several individual effects of the plan (e.g. noise, dust and visual) have a combined effect.
Synergistic	Effects interact to produce a total effect greater than the sum of the individual effects.

Source: A Practical Guide to the Strategic Environmental Assessment Directive, ODPM

Approach to Impact Assessments

6.1.4 Our integrated approach to assessing the impact of the WTS brings together key assessments into a single appraisal framework. This approach enables them to be integrated effectively. Table 5-5 demonstrates how the requirements of the impact assessments have been included within the ISA Framework of objectives to be used to appraise the WTS.

Guidance on the impact assessments, where available, sets out the approaches to be undertaken for each of the impact assessments; they broadly contain the following stages:

- Screening/ scoping.
- Assessment – identifying both positive and negative impacts and opportunities for promotion including equalities, health, children’s rights and Welsh Language.
- Reporting and recommendations – ensuring transparency of the process that has been used and setting out the details of the decisions taken including what avoidance and mitigation measures are proposed.
- Review, monitoring and evaluation.

Geographical Scope of the ISA

6.1.5 The geographical scope of the ISA will be driven by the geographical scope of the WTS i.e. the whole of Wales. The geographical scale of particular baseline issues means that they will relate closely to neighbouring England and potentially Ireland. For example, employment migration and commuting, service provision and education can all result in flows of people across borders. This also means that both terrestrial and marine effects (up to the mean low water mark) are possible and will need to be considered.

¹⁶ ODPM, Scottish Executive, Welsh Assembly Government and Department of the Environment NI 2005

Temporal Scope of the ISA

6.1.6 The WTS is intended to set a longer term 25-year vision following publication in 2020. This timescale will be reflected in the ISA. If there are likely to be any sustainability effects of the WTS that would last longer than this, these would also be considered.

6.2 The Integrated Sustainability Appraisal Framework

6.2.1 To test the performance of the WTS we have established an ISA Framework containing 13 ISA objectives (covering social, economic, environmental and cultural issues). The WTS will be appraised against each ISA Objective individually and holistically. Topic areas have been grouped based on professional judgement for clarity, but in practice the assessment will encompass the interrelationships between each of the objectives and guide questions, where relevant to the assessment.

6.2.2 To help measure the performance of the WTS components against the ISA Objectives, these are supported by a series of questions. Baseline data at the national and sub-national scale has been collated (see Appendix B), as this provides a means of determining current performance across Wales and gauging how much intervention or the extent of work needed to ensure a positive direction in the achievement of more sustainable development.

6.2.3 The ISA Objectives are separate from the Government's wider well-being objectives, although there may be some overlaps between them as per Table 5-2.

Table 5-2 Explanation of Objectives

Objectives	Purpose
ISA Appraisal Objectives	Used to test the performance of the WTS to enable social, economic, environmental and cultural well-being to be fully considered.
Welsh Government's well-being objectives	The Welsh Government has published well-being objectives which set out how we will use the Well-being of Future Generations Act 2015 to help deliver our programme for government and maximise our contribution to the seven shared national well-being goals.

Development of the ISA Objectives

6.2.4 Table 5-3 presents the proposed ISA Objectives and questions that will be used. The corresponding well-being goals are identified in the table. The ISA Objectives have been developed using the following:

- Review of relevant plans, programmes and objectives, including, for example, the national well-being goals and the Welsh Government's well-being objectives.
- Review of baseline information, issues and opportunities.
- Input from the other appraisal strands identified in Section 1 of this report, notably: Health, Equalities, Welsh Language, Rural Proofing, Children's Rights, Climate Change and Economic Development.
- Experience of developing other SA Objectives in Wales and beyond.
- The Framework will be added to and adapted following stakeholder consultation including specifically the formal Scoping Consultation.

6.2.5 In summary, the review of plans, programmes and objectives in Appendix A identified a range of key themes (see Table 3-2). As a starting point the ISA Objectives were designed to reflect these key themes. Following the review of baseline environmental data in Appendix B where key sustainability issues were identified (see Table 4-1), the ISA Objectives were refined to ensure that they account for these key sustainability issues i.e. to ensure that achieving the ISA Objectives would help to tackle the key sustainability issues in Wales.

6.2.6 For example, the review in Appendix A identified a key theme of the need to reduce air pollution and ensure improvements in air quality. The review of baseline environmental data in Appendix B identified a key sustainability issue of air pollution limits being exceeded in various areas of Wales. ISA Objective 8 (see Table 5-3), which is '*To encourage the protection and improvement of air quality*', was therefore designed to reflect the key theme and key issue of air quality. ISA assessments and recommendations for ISA Objective 8 will therefore be a means of ensuring that the key theme of air pollution, and the key issue of improving air quality, is integrated into the WTS.

6.2.7 The decision aiding questions that will be used to guide the assessment against this Objective are based on ISA expert experience and best practice. Not all of the guide questions will be used as part of the assessment at each stage; this will be dependent on what is being assessed and the relevance at that stage. The assessment process will be transparent and clear as to how the plan is developed and will set out the methodology used.

6.2.8 The ISA Objectives have also been assessed for their internal compatibility and a compatibility matrix has been included in Appendix C. The purpose of this exercise is to highlight any potential for incompatibilities at an early stage in order for any potential issues to be balanced within the Framework. The matrix shows that the relationships between the ISA Objectives are predominantly neutral i.e. no clear impact or compatible. Some uncertain compatibilities have also been identified; these are set out in further detail in Appendix C.

6.2.9 ISA Objectives are often likely to have some degree of conflict or uncertainty when implementing specific schemes. The appraisal process necessarily seeks to identify the trade-offs between any such conflicts and uncertainty.

6.2.10 ISA Objectives are in no particular order and their position and number within the ISA Framework is not an indication of order of importance or preference. The WTS will be assessed against all ISA Objectives to the same level of detail.

Table 5-3 ISA Objectives and Questions

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
1. To contribute to an improvement in physical, mental and social health and well-being for all, including contributing towards a reduction in health inequalities across Wales	<ul style="list-style-type: none"> • Contribute towards an improvement in access to health and social care services especially in isolated/rural areas? • Contribute towards an improvement in the accessibility of Welsh medium health and welfare services? • Contribute towards a reduction in health inequalities amongst different groups in the community including specifically children and older people? • Promote healthy lifestyles through transport planning initiatives and the promotion of active travel? • Reduce the effect of transport infrastructure on limiting connectivity within communities through severance? • Reduce danger from road traffic, particularly for vulnerable and priority groups? • Reduce driver stress and potential stresses caused to other road users? • Reduce the health impacts of transport, including the impacts of air quality and noise, such as respiratory and cardiovascular health and stress? • Contribute towards improving access to open space including opportunities for play and access to National Parks by means of inexpensive and accessible transport? • Ensure children can develop healthily, and have access to good quality health care? • Contribute towards reducing loneliness and social isolation? 	<p>A prosperous Wales A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities</p>
2. To create the conditions within which an improvement in social cohesion and equality	<ul style="list-style-type: none"> • Create conditions to reduce levels of crime and the fear of crime? • Improve the accessibility and availability of public transport, so that access is equitable? 	<p>A Wales of cohesive communities A prosperous Wales A healthier Wales</p>

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
can be achieved	<ul style="list-style-type: none"> • Improve the safety, convenience and accessibility of walking and cycling routes so that walking and cycling are seen as realistic, safe and attractive options for people of all ages, backgrounds and abilities? • Create the conditions within which an improvement in satisfaction of people with their neighbourhoods as a place to live can be achieved? • Create the conditions within which equalities based on background or circumstances can be improved? • Create the conditions within which gender inequality may be reduced? • Create the conditions within which age inequality may be reduced? • Create the conditions within which inequalities based on disability can be improved, in accordance with the Social Model of Disability? • Encourage and support an increase in levels of participation and attainment in education for all members of society through increased accessibility? • Support the third sector and community transport providers and identify opportunities for growth in order to reduce inequalities between urban, rural and semi-rural communities? 	
3. To support sustainable economic development and diversity	<ul style="list-style-type: none"> • Support equitable access to employment, education and training opportunities? • Encourage sustainable access to tourist facilities and attractions? • Encourage the promotion of improved and resilient international transport links, including by air, sea, road and rail? • Support the regeneration of underperforming areas? • Support freight transport and improve the reliability and resilience of the road, rail and air freight transport networks? • Encourage inward investment? • Encourage improved productivity through enhanced connectivity? 	A prosperous Wales A resilient Wales A more equal Wales A Wales of vibrant culture and thriving Welsh Language A globally responsible Wales

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
	<ul style="list-style-type: none"> Support enhancements to the rural economy and rural diversification? Support and encourage third sector activities, including community transport? Support reducing the need to travel for work? Would it help to reduce inequalities associated with socio-economic disadvantage? 	
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	<ul style="list-style-type: none"> Promote sustainable and resilient access to Wales' cultural and heritage assets and activities? Encourage the enhancement of cultural heritage assets, recreational spaces and their setting? Contribute towards the efficient management of the transport system during major events, including sporting, leisure and recreational activities and cultural events? Contribute to the efficient management of travel in tourist areas during peak periods? 	A Wales of vibrant culture and thriving Welsh language
5. To encourage the protection and promotion of the Welsh Language	<ul style="list-style-type: none"> Seek to support improved access by sustainable modes to Welsh-Medium education facilities? Seek to support the increase in the range of services offered in Welsh? Seek to support Welsh-speaking communities through transport initiatives? Create the conditions in which the Welsh language thrives? Seek to promote the Welsh language through its use in station announcements, road signs and signs within rail and bus stations? 	A prosperous Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh Language A globally responsible Wales
6. To reduce greenhouse gas emissions from transport	<ul style="list-style-type: none"> Encourage a reduction in greenhouse gas emissions from existing transport infrastructure? Contribute to a reduction in CO₂ emissions from the transport sector? 	A prosperous Wales A resilient Wales A healthier Wales A more equal Wales

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
	<ul style="list-style-type: none"> • Encourage cleaner technology for transport? • Create the conditions whereby sustainable design is required to be an integral part of new development? • Encourage a reduction in the demand for energy and increase energy efficiency? • Increase the potential for the use of low carbon or zero energy sources? • Reduce the volume of road traffic by reducing the need to travel, reducing travel distances and increasing active travel and public transport options available? 	A Wales of cohesive communities A globally responsible Wales
7. To enable climate change resilience	<ul style="list-style-type: none"> • Contribute to the reduction and management of flood risk? • Encourage all new transport development to be climate change resilient? • Reduce the inequalities experienced in relation to access to transport during flooding events? • Reduce the increased risk of flooding and/or coastal flooding and promote protection of floodplains or areas of managed flood risk? • Maximise opportunities for improving ecosystem resilience and functions that help reduce climate vulnerability? • Contribute to the implementation of coastal adaptation due to coastal erosion? 	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
8. To protect and improve air quality	<ul style="list-style-type: none"> • Create the conditions within which air quality can be improved and protected? • Reduce the negative effects of transport on local air quality? • Improve air quality in order to get rid of existing Air Quality Management Areas and reduce the likelihood of new Air Quality Management Areas being required through transport initiatives? 	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
	<ul style="list-style-type: none"> • Create the conditions within which potential emissions from traffic and industry may be reduced? • Reduce the disproportionate impact of poor air quality on the most disadvantaged and vulnerable communities? 	
9 To protect and enhance the local distinctiveness of our landscapes and townscapes	<ul style="list-style-type: none"> • Encourage the protection and enhancement of areas of landscape character, distinctiveness, diversity and quality? • Encourage the protection and enhancement of townscape character and quality? • Promote sensitive design in transport infrastructure development? • Reduce the adverse impacts of road traffic and parking (e.g. visual intrusion and noise) on Wales' valued landscapes and townscapes? 	A prosperous Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh Language A globally responsible Wales
10 To promote the conservation and enhancement of heritage assets	<ul style="list-style-type: none"> • Encourage the conservation and enhancement of heritage assets and their settings, which may include some transport assets themselves? • Encourage upgrading existing heritage assets, such as historic bridges, to meet updated operational standards? • Encourage the conservation and enhancement of the historic landscape? 	A prosperous Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh Language A globally responsible Wales
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	<ul style="list-style-type: none"> • Promote the establishment of more coherent and resilient ecological networks on land that safeguard ecosystem services for the benefit of wildlife and people? • Encourage the conservation and enhancement of designated nature conservation sites, habitats and species including their connectivity in the landscape? 	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
	<ul style="list-style-type: none"> • Encourage the conservation and enhancement of non-designated habitats and species, including their connectivity in the landscape? • Provide an improvement in opportunities for people to access wildlife and open green spaces? • Promote good design of transport infrastructure to secure biodiversity benefits? • Protect geodiversity? 	
12.To ensure the sustainable use of natural resources	<ul style="list-style-type: none"> • Contribute to the protection and enhancement of ground and surface water quality? • Encourage the use of recycled and sustainable materials in the development of transport infrastructure, with a focus on reducing the embodied carbon in new transport infrastructure? • Reduce overall waste volumes through transport initiatives? • Encourage the conservation of soil, including avoiding soil pollution? • Increase opportunities to enjoy Wales' natural environment and rights of way network through all forms of active travel? 	<p>A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales</p>
13. To enable the protection of tranquil areas and prevention of noise and light pollution	<ul style="list-style-type: none"> • Encourage the avoidance of habitats and settlements sensitive to noise pollution? • Encourage the maintenance and expansion of tranquil areas? • Promote the reduction and use of mitigation to reduce light pollution, particularly at night? • Promote the use of mitigation and enhancements to areas affected by noise pollution? • Reduce the number of areas negatively affected by noise pollution? 	<p>A more resilient Wales A healthier Wales A Wales of cohesive communities</p>

6.2.11 Coverage of the SEA Directive Topics and Integrated Assessments by ISA Objective

6.2.12 Table 5-4 sets out where each of the environmental topics listed in Annex 1(f) of the SEA Directive, as well as each of the different impact assessments that form the ISA are accounted for in the ISA Objectives. All of these topics and impact assessments have been screened into the assessment.

Table 5-4 SEA Directive topics and main ISA objectives of relevance

SEA Topic/Integrated Assessment	Main ISA Objective(s)	Screened in?
SEA: Biodiversity	6, 7, 8, 9 and 11	Yes
SEA: Population	1, 2, 3, 5, 6, 7 and 12	Yes
SEA: Human Health	1, 2, 6, 7, 8 and 13	Yes
SEA: Fauna	6, 7, 8, 9 and 11	Yes
SEA: Flora	6, 7, 8, 9 and 11	Yes
SEA: Soil	6, 7, 8, 9 and 11	Yes
SEA: Water	6, 7, 11 and 12	Yes
SEA: Air	6, 7, 8, 11 and 12	Yes
SEA: Climatic Factors	3, 6, 7, 8, 9, 11 and 12	Yes
SEA: Material Assets	3, 6, 7, 9, 10 and 12	Yes
SEA: Cultural Heritage including architectural and archaeological heritage	4, 5, 9 and 10	Yes
SEA: Landscape	4, 9, 10 and 13	Yes
Health	1, 2, 6, 7, 8 and 13	Yes
Equalities	1, 2 and 3	Yes
Welsh Language	4 and 5	Yes
Rural Proofing	1, 3, 9 and 13	Yes
Children's Rights	1 and 2	Yes
Climate Change	3, 6, 7, 8, 9, 11 and 12	Yes
Economic Development	1, 2, 3, 9, 10 and 12	Yes

7 Next Steps

7.1 General

7.1.1 This ISA Scoping Report has outlined how it is intended to undertake the ISA of the WTS. Responses to the consultee comments, and how they have shaped the ISA, have been recorded and are within Appendix D of this report.

7.1.2 The next stage for the WTS is the publication of the Draft WTS. An ISA Report will be published and consulted upon alongside this. The ISA Report will:

- Demonstrate how the ISA has shaped the development of the WTS;
- Set out the methodology for the appraisal;
- Set out the options that were considered, how they were identified and any mitigation measures proposed
- Set out the social, economic, cultural and environmental effects of the WTS; and
- Describe the proposals for monitoring.

7.1.3 Further information about future stages of the ISA process can be found in Section 2.1 of this report.

APPENDIX A

Glossary and Plans, Programmes and Environmental
Protection Objectives

Glossary

Terminology	Definition
Cultural Heritage	This term is the SEA Directive Topic Cultural Heritage, including architectural and archaeological heritage.
Cultural Asset/ Cultural environment	This term refers to arts, music, literature, sport and heritage.
Ecosystem Resilience	The capacity of ecosystems to deal with disturbances, either by resisting them, recovering from them, or adapting to them, whilst retaining their ability to deliver services and benefits now and in the future.
Historic Asset	<p>The historic environment is made up of individual historic features which are collectively known as historic assets. Examples of what can constitute an historic asset are as follows:</p> <ul style="list-style-type: none"> • Listed buildings and conservation areas; • Historic assets of special local interest; • Historic parks and gardens; • Townscapes; • Historic Landscapes; • World Heritage Sites; and • Archaeological remains (including scheduled monuments and marine archaeology).
Innovation Active ¹	<p>The UK definition of innovation follows the EU-wide definition adopted by Eurostat. This definition of 'innovation active' includes any of the activities described below that enterprises were engaged in during the survey period:</p> <ol style="list-style-type: none"> 1. Introduction of a new or significantly improved product (good or service) or process; 2. Engagement in innovation projects not yet complete or abandoned; 3. New and significantly improved forms of organisation, business structures or practices and marketing concepts or strategies; and 4. Investment activities in areas such as internal research and development, training, acquisition of external knowledge or machinery and equipment linked to innovation activities. <p>The definition excludes expenditure and activities linked to innovation. For the purpose of the UK Innovation Survey and in line with the European-wide Community Innovation Survey, a business that had engaged in any of the activities described in points 1 to 3 above is defined as being 'innovation active'.</p> <p>For the purpose of this report, a business that has engaged in any of the activities described in points 1 to 4 above is defined as a 'broader innovator'. Also, businesses classed as a 'wider innovator' are those that have engaged in the activity described in point 3 above.</p>
Natural Resource	<p>Defined in section 2 of the Environment (Wales) Act 2016; this includes but is not limited to:</p> <ul style="list-style-type: none"> • animals, plants and other organisms; • air, water and soil; • minerals; • geological features and processes; • physiographical features; • climatic features and processes.
Sustainable Management of Natural Resources	<p>As defined in section 3 of the Environment (Wales) Act 2017:</p> <p>(1) In this Part, "sustainable management of natural resources" means—</p> <ol style="list-style-type: none"> (a) using natural resources in a way and at a rate that promotes achievement of the objective in subsection (2), (b) taking other action that promotes achievement of that objective, and

¹

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536491/UKIS_2015_Main_report_Final_v.pdf

Terminology	Definition
	<p>(c) not taking action that hinders achievement of that objective.</p> <p>(2) The objective is to maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing—</p> <p>(a) meet the needs of present generations of people without compromising the ability of future generations to meet their needs, and</p> <p>(b) contribute to the achievement of the well-being goals in section 4 of the Well-being of Future Generations (Wales) Act 2015 (anaw 2).</p>

Table 1-1 List of Relevant Plans, Programmes and Environmental Protection Objectives

International Plans and Programmes
<p>UNESCO (1971) The Ramsar Convention on Wetlands (1971)</p> <p>UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural Heritage</p> <p>UNESCO (1973) Convention on International Trade in Endangered Species of Wild Fauna and Flora</p> <p>UNESCO (1979) Geneva Convention on Long Range Transboundary Air Pollution</p> <p>United Nations (1989) UN convention on the Rights of the Child 1989</p> <p>United Nations (1989) Basel Convention</p> <p>United Nations (1992) The Rio Convention on Biodiversity</p> <p>United Nations (1992) The Rio Declaration on Environment and Development</p> <p>United Nations (1994) The United Nations Framework Convention on Climate Change</p> <p>United Nations (1997) Kyoto Protocol to the UN Framework Convention on Climate Change</p> <p>United Nations (2002) The World Summit on Sustainable Development</p> <p>United Nations (2006) Convention on the Rights of Persons with Disabilities</p> <p>United Nations (2009) The Copenhagen Accord</p> <p>United Nations (2010) Cancun Adaptation Framework</p> <p>United Nations (2015) Sustainable Development Goals</p> <p>Universal Declaration of Human Rights (1948)</p> <p>United Nations (2016) Paris Agreement</p> <p>United Nations (2016) Committee on the Rights of the Child Recommendations report</p> <p>United Nations (2019) The PEP Partnerships</p> <p>United Nations, World Health Organisation and United Nations Economic Commission for Europe (2017) Cycling and Green Jobs</p> <p>United Nations Economic Commission for Europe (1998) The Aarhus Convention World Health Organization (1999) Guidelines for Community Noise 1999</p> <p>World Health Organisation (2014) Developing National Action Plans on Transport, Health and Environment</p> <p>World Health Organisation (2018) Making the (Transport, Health and Environment) Link</p> <p>World Health Organisation (2004) Children's Environment and Health Action Plan for Europe</p>
European Plans and Programmes
<p>Council of Europe (1981) Convention on the Conservation of European Wildlife and Natural Habitats - The Bern Convention</p> <p>Council of Europe (1992) European Convention on the Protection of the Archaeological Heritage</p> <p>Council of Europe (2000) European Landscape Convention</p> <p>European Council (2013) Seventh EU Environmental Action Plan (EAP) (2013-2020)</p> <p>European Commission (2006) Groundwater Directive 2006/118/EC</p> <p>European Commission (1992) EU Directive on the Conservation of Natural Habitats and Wild Fauna and Flora - The Habitats Directive 92/43/EEC</p> <p>European Commission (1999) European Spatial Development Perspective (ESDP) (97/150/EC)</p> <p>European Commission (2001) National Emissions Ceiling Directive 2001/81/EC</p> <p>European Commission (2002) Environmental Noise Directive (END) 2002/49/EC</p> <p>European Commission (2003) Public Sector Information Directive (PSI) 2003/98/EC</p> <p>European Commission (2004) Environmental Liability Directive 2004/35/EC</p> <p>European Commission (2005) EU Thematic Strategy on Air Quality</p> <p>European Commission (2006) Sustainable Development Strategy</p> <p>European Commission (2006) Action Plan on Biodiversity</p> <p>European Commission (2007) Together for Health - A Strategic Approach for the EU 2008-2013</p> <p>European Commission (2007) The Integrated Climate and Energy Package</p> <p>European Commission (2007) Green Paper: Towards A New Culture for Urban Mobility</p> <p>European Commission (2007) The Floods Directive 2007/60/EC</p> <p>European Commission (2008) Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC and Air Quality Framework Fourth Daughter Directive 2004/107/EC</p>

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) EU Biodiversity Strategy to 2020
 European Commission (2011) Roadmap to a Single European Transport Area
 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 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

UK Plans and Programmes

The Department for Business, Innovation and Skills (BIS) (2010) Local Growth: Realising Every Place's Potential (Local Growth White Paper)
 Committee on Climate Change (2008) Building a Low-Carbon Economy - the UK's Contribution to Tackling Climate Change
 Defra (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland
 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 and Department for Transport (2017) Air Quality plan for NO₂ in the UK Defra (2013) The National Adaptation Programme: Making the Country Resilient to a Changing Climate
 Defra (2018) Clean Air Strategy
 DECC (2009) UK Ports for the Offshore Wind Industry: Time to Act
 DECC (2011) Carbon Plan: Delivering our Low Carbon Future
 DECC (2011) National Policy Statements for Energy Infrastructure
 DECC (2011) UK Renewable Energy Roadmap
 DECC (2014) UK National Energy Efficiency Action Plan
 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 (2011) National Policy Statement for Ports
 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 (2018) Connecting communities with the railways: the community rail development strategy
 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
 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 (2018) The Environment Agency's Approach to Groundwater Protection V1.2
 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 (2003) The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003
 HM Government (2006) The Stern Review: The Economics of Climate Change
 HM Government (2006) Government of 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) 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 (2010) Environmental Permitting (England and Wales) Regulations
 HM Government (2013) Aviation Policy Framework
 HM Government (2015) Ozone-Depleting Substances Regulations 2015
 HM Government (2017) Industrial Strategy: Building a Britain fit for the Future
 HM Government (2017) Clean Growth Strategy
 HM Government (2017) Wales Act
 HM Government (2018) The Road to Zero
 HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment
 HM Government (2019) Clean Air Strategy 2019
 HMG, NI Executive, Scottish Government, Welsh Government (2011) UK Marine Policy Statement
 HM Treasury (2011) UK Plan for Growth
 HM Treasury (2014) National Infrastructure Plan
 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)
 Public Health England (2019) PHE Strategy 2020 - 2025
 Strategic Plan for Biodiversity 2011-2020 (2010)
 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

Brecon Beacons National Park Authority (2015) A Management Plan for the Brecon Beacons National Park 2015 - 2020

Committee on Climate Change (2017) UK Climate Change Risk Assessment 2017 Evidence Report, Summary for 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

Future Generations Commissioner for Wales (2020) The Future Generations Report

Joint Nature Conservation Committee (ongoing) Geological Conservation Review

Historic Environment Group (2020) Historic Environment and Climate Change in Wales Sector Adaption Plan

National Assembly for Wales (2009) Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009

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) Act

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 (2019) State of Natural Resources (SoNaRR) Interim Report

NHS Wales (2011) Together for Health

Oxfam (2020) The Welsh Doughnut – A Framework for Environmental Sustainability and Social Justice

Pembrokeshire Coast National Park Authority (2019) Management Plan 2020 - 2024

Public Health Wales (2015) A Healthier, Happier and Fairer Wales

Public Health Wales (2018) Long Term Strategy

Public Health Wales (2019) Our Strategic Plan 2019 – 2022

Snowdonia National Park Authority (2010) National Park Management Plan

Sustainable Development Commission (2009) Low Carbon Wales

The Socio-Economic Duty (2021)

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 (2008) The Wales Freight 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' 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) Woodlands for Wales Strategy

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) Climate Change Strategy for Wales

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) Rights of Children and Young Persons (Wales) Measure 2011

Welsh Government (2011) Welsh Language (Wales) Measure 2011

Welsh Government (2012) Working Differently – Working Together

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) Strategy for Tourism 2013 – 2020: Framework Action Plan Year 2

Welsh Government (2015) Nature Recovery Action Plan

Welsh Government (2016) Active Travel Action Plan for Wales

Welsh Government (2016) Consultation on a Welsh Government draft strategy: a million Welsh speakers by 2050

Welsh Government (2016) National Strategy on Violence against Women, Domestic Abuse and Sexual Violence – 2016 - 2021

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 (2018) Planning Policy Wales; Edition 10

Welsh Government (2018) Clean Air Zone Framework for Wales

Welsh Government (2018) Improving Public Transport (White Paper)

Welsh Government (2018) Valued and Resilient: The Welsh Government's Priorities for Areas of Outstanding Natural Beauty and National Parks

Welsh Government (2018) Review of the Road Safety Framework for Wales

Welsh Government (2018) Noise and Soundscape Action Plan 2018 -2023

Welsh Government (2019) Draft National Development Framework 2020 – 2040

Welsh Government (2019) Healthy Weight: Healthy Wales

Welsh Government (2019) A railway for Wales: the case for devolution

Welsh Government (2019) The Clean Air Plan for Wales; Healthy Air, Healthy Wales

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 (2020) Connected Communities

Welsh Government (2020) 20mph Task Force Group Report

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) 24: The Historic Environment

Welsh Government: Wales We Want National Conversation

Welsh Water (2008) Surface Water Management Strategy

Future Generations Commissioner for Wales: 10 Point Plan to Fund Wales' Climate Emergency, White Paper: Detailed Report, June 2019

Table 1-2 summarises the outcomes of the review of International, European, UK and National plans, policies and environmental protection objectives. This identified key themes and the implications for the ISA and the WTS illustrating how these link to the development of the ISA framework.

The Well-being of Future Generations (Wales) Act 2015 that are applicable to the themes relevant to the ISA have also been included within Table 1-2. The goals are listed below:

1. A prosperous Wales
2. A resilient Wales
3. A healthier Wales
4. A more equal Wales
5. A Wales of cohesive communities
6. A Wales of vibrant culture and thriving Welsh language
7. A globally responsible Wales

Table 1-2 Sustainability Themes linked to ISA Objectives

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
Reduce air pollution and ensure improvements in air quality contributing to a healthier Wales	2, 3 and 7	Geneva Convention on Long Range Transboundary Air Pollution; The United Nations Framework Convention on Climate Change; Kyoto Protocol to the UN Framework Convention on Climate Change; Declaration of Human Rights; The	Building a Low-Carbon Economy - the UK's Contribution to Tackling Climate Change; Environmental Protection Act 1990; Air Pollution: Action in a Changing Climate; Air Quality Plans for the Achievement of EU Air Quality Limit Values for	Environment (Wales) Act 2016; Environment Strategy for Wales; Climate Change Strategy for Wales; Low Carbon Revolution – the Welsh Government Energy Policy Statement; Policy Statement: Preparing for a Changing Climate; A Climate Conscious Wales; Energy Wales: A Low Carbon Transition; Wales Transport Strategy; Well-being of Future Generations (Wales) Act 2015; UK Climate Change Risk Assessment 2017 Evidence Report, summary for Wales; A Healthier, Happier	The WTS should seek to incorporate measures to improve air quality such as promoting low carbon initiatives and sustainable transport modes. The WTS should maximise the ability of Wales' natural habitats to absorb pollutants and improve air quality. The	The ISA Framework should include objectives that seek to improve air quality and health through a range of potential opportunities	Air, Population, Human Health and Climatic Factors	1, 6, 7, 8, 11 and 12

² Well-being of Future Generations (Wales) Act 2015

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
		Copenhagen Accord; National Emissions Ceiling Directive 2001/81/EC; EU Thematic Strategy on Air Quality; Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC and Air Quality Framework Fourth Daughter Directive 2004/107/EC; Seventh EU Environmental Action Plan; The EIA Directive 2014/52/EU; Industrial Emissions Directive (integrated pollution prevention and control) 2010/75/EU; Emissions Trading Scheme (EU ETS); Cancun Adaptation Framework (2010); Paris Agreement (2016).	Nitrogen Dioxide (NO ₂) in the UK: List of UK and National Measures; The National Adaptation Programme: Making the Country Resilient to a Changing Climate; Carbon Plan: Delivering our Low Carbon Future; UK Climate Change Risk Assessment: Government Report; Delivering a Sustainable Transport System; Managing the Environment in a Changing Climate; Climate Change Act 2008; Air Quality Standards Regulations 2010; Mainstreaming Sustainable Development; Environment Act 1995; Ozone-Depleting Substances Regulations 2015; Aviation Policy Framework; UK Climate Change Risk Assessment (2012); Air Quality plan for NO ₂ in	and Fairer Wales; Low Carbon Wales; Active Travel (Wales) Act 2013; Active Travel Action Plan for Wales; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Technical Advice Note (TAN) 18: Transport; Clean Air Zone Framework (2018); Healthy Air, Healthy Wales (2019); Prosperity for All: A Low Carbon Wales, Public Health Wales (2018) Long Term Strategy Public Health Wales (2019), Our Strategic Plan 2019 – 2022; The Future Generations Report (2020)	plans, programmes and environmental protection objectives seek to improve air quality through low carbon initiatives and policies, Plans, programmes and environmental protection objectives that prioritise economic development without consideration of ecosystems services, may conflict with this theme. This is as an increase in built development or transport infrastructure could threaten the achievement of an improvement in, or the protection of, the natural environment. The WTS should also consider if poor air quality hot spots relate to areas of economic disparity. The health implications of poor air quality and the impact this has on vulnerable groups	such as transport, housing, economic development and improvements to the natural environment and ecosystems services.		

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
			the UK; Clean Air Strategy (2019);		should also be considered.			
Promote sustainable patterns of mobility, including active travel and public transport and enhance Sustainable Transport provision to improve air quality		A European Strategy for Low – Emission Mobility (2016); Cycling and Green Jobs; The PEP Partnerships (2019), Developing National Action Plans on Transport, Health and Environment (2014) Making the (Transport, Health and Environment) Link (2018); Green Paper: Towards a New Culture for Urban Mobility (2007); Action Plan on Urban Mobility (2009); Efficient Road Transport Vehicles Directive (2009/33/EC); A Sustainable Transport Future (2009); Strategic Plan 2016 – 2020: Mobility and Transport (2017);	UK Ports for the Offshore Wind Industry: Time to Act; Ports Policy Review Interim Report; Delivering a Sustainable Transport System; National Policy Statement for Ports; Transport Act 2000; Cycle and Walking Investment Strategy (2017); Port Air Quality Strategies (2019); Maritime (2050); The Community Rail Development Strategy (2018)	Wales Transport Strategy; Active Travel (Wales) Act 2013; Active Travel Action Plan for Wales; Clean Air Zone Framework (2018); Planning Policy Wales 10 (2018); Public Transport Bill (2019); A railway for Wales: the case for devolution (2019); Improving Public Transport (White Paper); The Future Development of Transport for Wales; Prosperity for All: A Low Carbon Wales; The Social Model of Disability.	The WTS should seek to promote and enhance sustainable transport modes, including Active Travel and Public Transport, in order to dissuade the use of single occupancy vehicles. The WTS should enhance and maintain sustainable connectivity between communities and across Wales, with the aim to reduce emissions and improve air quality. Patterns of mobility should be considered, in particular, if there are gendered or demographic differences associated with journey type, mode and journey time.	The ISA Framework should include objectives which seek to ensure the number single occupancy vehicle trips decreases and public transport and active travel patronage increases.	Air, Population, Human Health and Material Assets	1, 2, 6, 7, 8, 11 and 12
Improve the connectivity of existing communities and	1, 2, 3, 4, 5, 6 and 7	European Sustainable Development Strategy; Roadmap to a Single	The UK's Shared Framework for Sustainable	PPW edition 10; TAN18; One Wales, One Planet; TAN6-Planning for Sustainable Rural Communities;; Well-being of Future	Development and transport infrastructure should encourage	The ISA Framework should include	Population, Human Health and	1, 2, 3 and 9

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
reduce isolation through better planned and designed future communities and more inclusive public transport.		European Transport Area; Declaration of Human Rights; The Rio Declaration on Environment and Development; Review of the EU Sustainable Development Strategy European Commission (2009); Convention on the Rights of Persons with Disabilities;	Development; Countryside and Rights of Way Act; National Parks and Access to the Countryside Act 1949Achieving Equal Access for Disabled People (2018); Connecting People: A Strategic Vision for Rail (2017); Future of Mobility: Urban Strategy (2019); The Community Rail Development Strategy (2018)	Generations Act; Wales Transport Strategy; Active Travel (Wales) Act 2013; Active Travel Action Plan for Wales; Framework for Action on Independent Living; Taking Wales Forward 2016-2021; Planning (Wales) Act 2015; Shape Your Future - future trends: Implications for the third sector in Wales; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Rural Development Plan for Wales (2014-2020); Connected Communities (2020); Improving Public Transport (White Paper); The Future Development of Transport for Wales; The Future Generations Report (2020); The Welsh Doughnut	efficient and sustainable patterns of movement in the first instance. The WTS should plan for reducing the need to travel and provide opportunities to access new and existing development and services by a range of sustainable travel modes.	objectives that encourage improving the connectivity of communities and sustainable patterns of movement, as well as sustainable transport options.	Material Assets	
Promote greater equality of opportunity for all citizens. This should include a focus on ensuring equal accessibility for all, including for disabled and vulnerable people, as well as equality of outcome for all	1, 2, 3, 4, 5, 6 and 7	European Sustainable Development Strategy; Roadmap to a Single European Transport Area; The Rio Declaration on Environment and Development; Review of the EU Sustainable Development Strategy European Commission (2009); Convention on the Rights of Persons with Disabilities; Transport	The UK's Shared Framework for Sustainable Development; Countryside and Rights of Way Act; National Parks and Access to the Countryside Act 1949Achieving Equal Access for Disabled People (2018); Connecting People: A	PPW edition 10; TAN18; One Wales, One Planet; TAN6-Planning for Sustainable Rural Communities;; Well-being of Future Generations Act; Wales Transport Strategy; Active Travel (Wales) Act 2013; Active Travel Action Plan for Wales; Framework for Action on Independent Living; Taking Wales Forward 2016-2021; Planning (Wales) Act 2015; Shape Your Future - future trends: Implications for the third sector in Wales; One Wales – A Progressive Agenda for the Government of Wales; One Wales:	The WTS will need to recognise the existing ways in which power structures based on factors such as gender, race, sexuality, disability, class, age and faith interact with each other and create inequalities, discrimination and oppression. The WTS will need to ensure that	The ISA will need to help ensure that a gender perspective is at the heart of all decision-making during the preparation of the WTS. Appraisals through the ISA	Population and Human Health	1, 2, 3 and 9

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
women, men, and non-binary people		Connectivity: A Gender Perspective, International Transport Forum, 2019	Strategic Vision for Rail (2017); Future of Mobility: Urban Strategy (2019); The Community Rail Development Strategy (2018); Public Transport and Gender, Women's Budget Group, October 2018; 3 Campaign for Better Transport (2018) Buses in Crisis: A report on bus funding across England and Wales 2010-2018; Strategic Equality Plan 2020 - 2024	Connecting the Nation; Rural Development Plan for Wales (2014-2020); Connected Communities (2020); Improving Public Transport (White Paper); The Future Development of Transport for Wales; The Future Generations Report (2020); The Welsh Doughnut: A framework for environmental sustainability and social justice; Advancing Gender Equality in Wales Plan (2020);	transport in Wales facilitates economic independence of all women with all forms of unpaid and paid work recognised; facilitates the freedom of women to live their lives as they choose; challenges any existing power structures that may be disadvantaging women; is committed to equality of outcome for all women, men and non-binary people; places a gender perspective at the heart of decision-making; is open, transparent and welcomes scrutiny through a gender-lens; actively monitors progress towards equality; and leads by example for delivering equality.	will provide scrutiny from a gender-lens and help to ensure equality of outcome for all men, women, and non-binary people. The ISA will help to ensure that key issues such as safety on public transport, in public toilets and when using services such as taxis are appropriately addressed in the WTS.		

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
Maintain and enhance biodiversity, habitats and species with healthy functioning and resilient ecosystems, including connected networks of green infrastructure throughout rural and urban areas. This is so that ecosystem services provided by green infrastructure can be enhanced and taken full advantage of, including climate change resilience & mitigation, enhancements to biodiversity, geodiversity and soils and filtering air and water.	1,2,3,5 and 7	The Rio Convention on Biodiversity; Rio Declaration on Environment and Development; Liability Directive 2004/35/EC; World Summit on Sustainable Development; Convention on the Conservation of European Wildlife and Natural Habitats – The Bern Convention; EU Directive on the Conservation of Natural Habitats and Wild Fauna and Flora – The Habitats Directive 92/43/EEC; Convention on International Trade in Endangered Species of Wild Fauna and Flora; The Ramsar Convention on Wetlands (1971); Convention on International Trade in Endangered Species of Wild Fauna and Flora; Cancun Adaptation Framework (2010); Paris Agreement; Review of the EU Sustainable Development Strategy; The Birds Directive	Mainstreaming Sustainable Development; The Natural Choice: Securing the Value of Nature; Wildlife and Countryside Act 1981; Environmental Protection Act 1990; Natural Environment and Rural Communities Act 2006; Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended 2010); Conservation of Habitats & Species Regulations 2010 (as amended 2011); The UK Post-2010 Biodiversity Framework; Charting Progress 2: The State of UK Seas; UK National Ecosystem Assessment: Understanding Nature's Value to Society; The Paris Agreement; Joint Nature Conservation Committee and Defra (2012) UK Post-2010	One Wales: One Planet: The Sustainable Development Scheme of the Welsh Assembly Government; Woodlands for Wales Strategy; Wales Biodiversity Framework; UK Climate Change Risk Assessment 2017 Evidence Report; National Seascape Assessment for Wales; Taking Wales Forward 2016-2021; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; SoNaRR; Draft NRP; One Wales: Connecting the Nation; Capturing the Potential: A Green Jobs Strategy for Wales; Rural Development Plan for Wales (2014-2020); Water Strategy for Wales; Surface Water Management Strategy;; Technical Advice Note (TAN) 5: Nature Conservation and Planning; TAN 10: Tree Preservation Orders; Nature Recovery Action Plan (2015)	The WTS should seek to make transport, the environment and communities more resilient to major environmental problems including addressing declining biodiversity. Section 6 of the Environment (Wales) Act 2016 introduces an enhanced biodiversity and resilience of ecosystems duties for public authorities in relation to the exercise of their functions. The emphasis of the duty is that the consideration of biodiversity and ecosystem are embedded in the early thinking of the development of the WTS. The design of new transport infrastructure should retain and enhance biodiversity and habitats and the WTS should reflect this, with no interventions	The ISA Framework should include objectives that seek to conserve and enhance biodiversity, species and habitats as part of a wider aim to protect and enhance ecosystems services.	Biodiversity, Flora and Fauna	6, 7, 8, 9 and 11

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
Well-connected green infrastructure networks also provide active travel links		2009/147/EC; EU Biodiversity Strategy to 2020; Action Plan on Biodiversity (2006)	Biodiversity Framework; Conserving Biodiversity the UK Approach; Joint Nature Conservation Committee (2012) The UK Post-2010 Biodiversity Framework; Strategic Plan for Biodiversity 2011-2020 (2010); Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended 2010); Conservation of Habitats & Species Regulations 2010 (as amended 2011); The Invasive and Non-Native Species Framework Strategy for Great Britain; National Parks and Access to the Countryside Act 1949; Environment Act 1995; The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003; Ozone-Depleting Substances Regulations 2015; HMG, NI		resulting in a net loss of biodiversity. Capturing this duty as an integral part of the WTS development process will be essential. The Plans, programmes and environmental protection objectives seek to conserve and protect biodiversity through international and national regulations or frameworks. Plans, programmes and environmental protection objectives that prioritise economic development without consideration of ecosystems resilience, may conflict with this theme. This is as an increase in built development or transport infrastructure could threaten the achievement of an improvement in, or the protection of, the natural environment.			

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
			Executive, Scottish Government; Inshore Fisheries and Conservation Authorities Bylaws (various); Natural England and JNCC (2011) Marine Conservation Zone (MCZ) Project; NERC (2010) Marine Environmental Mapping Programme (MAREMAP)					
Reduce the existing or future risk of flooding and/or coastal erosion by adapting existing infrastructure to the impacts of climate change, and promote protection of floodplains or areas of managed realignment	2, 3 and 7	The EU Water Framework Directive; EU Flood Directive; European Sustainable Development Strategy; EU Directive 2014/52/EU 97/11/EC amending Directive 85/337/EEC on Environmental Impact Assessment; The Floods Directive 2007/60/EC; The Rio Declaration on Environment and Development; The United Nations Framework Convention on Climate Change; Kyoto Protocol to	Flood Risk Regulations 2009; Flood and Water Management Act 2010; Adapting to Coastal Change: Developing a Policy Framework; The Marine and Coastal Access Act 2009; Environment Act 1995; The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003; Ozone-Depleting Substances Regulations 2015; Inshore Fisheries and Conservation	PPW edition 10; TAN15 Development and Flood Risk; National Flood and Coastal Erosion Strategy for Wales; Welsh Coastal Tourism Strategy; Coastal Access Improvement Programme; Making the Most of Wales' Coast: The Integrated Coastal Zone Management Strategy for Wales; UK Climate Change Risk Assessment 2017 Evidence Report; National Seascape Assessment for Wales; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Welsh Government Strategic Policy Position on Water; Water Strategy for Wales; Surface Water Management Strategy;	The WTS should use natural features that contribute to flood management to reduce flood risk and coastal erosion. Optioneering and design should seek to adapt to the risk of flooding when determining the location and design of new development and associated transport infrastructure. The WTS should ensure that new transport infrastructure avoids areas of flood	The ISA Framework needs to include objectives that to seek to ensure that flood risk is reduced, reflecting the principles of national studies and objectives.	Water Climatic Factors Population and Human Health	3, 6, 7, 9, 11 and 12

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
		the UN Framework Convention on Climate Change; Cancun Adaptation Framework (2010); Paris Agreement (2016); Review of the EU Sustainable Development Strategy European Commission (2009)	Authorities Bylaws (various); NERC (2010) Marine Environmental Mapping Programme (MAREMAP); Sustainable Development Commission (2005) One Future – Different Paths. Shared Framework for Sustainable Development	Technical Advice Note (TAN) 14: Coastal Planning	risk where possible and does not increase flood risk and should seek to ensure transport development incorporates climate change adaptation measures. The WTS should consider if areas of economic disparity are associated with a higher flood risk and should contribute to managing this additional risk.			
Sustainably manage natural resources and tackle the causes of climate change, including a reduction in carbon emissions associated with the transport sector in accordance with Wales' carbon budgets	1, 2, 3, 4, 5 and 7	Johannesburg Declaration on Sustainable Development; The EU Sixth Environmental Action Plan, European Sustainable Development Strategy; United Nations Framework Convention on Climate Change; European Climate Change Programme; The EU Air Quality Framework Directive; Agenda 21; EU Directive 97/11/EC amending Directive	Building a Low-Carbon Economy - the UK's Contribution to Tackling Climate Change; UK Climate Change Risk Assessment: Government Report; Health Effects of Climate Change in the UK 2008 - An update of the Department of Health report 2001/2002; The Stern Review: The Economics of Climate Change; Climate	Environment Strategy for Wales; Wales Spatial Plan;; Energy Policy Statement; Climate Change Strategy for Wales; One Wales, One Planet; Surface Water Management Strategy; TAN6-Planning for Sustainable Rural Communities Energy White Paper: Our Energy Future; Climate Change Wales; Well-being of Future Generations (Wales) Act 2015; A Climate Conscious Wales. Energy Wales A Low Carbon Transition; UK Climate Change Risk Assessment 2017 Evidence Report; Low Carbon Wales; Taking Wales Forward 2016-2021; Active Travel (Wales) Act 2013; Active Travel Action Plan for Wales;	The WTS should seek to reduce the consumption of natural resources and act to tackle the causes and consequences of climate change, through the promotion of sustainable transport modes and energy efficient transport systems The WTS could highlight the importance of managing and seeking to mitigate the consequences of climate	The ISA Framework should include objectives that address climate change issues. This is likely to be reflected across the whole range of SA objectives as a key	Air and Climatic Factors	3, 6, 7, 8, 9, 11 and 12.

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
		85/337/EEC on Environmental Impact Assessment; UN Framework Convention on Climate Change Directive to Promote Electricity from Renewable Energy (2001/77/EC); Strategy on Adaptation to Climate Change; National Emissions Ceiling Directive 2001/81/EC; Industrial Emissions Directive (integrated pollution prevention and control) 2010/75/EU; Emissions Trading Scheme (EU ETS); Kyoto Protocol to the UN Framework Convention on Climate Change; Cancun Adaptation Framework (2010); Paris Agreement (2016); Groundwater Directive 2006/118/EC; Review of the EU Sustainable Development Strategy European Commission (2009)	Change Act 2008; The Climate Change Act 2008 (2020 Target, Credit Limit and Definitions) Order 2009; Air Quality Strategy for England, Scotland, Wales and Northern Ireland; Water Resources Strategy for England and Wales; EA's Approach to Groundwater Protection V1.2 Forestry Act 1967; Planning (Listed Buildings and Conservation Areas) Act 1990; A Green Future (2018); Environment Act 1995; The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003; Ozone-Depleting Substances Regulations 2015; One Future – Different Paths. Shared Framework for	Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Capturing the Potential: A Green Jobs Strategy for Wales; Woodlands for Wales Strategy; Welsh Government Strategic Policy Position on Water; Rural Development Plan for Wales (2014-2020); Sustaining a Living Wales: A Green Paper on a New Approach to Natural Resource Management in Wales; Water Strategy for Wales; Surface Water Management Strategy; Final Water Resources Management Plan; Natural Resources Policy (2017); Prosperity for All: A Low Carbon Wales; The Future Generations Report (2020); Nature Recovery Action Plan (2015); 10 Point Plan to Fund Wales' Climate Emergency Future Generations Commissioner for Wales, White Paper: Detailed Report, June 2019	change by building resilience into the natural and built environment.	integral cross-cutting theme.		

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
			Sustainable Development					
Protect and improve the quality and quantity of water resources	2, 3 and 7	The EU Water Framework Directive; EU Flood Directive; European Sustainable Development Strategy; EU Directive 2014/52/EU 97/11/EC amending Directive 85/337/EEC on Environmental Impact Assessment; The Rio Declaration on Environment and Development; The United Nations Framework Convention on Climate Change; Kyoto Protocol to the UN Framework Convention on Climate Change; Cancun Adaptation Framework (2010); Paris Agreement (2016); Review of the EU Sustainable Development Strategy European Commission (2009)	Flood and Water Management Act 2010; Adapting to Coastal Change: Developing a Policy Framework; The Marine and Coastal Access Act 2009; Environment Act 1995; The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003; Sustainable Development Commission (2005) One Future – Different Paths. Shared Framework for Sustainable Development	Surface Water Management Strategy; Coastal Access Improvement Programme; Making the Most of Wales' Coast: The Integrated Coastal Zone Management Strategy for Wales; UK Climate Change Risk Assessment 2017 Evidence Report; National Seascape Assessment for Wales; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Welsh Government Strategic Policy Position on Water; Water Strategy for Wales; Surface Water Management Strategy; Final Water Resources Management Plan; Technical Advice Note (TAN) 14: Coastal Planning; Draft NRP	The WTS should seek opportunities to protect and improve the quality of water resources. The sustainable use of water should also be considered in new transport developments.	The ISA Framework needs to include objectives that seek to ensure that the quality of water resources is protected and improved.	Water	6, 7, 11 and 12

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
Manage mineral extraction and minimise waste generation and increase levels of reuse and recycling to achieve more sustainable waste management and reduce landfill	2 and 7	The EU Landfill of Waste Directive; EU Waste Framework Directive; European Sustainable Development Strategy; EU Directive 2014/52/EU 97/11/EC amending Directive 85/337/EEC on Environmental Impact Assessment; Environmental Liability Directive; (EU) Council Directive on Waste (75/442/EEC) as amended by Council Directive 91/156/EC; Council Directive on the Landfill of Waste (99/31/EC); EU Hazardous Waste Directive (91/689/EEC); EU Packaging and Packaging Waste Directive (94/62/EC); The Urban Waste Water Directive 91/271/EEC; Mineral Waste Directive 2006/21/EC; Landfill Directive (1999/31/EC); The Rio Declaration on	National Policy Statement for WasteWater; The UK's Shared Framework for Sustainable Development; Environment Act 1995; One Future – Different Paths. Shared Framework for Sustainable Development	Environment Strategy Wales; TAN21 – Waste; PPW edition 10; Wales Spatial Plan; One Wales, One Planet; Towards Zero Waste; Well-being of Future Generations (Wales) Act 2015; Low Carbon Revolution – the Welsh Government Energy Policy Statement; UK Climate Change Risk Assessment 2017 Evidence Report; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Capturing the Potential: A Green Jobs Strategy for Wales; Technical Advice Note (TAN) 21: Waste; The Future Generations Report (2020)	The WTS should promote the reduction of waste. Opportunities for recycling and reuse should be encouraged and opportunities to reduce the amount of waste sent to landfill should be increased in line with National targets and goals.	The ISA Framework should include objectives that seek to encourage sustainable waste management.	Materials Assets, Soil, Population, Human Health and Climatic Factors	6, 7, 8, 9, 11 and 12

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
		Environment and Development						
Relieve pressure on natural resources by increasing energy efficiency, stimulating investment and innovation, and promoting the sustainable use of national renewable energy resources	1, 2, 3, 5 and 7	European Sustainable Development Strategy; EU Directive 2014/52/EU 97/11/EC amending Directive 85/337/EEC on Environmental Impact Assessment, Renewable Energy Coalition; The Integrated Climate and Energy Package; Renewable Energy Directive 2009/8/EC; Energy 2020 - A Strategy for Competitive, Sustainable and Secure Energy; Energy Efficiency Directive (2012/27/EU); 2030 Policy Framework for Climate and Energy; The United Nations Framework Convention on Climate Change; Kyoto Protocol to the UN Framework Convention on Climate Change; Environmental Quality Standards Directive 2008/105/EC; Review of the EU	National Policy Statements for Energy Infrastructure; UK Renewable Energy Roadmap; UK National Energy Efficiency Action Plan; The Energy Act 2008; The UK's Shared Framework for Sustainable Development; Water Resources Strategy for England and Wales; DECC (2009) Framework for the Development of Clean Coal; UK Ports for the Offshore Wind Industry: Time to Act; Forestry Act 1967; Environment Act 1995; Environmental Permitting (England and Wales) Regulations; Ozone-Depleting Substances Regulations	One Wales, One Planet; Wales a better Country; PPW edition 10; TAN8 – Renewable Energy; TAN6-Planning for Sustainable Rural Communities; Wales Spatial Plan; Energy Policy Statement; Climate Change Strategy for Wales; Well-being of Future Generations (Wales) Act 2015; Low Carbon Revolution – the Welsh Government Energy Policy Statement; Towards Zero Waste One Wales: One Planet; A Climate Conscious Wales;. Energy Wales A Low Carbon Transition; UK Climate Change Risk Assessment 2017 Evidence Report; Low Carbon Wales; Taking Wales Forward 2016-2021; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Capturing the Potential: A Green Jobs Strategy for Wales; Woodlands for Wales Strategy; Rural Development Plan for Wales (2014-2020); Sustaining a Living Wales: A Green Paper on a New Approach to Natural Resource Management in Wales; Water Strategy for Wales; Surface Water Management Strategy; Final Water Resources Management Plan; The Future	The WTS should promote reduced energy usage and energy efficiency within the national transport network and incorporate this into the design phase of new transport infrastructure. The creation of energy from low or zero carbon energy sources for transport modes should also be promoted, capitalising on the potential of Wales.	The ISA Framework should include objectives that seek to encourage energy efficiency as well as the creation of energy from low or zero carbon energy sources, capitalising on the potential of Wales.	Population, Air and Climatic Factors	3, 6, 7, 8, 11 and 12

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
		Sustainable Development Strategy; Seventh Environmental Action Programme to 2020 'Living well, within the limits of our planet'; SEA Directive (2001/42/EC)	2015; A Green Future (2018);	Generations Report (2020); Nature Recovery Action Plan (2015)				
To conserve soil resources, control soil erosion and maintain their quality	2 and 7	European Sustainable Development Strategy; EU 6 TH Environmental Action Plan; EU Soil Framework Directive; European Nitrates Directive; EU Directive 2014/52/EU 97/11/EC amending Directive 85/337/EEC on Environmental Impact Assessment; Environmental Liability Directive 2004/35/EC; EU Nitrates Directive; European Thematic Strategy on Soil Protection European Commission (2006)	Forestry Act 1967; Environment Act 1995	Environment Strategy for Wales; Wales Spatial Plan; Surface Water Management Strategy; The Future of our Farming; UK Climate Change Risk Assessment 2017 Evidence Report; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Woodlands for Wales Strategy; Draft NRP; Nature Recovery Action Plan (2015)	Better soil management will contribute to erosion prevention and supporting habitats. The WTS should ensure soil resources are not adversely affected by transport infrastructure or development.	The ISA Framework should include objectives with a focus on the protection of soil resources.	Soil, Material Assets and Water	6, 7, 8, 11 and 12
Protect and enhance the distinctiveness of our landscapes	1, 4, 5, 6 and 7	Convention Concerning the Protection of the World Cultural and Natural Heritage; European	Heritage Protection for the 21st Century; The Protection of Wrecks Act 1973; Ancient	PPW edition 10; Cultural Tourism Strategy; Coastal Tourism Strategy; TAN12 – Design; Register of Landscapes of Historic Interest; Historic Environment (Wales) Act 2016;	The WTS should protect and retain distinctiveness of the national landscapes,	The ISA Framework should include objectives that	Cultural Heritage	

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
National Parks, AONBs, seascapes, historic environment, historic assets, and their settings		Landscape Convention; European Convention on the Protection of the Archaeological Heritage	Monuments and Archaeological Areas Act 1979; Protection of Military Remains Act 1986; Planning (Listed Buildings and Conservation Areas) Act 1990; The Treasure Act 1996; Environment Act 1995; The National Heritage Act 2002; Commons Act 2006	Valuing the Welsh Historic Environment; The Historic Environment Strategy for Wales; UK Climate Change Risk Assessment 2017 Evidence Report; National Seascape Assessment for Wales; Taking Wales Forward 2016-2021; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Valuing the Welsh Historic Environment; Valued and Resilient: The Welsh Government's Priorities for Areas of Outstanding Natural Beauty and National Parks; A Management Plan for the Brecon Beacons National Park 2015 – 2020; Pembrokeshire Coast National Park Management Plan 2020 – 2024; Snowdonia National Park Authority National Park Management Plan; Historic Environment and Climate Change in Wales Sector Adaption Plan	valued historic environment and cultural heritage and its setting and improve access to cultural facilities for citizens and visitors.	seek to protect local distinctiveness and the historic environment.	and Landscape	4, 5, 9, 10 and 13
Improve the physical and mental health and well-being of the population and reduce health inequalities to create a healthier Wales	1, 2, 3, 4, 5 and 7	Guidelines for Community Noise 1999; Children's Environment and Health Action Plan for Europe; Together for Health - A Strategic Approach for the EU 2008-2013; Environmental Noise Directive (END) 2002/49/EC; Seventh Environmental Action	Children's Environment and Health Action Plan; Health Effects of Climate Change in the UK 2008 - An update of the Department of Health report 2001/2002; Sustainable Development: The Key to Tackling Health Inequalities; One Future	PPW edition 10; Wales Spatial Plan; Play Policy Implementation Plan; National Energy Efficiency Action Plan; One Wales, One Planet; Living Well – Living Independent Lives; The Strategy for Older People in Wales; Third Sector Scheme; Volunteering Policy, Supporting Communities, Changing Lives; Towards Zero Waste; Active Travel (Wales) Act 2013; Active Travel Action Plan for Wales; Well-being of Future Generations (Wales) Act 2015; Together for Health; UK Climate	The WTS should encourage active travel and use the natural resources available to encourage an improvement in physical and mental health whilst promoting healthy and active lifestyles. The WTS should recognise the potential for national	The ISA framework should include a variety of social, environmental, cultural and economic objectives that seek to benefit health and the	Population, and Human Health	1, 2, 6, 7 and 8,

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
		Programme to 2020 'Living well, within the limits of our planet'	– Different Paths. Shared Framework for Sustainable Development; PHE Strategy 2020 – 2025;	Change Risk Assessment 2017 Evidence Report; A Healthier, Happier and Fairer Wales; Fulfilled Lives, Supportive Communities;; Declaration of Rights for Older People; Taking Wales Forward 2016-2021; Social Services and Well-being (Wales) Act 2014; Planning (Wales) Act 2015; Shape Your Future - future trends: Implications for the third sector in Wales; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Designed to Add Value - a third dimension for One Wales; Capturing the Potential: A Green Jobs Strategy for Wales; Rural Health Plan; A Framework for Action; Working Differently – Working Together; The Strategy for Older People in Wales 2013-2023; Technical Advice Note (TAN) 11: Noise Healthy Weight, Healthy Wales (2019); Public Health Wales - Long Term Strategy; Public Health Wales - Our Strategic Plan 2019 – 2022; Review of the Road Safety Framework for Wales; Noise and Soundscape Action Plan 2018 -2023; The Future Generations Report (2020); The Welsh Doughnut; The Socio-Economic Duty (2021)	green spaces as places for health and recreation, connecting habitats and supporting community interaction. A healthier population could enable people to achieve their potential and to make Wales a more equal society. The WTS should avoid and remove barriers to access for all members of society, including in accordance with the Social Model of Disability.	local community, reflecting the wide range of potential influences that can affect health and well-being within communities. This is likely to be reflected across the whole range of ISA objectives as a key integral cross-cutting theme.		
Contribute towards the future well-being of the	1, 2, 4, 6 and 7		Heritage Protection for the 21st Century (2007)	Welsh Language (Wales) Measure 2011; a million Welsh speakers by 2050; Planning (Wales) Act 2015; One Wales – A	The WTS should support activities which promote and facilitate	The ISA Framework should include	Population and Cultural	

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
Welsh language, culture, and heritage				Progressive Agenda for the Government of Wales; Well-being of Future Generations (Wales) Act (2015); One Wales: Connecting the Nation; Vibrant and Viable Places New Regeneration Framework; Welsh Medium Education Strategy 2010; TAN 24: The Historic Environment; The Future Generations Report (2020); Historic Environment and Climate Change in Wales Sector Adaption Plan	the use of the Welsh language as well as those who are reliant upon British Sign Language.	objectives that promote the Welsh language	Heritage	4, 5, 9 and 10
Create safe, sustainable, balanced, connected, and cohesive communities, including in both rural and urban areas	1, 2, 3, 4, 5 and 6	Johannesburg Declaration on Sustainable Development; European Spatial Development Perspective; European Sustainable Development Strategy; Agenda 21; Rio Declaration on Environment and Development; EU Rural Development Policy; Aarhus Convention; PSI Directive; Review of the EU Sustainable Development Strategy European Commission (2009); Towards Social Investment for Growth and Cohesion 2014-2020	Natural Environment and Rural Communities Act 2006; The Equality Act 2010; Planning (Listed Buildings and Conservation Areas) Act 1990; Commons Act 2006; One Future – Different Paths. Shared Framework for Sustainable Development; The Community Rail Development Strategy (2018)	National Energy Efficiency and Savings Plan; Living Well – Living Independent Lives; Framework for Regeneration Areas – Vibrant and Viable Places; Wales – A Better Country; Improving Lives and Communities – Homes in Wales; National Flood and Coastal Erosion Strategy for Wales; TAN 12- Design, Play Policy Implementation Plan; Community Cohesion Strategy for Wales; TAN1- Joint Housing Land Availability Studies; Gypsy Traveller Good Practice Guidelines; Travelling to a Better Future; Improving Lives and Communities; Improving Lives and Communities – Homes in Wales; Third Sector Scheme; Volunteering Policy, Supporting Communities, Changing Lives; A Healthier, Happier and Fairer Wales; Fulfilled Lives, Supportive Communities; Welsh Language (Wales) Measure 2011; a million Welsh speakers by 2050; Active Travel (Wales) Act 2013; Active Travel Action Plan for	The WTS should provide access to a range of employment and other opportunities to enable people to realise their individual aspirations. The WTS should promote cohesive communities through design and connectivity and promote equal access to well-being services and educational opportunities. The WTS should avoid and remove barriers to access for all members of society, including in accordance with the	The ISA Framework should include objectives that address community needs.	Population and Material Assets	1, 2 and 3

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
				Wales; Framework for Action on Independent Living; Taking Wales Forward 2016-2021; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Setting the Direction: Primary & Community Services Strategic Delivery Programme; Welsh Government Rural Development Plan for Wales (2014-2020); Wales Infrastructure Investment Plan; Vibrant and Viable Places New Regeneration Framework; The Strategy for Older People in Wales 2013-2023; Review of the Road Safety Framework for Wales; 20mph Task Force Group Report; National Strategy on Violence against Women, Domestic Abuse and Sexual Violence – 2016 – 2021; The Welsh Doughnut: A framework for environmental sustainability and social justice	Social Model of Disability.			
Promote quality employment opportunities and economic activity	1, 2, 4, 5, 6 and 7	Johannesburg Declaration on Sustainable Development; The European Employment Strategy; Review of the EU Sustainable Development Strategy European Commission (2009); Public Sector Information Directive (PSI) 2003/98/EC	National Infrastructure Plan; One Future – Different Paths. Shared Framework for Sustainable Development; Aviation 2050; Regional Airports (2016).	PPW edition 10; Coastal Tourism Strategy; Strategy; Sustainable Tourism Framework; A Skills and Employment Strategy and Action Plan; Wales – A Better Country, Well-being of Future Generations (Wales) Act 2015; Taking Wales Forward 2016-2021; Natural Resources Policy Statement; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; Capturing the Potential: A Green Jobs Strategy for Wales; Sustaining a Living Wales: A Green Paper on a New Approach	The WTS should use the natural resources and transport infrastructure available to ensure adequate provision of employment opportunities, accessibility to employment and increased economic activity.	The ISA Framework should address employment provision.	Population and Material Assets	1, 2 and 3,

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
				to Natural Resource Management in Wales; Wales Infrastructure Investment Plan; Technical Advice Note (TAN) 4: Retail and Commercial Development; Technical Advice Note (TAN) 20: Planning and the Welsh Language; Technical Advice Note (TAN) 23: Economic Development; Prosperity for All: National Strategy; Prosperity for All: Economic Action Plan; Taking Wales Forward (2017); National Transport Finance Plan 2018; The Future Generations Report (2020); The Socio-Economic Duty (2021)				
Promote sustainable economic growth and business competitiveness through transport and innovation.	1, 2, 4, 6 and 7	European Spatial Development Perspective; The European Employment Strategy; Sustainable Development Goals; The Aarhus Convention; Europe 2020: A strategy for smart, sustainable and inclusive growth	Local Growth: Realising Every Place's Potential (Local Growth White Paper); UK Plan for Growth; National Infrastructure Plan; Rail Freight Strategy (2016); Transport Investment Strategy – Moving Britain Forward (2017); Transport Infrastructure Efficiency Strategy (2017); Industrial Strategy (2017); Clean Growth Strategy (2017); Aviation 2050; Regional Airports (2016).	Wales Spatial Plan; Economic Renewal: A New Direction; Third Sector Scheme; Volunteering Policy, Supporting Communities, Changing Lives;; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Capturing the Potential: A Green Jobs Strategy for Wales; Wales Infrastructure Investment Plan; Vibrant and Viable Places New Regeneration Framework; Welsh Government Technical Advice Note (TAN) 4: Retail and Commercial Development; Technical Advice Note (TAN) 23: Economic Development; National Transport Finance Plan 2018; Wales Freight Strategy (2008); The Socio-Economic Duty (2021)	The WTS should encourage the creation of transport infrastructure and networks which enable business innovation and stimulates business growth. As this has the potential to conflict with environmental sustainability aims, this should seek to be achieved within the boundaries of environmental limits, as reflected in the first well-	The ISA Framework should include objectives relating to economic growth and development within the context of the delivery of the green growth agenda, ecosystems services and environmental limits.	Population and Material Assets	1, 2 and 3

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
					being goal (a prosperous Wales).			
Establish a strong tourist economy, sensitively capitalising on environmental, heritage, and leisure assets	1, 2, 5 and 6		Heritage Protection for the 21st Century (2007); Aviation 2050; Regional Airports (2016); Clean Air Strategy (2018)	TAN13 – Tourism, Cultural Tourism Strategy for Wales; Coastal Tourism Strategy; Wales Spatial Plan; Welsh Coastal Tourism Strategy; Partnership for Growth: The Welsh Government Strategy for Tourism 2013 – 2020; Strategy for Tourism, 2013 to 2020: Framework Action Plan – Year 2; Welsh Language (Wales) Measure 2011; a million Welsh speakers by 2050; Planning (Wales) Act 2015; One Wales – A Progressive Agenda for the Government of Wales; One Wales: Connecting the Nation; Capturing the Potential: A Green Jobs Strategy for Wales; Wales Infrastructure Investment Plan; Vibrant and Viable Places New Regeneration Framework; Draft International Strategy; Valued and Resilient: The Welsh Government's Priorities for Areas of Outstanding Natural Beauty and National Parks; A Management Plan for the Brecon Beacons National Park 2015 – 2020; Pembrokeshire Coast National Park Management Plan 2020 – 2024; Snowdonia National Park Authority National Park Management Plan	<p>The WTS should promote the use and enhancement of transport infrastructure for tourism development, within environmental limits. This includes addressing the impacts of aviation from international travel, whilst not negatively impacting on the tourist economy.</p> <p>The WTS could support the tourism industry through targeting improvements to travel including:</p> <ul style="list-style-type: none"> • Improving the experience of car/coach/motorcycle based visitors to Wales. • Increasing the use of public transport for 	The ISA Framework should include reference to capitalising on the tourist economy nationally, capitalising on, but not threatening, the wealth of national environmental and cultural resources and attractions.	Population, Cultural Heritage and Landscape	2, 3, 4, 9 and 10

Themes relevant to ISA of Wales Transport Strategy	Relevant Goals ²	Source					Main SEA Topics	Relevant ISA Objective
		International and European	UK	National	Implications for the WTS	Implications for the ISA		
					<p>journeys to and within Wales</p> <p>• Support the extension of the incoming route network, passenger numbers and attractiveness of Cardiff Airport, and maximise the potential of the ports and near airports in England.</p>			

APPENDIX B

Baseline Data and Key Issues and Opportunities

CONTENTS

1	INTRODUCTION	5
2	WELL-BEING GOAL: A PROSPEROUS WALES	6
2.1	Overview of Baseline Conditions.....	6
2.1.1	The Economy, Employment and Income in Wales.....	6
2.1.2	Education in Wales	16
2.2	Key Issues relevant to the WTS and opportunities for it to address them.....	20
3	WELL-BEING GOAL: A RESILIENT WALES.....	21
3.1	Overview of Baseline Conditions.....	21
3.1.1	Air Quality	21
3.1.2	Noise	24
3.1.3	Biodiversity, Flora and Fauna	29
3.1.4	Climate Change Adaptation and Flood Risk.....	38
3.1.5	Geology and Soils.....	41
3.1.6	Water Environment	45
3.1.7	Minerals and Waste	47
3.2	Key Issues relevant to the WTS and opportunities for it to address them.....	49
4	WELL-BEING GOAL: A HEALTHIER WALES AND A MORE EQUAL WALES ...	52
4.1	Overview of Baseline Conditions.....	52
4.1.1	Health and Well-being	52
4.1.2	Population.....	60
4.1.3	Links between transport, population and health of relevance to the study area	63
4.1.4	Vulnerable or Priority Groups	71
4.2	Key Issues relevant to the WTS and opportunities for it to address them.....	74
5	WELL-BEING GOAL: A WALES OF COHESIVE COMMUNITIES	77
5.1	Overview of Baseline Conditions.....	77
5.1.1	Crime and Safety	77
5.2	Key Issues relevant to the WTS and opportunities for it to address them.....	79

6 WELL-BEING GOAL: A WALES OF VIBRANT CULTURE AND THRIVING

WELSH LANGUAGE80

6.1 Overview of Baseline Conditions.....80

6.1.1 Welsh Language80

6.1.2 Landscape and Townscape Character84

6.1.3 Dark Skies and Tranquil Areas88

6.1.4 Historic Environment, Cultural and Heritage Assets88

6.2 Key Issues relevant to the WTS and opportunities for it to address them.....92

7 WELL-BEING GOAL: A GLOBALLY RESPONSIBLE WALES93

7.1 Overview of Baseline Conditions.....93

7.1.1 Energy Consumption, Greenhouse Gas Emissions and Ecological Footprint93

7.2 Key Issues relevant to the WTS and opportunities for it to address them.....101

Abbreviations Used in this Appendix

Abbreviation	Definition
AONB	Area of Outstanding Natural Beauty
ASNW	Ancient Semi-Natural Woodland
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
CO ₂	Carbon Dioxide
CSI	Core Subject Indicator
DBEIS	Department for Business, Energy and Industrial Strategy
Defra	Department for Environment, Food and Rural Affairs
EC	European Commission
FPI	Foundation Phase Indicator
GDP	Gross Domestic Product
GDHI	Gross Disposable Income
GVA	Gross Value Added
HBAI	Households Below Average Income
HMO	Houses in Multiple Occupancy
ISA	Integrated Sustainability Appraisal
LA	Local Authority
LCA	Landscape Character Area
LSOA	Lower Super Output Area
MCA	Marine Character Area
MCZ	Marine Conservation Zone
NDF	National Development Framework
NEET	Not in education, employment or training
NI	National Indicator
NLCA	National Character Areas
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides

Abbreviation	Definition
NRW	Natural Resources Wales
ONS	Office for National Statistics
NQF	National Qualifications Framework
NVZ	Nitrate Vulnerable Zone
PM	Particulate Matter
RIGS	Regionally Important Geodiversity Sites
SAP	Standard Assessment Procedure
SAC	Special Area of Conservation
SCA	Seascape Character Assessment
SME	Small to Medium Enterprises
SoNaRR	State of Natural Resources Report
SMP	Shoreline Management Plan
SPA	Special Protection Area
SPP	Statement of Public Participation
SSSI	Site of Special Scientific Interest
TAN	Technical Advice Note
TSA	Tourism Satellite Account
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCVA	Wales Council for Voluntary Action
WIMD	Welsh Index of Multiple Deprivation
WTS	Wales Transport Strategy

1 Introduction

This appendix provides the baseline social, economic, cultural and environmental data for Wales that is being used to help undertake the following aspects of the ISA:

- Identify the current baseline social, economic, cultural and environmental situation within Wales, against which the likely effect of the Wales Transport Strategy will be predicted.
- Identify key trends issues and opportunities for the ISA and WTS to consider.
- Develop the ISA Framework to use for the appraisal of the WTS.
- Ultimately assist the development of a monitoring framework to monitor the significant effects of the WTS.

The appendix has been structured around each of the seven well-being goals. Within those goals, the baseline data has been sub-divided into a series of ISA topics. Each section is structured as follows:

1. Wellbeing Goal and identification of relevant ISA topics within it.
2. Overview of Baseline Conditions for each topic. This comprises:
 - a. The relevance of that topic to the WTS;
 - b. The baseline conditions and trends structured around the baseline data sets; and
 - c. Any data gaps that are in the process of being filled.
3. Key Issues derived from the above that are relevant to the WTS and opportunities for it to address them.

Note on the baseline data sets

In the ISA the baseline data sets used are specific facts and statistics that are gathered by different organisations including, for example, the Welsh Government; the UK Government; or statutory bodies such as Natural Resources Wales (NRW), amongst others. These have been carefully selected to help give an appropriate overview of the baseline conditions and trends over time at a national scale and where necessary more detail on regional variations within Wales.

It is intended that the baseline data sets can be used as factual yardsticks to support the appraisal of the effects of the WTS against each of the relevant ISA Framework Objectives.

Ultimately, once the ISA is complete and the WTS is adopted, indicators will be produced to help monitor the predicted significant effects of the WTS as it is used.

There are hundreds of potential baseline data sets that could be used, many providing only subtly different information. As such, the selection of indicators for this ISA will be focussed, streamlined and reflective of the national scale and influence that the WTS is expected to have.

2 Well-Being Goal: A Prosperous Wales

This section provides baseline data relating to the following well-being goal:

‘An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.’

The data relates primarily to:

- The Economy, Employment and Income in Wales; and
- Education in Wales.

2.1 Overview of Baseline Conditions

2.1.1 The Economy, Employment and Income in Wales

Relevance to the WTS

A strong national economy is vitally important for securing people's wealth, jobs and incomes. This has a large contribution to the quality of life and the economic, social, cultural and environmental well-being of people and communities in Wales. Investment in transport networks can influence the functioning of labour markets, business productivity and competitiveness. These impacts interact over time and can lead to improvements in economic output and the geographical distribution of economic activity. They can also impact on the environment, quality of life and the overall attractiveness of towns and cities.¹

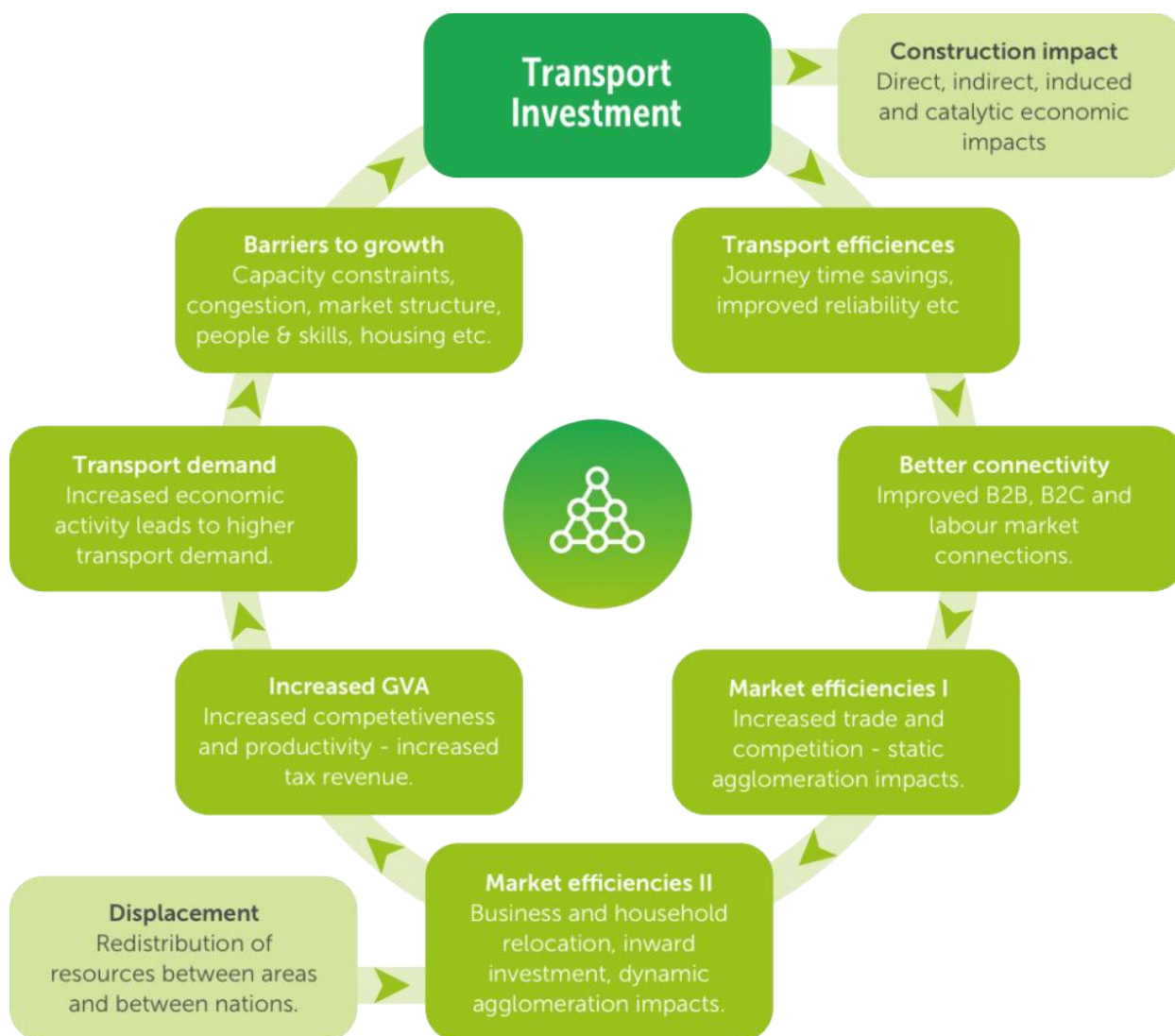
Figure 2-1 highlights how direct impacts from investment could create market efficiencies leading to investment and relocation decisions which in-turn can lead to changes in productivity and economic growth. The mechanisms for delivering economic impacts include:

- Benefits to non-users. In the case of public transport investments, these include reduced negative externalities from car travel (i.e. reduced congestion and CO₂ emissions) and option values (i.e. the value that is placed on maintaining a public asset or service even if there is little or no likelihood of the individual actually ever using it).
- Productivity effects. Productivity impacts generated through efficiencies resulting from improved connectivity, which effectively brings businesses, suppliers and workers closer together. These benefits are additional to user and non-user benefits at the national level.
- Induced investment impacts. Changes in the level or location of private sector investment as a result of a transport investment. These benefits are context specific and may be partially displaced from other areas.
- Employment impacts. Labour market impacts resulting from connectivity improvements, which may allow people to move to more productive jobs or enter the labour market as a result of reduced and cheaper commuting journeys.
- Regeneration impacts. Local economic impacts resulting from improved local image and attraction of land use development. In some cases, transport can act as a catalyst of local economic growth. These benefits may not be completely additional at a national level and may arise as a result of displacement of economic activity from elsewhere.

In addition to the potential long term impacts on productivity, the construction of large infrastructure projects provides an injection of resources into local economies during construction which may create new employment opportunities. Whilst this expenditure may simply be redirected from other government activities, the local impacts could be both significant in the short term and catalytic over the longer term.

¹ <https://transportknowledgehub.org.uk/guidance-tool/relationship-between-transport-economy/>

Figure 2-1 Transport investment and economic growth



Source: <https://transportknowledgehub.org.uk/guidance-tool/relationship-between-transport-economy/>

The WTS has a key role in supporting the national economy, through helping to guide decisions relating its supporting infrastructure.

The Welsh Government Strategy for Tourism² seeks to promote improved transport links by air, sea, road and rail. This could be supported by the WTS.

Baseline conditions and trends

The economy of Wales is closely aligned with that of the rest of the UK. However, for a long time, economic output has been lower in Wales compared with other areas. In 2018, the GVA (a key measure of economic output) was £65.1 billion, or £20,738 per head³. This was 72.8% of the average for the total of all UK regions, up by 2.9% on 2017, the third highest increase over the year of the 12 UK countries and English regions. Wales had the second lowest level of GVA per head in the UK (measured against the other UK regions), ahead of the North East where GVA per head was 72.1% of the UK average respectively (Welsh Government, ONS – 2020). GVA is rising, however the economic future of the whole of the UK is currently uncertain in light of the exit of the UK from the European Union. Economists and politicians are currently divided over what this will mean for the UK, with many schools of thought suggesting a short-term economic downturn, with potential for higher growth in the longer term.

² <https://gov.wales/sites/default/files/publications/2019-07/strategy-for-tourism-2013-to-2020-framework-action-plan-year-2.pdf>

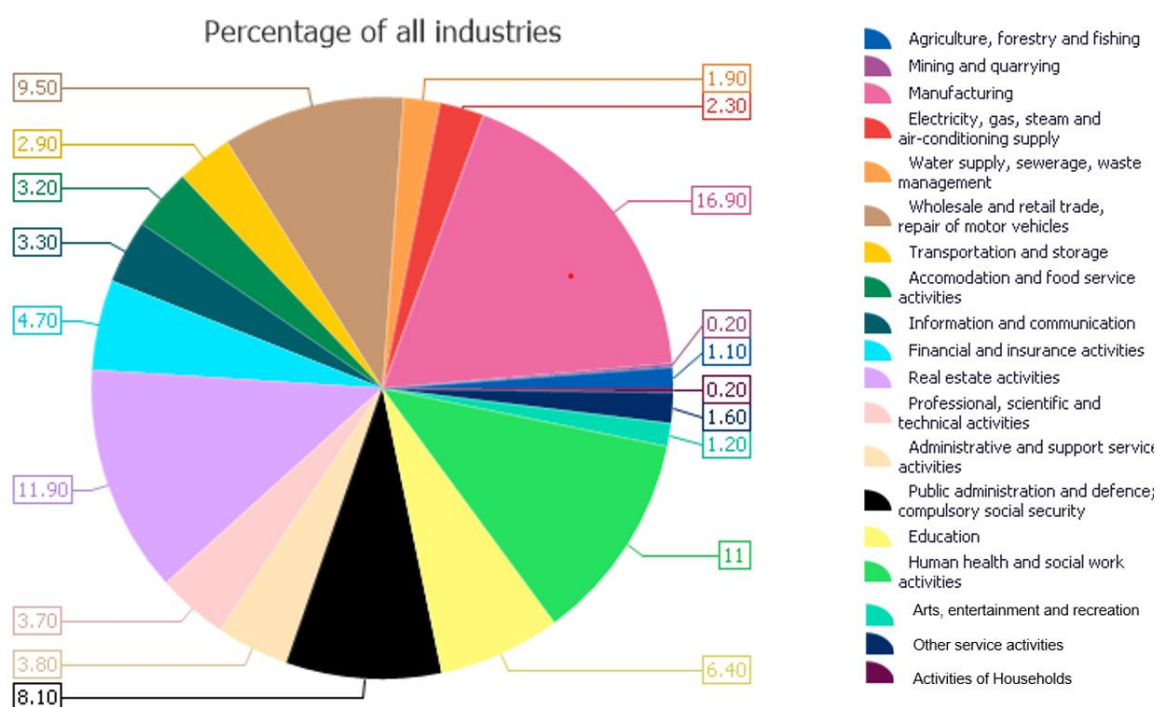
³ Welsh Government (2018) <https://gov.wales/regional-gross-domestic-product-and-gross-value-added-1998-2018>

The highest levels of output in 2018 were from Cardiff; Swansea; Monmouthshire; Newport; Flintshire; and Wrexham, reflecting the larger proportion of industry, population and services in those areas. GVA per head is significantly lower across much of the rest of Wales, reflecting its more rural nature. Blaenau Gwent recorded the lowest GVA per head in 2017 (£12,671). The fastest growth over the last decade has been in the Central Valleys region (all figures from Stats Wales).

In 2017, GVA per hour worked in Wales was approximately 16% below the UK average – making it the second lowest region in the UK, less than 1% above Northern Ireland. This reflects a lower than average level of productivity in Wales (ONS)⁴.

The second half of the 20th century saw a significant decline in the traditional manufacturing and extractive industries in Wales with a move towards service sector employment. The modern Welsh economy is now dominated by the service sector including public health, education, defence and administration, accounting for over half of the total Wales GVA. Figure 2-2 shows the split of GVA per industry.

Figure 2-2 Gross Value Added in Wales by industry (%)



Source: Stats Wales (2020)

After the service industry, the next largest group is the 'Production' industry. Whilst heavy industry has been in decline, Wales still has a diverse manufacturing sector. This includes:

- Metal ore refining at plants in, for example, Port Talbot, Llanwern, Newport, Trostre, Shotton, Ammanford, Pontarddulais, Tafarnaubach and Caerphilly;
- Oil refining at Milford Haven;
- Automotive component production; and
- Growth in the electronics industry.

⁴

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/regionalandsubregionalproductivityintheuk/february2019>

Rural economy

Wales is largely rural in nature, so agriculture and forestry represent a large area of economic land-use. This is dominated by beef, sheep and dairy farming on relatively small farms, compared to the rest of the UK. Economic output from these industries is, however, relatively small.

Tourism

The National Heritage Memorial Fund⁵ (25/10/2016) sets out the following from 'The Impact of heritage tourism for the UK economy 2016', which is the second follow-up to Investing in Success, HLF's original report on heritage tourism, published in 2010 in partnership with VisitBritain. The three reports analyse the impact of the heritage-based visitor economy and highlight the importance of continued investment from leisure, culture and heritage budgets in supporting UK tourism.

- Wales' heritage makes a £1bn GVA⁶ contribution to UK tourism economy (Cultural, historic and natural heritage attractions refer to museums, theatres, historic houses, historic parks or natural landscapes such as wetlands and national parks).
- Heritage tourism supports over 24,000 jobs in Wales.
- Wales' cultural and heritage attractions receive more than 10m visitors per year.
- Heritage tourism more important as economic driver in Wales than the UK as a whole.

With its rich natural and cultural assets, tourism is also a significant and growing part of the national economy. Cardiff, in particular, is a primary tourist destination due to its large number of high-quality attractions. This brings income and employment opportunities for a range of associated businesses such as hotels, food and retail outlets. The Wales Tourism Satellite Account (TSA) estimated a total tourism GVA of £1.8bn – around 4.4% of total direct GVA for the Welsh economy in that year. Emerging research suggests that when indirect impacts are added, the Tourism GVA increases to £2.5bn, which represents 6% of the whole economy (The Welsh Government Strategy for Tourism 2013 – 2020).

Between September 2018 and 2019 there were 10.4 million overnight domestic Great Britain trips to Wales which was an increase of 6.3% on the previous year which generated an expenditure of £1,973 million (9.2% increase) (Wales Gov 2020).⁷ These figures compare to a 0.1% increase in overnight domestic trips in Great Britain and a 0.7% increase in expenditure. For both Great Britain and Wales, the total expenditure increased but the number of nights spent decreased. The volume of international trips and expenditure also increased in Wales by 4% and 12%, respectively. In contrast, the number of tourism day visits taken in Wales decreased by 13% in the same period, compared to a decrease of 3% of trips taken in Great Britain.

Third sector

The third sector, as defined by the Wales Council for Voluntary Action (WCVA), is a very diverse range of organisations, including voluntary organisations and social enterprises, which share a set of values and characteristics. In 2017, approximately 100,000 people in Wales were employed in the charity/voluntary sector in Wales, accounting for just over 8% of all employment in Wales (WCVA Statistical Resource 2020).

The value of the third sector has been estimated by WCVA by adding the value of volunteer time (provided by organisations) – an estimated 61 million hours is given in a year and this has a monetary value of £757 million. In 2019 the sector had an estimated value of £3.8 billion⁸.

Micro-businesses

In 2019, there were an estimated 267,045 enterprises, the highest estimate since the start of the series in 2003. There was a steady annual increase from 2009-2019 and this trend is likely to continue (StatsWales). The overall increase was largely attributed to growth in the micro size-band enterprises - 0-9 employees which grew by 29% between 2009 and 2019. This could be a result of the recent labour market conditions, which may have encouraged people to set up businesses, as they are made redundant (for example).

⁵ Gross value added (GVA) is a measure of the value of goods and services produced in an area, industry or sector of an economy. GVA is linked as a measure to gross domestic product (GDP).

⁶ Gross value added (GVA) is a measure of the value of goods and services produced in an area, industry or sector of an economy. GVA is linked as a measure to gross domestic product (GDP).

⁷ <https://gov.wales/sites/default/files/statistics-and-research/2020-02/wales-tourism-performance-january-september-2019-537.pdf>

⁸ https://gov.wales/sites/default/files/publications/2019-03/third-sector-annual-report-2017-18_0.pdf

Regionally, micro enterprises in 2019 accounted for 34.9% of employment, however in mid-wales they represented 52% of employment. The production sector had the smallest proportion of total employment in micro businesses in Wales at 5.6 per cent.

Innovation

The Welsh Government also monitors the levels of innovation in the economy. It identified that between 2014-2018, 46% of Welsh businesses were innovation active, comparable to levels in Scotland, but just behind England (49%) and ahead of Northern Ireland (Stats Wales)⁹.

Economic Activity

The 2010, the Welsh Government publication, *Economic Renewal: a new direction*, identified two important factors responsible for Wales weaker economic position compared to the rest of the UK. These are a low employment rate and low average wages (reflecting low average productivity). In December 2019, the employment rate in Wales was 74.4% compared to 76.55 in the UK. In September 2019, the number of people economically inactive had decreased in Wales over the past decade by 4% from 23.7% to 19.7% (between September 2009 – September 2019). The national trend decrease in Wales has been above the UK average over this period with the UK decreasing by only 2.6%, however the percentage of economic inactivity in Wales remains above the UK average of 17.4 in 2019. The future direction of this trend is likely to be affected by the outcome of Brexit.

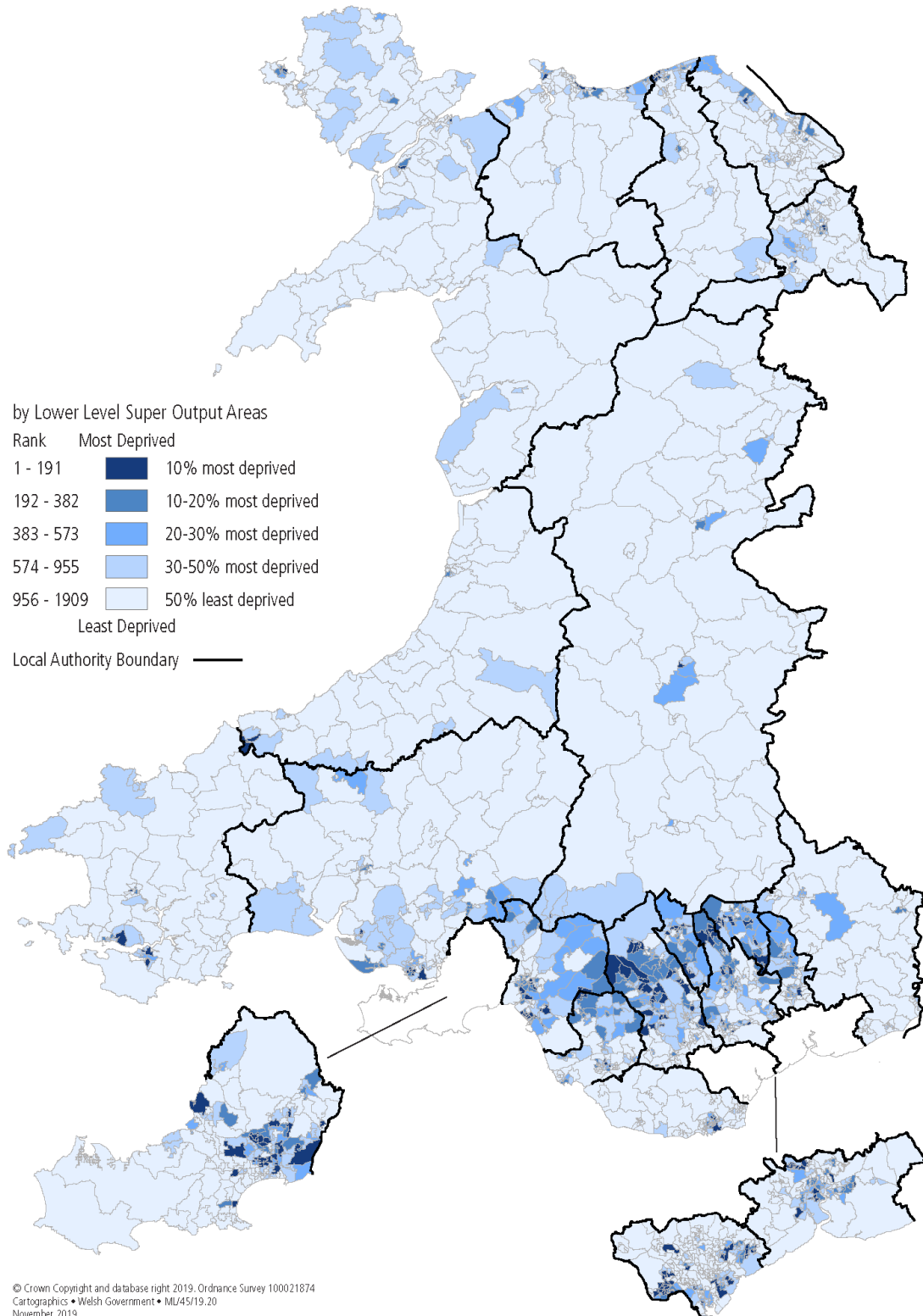
According to the Welsh Index of Multiple Deprivation (WIMD)¹⁰ 2019 employment domain (see Figure 2-3), the highest levels of employment deprivation were in the South Wales valleys and in some North Wales coastal towns. In terms of local authorities, Blaenau Gwent Merthyr Tydfil recorded the highest proportion of LSOAs in the most 10% in Wales for the employment domain. Monmouthshire had no LSOAs in the most deprived 10%.

⁹ <https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/Businesses/Innovation/businessessthatareinnovationactive-by-year>

¹⁰ The WIMD ranks each of the 1909 Lower Super Output Areas (LSOAs) in Wales in terms of the level of deprivation that LSOA exhibits for a given domain. Those ranked in the bottom 191 LSOAs are, therefore, in the 10% most deprived nationally.

Figure 2-3 WIMD 2014 Map for Wales, Employment Domain

Welsh Index of Multiple Deprivation 2019 Employment Domain



Source: WIMD 2019

Earnings

In April 2019, the average (median) gross weekly earning for full-time adults working in Wales was £535.00, this compares to a UK average of £584.90¹¹. However, median gross earnings in Wales increased by 5.1% between 2018 and 2019, compared to 2.9% across the UK.

The highest average earnings were in the South East and West Wales economic regions, followed closely by the North Wales economic region with the Mid Wales region significantly lower (Stats Wales).

In Wales, 67.5% of people in employment were either on permanent contracts (or have a temporary contract and are not seeking permanent employment) and were earning more than two thirds of the UK median wage for August to October 2018 (Stats Wales)¹².

The WIMD 2019 income domain focuses on the proportion of people with income below a defined level and has a weight of 22% in the overall index. In the WIMD 2019 income domain, there were pockets of high deprivation in the South Wales valleys, and in some North Wales coastal towns. The local authorities with the highest proportion of LSOAs in the most deprived 10% in Wales, for the income domain, was Newport, Merthyr Tydfil and Cardiff (at around 20%).

Job Satisfaction

Findings from the Work in Wales Skills and Employment Survey (2006-2017) found that, in terms of overall work satisfaction, workers in Wales exhibited the highest levels of low job satisfaction (9% compared to 7% in Britain) and very high job satisfaction (21 % compared to 18% in Britain).¹³ In 2013-14, respondents (to the National Survey of Wales) were asked how satisfied they were with their present job. On a scale of 0-10, the average satisfaction score was 7.5. There appears to be a strong correlation between satisfaction with present job and satisfaction with commuting time. 66% of people who were highly satisfied with their present job were also highly satisfied their commuting time.

Distance travelled to work

Table 2-1 shows the majority of Welsh residents travel less than 10km to work. The majority of residents living within all Welsh regions travel a maximum distance of less than 10km to work at a proportion ranging between 37.9 to 58%. Of the residents who work from home Mid and West Wales work have significantly higher numbers than the Welsh and other regional levels. The age of this dataset should be taken into account as distances may have changed significantly in the past 9 years.

Table 2-1 Distance travelled to work by Welsh Regions

Distance travelled to work	Mid and West Wales	North Wales	South Wales Central	South Wales East	South Wales West	Wales
Less than 10km	37.9%	48.6%	58.0%	51.2%	55.9%	50.5%
10km to less than 30km	23.0%	23.5%	20.4%	25.8%	21.1%	22.8%
30km and over	11.7%	9.6%	6.1%	7.6%	8.1%	8.5%
Work mainly at or from home	18.2%	10.8%	7.8%	8.1%	7.7%	10.4%
Other	9.3%	7.6%	7.7%	7.3%	7.2%	7.8%

Source: 2011 Census

Journey to work by mode

The method of travel to work census data (QS701EW) for Welsh residents are illustrated in Table 2-2. The results show a similar split between each mode type compared across each country by Welsh regions. The results for Wales overall the majority of residents travel by car (car or van driver, car passenger or motorcyclist) 45% and lower for active travel (walking or cycling) 7%, whilst the proportion of residents

¹¹ <https://gov.wales/annual-survey-hours-and-earnings-2019>

¹² <https://stats.wales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/People-and-Work/Earnings/peopleinemploymentwhoareonpermanentcontractsearnmorethantwothirdsukmedianwage-by-quarter>

¹³ Welsh Government (2019) - <https://gov.wales/sites/default/files/statistics-and-research/2019-04/work-in-wales-2006-2017.pdf>

travelling via public transport (bus or rail) lower at 4%. The proportion of residents not in employment in Wales overall at 39%.

Table 2-2 Method travelled to work by Welsh Regions, 2011 Census

Distance travelled to work	Mid and West Wales	North Wales	South Wales Central	South Wales East	South Wales West	Wales
Car	44%	48%	42%	47%	46%	45%
Public Transport	2%	4%	7%	5%	4%	4%
Active	8%	7%	9%	6%	6%	7%
Other method of travel to work	1%	0%	0%	0%	0%	0%
Not in employment	38%	37%	39%	40%	42%	39%
Working from home	7%	3%	2%	2%	2%	3%

Source: 2011 Census

Broadband

Ofcom¹⁴ reported in 2018 that Superfast Broadband is available to 93% of premises in Wales, up 4% from the previous year. However, of the 93% of the homes and businesses with access only 38% of homes/businesses have taken up the services which is the lowest up take in any of the UK nations. Whilst the coverage of internet access is growing, speeds and, in particular, access to superfast broadband can be a particular issue in rural communities, particularly amongst those with low incomes (National Survey for Wales, 2014-15). Poorer households across Wales are less likely to have internet access in their home. This is exacerbated in rural areas by relatively poor access to good quality broadband (Rural broadband ICT Toolkit, Welsh Government). Notwithstanding, full fibre broadband coverage to rural premises is the highest in Wales compared to the other nations in the UK, with 16% of homes/businesses having access to this, compared to 8% in rural England and Northern Ireland and 3% in rural Scotland. Over time, it is anticipated that the coverage of high-speed broadband will improve.

Access to Services

The Welsh Index of Multiple Deprivation 2019¹⁵ sets out deprivation in relation to access to services. The access to services domain measures travel times to a range of services as a proxy for wider physical access to services. For WIMD 2019, the domain also considers access to digital services, through an indicator on the availability of superfast broadband. The domain measures include access to the following services:

- Food shop
- General Practitioner (GP) Surgery
- Post Office
- %Unavailability of broadband at 30Mb/s
- Primary School
- Public Library
- Sports Facility
- Secondary School
- Petrol Station
- Pharmacy

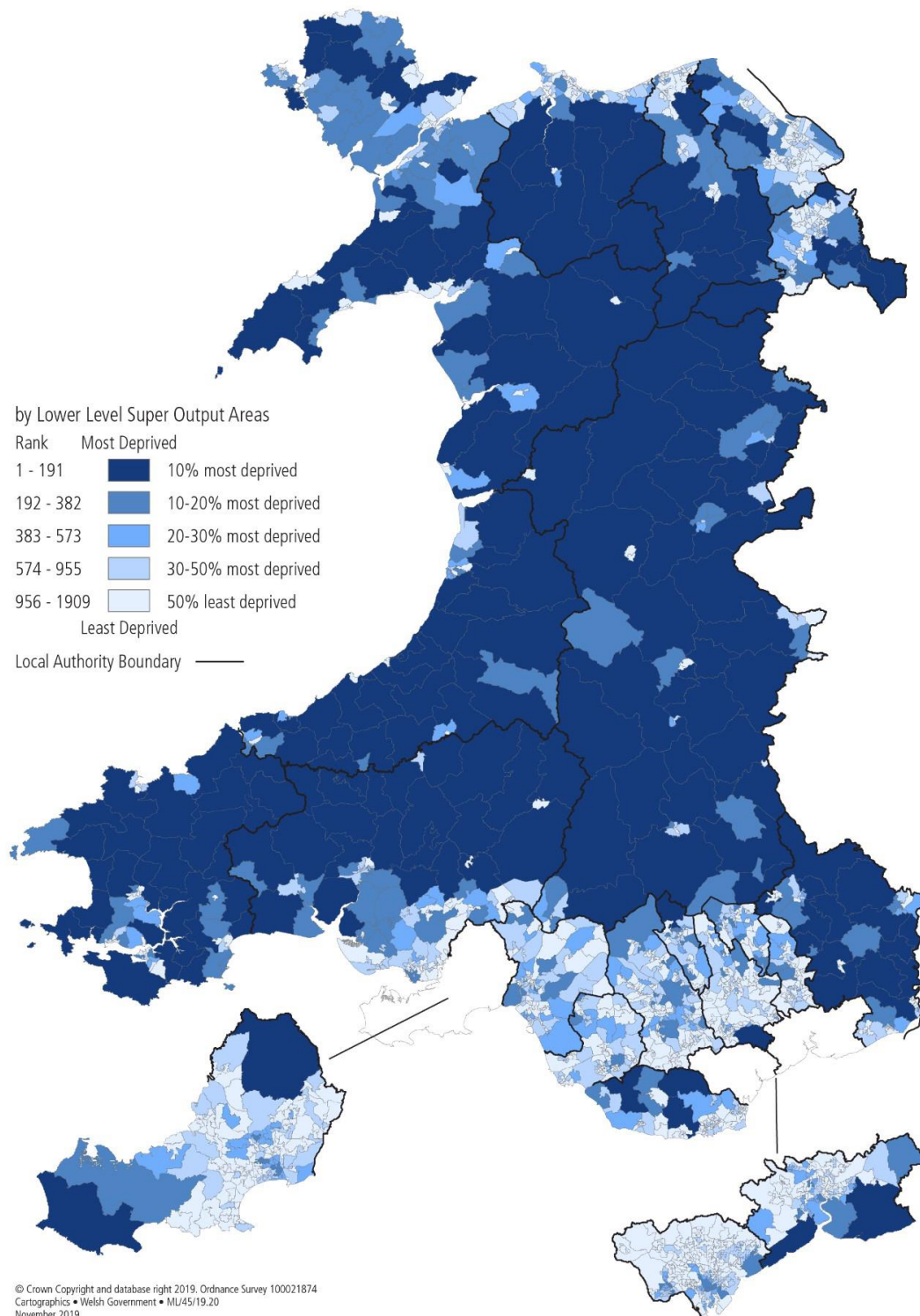
¹⁴ Ofcom (2018) Connected Nations 2018 - https://www.ofcom.org.uk/__data/assets/pdf_file/0020/130736/Connected-Nations-2018-main-report.pdf

¹⁵ <https://gov.wales/sites/default/files/statistics-and-research/2020-02/welsh-index-multiple-deprivation-2019-results-report.pdf>

Figure 2-4 presents the overall scores across Wales. In the WIMD 2019 access to services domain, high deprivation was widespread across rural areas of Wales. There were also some deprived pockets near large urban areas. The local authorities with the highest proportion of small areas in the most deprived 10% in Wales for access to services were Powys (50.6%) and Ceredigion (50.0%). Cardiff, Neath Port Talbot, Bridgend, Rhondda Cynon Taf, Blaenau Gwent and Torfaen local authorities had no areas in the most deprived 10%. For the access to services domain, the most deprived small area in Wales was Cynwyl Gaeo, Carmarthenshire, the same as for WIMD 2014. Six of the 10 most deprived areas in WIMD 2019 were also in the 10 most deprived areas in WIMD 2014. The overall patterns of access to services deprivation in WIMD 2019 are similar to those for WIMD 2014. However, there have been notable changes to relative ranks at the least deprived end. This reflects the significant improvements in the travel time calculations, as well as possible changes to service locations, public transport and road networks since 2014, and the inclusion of the new access to digital services indicator.

Figure 2-4 Access to services for LSOAs in Wales

Welsh Index of Multiple Deprivation 2019 Access to Services Domain



2.1.2 Education in Wales

Relevance to the WTS

Education is a fundamental factor in developing people's skills, both for future employment and for life in general. Improvements in educational attainment are directly linked to increased incomes, employment and overall economic growth. In particular, education and training to meet the skill sets required to grow the economy are of greatest importance. Chapter 4 of this appendix sets out further specific information in relation to the links between transport and young people, including in relation to accessing educational opportunities.

The WTS has a key role in ensuring that everyone can access education and training opportunities and, in doing so, support educational development and a healthy economy.

Baseline conditions and trends

Education/ Training

The Welsh Government publishes data on the learning activities and labour market status of young people (aged 16 to 24) in Wales. The provisional data series for 2018 further focuses on the proportion of young people who are not in education, employment or training (NEET) in Wales.

In terms of 16-18 year olds, around 78.3% were in education or training (down from 79.8% in 2017). The proportion in employment had increased annually since 2011 and in 2018 37.6% were in full or part-time employment. In addition, 10.3% of 16-18 year olds were reported as NEETs, an increase of 0.9% from the previous year.

Since 2004, the proportion of 19-24 year olds in education or training has remained around a similar level (37 to 39 per cent), whilst the proportion who are NEET increased to higher levels, following the start of the 2008 recession, reflecting contracting employment levels. There has, however, been an increase in employment, and a decrease in the proportion who are NEET in the last 3 successive years. As with many economic statistics, the immediate future direction of this trend is likely to be influenced by Brexit.

In terms of 19-24 year olds, around 38.4% were in education or training and 64% were in full or part-time employment. In addition, 16.1% of 19-24 year olds were reported as NEETs which is similar to the previous year.

Educational attainment in Wales is slightly below the UK average. The proportion of adults of working age holding Higher Education or equivalent level qualifications (NQF level 4 or above) in 2018 was 37.8%, compared with 27.9% in 2008. Wales is below the UK average level for NQF level 4 (which is 44%¹⁶). However, Wales is above Northern Ireland (33%) and some other UK regions. Over 78% of adults were qualified to NQF level 2 or above.

The trend is rising, with a 10% increase in NQF level 4 attainment in working age adults since 2008, with the greatest rises being amongst women.

In terms of regional distribution, adults in Mid Wales had the highest level of qualifications, whereas adults in South West Wales had the highest number of adults with no form of qualifications. The results for 2018 are presented in Table 2-3. More specifically, qualification levels were highest in Cardiff, Monmouthshire, and Vale of Glamorgan and lowest in Blaenau Gwent, Merthyr Tydfil and Neath Port Talbot.

¹⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757675/UKETS_2018_Text.pdf

Table 2-3 Percentage of adults with qualifications at the different levels of the NQF

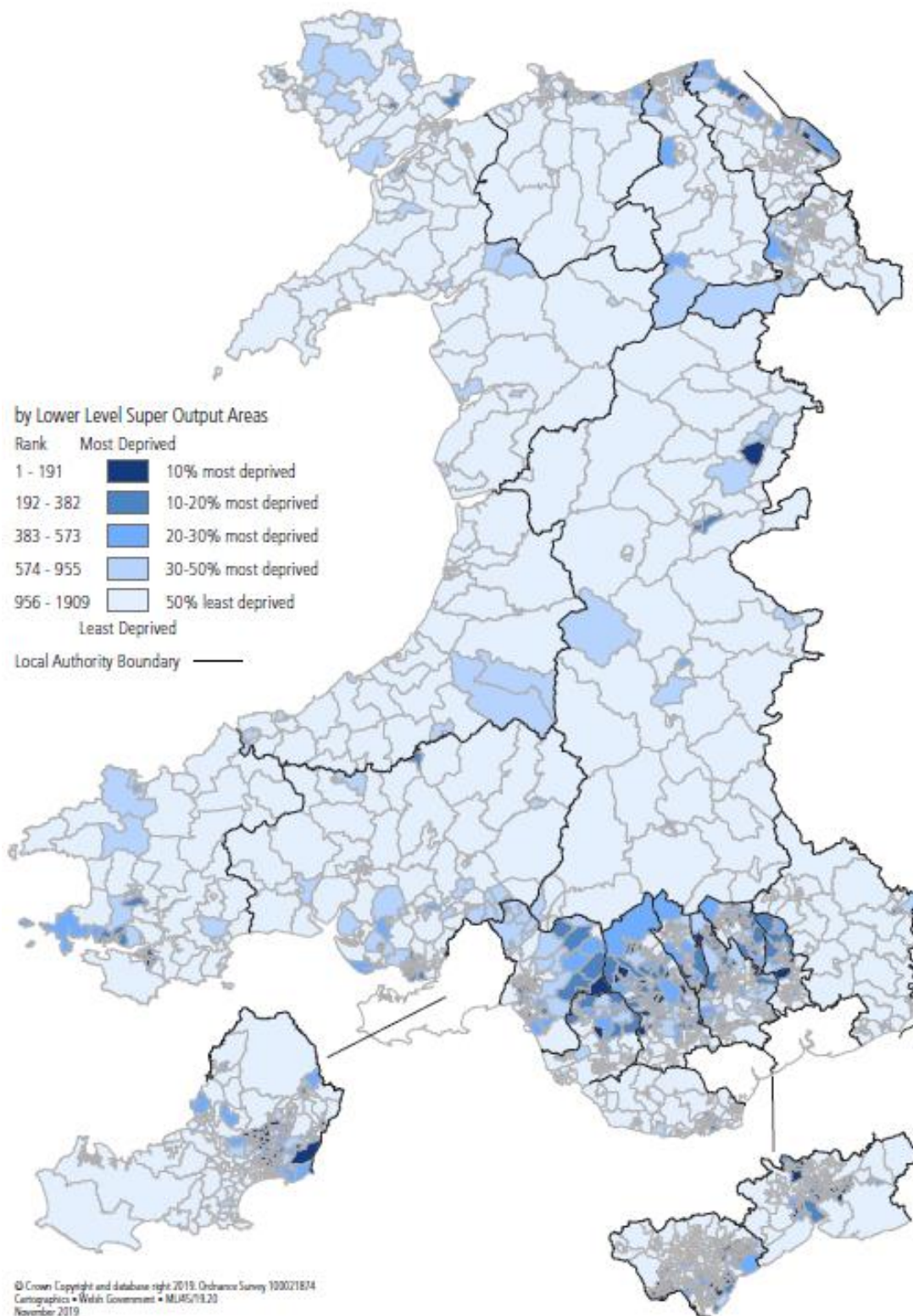
Area	No qualifications	Qualified to below level 2	Qualified to NQF level 2 or above	Qualified to NQF level 3 or above	Qualified to NQF level 4 or above
Wales	8.4%	12.7%	78.9%	59.1%	37.8%
North Wales	7.0%	12.9%	80.1%	59.0%	36.3%
Mid Wales	6.4%	12.2%	81.4%	63.8%	38.8%
South West Wales	9.2%	12.0%	78.8%	57.9%	36.1%
South East Wales	8.9%	13.0%	78.0%	59.0%	39.1%

Source: Stats Wales

The distribution of LSOAs and their relative deprivation in the education domain illustrates regional variation in educational attainment and access to education. This is shown in Figure 2-5 below. The South Wales valleys are the most educationally deprived area of Wales. This area includes the local authorities of Merthyr Tydfil, Torfaen, Blaenau Gwent and Rhondda Cynon Taff. There are also parts of the urban areas of Cardiff, Newport and Swansea that are suffering from education deprivation. Parts of Monmouthshire, Powys, Vale of Glamorgan and the North-East corner of Wales exhibit relatively low levels of education deprivation.

Figure 2-5 Education Deprivation for LSOAs in Wales

Welsh Index of Multiple Deprivation 2019 Education Domain



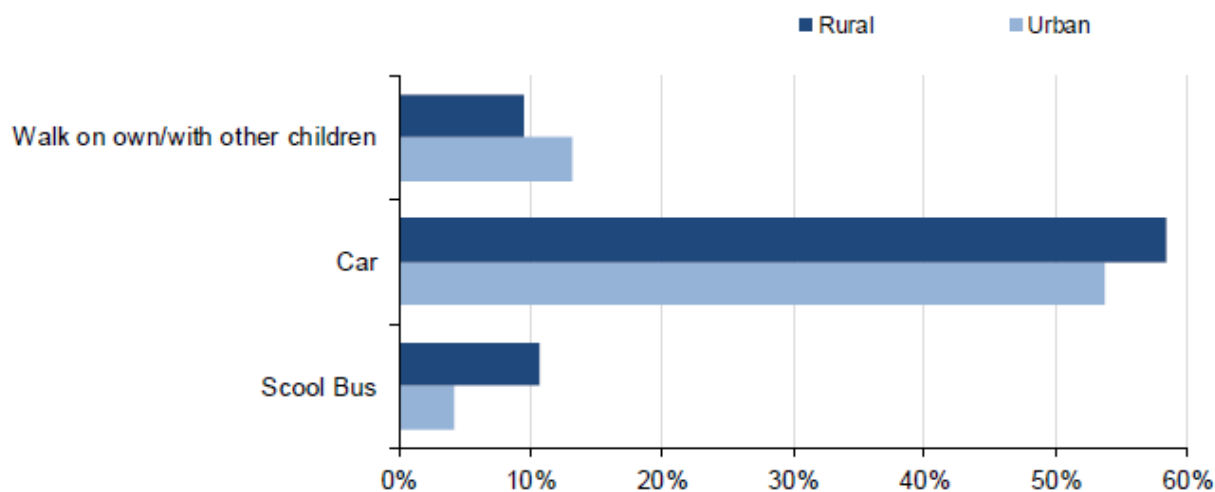
Source: Welsh Index of Multiple Deprivation 2014

Travel to School¹⁷

National Survey results (2019) indicate that car was the most common mode of transport used to get to a primary school (55%), followed by walking with an adult (32%). At secondary school the most popular modes of transport were catching a school bus and walking.

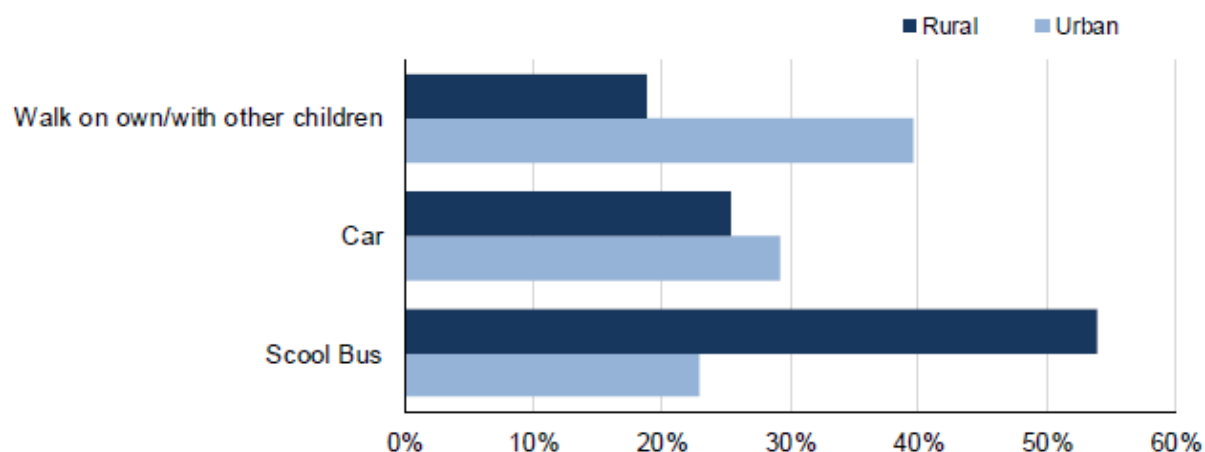
Figures 2-6 and 2-7 illustrate the mode of travel to/from school by urban/rural classification.

Figure 2-6 Mode of travel to/from primary school by urban/rural classification (a)



(a) Totals may not sum to 100% as multiple modes of transport can be selected

Figure 2-6 Mode of travel to/from Secondary school by urban/rural classification (a)



(a) Totals may not sum to 100% as multiple modes of transport can be selected

¹⁷ <https://gov.wales/sites/default/files/statistics-and-research/2019-11/active-travel-walking-and-cycling-april-2018-march-2019-073.pdf>

Data gaps

Data relating to the barriers to walking to school.

Data relating to distance travelled to work/education opportunities.

There are also relevant data gaps to be considered from the data collated from the 2011 Census, as it may not be accurate to the current population and these figures will not be updated until 2021/2022.

Data relating to the modal split of transport journeys within Wales.

For all data collected, there may be gendered differences that are not reflected in the sources they were collected from.

Visitor Economy Data may be considered out of date.

2.2 Key Issues relevant to the WTS and opportunities for it to address them

Issues

The economy of Wales is closely aligned with that of the rest of the UK. There has been a move towards service sector employment and a decline in heavy industry; Wales still has a diverse manufacturing sector.

There are clear geographical differences in employment activity in Wales with pockets of higher than average deprivation in the South Wales valleys and in some North Wales coastal towns.

Key reasons for relatively poor economic performance include:

- Relatively low skills levels and poor educational attainment levels (although improving), particularly in the more deprived parts of the country.
- The largely rural nature of the country results in relatively small urban areas which would otherwise be more strongly associated with agglomeration effects.
- There is a relatively high proportion of older people who are retirement age.
- There are high levels of congestion which have negative economic impacts including the impact on productivity and freight.

The UK Climate Change Risk Assessment 2017: Evidence Report highlights a number of key risks and opportunities facing Wales with regard to business. These could have effects on a number of factors including health and well-being, employment and the economy. Such matters facing Wales can be summarised as risks to business from flooding, loss of coastal locations, water scarcity, reduced access to capital, reduced productivity from disruption to infrastructure etc., disruption to supply chains and changes in demands for goods and services. These could all be taken into consideration in the WTS as they will all influence the habits of transport users.

There are issues with provisioning access to schools and employment, as the highest density areas for these are in the South of Wales. These facilities are much more difficult to access by any means other than private owned car in the North of Wales. It should be noted that, as per Appendix B, there are data gaps with regards to detailed information on school access.

Opportunities

The WTS has a role to play in achieving balanced and sustainable growth, and the transition to a low resource use (including low carbon) economy, to enable the population to live within environmental limits. This includes the opportunity to promote sustainable freight transport.

The WTS provides an opportunity for the economy to be guided towards a more sustainable future. This can be through the promotion of sustainable travel infrastructure and improvement of access to employment centres. It can also provide a framework that is more responsive to the needs of the economy and able to support new, emerging sectors and support transition of existing ones through the creation and enhancement of networks. Furthermore, it can also help to guide the creation of an environment that is attractive to inward investment and encourages sustainable access to jobs. Similarly, the WTS may facilitate improvements in access to education.

The WTS could seek to help address issues related to poverty and inequality through access to better education, better connectivity between communities and access to jobs and the job market.

Overall, the WTS could help to achieve the important balance of economic and social improvement that is also sustainable and respects the country's valuable natural and cultural environment.

There is an opportunity for the WTS to support employment through the promotion and support for active tourism, including the designation of the National Cycle Network as a strategic transport facility to encourage active tourism

There is an opportunity to promote the use of active travel to primary and secondary schools through walk to school schemes.

There is also an opportunity through improved public transport schemes to enable people to access a wider range of employment and education options.

There is an opportunity for the WTS to reduce congestion through promoting active travel and public transport through re-allocation of road space and integrated sustainable travel modes.

3 Well-Being Goal: A Resilient Wales

This section provides baseline data relating to the following well-being goal:

'A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).'

The data relates primarily to:

- Air Quality;
- Biodiversity, Flora and Fauna;
- Climate and Flood Risk;
- Geology and Soils;
- Water Environment; and
- Minerals and Waste.

3.1 Overview of Baseline Conditions

3.1.1 Air Quality

Relevance to the WTS

Clean air is important for both human health and the health of the natural environment. Poor air quality is the largest environmental risk to public health in the UK, as long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy¹⁸. It is estimated that the life expectancy of every person in the UK is reduced by an average of 7-8 months due to air pollution¹⁹. Air pollution can directly affect vegetation (e.g. through exposure to sulphur dioxide or high levels of ozone), or indirectly affect the wider environment through pollutant deposition. Deposition of pollutants can adversely affect the acid and nutrient status of soils and waters, which, in turn, can affect habitat integrity and the fauna and flora they support. The introduction of environmental protection legislation has led to significant changes in the way air quality is managed and controlled, although the planning system also has a large role to play.

Transport is the biggest source of air and noise pollution in the UK. The WTS can affect air quality and noise pollution through ensuring decisions are based on the principle of reducing emissions through the transition to implementing the sustainable transport hierarchy.

¹⁸ <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

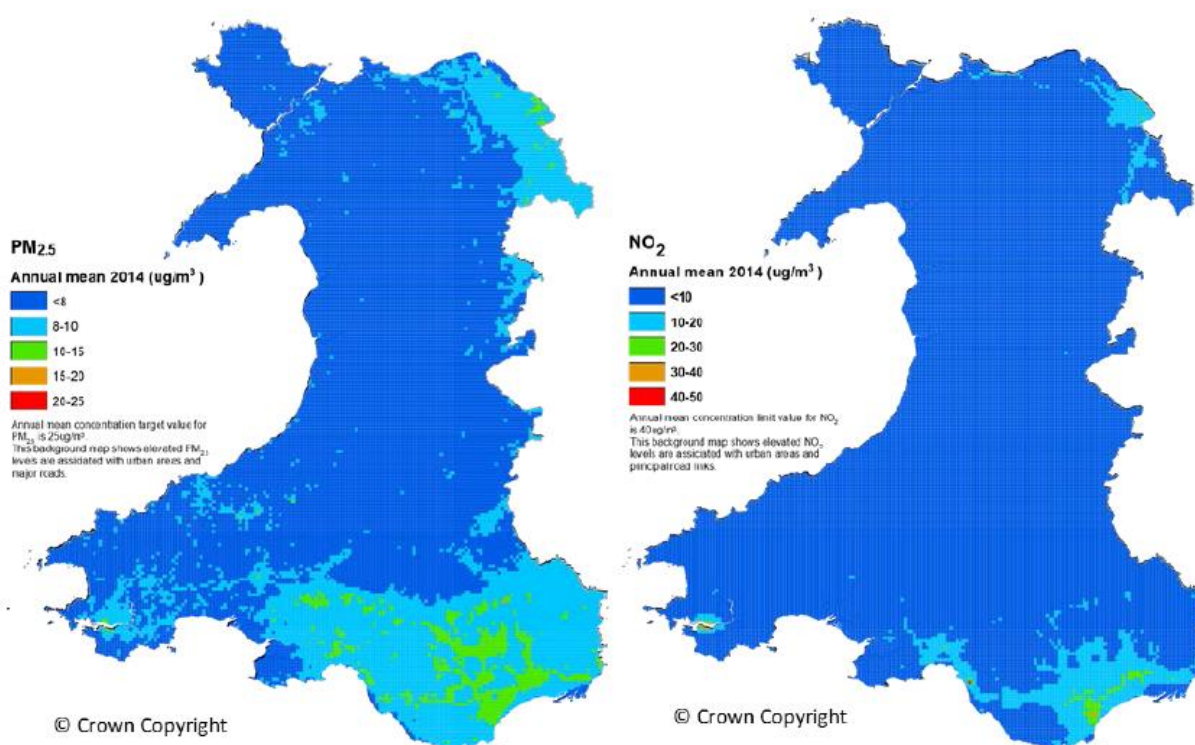
¹⁹ Defra in partnership with the Scottish Executive, Welsh Assembly Government and the Department of the Environment Northern Ireland (2007) the Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Volume 1.

Baseline conditions and trends

Air pollution is a local, national and international problem caused by the emission of pollutants. In Wales, air quality is generally very good, largely due to its predominantly rural nature and historic decline in heavy industry which has resulted in a reduction in emissions of some pollutants, such as particulate matter (PM) and Nitrogen Dioxide (NO₂). However, there are some parts of the country that experience highly elevated levels of localised pollution, notably due to road traffic. Targets for NO₂, PM, nickel and polycyclic aromatic hydrocarbons are still being breached in certain parts of Wales thereby posing a threat to human health and the natural environment (SoNaRR, 2016).

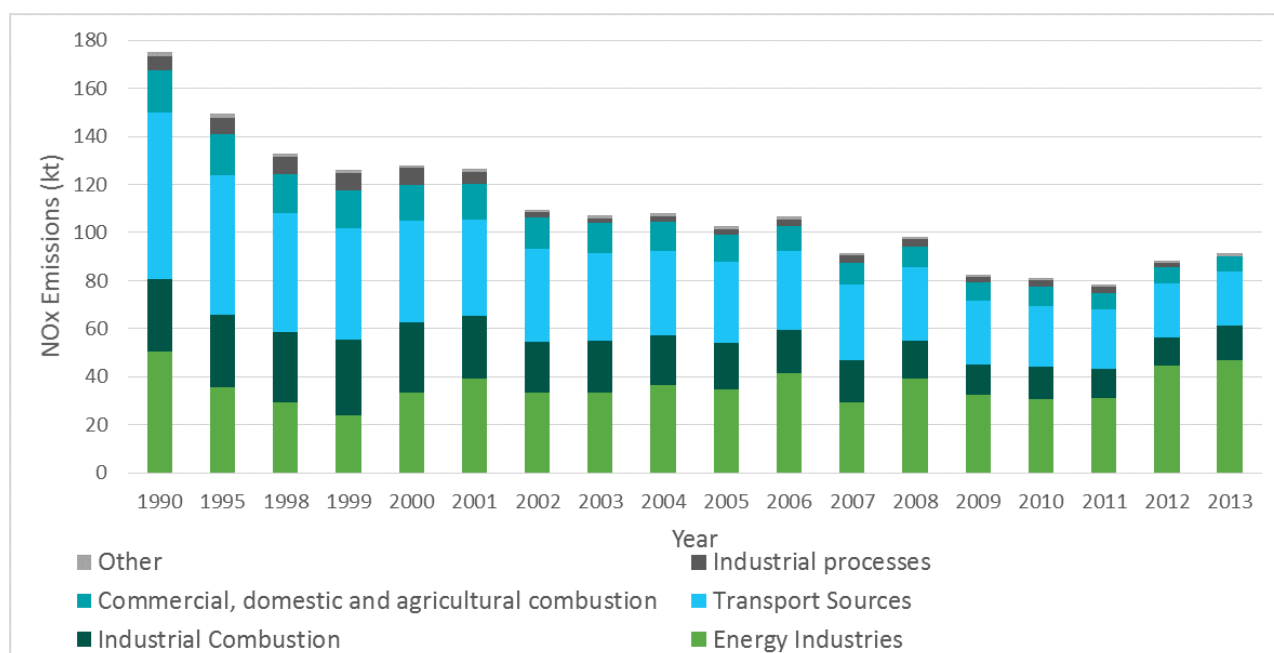
There are currently 38 designated Air Quality Management Areas (AQMAs) in Wales all of which are found in the south particularly centred around urban centres such as Cardiff, Newport and Swansea and relate to vehicle emissions. However, one area of elevated air pollution from an industrial source also exists associated with Port Talbot, where Tata Steel is located (Defra, 2017). Only four designated AQMAs have been revoked in Wales, with the last AQMA being revoked in 2015 in Rhondda Cynon Taff. The other three revocations occurred in Cardiff in 2007 (two AQMAs revoked) and 2013. Hafod-yr-ynys, a road in Caerphilly, is the most polluted road in the UK outside London. It exceeded hourly NO₂ limits on 60 occasions in 2016 (42 times more than allowed under EU law) and its annual mean NO₂ is almost double the EU limit (National Assembly for Wales, 2018). Figure 3-1 illustrates the highest concentrations of PM and NO₂ nationally.

Figure 3-1 PM_{2.5} and NO₂ concentrations in Wales (SoNaRR, 2016).



Road transport accounts for nearly a third of all NO₂ emissions in the UK and transport is the biggest source of air pollution in the UK (National Assembly for Wales, 2018). Levels of Nitrogen Oxides (NO_x) emissions have seen a significant decrease of over 50% between 1990 and 2013. The major contributor to NO_x emissions is the energy industry, however, the largest decrease in emissions between 1990 and 2013 was recorded by transport sources (see Figure 3-2).

Figure 3-2 Wales nitrogen oxides (NO_x) emissions by source sector (Defra, 2017)



Ammonia also remains an issue, both as a local air pollutant and as a contributor to the formation of secondary particulate matter. Concentrations of secondary particulate matter have risen in Wales in recent years, largely due to changes in agricultural practice. Indeed, 90% of semi-natural nitrogen sensitive Welsh habitats are subject to nitrogen deposition in excess of critical load limits (SoNaRR, 2016).

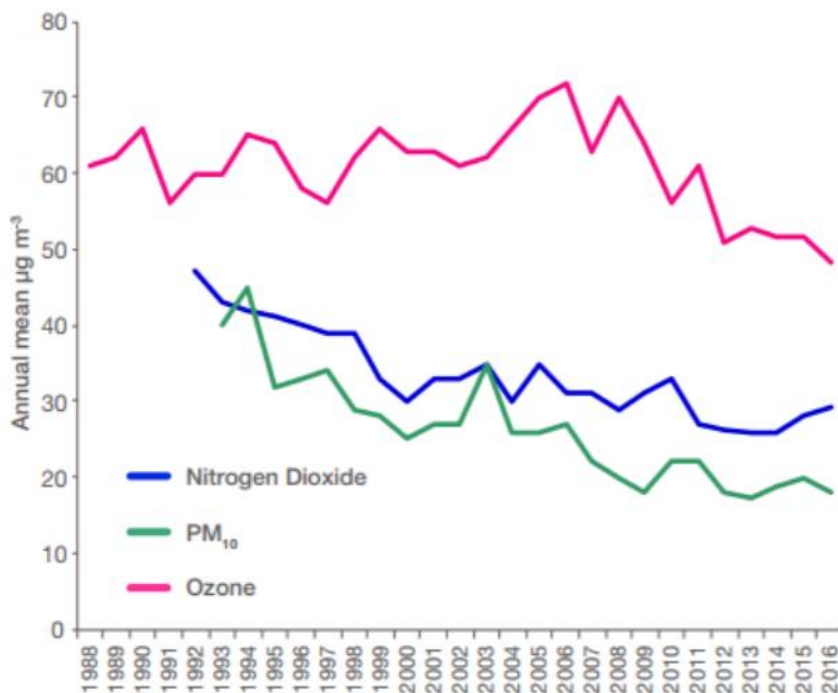
Wales has some of the worst air quality in the UK, which is surprising given its low population density and relatively small cities. A report in 2018 found that Cardiff and Port Talbot both have higher PM₁₀ levels than either Birmingham or Manchester. Hafod-yr-ynys, a road in Caerphilly, is the most polluted road in the UK outside London. It exceeded hourly NO₂ limits on 60 occasions in 2016 (42 times more than allowed under EU law) and its annual mean NO₂ is almost double the EU limit (however the houses on this road are to be demolished by the council). There are also five sites on motorway trunk roads (where NO₂ concentrations are above the limit level) that have had speed limits introduced in June 2018 in order to improve the air quality²⁰

Figure 3-3 shows the trends in ambient air pollution from 1990 to 2016. Whilst there were no instances in 2016 of EU PM₁₀ air quality limits being reached; NO₂ limits were exceeded at five sites. NO₂ and is the catalyst for the designation of all (except one) Air Quality Management Areas (AQMAs) in Wales. Road transport accounts for nearly a third of all NO₂ emissions in the UK.²¹

²⁰ <https://gov.wales/sites/default/files/publications/2019-10/interim-data-on-no2-concentrations-for-the-motorway-and-trunk-road.pdf>

²¹ <https://www.assembly.wales/Research%20Documents/18-009/18-009-Web-English.pdf>

Figure 3-3 Ambient Pollution Trends in Wales 1990-2016



Source: Abernethy, 2018

Data gaps

One relevant data gap is if the poor air quality hot spots have any relation to areas of economic disparity. Also, the individual transport mode contributions to air quality as opposed to road transport.

3.1.2 Noise

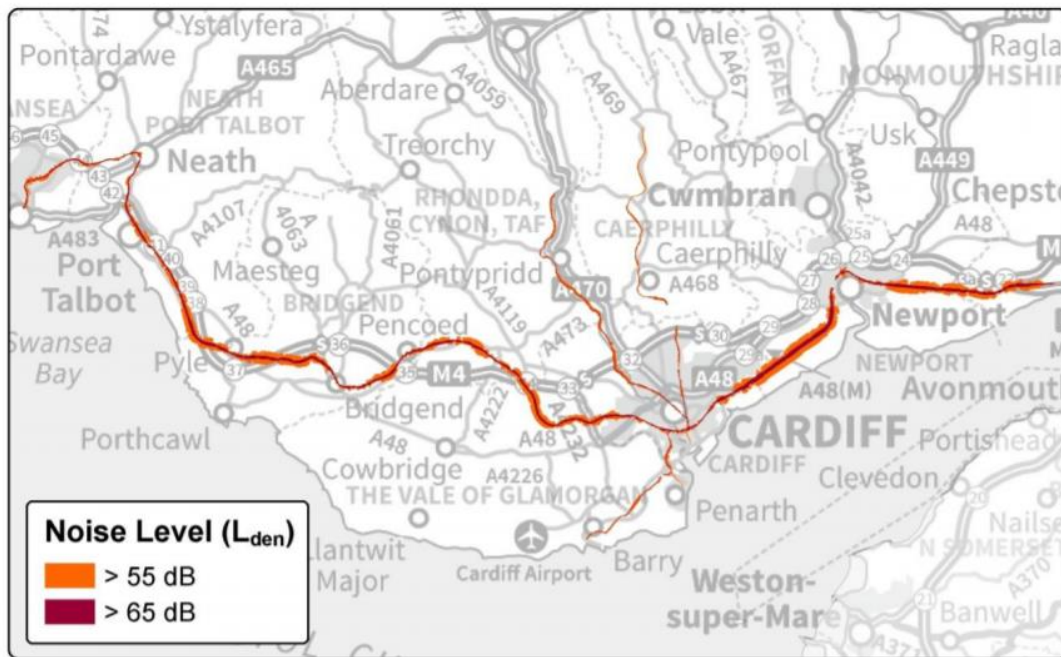
Relevance to the WTS

Noise pollution can have a damaging effect on people's health and the environment, from disrupting protected habitats to causing hearing loss and tinnitus. Transport is responsible for a lot of noise pollution in the UK. The WTS must plan transport networks to avoid areas sensitive to noise pollution. It must also seek to implement measures that will seek to reduce traffic overall, leading to a reduction in overall noise pollution and reduction in pressure on tranquil environments.

Baseline Conditions and trends

Noise pollution from railways mostly takes place in the south of Wales around Cardiff. Figure 3-4 shows the noise from major railways 2012/2017.

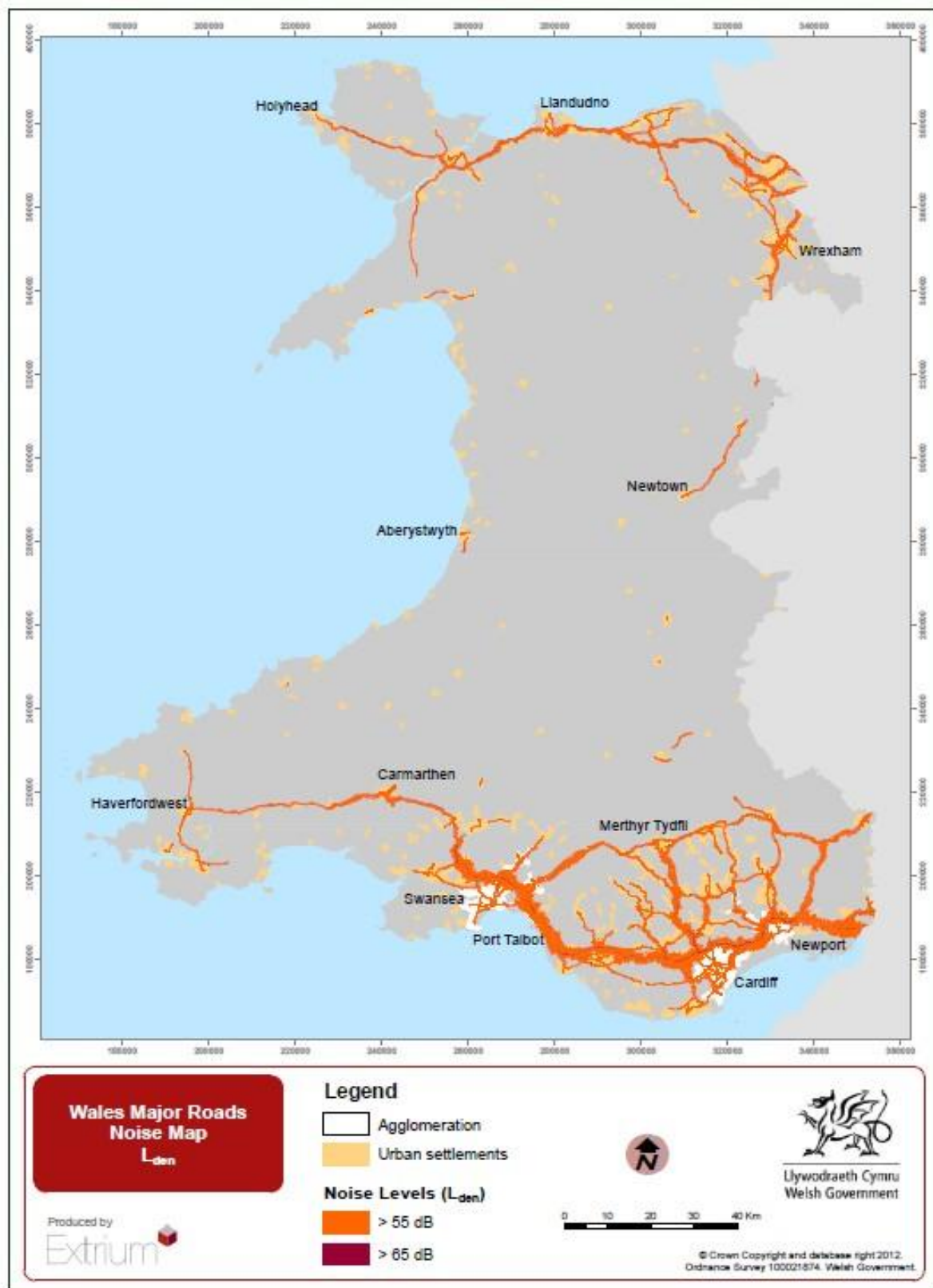
Figure 3-4 Noise of major railways in Wales (2012/2017)



Source: Welsh Government, 2018.

Noise mapping carried out by the Welsh Government in 2013 under the Environmental Noise Directive (see Figure 3-5) highlights that road noise is focused around the M4 in South Wales and adjoining 'A' roads. The A55 and adjoining 'A' Roads in North Wales, and the A483 in Mid Wales, also contribute to high levels of noise pollution.

Figure 3-5 Wales Major Roads Noise Map

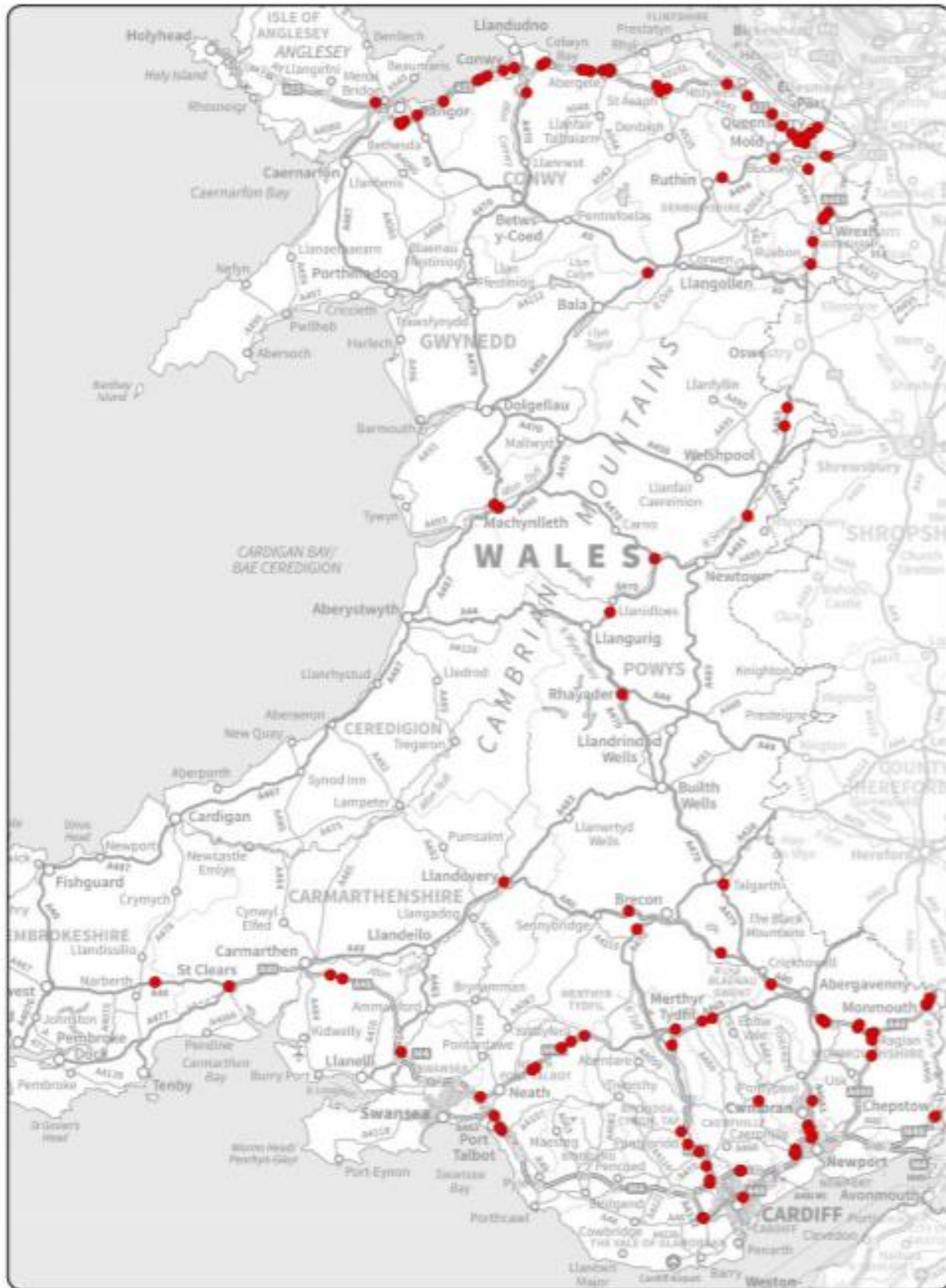


Source: Welsh Government (2013) Data Flow 4 and 8 Supplementary Report Major Roads in Wales.²²

²² Available at <http://gov.wales/docs/desh/publications/130214noise-major-roads-en.pdf> [Accessed January 2016].

The Welsh government has received many complaints about transport noise, the location of these complaints is shown in Figure 3-6.

Figure 3-6 Transport noise complaints received by the Welsh Government

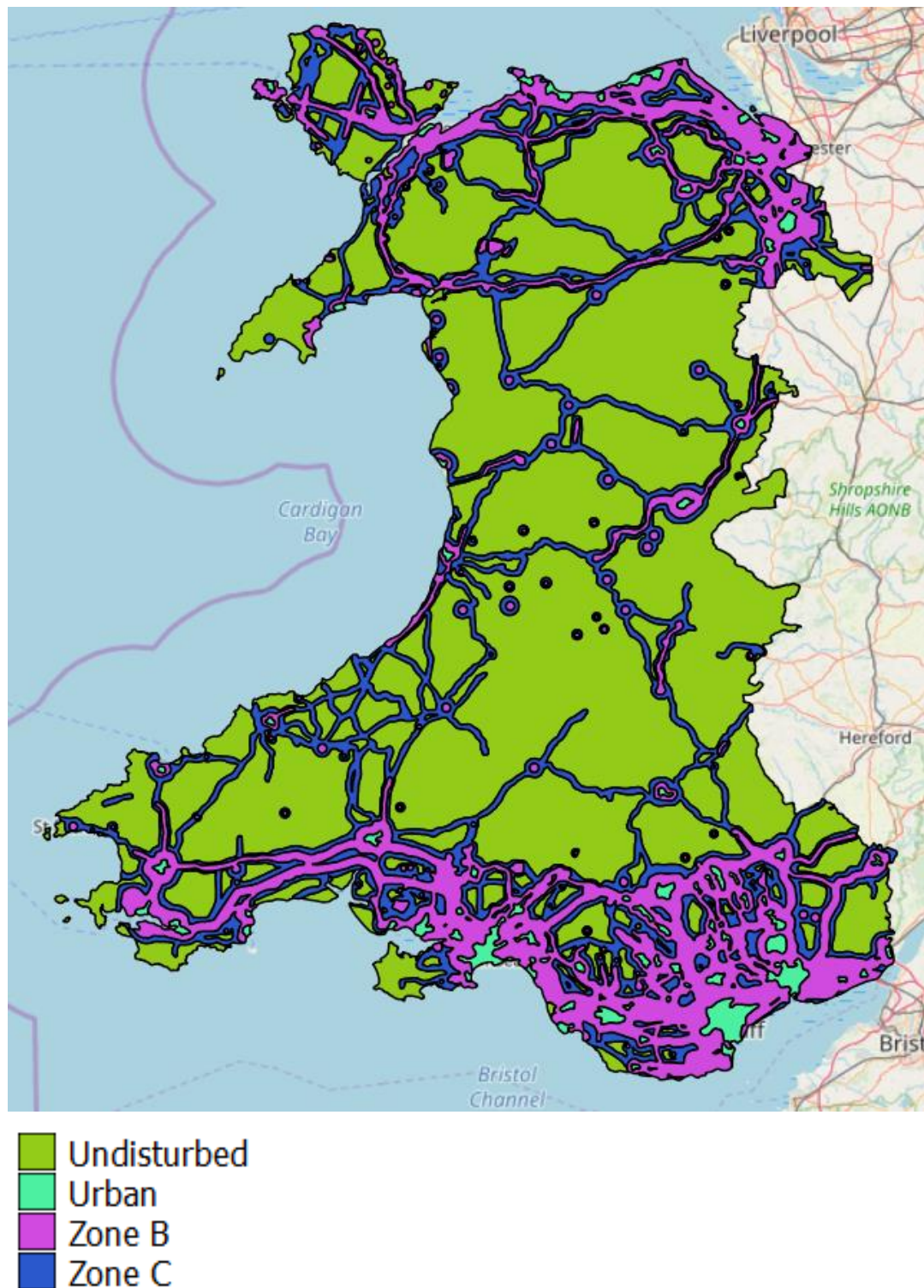


Source: Welsh Government, 2018.

When surveyed on noise complaints, 24% of Welsh people said they had regularly been bothered by noise from outside their home in the previous 12 months, 45% of these complaints were related to traffic, business or factories (it should be noted that noise is now considered a form of air pollution and as such is covered by WG's Clean Air Plan due to be published in 2020).

In Wales there is an official designation for areas of tranquillity, these different areas are mapped out below in Figure 3-7.

Figure 3-7 Map of Tranquil areas Wales 2009



Source: NRW

Data gaps

A data gap is if noise complaints made in Wales have any relation to economic disparity e.g. poorer households may be within closer proximity to factories or roadsides.

3.1.3 Biodiversity, Flora and Fauna

Relevance to the WTS

Biodiversity refers to the variety of all living organisms. It can be seen at a number of levels, in terms of the diversity within species, the diversity between different species, and the diversity of different ecosystems (i.e. the environments within which species live). High levels of diversity ensure habitats and species are more robust and able to cope with changes in the environment, both in terms of natural fluctuations and those caused by human activity, therefore supporting their long-term survival.

Ensuring the protection of biodiversity, including important marine and terrestrial habitats, species and protected sites, as well as biodiversity in general (including non-designated sites) and its resulting benefits in terms of ecosystems services, in turn, will have benefits to an improved economic and social health of an area. Therefore, conserving biodiversity not only fulfils our global responsibility but will improve the quality of life for Wales' residents and help maintain its attraction as a place to live and visit.

The WTS can significantly influence biodiversity through helping to guide decisions through the planning of transport infrastructure to ensure features of ecological importance, as well as their connectivity and the ecosystems services they provide, are protected and enhanced. The WTS has the potential to make a significant contribution to national and local biodiversity targets, particularly for those habitats and species that occur commonly on the Welsh trunk road and motorway network. The Trunk Road Estate Biodiversity Action Plan (TREBAP) audit of the network identified those habitats and species that are most at risk from the operation of the trunk road network, and those that could benefit from appropriate management of the soft estate.

The Welsh Assembly Government soft estate extends across the whole of Wales, traversing a wide variety of rocktypes, landscapes and habitats, from purple moorgrass and rush pasture to reedbed, coastal floodplain grazing marsh, and rock habitats. The associated soft estate currently extends to approximately 1700 hectares.

Increasingly, the soft estate is being acknowledged as holding areas of value for biodiversity. This can be: because of the presence of remnants of original habitats, the often low ecological value of adjacent land, its value as a wildlife corridor and in some cases, as a result of the management applied. Road verges can be of particular value if they comprise intrinsically valuable habitat that also adjoins larger areas of the same habitat type, such as Sites of Special Scientific Interest or local wildlife sites.

The RSPB²³ has provided guidance on the potential impacts to be considered in transport (particularly road) schemes. These include:

Habitat loss effects

- Permanent habitat loss on site
- Temporary habitat loss on site e.g. land taken up by construction equipment/temporary roads
- Physical removal of soils and vegetation

Habitat fragmentation effects

- Reduced habitat connectivity in the landscape – can disrupt the established relationships between different habitats or patches of the same habitat e.g. routes linking sleeping or roosting areas to feeding grounds or migration routes may be physically interrupted
- Barrier effects on species – can affect the movement of wildlife: population viability may be affected if populations of a scarce species are separated especially if they have poor dispersal activities
- Increased mortality due to wildlife casualties

²³ http://www2.rspb.org.uk/Images/BiodiversityImpact_tcm9-257019.pdf

- Edge effects – if vegetation is removed the new linear gap creates a new microclimate and a change in physical conditions which can extend varying distances from the road edge. This newly created habitat may provide habitat for edge species and facilitate dispersal for some species.
- Reduced patch size - may reduce populations of key plant species, which in turn may affect the abundance of insects including butterflies they support.
- These require a minimum area to sustain viable populations and may in turn affect other species e.g. predatory birds. Also small patch size may not be able to support the range of habitat structure needed to sustain a range of different species

Changes in habitat quality and other indirect impacts

Changes to natural processes

- Groundwater regimes - changes in the groundwater regime may adversely affect habitats dependent on the watertable e.g. marsh, fen and bog.
- Depending on the geology, lowering the water table can impact habitats a considerable distance from the development.
- Stream/river flows - Increases or reductions in natural rates of flow e.g. flash flooding from hard surfaces may affect aquatic ecosystems.
- Accumulation of construction spoil can alter flow, volume and composition of water. These increased solids increase turbidity which can cause abrasion damage and gill blockage in fish and lead to the disappearance of filter feeding invertebrates
- Flooding regimes
- Soil leaching and changes in soil structure
- Soil erosion patterns

Water pollution

Water pollution from accidental spillages, de-icing chemicals, runoff and road spray can lead to adverse changes in aquatic biodiversity as can changes in sediment and solid loads in watercourses.

Soil pollution

Road spray, vehicle emissions and dust and other particulates (including aggregate and sealant materials used in road construction) can be deposited directly on the land or by polluted precipitation and by polluted groundwater. These can change soil pH and structure. Soil conditions can also greatly alter the effective toxicity of pollutants.

Air pollution

Emissions of lead, zinc, nitrogen, de-icing materials and particulates such as dust can affect biodiversity.

Changes to microclimate

Light and radiation emissions may alter the microclimate. These microclimatic changes may be sufficiently great to alter the performance of some species of plants and animals.

Windfunnelling

Where woodlands are bisected interior trees become exposed and liable to wind-blow effects leading to changes in the new marginal vegetation. Cuttings can have an additional windfunnelling 'jet' effect increasing windblow and evaporation that may result in a water supply shortfall which may lead to changes in species composition.

Disturbance

Fauna can be disturbed by noise, lighting and vibrations from traffic and by road lighting.

Reduced visibility

Road structures e.g. bridges and viaducts may cause problems for certain birds/mammals by reducing visibility

Introduction of exotics

The edge habitat or ecotone and traffic on the road may facilitate dispersal for some species. This may result in dispersal and establishment of alien and invasive species or pest species that may have secondary effects on biological communities.

Changes to habitat management eg frequency of verge cutting.

Public pressure

Surrounding habitats may be placed under increasing public pressure, because of access, leading to effects including the disturbance of animals, and physical destruction of ground flora. Also, litter may accumulate along road

Off site habitat losses and changes in habitat quality

In relation to the obtaining and disposal of materials e.g. mining for aggregates for road building.

Cumulative effects

Even relatively minor habitat loss, fragmentation and indirect impacts of an individual road project can, when added to other past, present and reasonably foreseeable future impacts of other projects and activities, contribute to significant impacts in an area. All relevant types of future projects and activities should be considered (i.e. not just other road projects) including induced development.

Positive effects

- Habitat enhancement
- Improved habitat management
- New structures e.g. bridges and tunnels may provide habitats for some species e.g. bats
- Habitat creation

Baseline conditions and trends

The land area of Wales covers 2,078,224 ha. The Welsh marine area extends out to 12 nautical miles, covering just under 15,000 km² or 41% of the territory of Wales.

Wales has a wide representation of species across a broad range of taxonomic groups with estimates varying from 25,000 to 50,000 different species of animals, plants and other organisms. There are 20 Special Protection Areas (SPAs) for internationally important populations of birds and 92 Special Areas of Conservation (SACs) for other threatened species and natural habitats. 562 of the total 1,016 Sites of Special Scientific Interest (SSSI) (as of 2010) have individually qualifying species and 54 have species assemblages which qualify. Many of the same species are also found on sites that qualify for their habitat. The list of species and habitats of principal importance in Wales (the interim Section 7 list) includes 557 species (SoNaRR, 2016).

Species

The 2013 reports on the Annexes of the Habitats Directive and Birds Directive summarise the UK status and trends of the selected habitats and species and are important evidence resources. A summary of the Welsh results for species is presented in Figure 2-4.

From monitoring data collected for species features on Natura 2000 sites, the overall condition of SAC and SPA species features on these sites in Wales, as reported in 2013, was mostly unfavourable (55%) with the exception of birds and mammals of which 86% and 68% were in favourable condition respectively.

In Wales, the interim Section 7 list of the Environment (Wales) Act has 557 species and 55 habitats of principle importance. These were originally selected for the Section 42 list of the Natural Environment and Rural Communities Act 2006 for prioritised action from the UK Biodiversity Action Plan using criteria based on the level of threat they face, the level of responsibility in Wales for their populations and whether remedial action could be taken to improve their status. The list includes species as diverse as slow-worm (*Anguis fragilis*), hornet robber fly (*Asilus crabroniformis*) and long-snouted seahorse (*Hippocampus guttulatus*).

An assessment of the status of some of the interim Section 7 species in comparison to their condition at the time of the last Biodiversity Action Plan report in 2008 is shown in Box 1 below.

Box 1 Assessment of the state of some of the Welsh priority species at broad taxonomic group level (SoNaRR, 2016).

Of the 104 invertebrate species listed as priorities, 67 were assessed. *21% of these were declining*, the outlook was *improving for 25%*, and the remaining *54% showed little change* in their status.

83 vertebrate species appear on the list of priority species and we assessed 78 of them. *37% of these were declining* and the outlook was *improving for 21%*. The remaining *42% showed little change* in their status.

Of the 87 fungi and lichens listed as priorities, 55 were assessed. *29% of these were declining*, the outlook was *improving for 27%* and the remaining *44% showed little change* in their status.

52 bryophytes feature on the priority species list and we assessed 49 of them. *47% of these were declining*, the outlook was *improving for 24%* and the remaining *29% showed little change* in their status.

A study of the impact of the 1995 drought on butterfly abundance showed that some widespread species, including large skipper (*Ochlodes sylvanus*) and green-veined white (*Pieris napi*), were particularly drought-sensitive. The impact of extreme weather events is also relevant to many invertebrates and birds on a yearly basis.

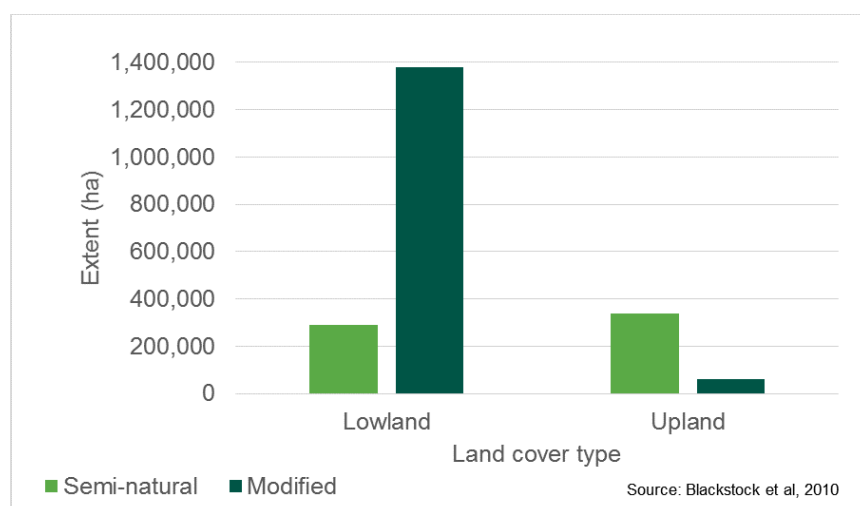
Climate change impacts such as acidification, sea temperature rises and extreme weather events have the potential to affect marine species through a number of factors including prey population dynamics, reproduction and distribution.

Habitats

The Habitat Survey of Wales provides complete coverage of the country and was undertaken between 1979 and 1997. More detailed information for habitats which are a priority for conservation measures is provided by NRW's ongoing Phase 2 Habitat Survey.

The land-cover of Wales can be divided broadly into semi-natural habitats and modified land-cover types. Semi-natural habitats retain many of their characteristic species. Modified land-cover types include the built environment as well as land where ecological processes and species composition have been hugely altered, for example, improved grassland, arable land and conifer plantations. The representation of semi-natural habitat varies significantly across Wales. The Welsh lowlands are highly modified as shown in Figure 3-8. Of the lowlands 17.3% is semi-natural habitat, whereas of the upland area 84% is semi-natural habitat. Semi-natural habitats in Wales cover a total of 626,100 ha (30% of the Welsh land surface) (SoNaRR, 2016).

Figure 3-8 Summary of the representation of semi-natural habitats and modified land-cover types in Wales.



The extent, condition and trends of terrestrial species in Wales are influenced primarily by habitat management and by climate change. Habitat management directly influences plant community composition, amounts of bare substrate, shading and vegetation structure. Shading due to scrub encroachment, following changes in grazing regime, can be as damaging for butterflies and many other species groups as overgrazing or agricultural improvement. These effects are compounded by direct habitat loss which leads to fragmentation of suitable habitat types or conditions and the increasing influence of nutrient enrichment which leads to changes in plant communities and patterns of growth. As above, climate change is also a significant threat to both habitats and the species they support (SoNaRR, 2016).

Habitats of Principle Importance

In Wales, the interim Section 7 list has 55 habitats of principle importance, which were originally selected for the Section 42 list of the Natural Environment and Rural Communities Act 2006. These habitats cover terrestrial, freshwater and marine. They include blanket bog, ponds and seagrass beds and were selected for prioritised action from the UK Biodiversity Action Plan (BAP) using criteria based on the level of threat they face, their relative importance as habitat in Wales and whether remedial action will be able to improve their status. Terrestrial habitats of principle importance extend over a total area of 387,300 ha. The most extensive of these in Wales (each with a resource of greater than 30,000 ha) include upland heathland, blanket bog, upland oak woodland, purple moor-grass and rush pasture, lowland dry acid grassland and coastal and floodplain grazing marsh. However, some key habitats of conservation importance are scarce, small in extent and highly vulnerable. Marine Intertidal BAP habitats extend over 15,000 ha. The most extensive intertidal BAP habitat, mudflats, covers over 14,000 ha and is found all around the coast of Wales. Honeycomb worm reefs cover 476 ha and are mainly found in South and West Wales. More than 50% of all BAP habitats were in decline in Wales in 2008 (SoNaRR, 2016).

Ancient Woodland

The area of Ancient Woodland in Ancient Wood Inventory (AWI) 2011 is 33,000ha (53 percent) greater than in AWI 2004. Largely, the revised figure consists of Ancient Semi-Natural Woodland (ASNW) in private ownership (29,000ha). 5,000 ha more Ancient Woodland has been identified on the Welsh Government Woodland Estate managed by Natural Resources Wales, compared with the AWI 2004. The AWI shows that South Wales Valleys and South Powys are the most populous ancient woodland areas. Most of these woodland resources are designated Plantations on Ancient Woodland Sites (SoNaRR, 2016).

European and UK Protected Sites

European protected sites are designated either as exemplars of listed habitat and species types or specifically to conserve wild birds that are listed as rare and vulnerable. The protection of these sites makes a significant contribution to conserving the habitats and wildlife species that live there. Protected sites also exist in the marine environment, and work continues to ensure these sites contribute to an ecologically coherent network of marine protected areas in UK seas.

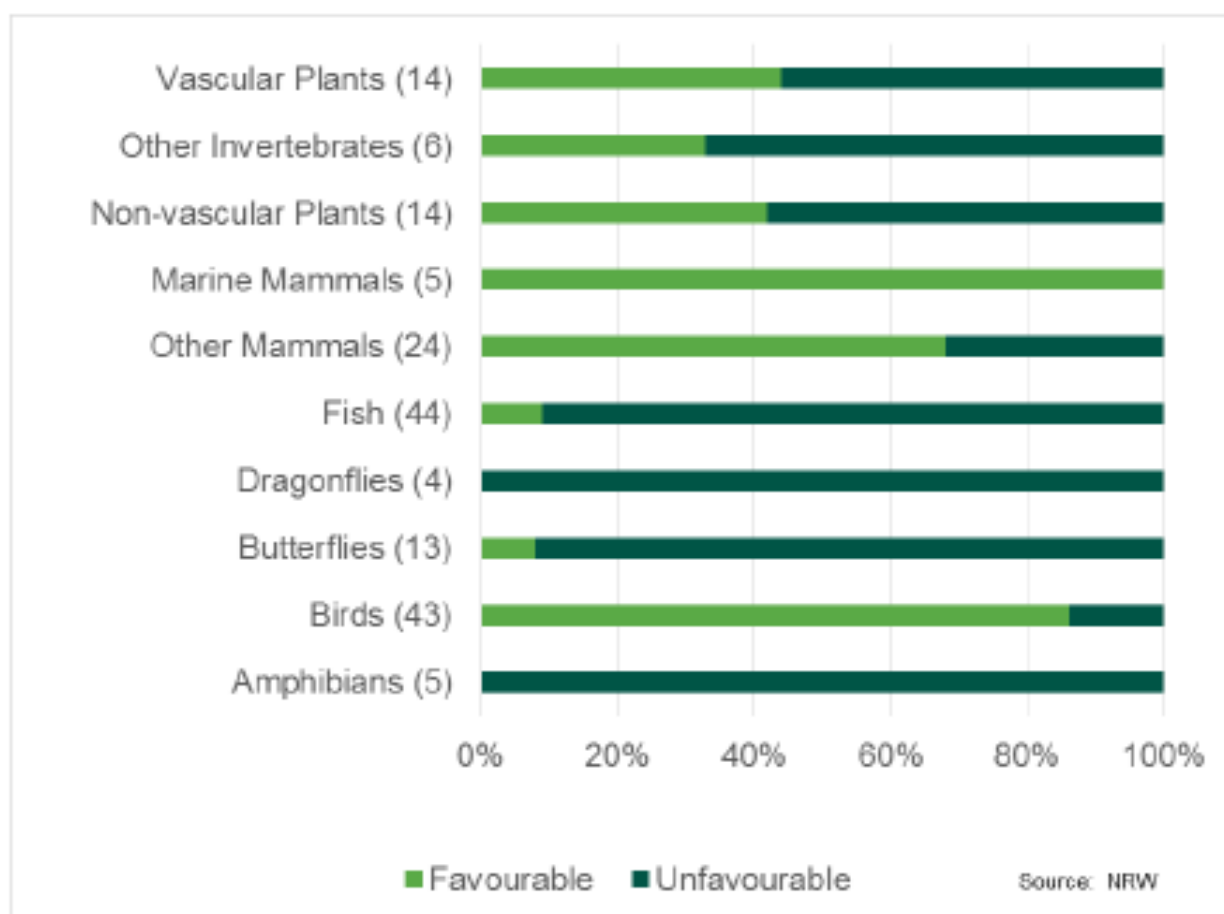
Special Protection Areas (SPA)

SPAs are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species (Defra, 2013).

SPAs in Wales include the coastline between Burry Port and Saundersfoot, sections of the Pembrokeshire coast and the coastline from Penarth to the Severn Bridge in South Wales. The area between Llandrindod Wells and Tregaron in Mid Wales and the South Gwynedd area and Northern coastline in North Wales. The spatial distributions of Welsh SPAs can be found in Figure 1 - Designated Nature Conservation Sites.

The condition of SAC and SPA species features on sites in Wales, as reported in 2013, remains mostly unfavourable (55%), with the exception of birds and mammals of which 86% and 68% were in favourable condition, respectively. A summary of the results for species is shown in Figure 3-9.

Figure 3-9 Overview of condition of Habitat and Bird Directive species features on SACs and SPAs. Number of features in assessment shown in brackets.



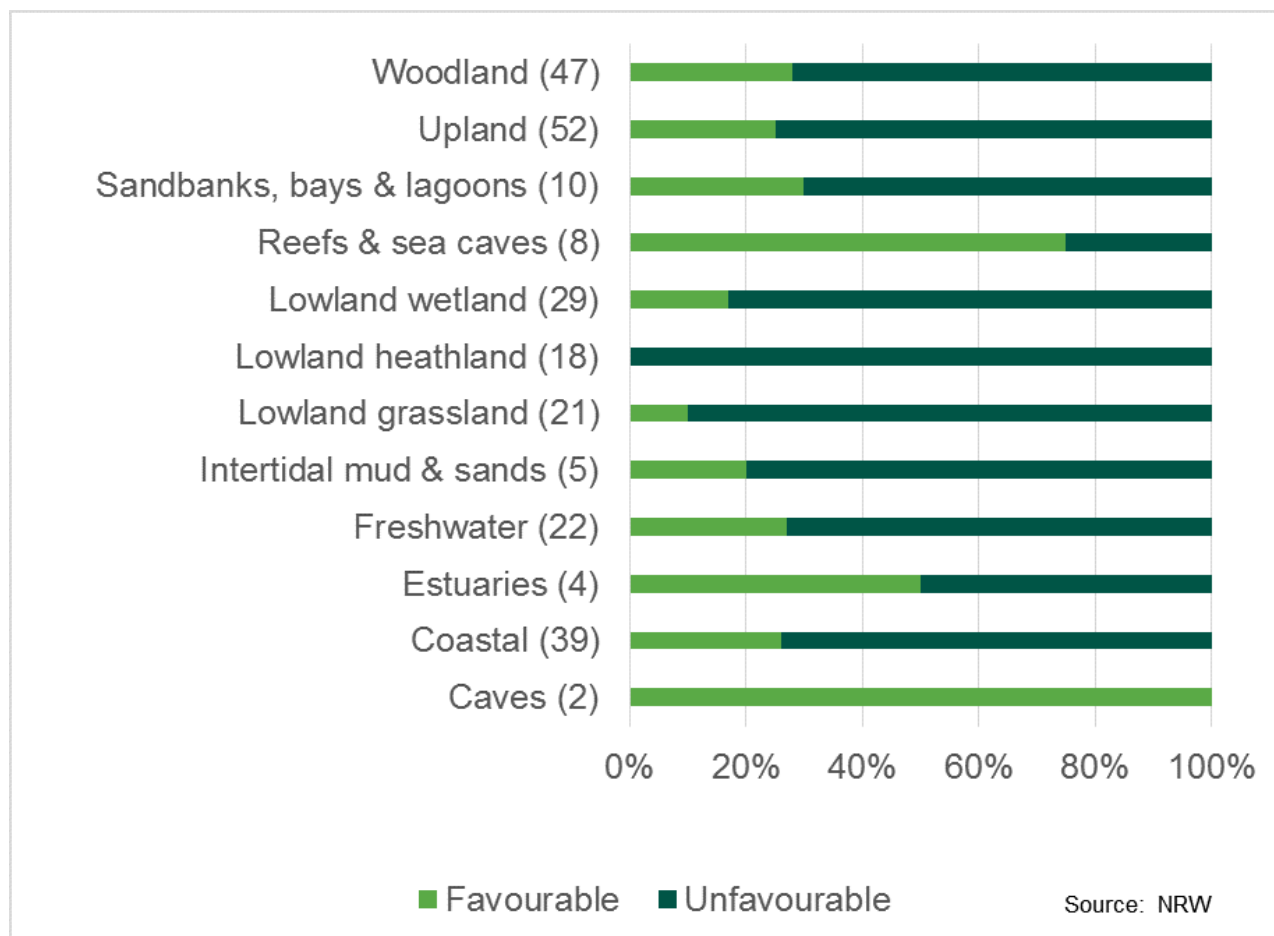
Special Areas of Conservation (SAC)

A Special Area of Conservation (or SAC) is a site designated under the Habitats Directive. These sites, together with Special Protection Areas (or SPAs), are called Natura 2000 sites and they are internationally important for threatened habitats and species.

SACs in Wales include the coastline between Burry Port and St. Davids; sections of the Pembrokeshire coast; and the coastline from Penarth to the Severn Bridge in South Wales. Large sections of the coastline between Cardigan up to Caernarfon in Mid Wales and the coast between Bangor and Conwy in North Wales are also protected under this designation. The spatial distributions of Welsh SACs can be found in Figure 1 –

Designated Nature Conservation Sites. As an overview, roughly a quarter of SAC habitats in Wales are in a favourable condition, see Figure 3-10.

Figure 3-10 Percentage of SAC habitat features in favourable and unfavourable condition. Number of habitat features in assessment shown in brackets (SoNaRR, 2016)



Ramsar Sites

The Ramsar Sites in Wales include wetlands that are considered to of international importance under the Ramsar Convention. Wales currently has 10 Ramsar Sites including The Dee Estuary, Llyn Idwal, Llyn Tegid and Corsydd Mon a Llyn in the north, Cors Caron, Cors Fochno and Midland Meres and Mosses in Mid Wales/Midlands and Burry Inlet, Crymlyn Bog and Severn Estuary in the south. The spatial distributions of Welsh Ramsar sites can be found in Figure 1 – Designated Nature Conservation Sites.

Sites of Special Scientific Interest (SSSI)

SSSIs are the most important sites for Wales' natural heritage. They help conserve and protect the best of the nation's wildlife, geological and physiographical heritage for the benefit of present and future generations.

SSSIs in Wales include coastline, freshwater, upland and lowland sites and range from small fens or sand dunes to woodlands and vast reaches of mountain. They contain important types of land, plants and wildlife. Geological sites range from quarries to rocky outcrops and massive sea-cliffs (Natural Resources Wales, 2016). As demonstrated in Figure 1 – Designated Nature Conservation Sites, the SSSIs in Wales are geographically spread across the country with a slight cluster in the rural areas North Powys and South Gwynedd. As of 2019 there are 1078 SSSIs within Wales²⁴.

²⁴ <https://lle.gov.wales/catalogue/item/ProtectedSitesSitesOfSpecialScientificInterest/?lang=en>

National Nature Reserves

National Nature Reserves tend to occupy the coastal areas of the country. There is a strong presence of nature reserves in the coastal areas of Wales. The highest concentration is to the east of the Llyn Peninsula. The spatial distributions of Welsh National Nature Reserves can be found in Figure 1 – Designated Nature Conservation Sites.

Marine Conservation Zones (MCZ)

The marine environment includes 2,740 km of coastline. The marine ecosystems in Wales form part of two wider biogeographic regions: the Irish Sea, and the Western Channel and Celtic Sea. There is a high diversity of habitats and species including sediment and biogenic habitats, sessile and highly mobile species. A proportion of marine habitats are surveyed and mapped, but for some areas our understanding only comes from modelling.

In 2014, the first MCZ in Welsh waters was established. Skomer MCZ is situated around the island of Skomer and the Marloes Peninsula in Pembrokeshire, South West Wales. Before 2014 the area had been Wales' only Marine Nature Reserve for 24 years (Joint Nature Conservation Committee). This is clearly visible in Figure 3-11 below.

Figure 3-11 Skomer Marine Conservation Zones – The first and only current MCZ in Wales situated off the South-West coast of Wales.



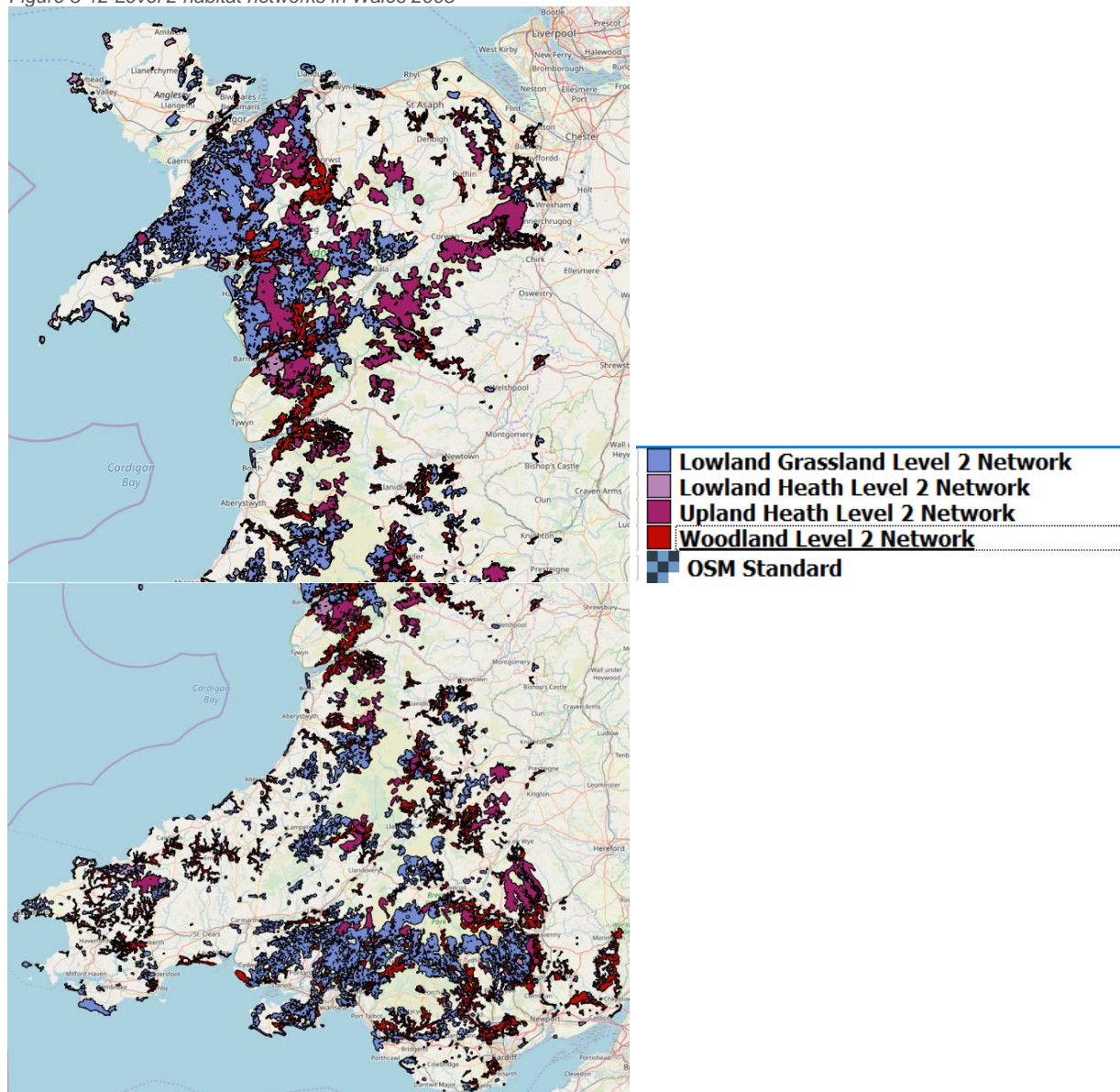
The Environmental and Rural Affairs Monitoring & Modelling Programme (ERAMMP) has accumulated and carried out many surveys of the habitats of Wales that is used to inform SoNaRR reports, they include both areas where the habitats excel and areas that need improvement, these areas that need improvement should be considered in the WTS; their 2020 findings²⁵:

- 20% of vegetation plots in Wales are on neutral grassland, but only <1% are on semi-natural neutral grassland.
- Topsoil carbon declined in the uplands since 2007. This includes acid grassland.
- 74-90% of farmed grassland fields contain no trees.
- Recent topsoil carbon declines in the uplands include Mountain, Moor and Heath.

Resilient Ecological Networks

In order to preserve biological diversity, resilient ecological networks are planned to enable habitats to adapt to developments within Wales.

Figure 3-12 Level 2 habitat networks in Wales 2008



²⁵ <https://erammp.wales/en/gmep-data-analysis>

Data gaps

No significant data gaps have been identified for this topic at this stage. Information in this section comes mostly from the SoNaRR, 2016 report, this information has not been updated online in an accessible form since then, even though there is a 2019 interim report.

3.1.4 Climate Change Adaptation and Flood Risk

Relevance to the WTS

Measurements indicate that over the past century air and ocean temperatures have increased, rates of ice melt in valley glaciers and ice caps have accelerated and sea levels have risen. However, the extent of future warming and both the nature and geographical distribution of its impacts are the subject of much greater uncertainty. Scientists predict that climate change will result in increased sea-levels, increased average annual temperatures, warmer wetter winters, hotter drier summers and an increase in extreme weather events. These factors have significant implications for both our human and natural environment.

The implications of climate change for the WTS are related to the need to arrest, or mitigate, the causes of global warming, and to adapt to future conditions. Flooding is a key area in which the effects of climate change are felt locally.

Baseline conditions and trends

Flooding is a key area in which the effects of climate change are felt locally. Flood risk is a significant issue in Wales including coastal, fluvial and surface water flooding.

Figure 3-12 presents the Technical Advice Note (TAN) 15 development flood risk areas, including the identification of areas served by significant infrastructure including flood defences; areas without flood defences; areas known to have had past flooding events; and areas at little or no risk of fluvial coastal or tidal flooding. TAN 15 notes that, historically, the topography of Wales has generally resulted in transport infrastructure being concentrated on valley floors, lowland areas and in the coastal fringes. The North West, North East, and South East regions are areas that have a high risk of flooding due to the extent of watercourses. A large proportion of the Welsh population is also located within urban centres along the coastal plain in North and South Wales, particularly Cardiff, Swansea and Newport and the coastal settlements of North Wales. Shoreline Management Plans (SMPs) provide a large-scale assessment of the risks associated with coastal processes that result in both erosion and flooding and presents a policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner. Wales is covered by the following SMPs:

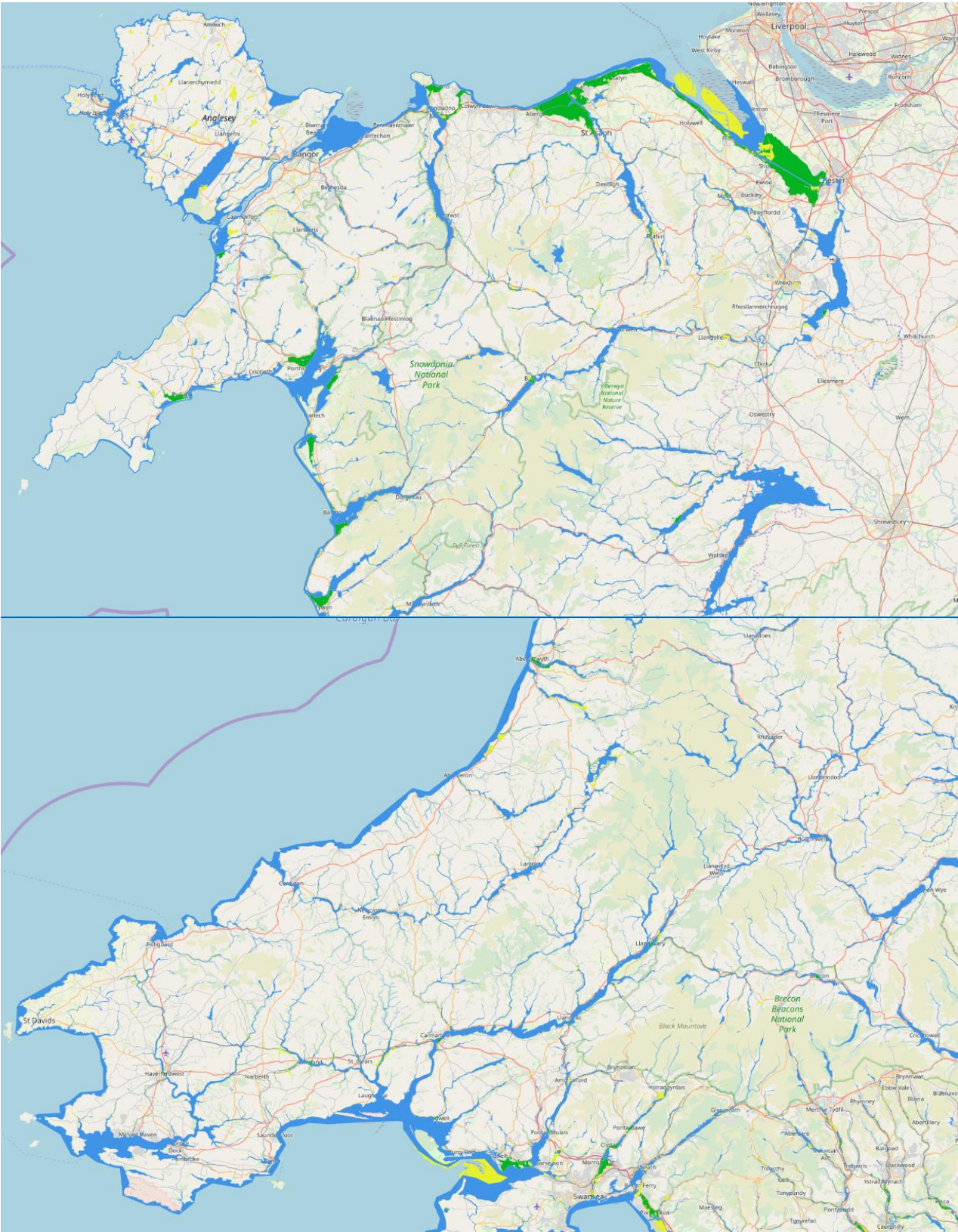
- SMP 19 Anchor Head to Lavernock Point (Severn Estuary);
- SMP 20 Lavernock Point to St Ann's Head (South Wales);
- SMP 21 St Ann's Head to Great Ormes Head (West of Wales); and
- SMP 22 Great Ormes Head to Scotland (North West England and North Wales).

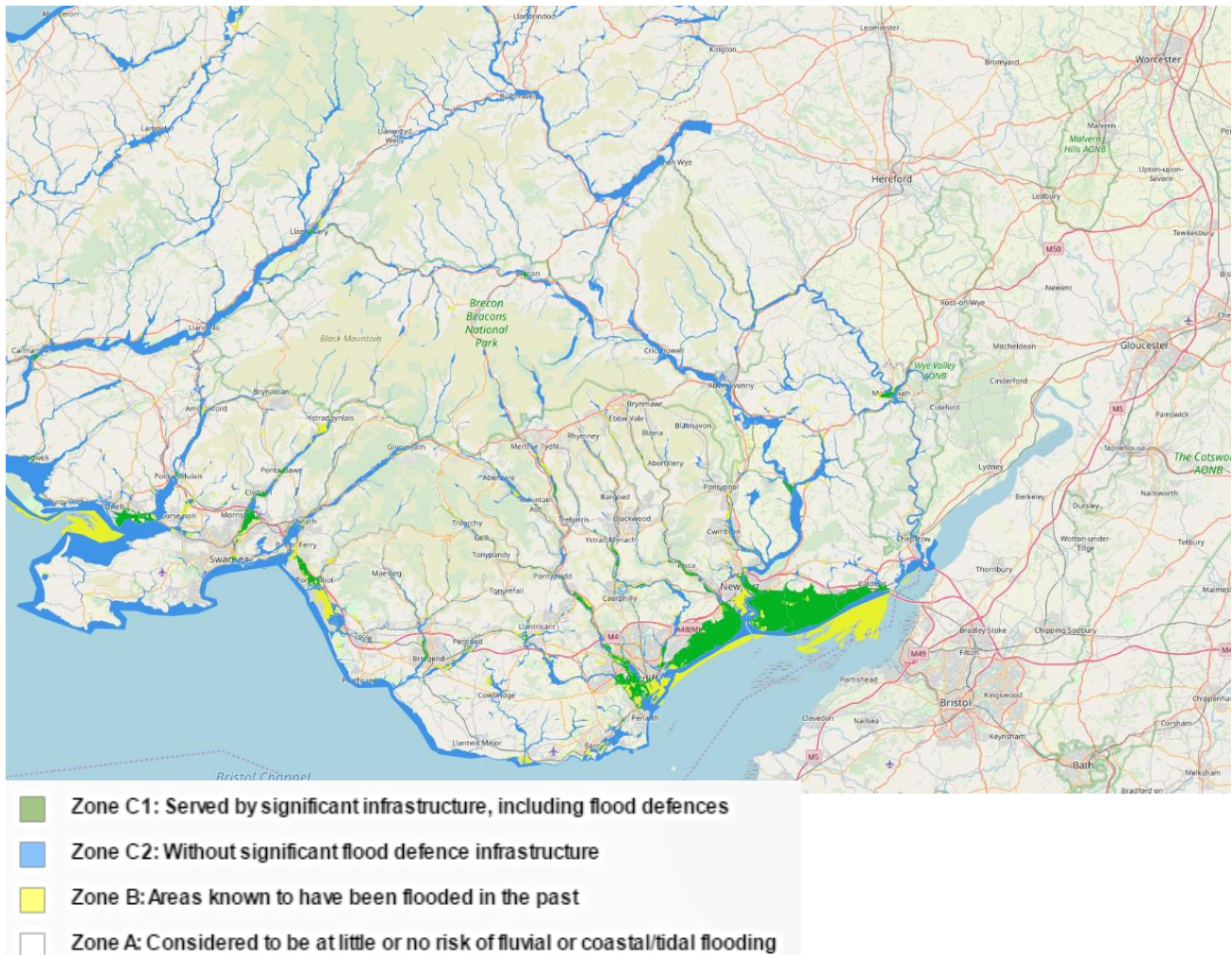
Overall, it has been assessed by the National assembly in Wales in 2017 that:

- There are at present around 208,500 properties at risk from flooding from rivers and sea in Wales. Around 163,000 properties are at risk from surface water flooding (based on 2014 data).
- Natural Resources Wales²⁶ estimates that 33 properties could be lost to coastal erosion over the next 20-50 years, and about 156 could be lost in the next 50-100 years. These estimates take into account the interventions proposed in the Second Generation Shoreline Management Plans. Without the interventions, these figures could increase to about 559 properties within 20-50 years and about 2,126 in 50-100 years.

²⁶ NRW (2017) Flood and Coastal Erosion Risk Management in Wales <https://www.assembly.wales/Research%20Documents/17-024/17-024-Web-English.pdf>

Figure 3-13 TAN 15 Development Flood Risk





Source: Development Advice Maps, Welsh Government

Flood risk and the need to manage and adapt to it is a very significant issue for Wales in the future as the risks brought about by climate change are anticipated to exacerbate flooding issues in the future. The most recent information for Wales from the UK Climate Impacts Programme (UKCP09) forecasts that by 2080 (under a medium emissions scenario), there will be an increase in winter mean precipitation of 19% (it is very unlikely to be less than 4% and it very unlikely to be more than 42%). Sea levels are forecast to increase by 36.2 cm compared to 1990 levels²⁷.

Almost 28% of the coast has some form of artificial protection, whilst 23.1% of the Welsh coast is considered to be eroding, with the potential to affect people, properties and infrastructure. In addition, both erosion and coastal protection have the potential to affect protected sites, although allowing dynamic processes to take place is usually considered to be positive.

Flooding is not only a pressure on communities and built structures but also causes impacts on the environment, as seen in the 2013-14 winter storms. These storms caused £8.1 million of damage to flood defence structures, in addition to the financial costs associated with the approximately 300 properties that were flooded. The work by NRW, Lead Local Flood Authorities, Internal Drainage Boards and Water and Sewerage companies has sought manage flooding and coastal erosion. In the winter storms of 2013/14, it is estimated that approximately 75,000 properties and 34,000 hectares of agricultural land was protected from flooding. Between 2011 and 2014, in excess of 340 coastal and river flood defence schemes were delivered, reducing flood risk to approximately 6,700 properties (Welsh Government Climate Change Annual Report 2014). It is estimated that £2.96 billion of damage to properties was avoided as a result of protection from

²⁷ UK Climate projections (2009) maps and key findings. Available: <http://ukclimateprojections.defra.gov.uk/21708#key> (accessed March 2017)

defences (SoNaRR, 2016). The trends in hydrological processes, which include sea-level rise and increased storminess, are likely to increase the likelihood and consequences of coastal flooding and erosion.

Data gaps

Data gaps relating to transport links affected by flooding.

Data gaps relating to transport structures affected by scour.

Data gaps relating to the types of households most likely to be affected by flooding.

3.1.5 Geology and Soils

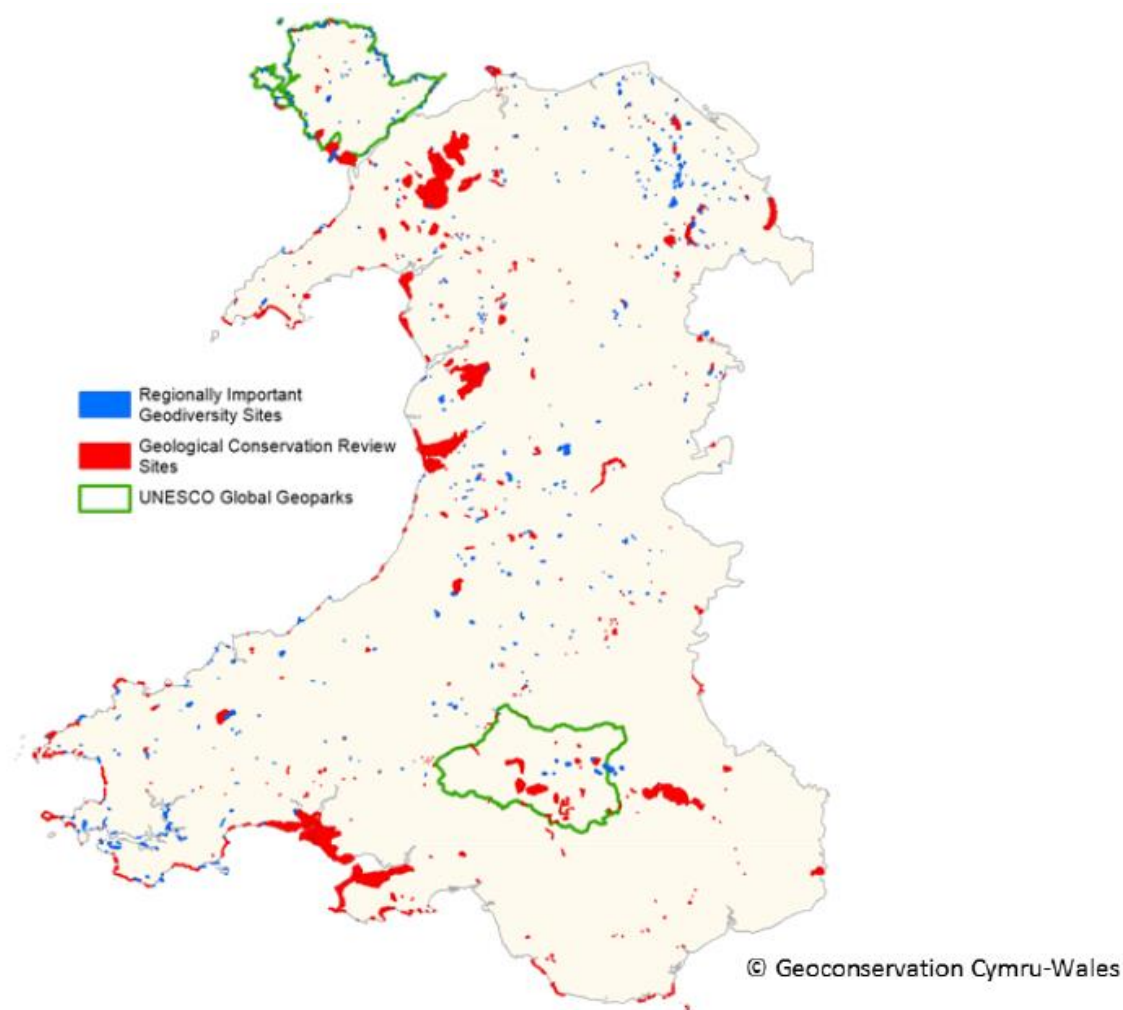
Relevance to the WTS

Wales has some of the most varied geology in the world representing all geological periods and spanning 1.4 billion years of the Earth's history. This diverse geology not only underpins the country's biodiversity and landscape but also provides important mineral resources. The protection and sustainable use of geological diversity, soil resources and minerals can be delivered through the guidance within the WTS.

Baseline conditions and trends

As identified above, Wales' geodiversity is significant. 300 SSSIs in Wales, covering 48,815 ha, contain some 500 geological features and 93% of these features are in favourable condition. Figure 3-13 illustrates the distribution of geological SSSIs and Regionally Important Geodiversity Sites (RIGS). Two UNESCO Global Geoparks, Geo Môn and Fforest Fawr, cover 1,483 km² of Wales and are also designated for the primary purpose of promoting geo-tourism (SoNaRR, 2016).

Figure 3-14 Welsh Geodiversity Sites (SoNaRR, 2016).



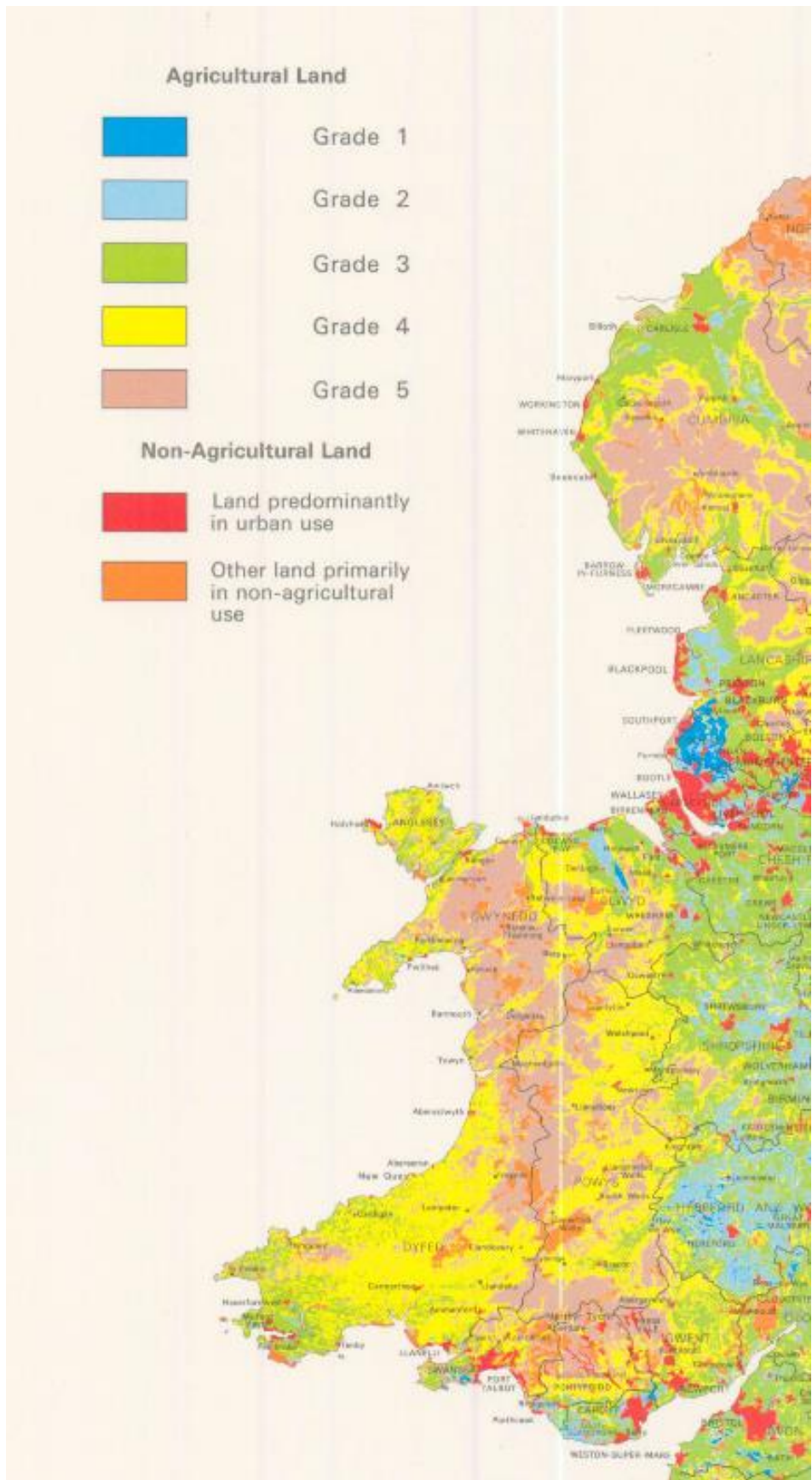
Source: SoNaRR, 2016.

In the future, geological hazards may change as a response to climate change. For example, coastal erosion, landslides and pollution from former mine sites. Exploration for conventional and unconventional sources of oil and gas also remains a possibility in Wales and its consideration will form a part of the emerging Welsh Government Energy Strategy.

The soil and agricultural land quality of Wales is reflective of the topography and geology of the country. The soil types are diverse with over 400 different soil types present across the country, which contribute to a rich geodiversity and biodiversity, landscapes and land uses. The majority of Wales is either Grade 4 or 5 in the Agricultural Land Classification. This classification is generally considered to be of poor or very poor quality agricultural land and is largely due to the predominantly upland nature of Wales. This has a strong influence on the types of agriculture feasible, lending itself more towards livestock farming. The soils of best quality and most productive agricultural land are a scarce and finite resource in Wales accounting for less than 7% of land area.

Soil quality has deteriorated over time across all habitats apart from woodlands where there has been some improvement (SoNaRR, 2016).

Figure 3-15 Agricultural Land Classification Map of England and Wales (extract) (Natural England).



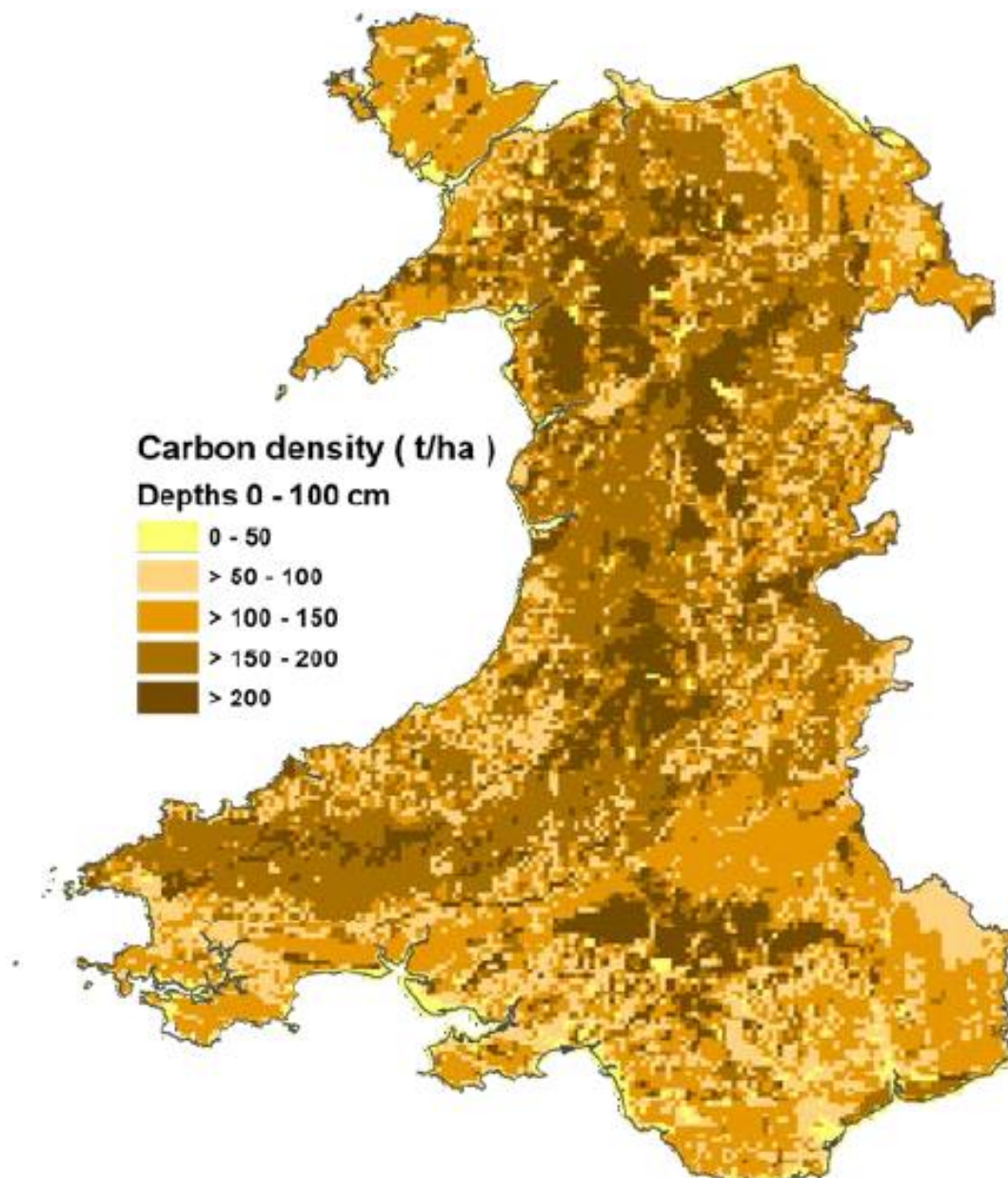
Source: Natural England

Whilst the severity and spatial extent of soil erosion has not been directly quantified in Wales, around 10-15% of grassland fields in England and Wales are thought to be affected by severe soil compaction and 50-60% are in moderate condition. Only 30% of the Welsh peat soil area is considered to be in 'good condition' (SoNaRR, 2016).

Remediation has been completed at 97 of the 111 Contaminated Land sites identified in Wales, but around 9,330 potentially contaminated sites have yet to be investigated (SoNaRR, 2016).

Welsh soils contain 410 million tonnes of carbon. The carbon density of Wales on the whole, is relatively high with the densest areas mainly being upland parts of the country. Again, this reflects the country's upland nature and large quantities of peaty soils. Figure 3-15 below, shows the carbon density of Wales at a depth of 0-100cm. Topsoil carbon concentrations are generally stable and there is ongoing recovery from soil acidification (SoNaRR, 2016).

Figure 3-16 Distribution of soil carbon in Wales, shown as carbon density (t/ha) depth 0-100 cm (SoNaRR, 2016).



Source: SoNaRR, 2016).

Data gaps

Issues relating to geology and soils amounting from transport and the potential impact new transport infrastructure can have on geology and soils.

3.1.6 Water Environment

Relevance to the WTS

Water is central to life. Wales relies on considerable quantities of water to produce resources, transport goods, provide recreational benefits, as a drinking resource and to grow food. The quality and quantity of water is therefore vitally important.

The WTS can help manage the water environment through helping to guide decisions through the planning process relating to development of transport infrastructure that could harm water quality or put pressure on water resources. It also has a role to play in environmental protection in general through its guidance.

Baseline conditions and trends

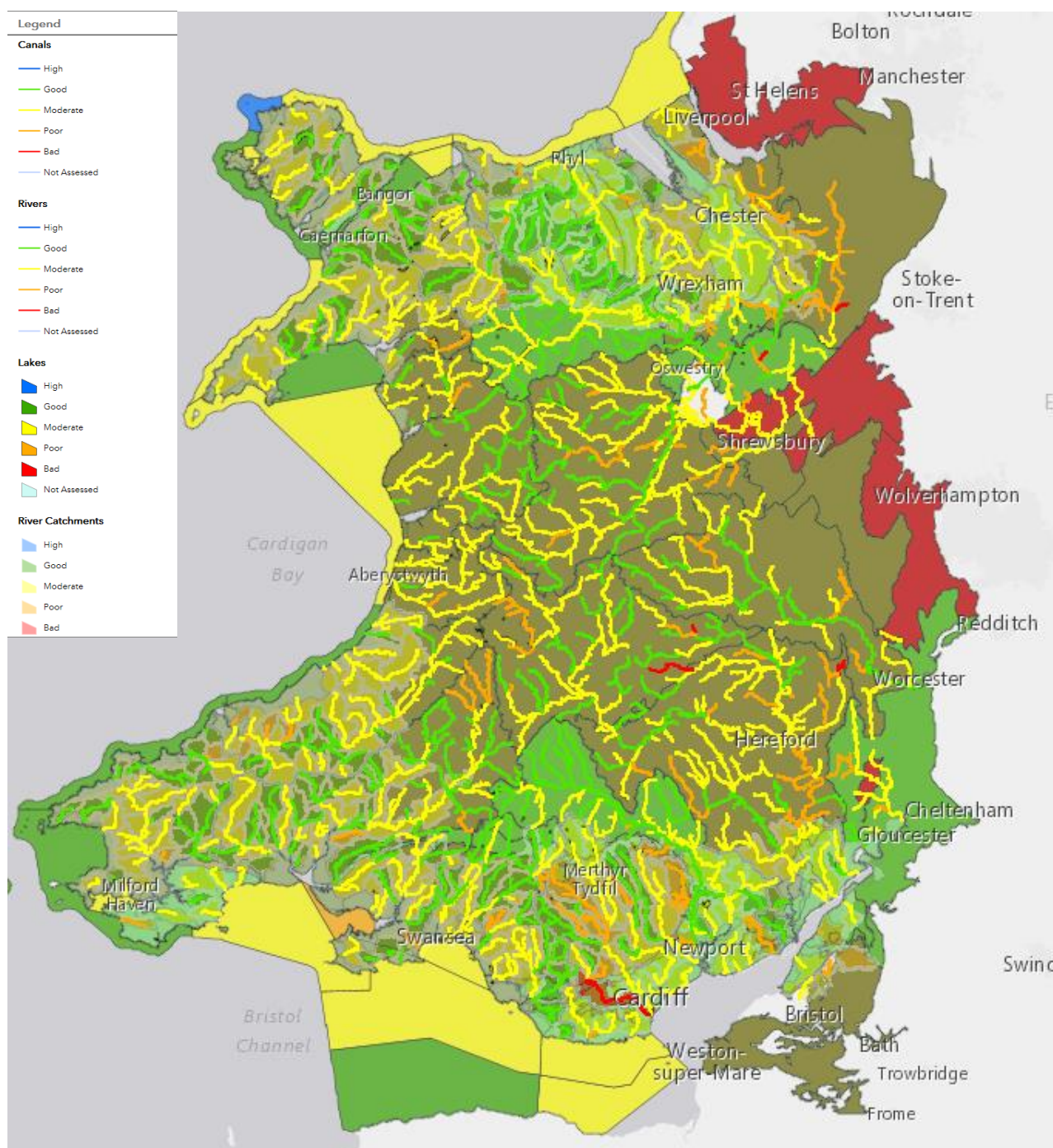
The water features map of Wales in Figure 3-16 was produced under the requirements of the Water Framework Directive. The map shows the river catchments and other water features in Wales. Water resources across Wales tend to range from a good to poor classification but are very rarely classed as high or bad. In particular, the river catchments in the south and Cardigan Bay are classed as moderate or good.

The Water Framework Directive required the UK to achieve 'good' status of all water bodies (including rivers, streams, lakes, estuaries, coastal waters and groundwater) by 2015.

In 2014 42% of water bodies in Wales were classified as being of 'good' ecological status compared to 21% in England. There was a slight decrease to 39% classified as being of 'good' ecological status in 2015 (Natural Resources Wales).

In many Welsh rivers, flows are particularly vulnerable to climate change because they tend to rise and fall quickly in response to rainfall. Increased flows during winter may also increase pressure upon sewerage and drainage systems and diffuse pollution (SoNaRR, 2016).

Figure 3-17 Water Features and Quality in Wales



(Source: Natural Resources Wales)

Groundwater provides a third of the drinking water in England and Wales, and it also maintains the flow in many of our rivers. All of Wales is classified as groundwater inner source protection zone. The zone is defined as the 50-day travel time from any point below the water table to the source. These areas apply at and below the water table. The criteria are set to protect against transmission of toxic chemicals and water-borne disease.

In Wales, the EC Nitrates Directive (91/676/EEC) was brought into law through the Nitrate Pollution Prevention (Wales) Regulations 2013. A Nitrate Vulnerable Zone (NVZ) is an area of land draining into ground or surface waters that are currently high in nitrate; or may become so if appropriate actions are not taken. Around 2.4% of Wales is currently within an NVZ.

Data gaps

No significant data gaps have been identified for this topic at this stage.

3.1.7 Minerals and Waste

Relevance to the WTS

As described above, Wales' diverse geology provides important mineral resources which underpins the country's construction and energy industries and is therefore an important aspect of the economy. Waste can also be viewed as a resource, both in terms of recycling and re-use for other purposes or as a source of energy. The future of transport in Wales will interact with this through both Waste creation, pathways for minerals and waste and use of waste and minerals in development of transport infrastructure.

The sustainable use of these minerals and waste resources can be delivered through the guidance within the WTS.

Baseline conditions and trends

Following a long history, metal mining has ceased and there is only localised coal mining and slate quarrying in Wales. The aggregates industry is now the main mineral extraction industry in Wales, including marine and terrestrially derived aggregates. In 2014, the largest extraction of minerals in tonnes was limestone and dolomite (see Table 3-1 (SoNaRR, 2016)).

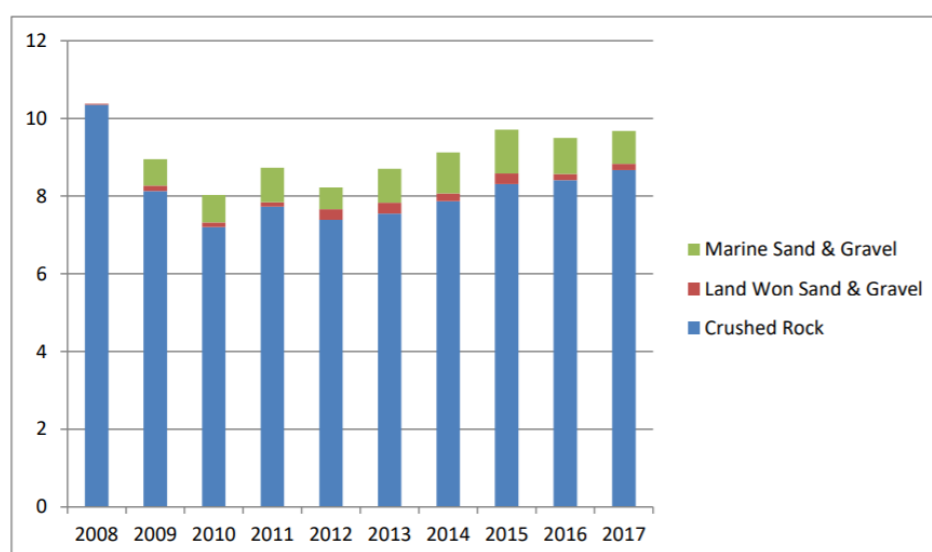
Table 3-1 Mineral Production in Wales for 2014 (SoNaRR, 2016)

Mineral	Thousand Tonnes Extracted
Coal (deep-mining)	91
Coal (opencast)	2,343
Igneous Rock	1,905
Limestone and Dolomite	8,934
Sand and gravel (land)	673
Sand and gravel (marine)	632
Sandstone	2,774
Total	17,352

The future trend in minerals extraction is heavily influenced by the national economy and confidence in the construction industry. Exploration for conventional and unconventional sources of oil and gas also remains a possibility in Wales and its consideration will form a part of the emerging Welsh Government Energy Strategy.

The sales of aggregates in Wales was published in the 2019 South Wales Regional Aggregates Working Party Annual Report for 2017.

Figure 3-18 Primary Aggregate Sale 2008-2017²⁸



The Welsh Government publication, 'Towards Zero Waste 2010–2050' aims for Wales to become a high recycling nation by 2025 and a zero-waste nation by 2050. The 2015 Progress Report identifies the following key statistics and trends:

- Wales leads the UK in recycling municipal waste by a significant margin, achieving 54.3% in 2013/14.
- Wales has reduced waste sent to landfill at permitted sites by 37% between 2010 and 2013.
- Since 2009-10, Wales has made progress in reducing household waste arisings by an average of 1.8% per year, and the recycling rate of local authority collected waste has improved by 13.8%.
- Wales met the EU target 2020 for biodegradable waste collected by local authorities and others sent to landfill eight years early.
- Wales has also reduced the greenhouse gas emissions from waste by 4.7% per year since 2007, exceeding the target reduction of 3% per year set in the Climate Change Strategy.

Table 3-2 shows the total amount of waste per sector that was not recycled, re-used or composted as a percentage of overall municipal waste production. This shows a steady decrease in the amount of waste sent to landfill. This trend is echoed in the commercial and construction sectors.

Table 3-2 Percentage of Municipal Waste sent to Landfill (Statistical Bulletin 'Local authority municipal waste management report for Wales, 2013-14', Welsh Government)

Year	% municipal waste sent to landfill
2009-10	59.5%
2011-12	50.0%
2013-14	45.7%

The latest quarterly statistical release for Landfill Disposals Tax by the Welsh Revenue Authority states that for waste disposed to landfill in the period April to June 2020, there were 179 thousand tonnes of authorised disposals, which is a fall of 28% for the same period in 2019. These disposals resulted in £5.2 million tax due, a fall of nearly 50% from the same period 2019. It is cited that Covid-19 has had a major impact on the

²⁸ <http://www.swrawp-wales.org.uk/Html/SWRAWP%20Annual%20Report%202017%20FINAL.pdf>

businesses of some landfill site operators and is likely to be a factor in the level of waste disposed.

The Natural Resource Policy published in 2017 puts an emphasis on taking a place-based approach and delivering nature-based solutions²⁹. There is an emphasis within the document of using a solid baseline to understand how to sustainably plan for the future.

The four policy themes, drawn from the NRP, were:

1. Marine and Freshwater Water Quality
2. Natural Flood Management
3. Woodland Planting (for various objectives)
4. Urban and Peri-Urban Green Infrastructure

Data gaps

Data gap relating to how recycled materials are used in the transport industry as a percentage of total materials used.

Data gaps relating to the transportation and management of waste and minerals.

There may be data gaps due to some of the data being five years old or more, this data may no longer be an accurate representation.

3.2 Key Issues relevant to the WTS and opportunities for it to address them

Issues

Air Quality

Air quality in Wales is generally very good, reflective of its largely rural nature and high-quality natural environment. However, targets are being breached for a number of key pollutants which pose a risk to human health and the natural environment so the transport plan must take this into account. These notably occur in urban areas and adjacent to busy roads.

90% of semi-natural nitrogen sensitive Welsh habitats are subject to nitrogen deposition in excess of critical load limits.

Road transport accounts for nearly a third of all NO₂ emissions in the UK and transport is the biggest source of air pollution in the UK.

Noise Pollution

Road noise is focused around the M4 in South Wales and adjoining 'A' roads. The A55 and adjoining 'A' Roads in North Wales, and the A483 in Mid Wales, also contribute to high levels of noise pollution. Noise pollution from railways mostly takes place in the south of Wales around Cardiff.

Biodiversity, Flora and Fauna and Ecosystem Resilience

Wales has a rich and varied natural environment including a wide representation of important habitats and species. However, the condition of species features in European designated sites in Wales and the condition of priority habitats in Wales remains mostly unfavourable, the transport plan must do its best to not impede on the habitats via habitat fragmentation or indirect effects such as nitrogen deposition, wildlife fatalities or noise disturbance.

²⁹ http://www.hwa.uk.com/site/wp-content/uploads/2018/11/POL_22-Welsh-Government-2017-Natural-Resources-Policy.pdf

Terrestrial and marine biodiversity is under threat from transport infrastructure, pollution and climate change, all of which are effects that come from the transport network.

Changes in habitat quality coming from changes to the groundwater regime, changes in natural rates of flow from hard surfaces increasing surface water flooding.

A change in soil leaching and erosion patterns.

Changes to microclimate from light and radiation emissions.

Windfunnelling from bisected trees.

Disturbance to fauna from noise, lighting and vibrations from traffic and road lighting.

Road structures may cause problems for certain birds/mammals by reducing visibility.

The edge habitat or ecotone and traffic on the road may facilitate dispersal for some species. This may result in dispersal and establishment of alien and invasive species or pest species that may have secondary effects on biological communities.

Surrounding habitats may be placed under increasing public pressure, because of access, leading to effects including the disturbance of animals, and physical destruction of ground flora. Also, litter may accumulate along road

Off-site habitat losses and changes in habitat quality in relation to the obtaining and disposal of materials e.g. mining for aggregates for road building.

Even relatively minor habitat loss, fragmentation and indirect impacts of an individual road project can, when added to other past, present and reasonably foreseeable future impacts of other projects and activities, contribute to significant impacts in an area. All relevant types of future projects and activities should be considered (i.e. not just other road projects) including induced development.

Climate, Flood Risk and Coastal Erosion

The effects of climate change are increasing and adaptation and resilience to its effects is an increasing necessity. Notably, flood risk is a significant issue in Wales including coastal, fluvial and surface water flooding that may affect transport infrastructure. This is exacerbated by an increase in extreme weather events and this means that properties and businesses are increasingly becoming at risk. Disruption can disproportionately impact communities with fewer and less resilient transport options.

Climate change will impact on Wales in ways other than just flooding, such as more extreme weather events, an increase in storminess, higher maximum and minimum temperatures, more severe droughts and exacerbated rates of coastal erosion. Climate change will also affect habitats and species throughout Wales.

The UK Climate Change Risk Assessment 2017: Evidence Report highlights a number of key risks and opportunities facing Wales with regard to transport, including the need to transition towards low-emission vehicles and enhanced active travel options.

Geology and Soils

In the future, geological hazards may change as a response to climate change. For example, coastal erosion, landslides and pollution from former mine sites. This poses significant risks to the transport system.

The soils of best quality and most productive agricultural land are a scarce and finite resource in Wales and soil quality has deteriorated over time across all habitats. Only 30% of the Welsh peat soil area is considered to be in 'good condition'. This is important for biodiversity, landscape character, tourism, agricultural productivity and climate change resilience. Topsoil, in particular peaty soils in Wales are a major carbon sink which needs protection. All of this must be taken into account when planning the location of future transport infrastructure.

Water Environment

The quality of Wales' water bodies is still not up to Water Framework Directive requirements with only 42% being of good ecological status in 2014. Transport activities can be a big contributor to poor water quality.

In many Welsh rivers, flows are particularly vulnerable to climate change because they tend to rise and fall quickly in response to rainfall. Increased flows during winter may also increase pressure upon sewerage and drainage systems and diffuse pollution (which may come from road surface run-off).

Whilst Wales is perceived to be water-rich, it is already facing challenges in terms of supply and water resources can become relatively scarce during prolonged warm, dry weather.

Run off from roads and spillages on roads and during construction can all lead to pollution in surface waters, ground waters and marine environments (around ports).

Minerals and Waste

The country still has substantial resources if required. sustainable management of this extraction is necessary for ongoing or future activity. Minerals safeguarding can sometimes also conflict with other forms of development e.g. transport infrastructure.

There may be high material requirements for construction of transport infrastructure putting further strain on the limited resources.

Covid-19

The Covid-19 pandemic has impacted most on the most vulnerable individuals and deprived communities. The long-term impacts of the pandemic are currently unknown and, whilst there have been some beneficial impacts, including improved air quality and greater reliance on active travel, the approach to recovery should promote social, health and economic equality.

Opportunities

Air Quality

The transport system is a significant contributor to air pollution at present, an opportunity to reduce this negative effect on air quality could be affected by helping to minimise pollution from transport through minimising the distance travelled and encouraging more sustainable modes of transport. Sustainable design and landscaping policies could help to provide opportunities for absorbing some pollutants.

Noise Pollution

The WTS can affect noise pollution through ensuring decisions are based on the principle of reducing emissions through the transition to implementing the sustainable transport hierarchy. Sustainable design and landscaping policies could help to reduce the effect of noise and the potential impact from transport on tranquil areas.

Biodiversity, Flora and Fauna and Ecosystem Resilience

The WTS can both benefit and enhance biodiversity through guiding the location and manner in which new transport infrastructure occurs. It provides opportunities to ensure biodiversity is protected and enhanced through the transport system, not just in terms of protected sites but also in terms of biodiversity and connectivity in general. Other benefits might include improved habitat management; new structures e.g. bridges and tunnels may provide habitats for some species e.g. bats; and habitat creation. There is opportunity for the WTS to introduce additional green infrastructure as part of future transport proposals to support placemaking as well as biodiversity, flora and fauna.

Climate, Flood Risk and Coastal Erosion

The WTS has a significant role to play in terms of climate change adaption and resilience. Flooding and coastal erosion are key areas in which the effects of climate change are felt locally and the WTS can help provide guidance on the location and design of infrastructure development to help minimise the risk. It is also an opportunity to further work with partners such as NRW and local authorities in developing flood management and protection schemes as part of encouraging sustainable land and ecosystem management, including the opportunity for the inclusion of SuDS to reduce the impact of new schemes on flood risk..

The WTS has a focus on significantly reducing greenhouse gas emissions from transport, through the promotion of more sustainable transport methods such as public transport and active travel.

Geology and Soils

The WTS has an opportunity to guide the sustainable use of Wales' geology and soils in the transport system in terms of their use in the construction of transport infrastructure.

The WTS could also help to avoid future risks by managing or avoiding geological hazards through the planning of the transport system. Exploration for conventional and unconventional sources of oil and gas also remains a possibility in Wales and its consideration will form a part of the emerging Welsh Government Energy Strategy.

Water Environment

The WTS can help to guide new development of transport infrastructure and transport routes in a manner that seeks to avoid pollution of water bodies. It could also be cognisant of the potential limitations of water supply and could promote measures to reduce water use in developments.

Minerals and Waste

The WTS has an important role to play with regard to minerals demand (through economic aspirations), planning and management. It can help to guide the sustainable use of such resources through its policies.

Covid-19

The WTS has a role to play in the recovery from Covid-19, particularly addressing changes in mobility. The WTS should address inequalities that have been exacerbated by Covid-19 and should promote sustained, equal recovery.

4 Well-Being Goal: A Healthier Wales and A More Equal Wales

This section provides data relating to the following well-being goal:

'A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood.' And *'To deliver better public services, helping everyone who needs them, when they need them, where they need them.'*

The data relates primarily to:

- Human Health;
- Well-Being; and
- Population.

4.1 Overview of Baseline Conditions

4.1.1 Health and Well-being

Relevance to the WTS

Information with regard to the links between transport, health and priority groups can be found in section 4.1.3. In terms of equality, transport plays an important role in delivering an inclusive Wales, everyone, regardless of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation should be able to, and have the confidence to, make seamless independent and unassisted journeys across all modes of transport – from door to door and on a turn-up-and-go basis.

Baseline conditions and trends

In many ways, health in Wales is improving; people are living longer and rates of certain types of diseases are coming down. In many parts of Wales, the health of those living in rural communities is generally good, in comparison to those in a more urban setting. However, there are factors specific to a rural environment compared to those of urban environments that can impact on health more significantly and lead to

inequalities and poorer health, such as distance from public services and support; availability of transport; housing standards; and an ageing population.

Active Travel

“Active travel” is walking or cycling as a means of transport; that is walking or cycling in order to get to a particular destination such as school, work, shops, visit friends and many other journeys.’

Between 2018 and 2019 the Walking and cycling in Wales report³⁰ identified –

- 6% of adults cycled at least once per week for active travel purposes
- 57% of adults walked at least once per week for active travel purposes
- 70 per cent of people in urban areas walked for more than 10 minutes as a means of transport at least once a month, compared with 56 per cent of people in rural areas (Figure 4-1).
- Men, younger people, those without limiting illnesses and those who have qualifications were more likely than others to cycle.
- 44 per cent of children actively travel to primary school, and 34 per cent to secondary school.
- National Survey respondents who were in ‘very good’ or ‘good’ health were more likely to walk or cycle regularly.

Figure 4-1 Active travel (walking) by urban and rural classification

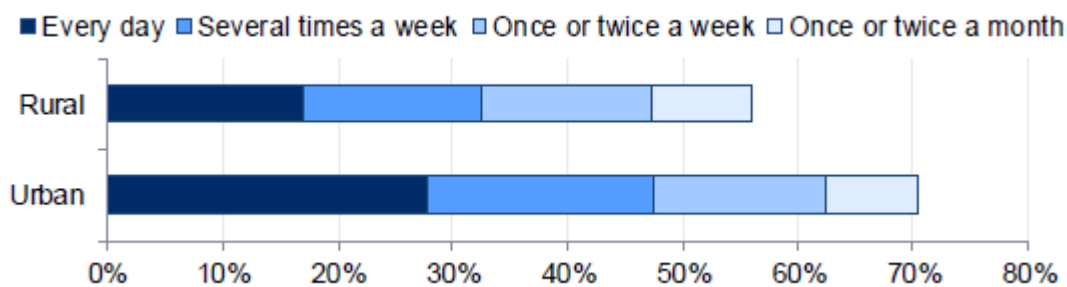
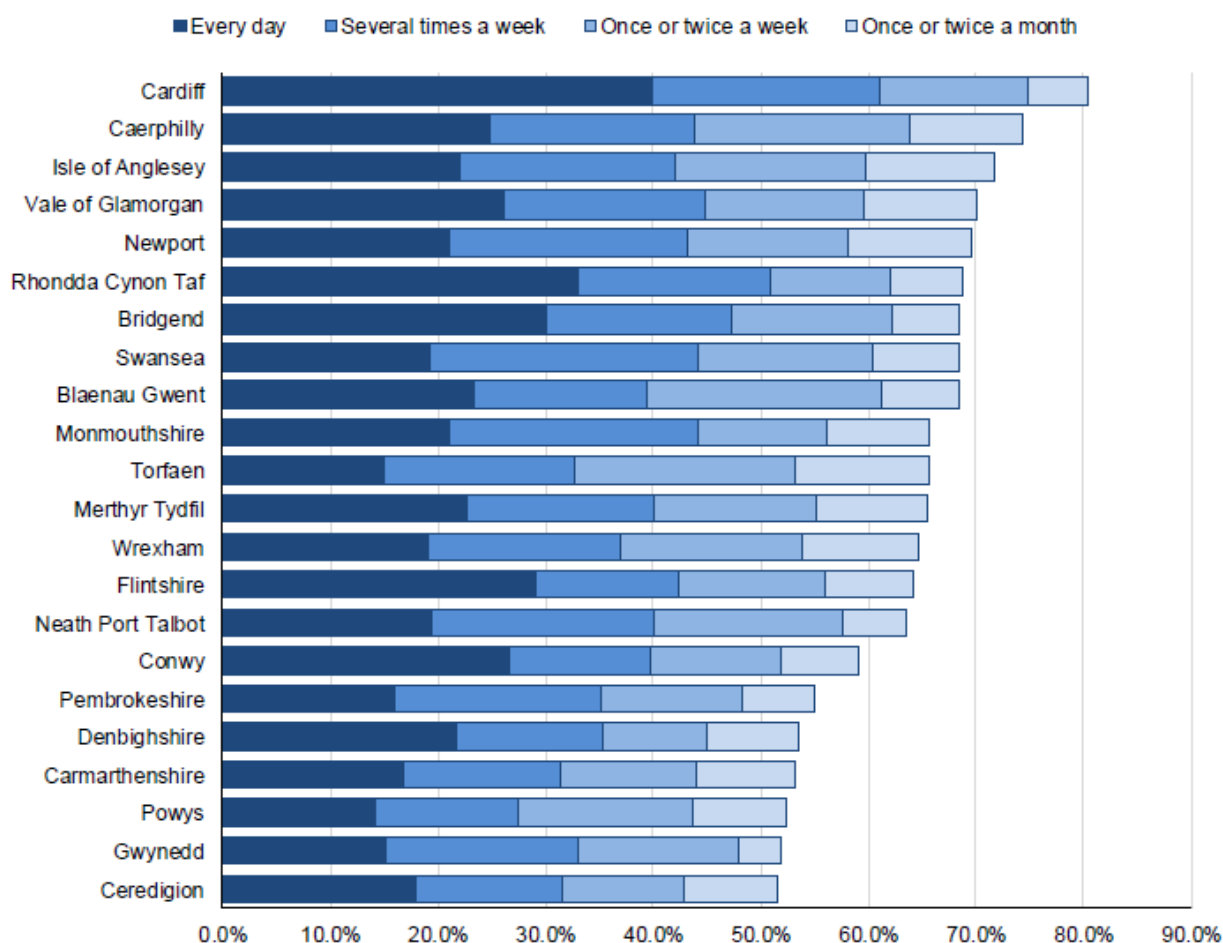


Figure 4-2 Active travel by walking, by local authority

³⁰ Walking and cycling in Wales: Active travel, 2018-19 Statistical Bulletin



Percentage of adults who have fewer than two healthy lifestyle behaviours

The 2019 Welsh Health Survey³¹ assessed whether Welsh respondents exhibited the following healthy lifestyle behaviours:

- Not smoking;
- Not drinking above daily guidelines in the previous week;
- Eating five or more portions of fruit and vegetables the previous day;
- Being physically active for at least 150 minutes in the previous week; and
- Maintaining a healthy weight/body mass index.

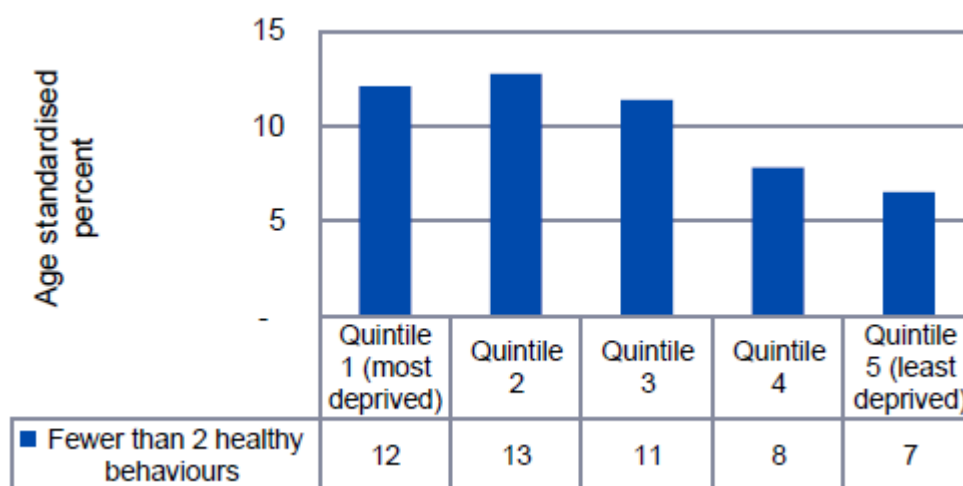
Around 10% of adults reported following less than 2 healthy lifestyle behaviours, 64% of adults reported either 2 or 3 healthy lifestyle behaviours

In terms of specific groups, the percentage of adults who followed fewer than 2 healthy lifestyles was slightly more common in men (12%) than women (8%), and among adults aged 45-64.

Figure 4-3 shows that the percentage of adults who reported following 0 or 1 healthy lifestyles was more prevalent in the most deprived areas (age-standardised).

Figure 4-3 Percentage of adults who exhibited 0 or 1 healthy lifestyles, by deprivation quintile

³¹ National Survey for Wales 2018-19: Adult Lifestyle Statistical Bulletin <https://gov.wales/sites/default/files/statistics-and-research/2019-06/national-survey-for-wales-april-2018-to-march-2019-adult-lifestyle-534.pdf>



Source: Welsh Government

The Welsh Health Survey (2019) established that for 2018 and 2019, amongst local health boards, the highest reports of 'Active less than 30 minutes a week' (50%) and lowest reports of 'Active 150 minutes a week' (39%) was in Cwm Taf Morgannwg. In contrast, Powys has the lowest records of less than 30 minutes of exercise (25%) and highest records of 150 minutes of exercise (65%).

Percentage of people who are lonely

In 2017-18, the National Survey for Wales asked people whether they agreed with a series of statements about their current life status. Users of care and social services were the most likely to agree that they often felt lonely (29% compared with 13% of those who were not users or carers).

Health facilities in Wales

There are a number of hospital facilities within Wales spread across a number of departmental requirements, the number and types of facilities are shown in Table 4-1. As of 2018 there were 421 GP Practices in Wales of which 89% were for all daily core hours were open for all of core hours or within one hour of core hours (08:00 to 18:30), Monday to Friday. (GP Access, Welsh Government, 2019).

Table 4-1 Number and Type of Hospital Facilities within Wales

Hospital Facility Type	Number
Major A&E Unit	13
Minor A&E Unit	1
Minor Injuries Unit	24
Other Hospitals	
Acute	2
CHC Local Committee	3
Clinic	19
Community	28
Community Hospital: Elderly Mental Infirm	3
Day Hospital	5
Major Acute	1
Psychiatric: Learning Disability	2
Psychiatric: Mental Illness	17
Psychiatric: Mental Illness / Learning Disability	2
Specialist Acute	3

Source: NHS Wales

Percentage of people overweight in particular levels of childhood

In 2019, 59% of adults were classified as overweight or obese, including 23% obese. Obesity levels in Wales have seen an increase since the Welsh Health Survey began in 2003/2004. Childhood obesity rates were higher in Wales in 2014 than in England. The prevalence of overweight and obese children in Wales was highest in Merthyr Tydfil (34%), Gwynedd and Bridgend (both 30%) and lowest in Monmouthshire (21%) and the Vale of Glamorgan (22%) (Public Health Wales, 2019).

In 2019 four and five year olds in Wales were found to have an obesity rate of 3.3%³².

Number and distribution of LSOAs in bottom 10% of most deprived in terms of access to services

Latest figures for the LSOAs in Wales (there are 1909 LSOAs in total in Wales) include average travel times using private transport when access to services have been considered. The WIMD 2019 access to services domain results have demonstrated that there is a widespread deprivation across Wales and also particularly within rural areas in terms of access. Furthermore, there are some deprived pockets near large urban areas.

The local authorities with the highest proportion of small areas in the most deprived 10% in Wales for access to services were Powys (50.6%) and Ceredigion (50.0%).

Cardiff, Neath Port Talbot, Bridgend, Rhondda Cynon Taf, Blaenau Gwent and Torfaen local authorities had no areas in the most deprived 10%.

The most deprived small area in Wales was Cynwyl Gaeo, Carmarthenshire, the same as for WIMD 2014.³³

Access to services and facilities

In the 2019 Wales National Survey³⁴, 69% of people surveyed were satisfied that good services and facilities are available in their local area, but 3% said that there were no services or facilities in their area. 80% were satisfied with their ability to get to or access the facilities and service they needed.

Figure 4-4 shows the deprivation levels of the LSOAs in Wales with regard to access to services.

³² <https://www.bbc.co.uk/news/uk-wales-47483203>

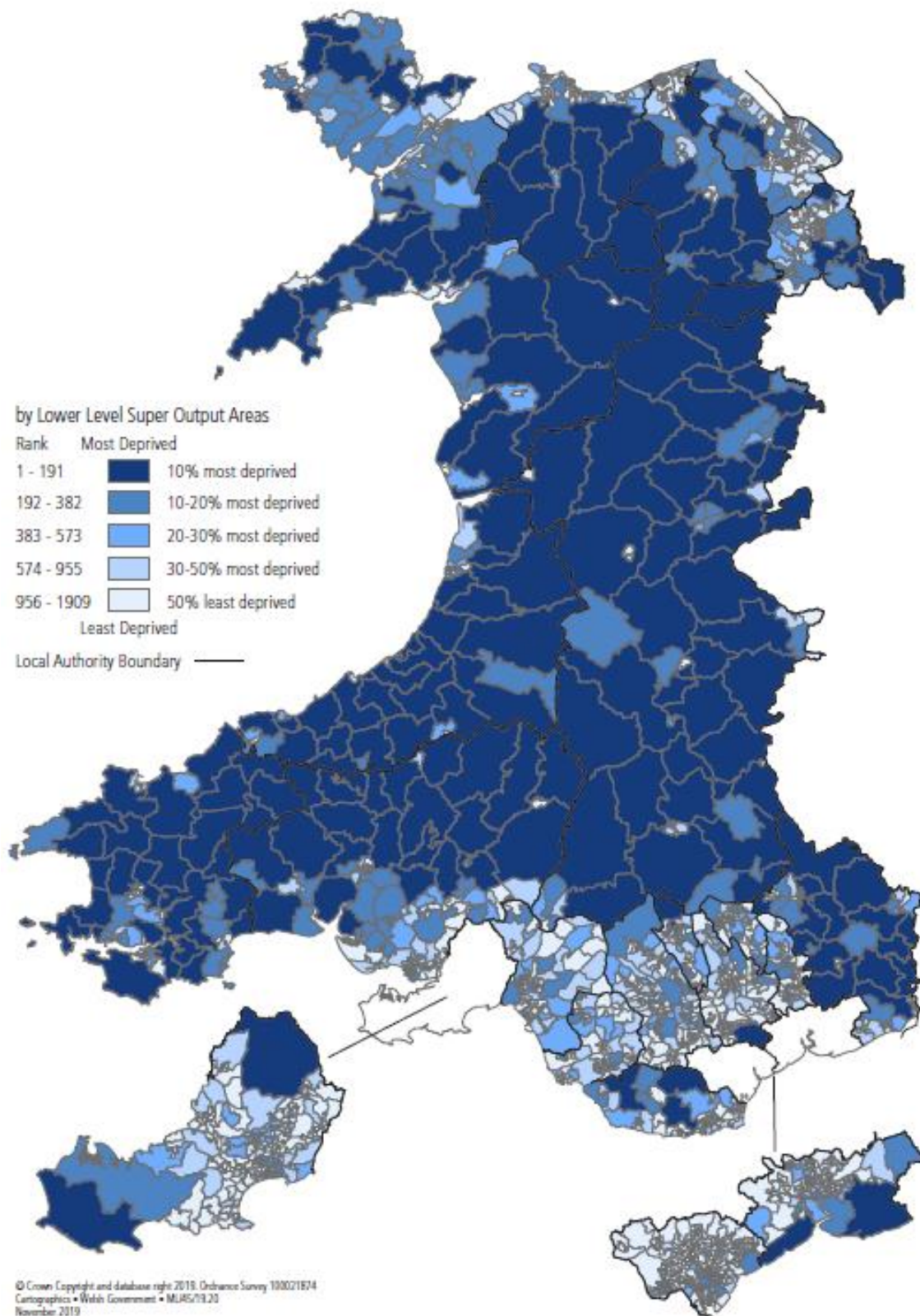
³³ Welsh Index of Multiple Deprivation, 2019 <https://gov.wales/welsh-index-multiple-deprivation-full-index-update-ranks-2019>

³⁴ National Survey for Wales, 2018-19 Community cohesion and safety in the local area Statistical Bulletin <https://gov.wales/sites/default/files/statistics-and-research/2019-11/community-cohesion-and-safety-local-national-survey-wales-april-2018-march-2019-739.pdf>

Figure 4-4 Access to Services Deprivation Map for Wales

Welsh Index of Multiple Deprivation 2019

Access to Services Domain



Source: WIMD 2019

No of LSOAs in bottom 10% Health deprivation domain

Patterns in health deprivation in Wales have remained largely unchanged since the 2011 WIMD. High deprivation levels were recorded in South Wales valleys and large cities, coastal areas of North Wales and border towns. The local authority the highest proportion of LSOAs in the most deprived 10% in Wales for health domain was Merthyr Tydfil. Three local authorities (The Isle of Anglesey, Ceredigion and Monmouthshire) were recorded as having had no LSOAs in the most deprived 10%.

For the health domain, the most deprived LSOA in Wales was Rhyl West 2, Denbighshire.

Percentage of good / bad health

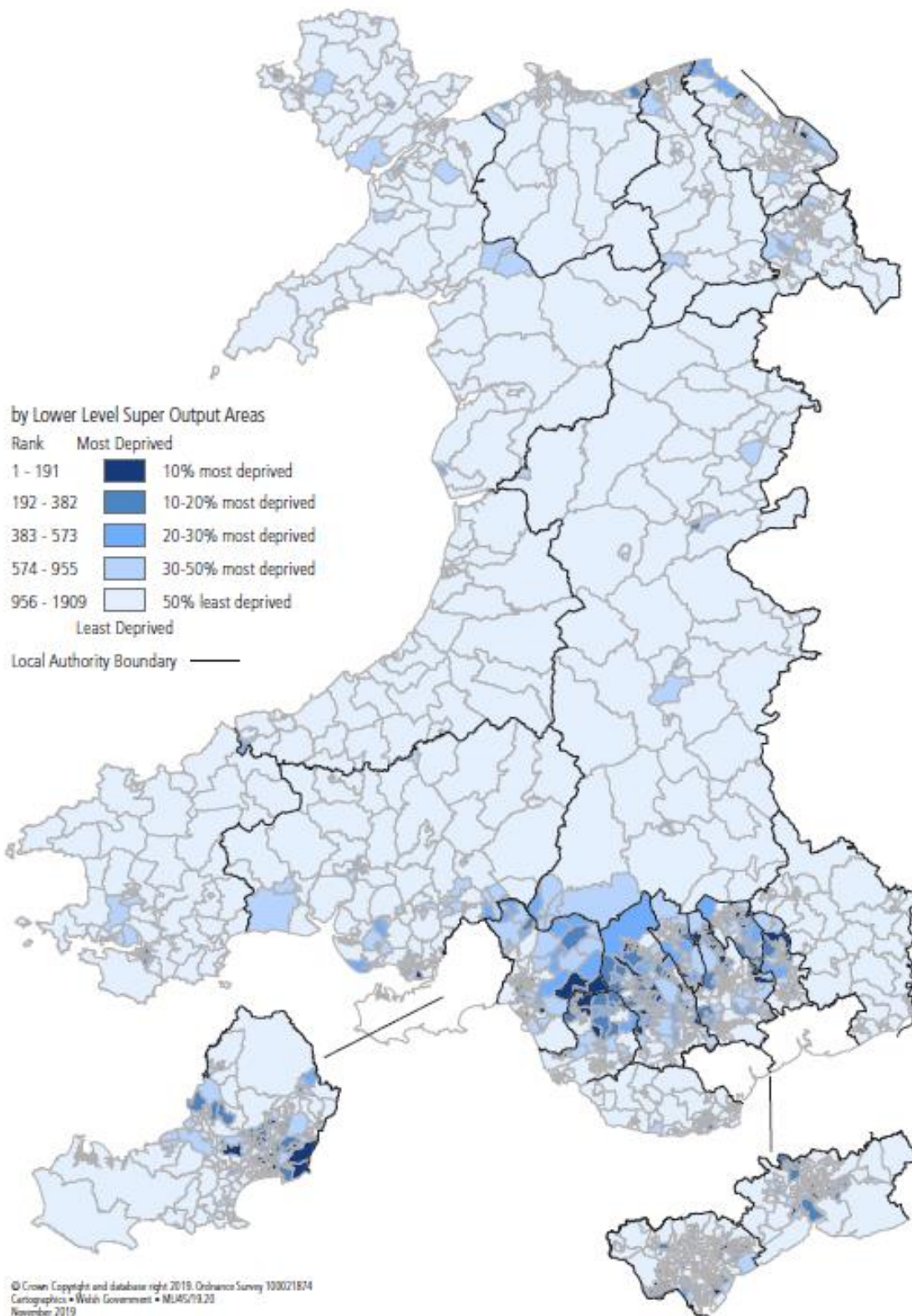
In 2018, 70% of people in Wales reported their general health as either 'Very good' or 'Good'. The gap between local health board reporting the highest (Powys: 76%) and lowest (Cwm Taf: 67 per cent) percentages of 'Very good' and 'Good' general health was 9%. The concentration of low percentages of 'Good' general health recorded in 2019 corresponds with the former coal mining and heavy industrial centres of the Welsh valleys in 2019 suggesting that these former industries have had long term health implications.

Isle of Anglesey, Ceredigion and Monmouthshire had no LSOAs in the most deprived 10%. Only 15.2% of the LSOAs in Ceredigion were in the most deprived 50% in Wales. Blaenau Gwent had the highest proportion of LSOAs in the most deprived 50% in Wales (95.7%). The next highest was Merthyr Tydfil, with 86.1% of its LSOAs in the most deprived half of Wales.

Figure 4-5 shows the deprivation levels of the LSOAs in Wales with regard to Health Domains.

Figure 4-5 Health Deprivation Map for Wales

Welsh Index of Multiple Deprivation 2019 Health Domain



Source: WIMD 2019

4.1.2 Population

Relevance to the WTS

An equal society in Wales can help to ensure that public transport services are fair and accessible to all and completely inclusive. The WTS could contribute positively towards making more fair and inclusive societies. Further detail is provided in section 4.1.3.

Baseline conditions and trends

The following baseline indicators have been used to characterise existing conditions relating to goal 4 of the Well-being of Future Generations (Wales) Act 2015 for population in Wales:

Percentage of Ethnic Groups

The ethnic make-up of the Welsh local authorities compared to national figures is shown in Table 4-2 below.

Table 4-2 Percentage of Ethnic Groups in Wales and local authorities

Area	All categories: Ethnic group	White (%)	Mixed (%)	Asian (%)	Black (%)	Other (%)
United Kingdom	63,182,178	87.2	2.0	6.9	3.0	0.9
Wales	3,063,456	95.6	1.0	2.3	0.6	0.5
Anglesey	69,751	98.2	0.7	0.7	0.1	0.3
Blaenau Gwent	69,814	98.5	0.6	0.7	0.1	0.1
Bridgend	139,178	97.8	0.7	1.1	0.2	0.2
Caerphilly	178,806	98.3	0.7	0.8	0.1	0.1
Cardiff	346,090	84.7	2.9	8.1	2.4	2.0
Carmarthenshire	183,777	98.1	0.6	1.0	0.2	0.2
Ceredigion	75,922	96.7	1.0	1.4	0.4	0.5
Conwy	115,228	97.7	0.8	1.1	0.2	0.3
Denbighshire	93,734	97.4	0.8	1.5	0.2	0.1
Flintshire	152,506	98.5	0.6	0.8	0.1	0.1
Gwynedd	121,874	96.5	0.8	1.8	0.2	0.7
Merthyr Tydfil	58,802	97.6	0.8	1.2	0.2	0.2
Monmouthshire	91,323	98.0	0.7	1.0	0.2	0.1
Neath Port Talbot	139,812	98.1	0.7	1.0	0.2	0.1
Newport	145,736	89.9	1.9	5.5	1.7	1.0
Pembrokeshire	122,439	98.1	0.6	1.0	0.1	0.2
Powys	132,976	98.4	0.6	0.9	0.1	0.1
Rhondda Cynon Taf	234,410	97.4	0.6	1.3	0.6	0.1
Swansea	239,023	94.0	0.9	3.3	0.8	1.0

Area	All categories: Ethnic group	White (%)	Mixed (%)	Asian (%)	Black (%)	Other (%)
The Vale of Glamorgan	126,336	96.4	1.3	1.6	0.4	0.3
Torfaen	91,075	98.0	0.7	1.1	0.2	0.1
Wrexham	134,844	96.9	0.7	1.7	0.5	0.2

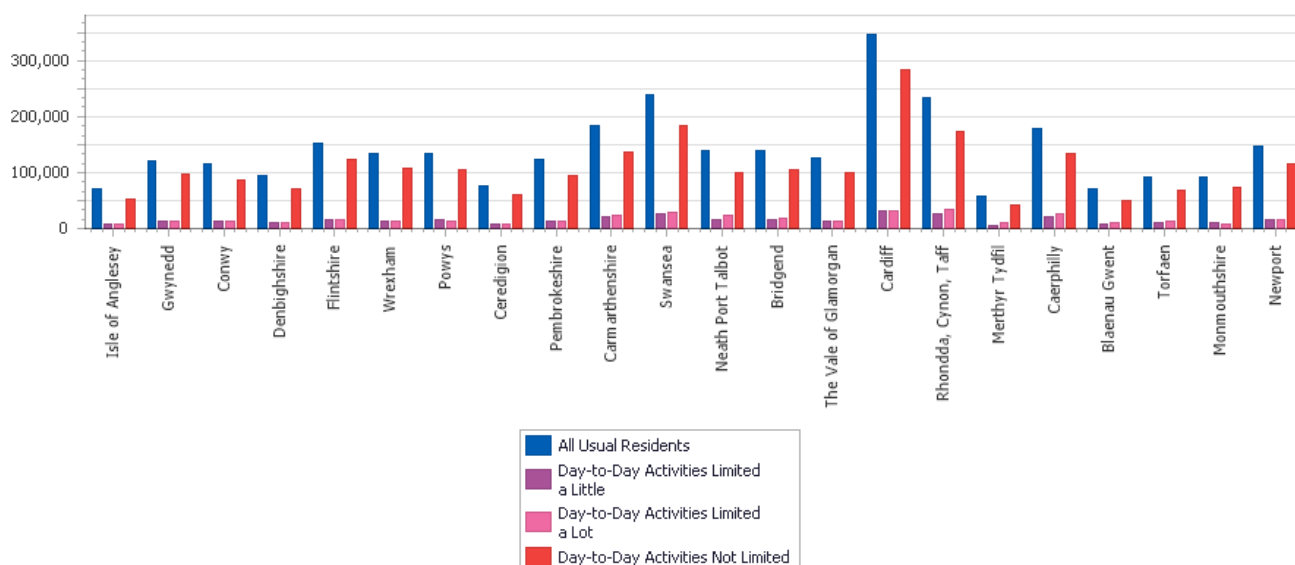
Source: 2011 Census – Nomis

In 2011, Wales had 8% more of its population who were white compared to the rest of the United Kingdom and a lower percentage of people who were Asian, black, mixed or other. The white ethnic group is dominant across all of the local authorities. The urban areas of Cardiff and Newport have a slightly more multicultural population and their percentages of white persons compares similarly with the UK figures.

Limiting long term illness or disability by local authority

Figure 4-6 shows the extent of illness or disability by local authority in Wales. In all cases, the majority of residents do not have an illness or disability that limits their day-to-day activities. The trend of results on a national scale for Wales is similar to that of the local authorities with 11.9% limited a lot and 10.8% limited a little. However, levels in Wales were slightly higher than that of England with 8.3% limited a lot and 9.3% limited a little in England (ONS).

Figure 4-6 Limiting long term illness or disability by local authority



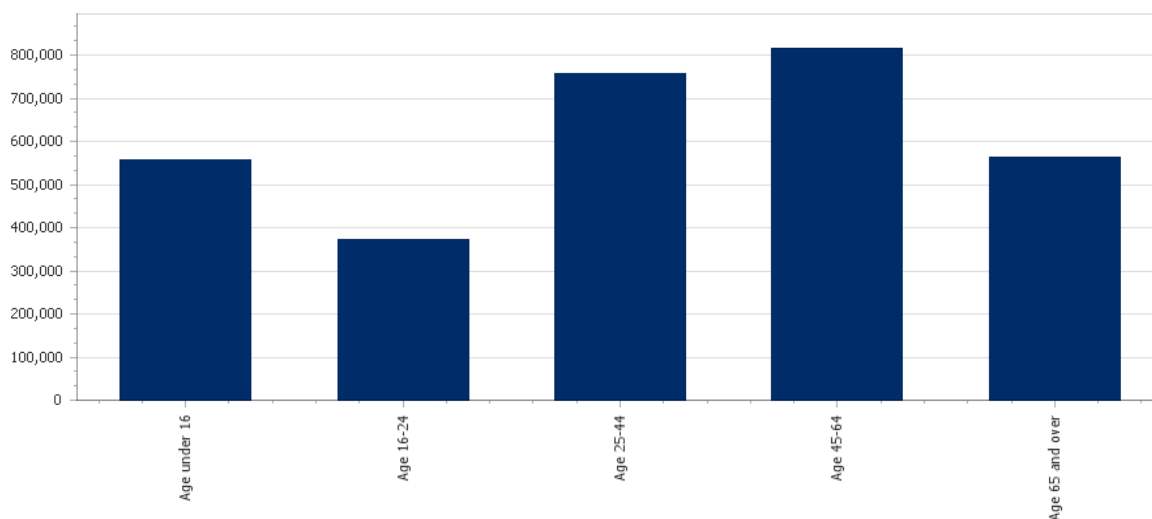
Source: StatsWales (2011)

Population Age Structure

Wales' population age structure for 2011 is shown in Figure 4-7. It shows the dominant age group is 45 – 64 years old. The results would also suggest that Wales is an 'aging' population with the higher figures leaning towards the older age groups. The number of people aged 65 and over is projected to increase by 292,000 (44%) between 2014 and 2039 (ONS). The 2009 Older People's Wellbeing Monitor identified that 44% of older people in Wales had a limiting long-term illness or disability.

In local authority terms, the majority of the authorities have a higher population between 25 and 64 with a fairly even split between the 25-44 and 45-64 age groups. Cardiff has a considerably higher proportion of 25-44 year olds.

Figure 4-7 Resident Population in Wales by broad age group

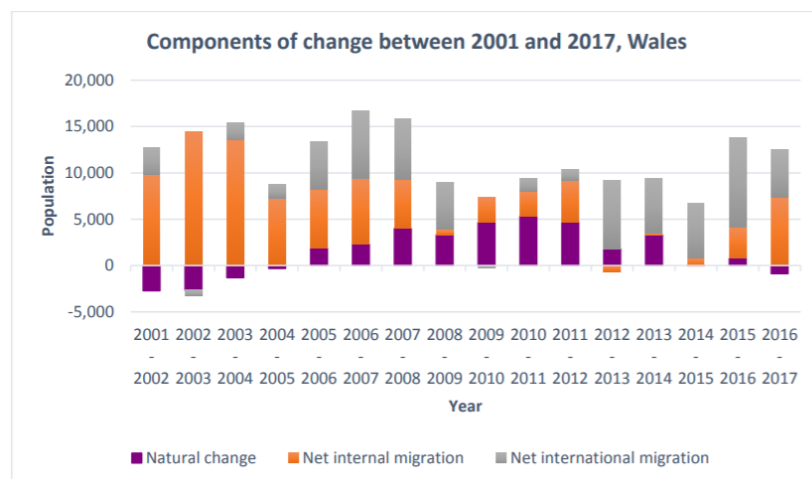


(Source: statswales.wales.gov.uk)

Net Migration Trends

Net migration in Wales has fluctuated over the past 12 years. Between 2012 and 2013 showed a considerable upturn in net migration (14,000) compared to the preceding years. Figure 4-8 shows the changes of migration in Wales over 16 years.

Figure 4-8 Migration in Wales between 2001 and 2017



Source: Bevan Foundation, 2018³⁵

Gender

Travel by public transport is highly gendered. In 2017 it was found that in England, a third more women than men travelled by bus and a third more men than women travelled by rail. Overall, expenditure on UK public transport (2016/17) was £29.1bn. This includes spending on national and local roads, public transport and national rail. 54% of this was spent on rail, compared to 8% on 'public transport' including local buses. The

³⁵ <https://41ydvd1cuyvlonsm03mpf21pub-wpengine.netdna-ssl.com/wp-content/uploads/2018/11/Demographic-trends-FINAL.pdf>

vast majority of politicians and policy makers involved in high level decision making about public transport are white men³⁶.

Gender Pay Gap

In 2019 the gender pay gap in Wales increased to 14.5%, this is a 1% increase on the 2018 figure of 13.5%, but still remains below the UK average of 17.3%³⁷.

4.1.3 Links between transport, population and health of relevance to the study area

The identification of links between transport systems and health, covering health determinants, pathways and outcomes are presented in Table 4-3. This analysis has informed the identification of potential health impacts of the Scheme on identified vulnerable groups during construction and operation (Section 7).

The following definitions have been adapted:

- a) Health Determinants: Factors that cause outcomes and influence our state of health. Factors are personal, social, cultural, economic and environmental. They include our physical environment, income, employment, education, social support and housing (Birley, 2011);
- b) Health Pathways: Routes leading to a change in determinant which affect the health risks (the probability that a particular harms will occur) (Birley, 2011); and
- c) Health Outcomes: medically defined states of disease and disability, as well as community defined states of wellbeing (Birley, 2011).

Table 4-3 identifies potential linkages between transport schemes and health, based on findings from research. However, the MRC Guide advocates that the findings from research be assessed against the local profile and qualitative evidence, to determine whether these findings are likely to be applicable.

³⁶ 2018 WBG Briefing: Public Transport and Gender: <https://wbg.org.uk/analysis/2018-wbg-briefing-transport-and-gender/>

³⁷ <https://chwaraeteg.com/news/wales-gender-pay-gap-increases/>

Table 4-3 Health determinants, pathways and outcomes

Relevance to the WTS: Health Determinants, Pathways and Outcomes Relevant to Transport Schemes

Determinant and Explanation	Pathways	Health Outcomes
<p>Accessibility to transport options and community facilities</p> <p>Accessible and affordable transport, enabling good access to education, employment, fresh food, friends and family, leisure and health services, enhances general physical health and wellbeing.</p> <p>Accessibility is a critical component of locally-based travel, which is influenced by socio-economic activity. Poor transport provision disproportionately affects lower-income groups and vulnerable groups and can lead to social exclusion and contribute negatively to quality of life and health. Specific groups include teenagers, the elderly, job seekers, and people living in rural locations.</p> <p>Car ownership amongst vulnerable groups is low. Therefore, the availability of other transport options is important for the wellbeing of vulnerable social groups.</p>	<p>Construction</p> <p>Transport routes and modes can be adversely affected by construction activities.</p> <p>There can be disruption and reduced access to existing transport modes and routes from route closures and diversions.</p>	<p>Construction</p> <p>Limited and disrupted accessibility may reduce access to amenities and services, adversely affecting general physical health and wellbeing. This is due to greater difficulties in traveling to the service or amenities and the increased stress caused by the disruption while travelling.</p> <p>Research shows that journey duration, predictability and convenience appear to be associated with lower stress levels.³⁸</p> <p>Disruption to pedestrian routes may result in a temporary increase in local traffic and congestion.</p>
	<p>Operation</p> <p>Transport schemes can lead to an increase in the provision of public transport use and an improvement of the walking/cycling environment. This can lead to a reduction in car usage.</p>	<p>Operation</p> <p>The identified pathways can lead to improvement in physical fitness, physical health and mental wellbeing.</p>
<p>Risk of injuries and deaths and highway user stress</p> <p>Road traffic accidents are a significant cause of mortality, disability and serious injuries across all age groups.³⁹</p> <p>Since the development of the DMRB methodology, understanding of the principal factors which cause driver stress has developed. Frustration at the inability to drive at a constant speed, as well as unreliable journey times, are now considered to represent factors of increased importance in assessing driver</p>	<p>Construction</p> <p>Increased construction traffic in residential area and alteration to existing traffic routes and patterns, can increase the risk of injury as a result of increase traffic levels and an unawareness of altered traffic movements.</p> <p>The risk of highway user stress could be increased during construction activity.</p>	<p>Construction</p> <p>Vulnerable road users, including motorcyclists, elderly drivers, children, pedestrians, new drivers and cyclists, may be at more risk of injury due to increased construction traffic and altered traffic movements.</p> <p>Highway user stress could be increased during construction activity.</p>

³⁸ MRC Social and Public Health Sciences Unit and Institute of Occupational Medicine, *Health Impact assessment of Transport Initiatives: A Guide*, 2007, p34

³⁹ Eastern Region Public Health Observatory, *Transport, Access and Health in the East of England*, 2005, p16-23

Determinant and Explanation	Pathways	Health Outcomes
stress.	<p>Operation</p> <p>Transport schemes can improve road safety, which can improve actual and perceived road safety.</p> <p>Highway user stress can be improved by the introduction of transport schemes.</p>	<p>Operation</p> <p>There can be a reduction in traffic-related injury and death and the risk of such. Vulnerable groups are similar to the ones identified for the construction stage.</p> <p>Highway user stress can be improved by the introduction of transport schemes.</p>
<p>Active travel</p> <p>Walking and cycling are physically active forms of transport. A supportive and safer environment for physical activity is a decisive factor in stimulating uptake. High quality, accessible new routes for pedestrians and cyclists with appropriate and safe crossing points are vital.</p>	<p>Construction</p> <p>Increased disruption, altered traffic movements and perception that routes have become unsafe can reduce active travel.</p>	<p>Construction</p> <p>Reduced levels of active travel may lead to increased prevalence of sedentary lifestyles, proven to increase risks of many preventable health conditions, including cardiovascular disease, obesity, osteoporosis and depression.⁴⁰</p>
	<p>Operation</p> <p>Transport schemes can enhance walking and cycling through new and more accessible, attractive and improved walking and cycling routes.</p>	<p>Operation</p> <p>An increase in active travel would increase the rate of physical activity leading to a potential improvement in wellbeing and improvement in physical fitness. This could lead to a decrease in conditions related to sedentary lifestyles.</p>
<p>Access to green space and land blight</p> <p>Studies⁴¹ have shown that exposure to the natural environment, or green space, has an independent effect on health and health-related behaviours.</p>	<p>Construction</p> <p>Transport schemes may lead to disruption of the normal uses of, or reduced access to, and potential loss of, green space. This can reduce the use of green space and have a negative aesthetic impact on the use and perception of the green space.</p>	<p>Construction</p> <p>Green space can affect health by inducing beneficial physical activity and by ameliorating stress level. Reducing or disrupting access to green space may therefore have negative health consequences.</p> <p>The fear of land being blighted by the proposals may lead to an increase in stress and affect wellbeing.</p>

⁴⁰ Health Scotland, MRC Social and Public Health Sciences Unit and Institute of Occupational Medicine, *Health Impact assessment of Transport Initiatives: A Guide*, 2007, p18

⁴¹ Mitchell, R and Popham, F, *Effect of exposure to natural environment on health inequalities: an observational population study*, 2008

Determinant and Explanation	Pathways	Health Outcomes
	<p>Operation</p> <p>Transport schemes can encourage active travel and improve access to local amenities, including green spaces. However, transport schemes could also lead to a loss of green space due to land-take.</p>	<p>Operation</p> <p>An increase in access and interaction with green spaces could lead to an improvement in mental health and wellbeing. It would also lead to an improvement in physical fitness, and a potential decrease in conditions related to sedentary lifestyles or air pollution.</p> <p>Loss of green space could cause the reverse of the above, as well as generate blight. This could have a further negative effect on wellbeing and health.</p>
<p>Air pollution</p> <p>Road traffic is a main source of air pollution. Pollutants that adversely impact health from road traffic include particulate matter (PM) and nitrogen dioxide (NO₂).</p>	<p>Construction</p> <p>Construction activities can have a short term negative impact on air quality.</p> <p>There can be dust from site works and construction vehicles carrying site materials or waste along with exhaust emissions from construction and other traffic due to road disruption and diversions.</p>	<p>Construction and Operation</p> <p>Increases in outdoor air pollution can lead to increased cardiovascular and respiratory mortality and morbidity. Some effects are more or less immediate and affect vulnerable groups (e.g. children or people whose health is already impaired) in particular, whereas the effects of long-term exposure are more widespread.</p> <p>PM is the constituent most closely associated with adverse health effects. Some evidence shows that PM from traffic is more toxic (per unit mass) than PM from other sources.⁴²</p> <p>A reduction in air pollution can reduce the above adverse health effects.</p>
	<p>Operation</p> <p>Transport schemes can increase car or motor vehicle usage leading to an increase in air pollution. They can also reduce car usage, which in turn could reduce air pollution.</p> <p>Increased efficiency of the road network could also lead to an overall neutral effect on air pollution, as although motor vehicle usage may increase, there may be less congestion.</p>	

⁴² MRC Social and Public Health Sciences Unit and Institute of Occupational Medicine, *Health Impact assessment of Transport Initiatives: A Guide*, 2007, p26-31

Determinant and Explanation	Pathways	Health Outcomes
<p>Noise pollution and vibration</p> <p>Motorised forms of transport are a common source of noise pollution.</p>	<p>Construction</p> <p>Construction activities can lead to an increase in localised noise and vibration.</p>	<p>Construction and Operation</p> <p>Noise pollution and vibration at the levels generated by traffic can lead to annoyance, interference with speech and sleep disturbance. It can also have cardiovascular and physiological effects.</p> <p>Stress has been suggested as a possible mechanism through which noise may affect mental and physical health.</p> <p>Evidence suggests noise pollution may limit children's learning.</p> <p>An improvement in mental and physical health may result during operation, should noise and vibration levels decrease.</p>
	<p>Operation</p> <p>Transport schemes can increase noise pollution and vibration through increase motor vehicle usage and the construction of new road and rail routes.</p> <p>They can also reduce noise and vibration by encouraging a shift from cars to active travel and public transport or through smoother traffic flows.</p>	
<p>Soil and water pollution</p> <p>Surface water run-off containing particles from car tyres, brake linings and road surfaces contribute to the spread of hazardous substances in the environment and impact on water and soil quality. Oil and vehicle fuel also contain harmful organic substances.</p>	<p>Construction and Operation</p> <p>Potential for localised contamination can occur during the construction period from construction spills and road run-off.</p> <p>Road construction activities can bring about changes in groundwater levels and pollute nearby waterbodies.</p> <p>During operation, potential for pollution as a result of drainage contaminated with vehicle emission particulates and grit/salt spreading residues. Also, potential contamination as a result of fuel/chemical spillages following major traffic accidents.</p>	<p>Construction and Operation</p> <p>Soil and water pollution can lead to public health impacts directly when people come into contact with water and soil through recreation activities and or indirectly through the use of water for gardens or other green spaces.</p>
<p>Quality of life</p> <p>Quality of life is typically measured using a range of indices, encompassing health, happiness, prosperity, arts, safety, community, public realm, access to transport, access to green space, diet, etc.</p>	<p>Construction</p> <p>A combination of all pathways.</p> <p>Light pollution could result from an increase in lighting relating to construction activities.</p>	<p>Construction</p> <p>A combination of all outcomes.</p> <p>There is evidence showing that exposure to light at night can lead to associated problems including psychological stresses; increased cancer rates; disruption in sleeping patterns; and negative</p>

Determinant and Explanation	Pathways	Health Outcomes
		impacts on immune systems. ⁴³ Glare from poorly shielded outdoor lighting is also harmful to health, because it decreases vision by reducing contrast. This limits our ability to see potential dangers at night. Aging eyes are especially affected. ⁴⁴
	<p>Operation</p> <p>Increasing the accessibility of transport options can lead to an increase in access to education, employment facilities, health and social care facilities, leisure facilities, and family and friends. This could improve quality of life.</p> <p>Community severance could reduce accessibility and hence reduce quality of life.</p> <p>Light pollution could result from an increase in lighting as part of transport schemes, particularly new infrastructure such as roads.</p>	<p>Operation</p> <p>Increased quality of life can improve wellbeing and mental health and vice versa.</p> <p>There is evidence showing that exposure to light at night can lead to associated problems including psychological stresses; increased cancer rates; disruption in sleeping patterns; and negative impacts on immune systems. Glare from poorly shielded outdoor lighting is also harmful to health, because it decreases vision by reducing contrast. This limits our ability to see potential dangers at night. Aging eyes are especially affected.</p>
<p>Personal safety and perceptions of safety</p> <p>More segregated spaces with limited natural surveillance may lead to enhanced fear of crime.⁴⁵</p>	<p>Construction</p> <p>During construction, the perception of safety along routes could decrease due to the removal of open spaces, presence of site hoardings, construction activities, access diversions, a reduction on the attractiveness of walking and cycling, decreased interaction with other people (as construction reduces access and prevents people from walking or cycling) and the general construction environment generating noise/vibration, which may create the perception that the area is unsafe.</p>	<p>Construction</p> <p>Fear of crime and perception of safety can be an important factor influencing travel choices. Women's fear is generally greater than men's. Women are therefore more likely to avoid segregated spaces and disrupted routes. Elderly people and people with disabilities may also avoid disrupted routes. Personal safety may also affect decisions to walk or cycle. This has implications for public health directly (fear of crime) and indirectly (decrease in active lifestyle).</p>

⁴³ <http://www.britastro.org/dark-skies/health.html>

⁴⁴ <http://darksky.org/light-pollution/human-health/>

⁴⁵ Hillier, B. and Sahbaz, O, Crime and Urban Design, 2009 In: Cooper, R. Evans, G. and Boyko, C. Designing Sustainable Cities, 2009

Determinant and Explanation	Pathways	Health Outcomes
	<p>Operation</p> <p>Transport schemes can enhance actual and perceived safety through road safety improvements and increase natural surveillance. They can also enable more strangers to travel through an area which can reduce perceived safety.</p> <p>However, the use of underpasses could increase the fear or crime and reduce usage, in comparison to bridges.</p>	<p>Operation</p> <p>In addition to the above, an increased use of public transport during operation could increase interaction with other people, which could increase perceptions of a safer community through natural surveillance. This could reduce stress and improve mental wellbeing.</p> <p>Improvements to the walking and cycling environment should also increase perceptions of safety.</p>
<p>Social interaction and community severance</p> <p>There is an observed relationship between positive social capital and health. Well-connected and walkable neighbourhoods can enhance social capital by increasing co-presence and encounter opportunities, which are vital for interaction.</p>	<p>Construction</p> <p>During construction, there could be a decrease in access to services and amenities resulting from road closures/diversions and disruption to traffic and road flows.</p> <p>Construction can decrease transport mode and route options and can increase the cost of travel. There is also a risk of communities being severed by the construction traffic routes through an increase in the levels of traffic.</p>	<p>Construction</p> <p>Community severance can result from the divisive effects of major roads and railways running through an existing community including through the construction of new routes or increased traffic on existing routes.</p> <p>Potential severance during construction can lead to a decrease in interaction with other people. This can be of particular importance to those who rely heavily of local social networks e.g. the elderly and parents with young children.</p> <p>Reduced social interaction and increased community severance can reduce wellbeing and mental health as well as lead to reduced active travel and reduced physical fitness and a potential increase in obesity and cardiovascular disease.</p>
	<p>Operation</p> <p>Enhanced connectivity and new travel modes and route options could increase social interaction and reduce community severance. However, new routes through or near existing communities could increase community severance and reduce social interaction.</p>	<p>Operation</p> <p>An increase in social interaction and reduced community severance could improve wellbeing and mental health as well as lead to increased active travel and improved physical fitness. This could improve physical and mental health.</p>

Determinant and Explanation	Pathways	Health Outcomes
<p>Climate Change</p> <p>Greenhouse gases (GHGs) from transport contribute to climate change.</p>	<p>Construction</p> <p>During construction, increased vehicle movements from construction vehicles and car movements, as well as the embodied energy in construction materials, can lead to an increase in fossil fuel use and an increase in GHG emissions.</p>	<p>Construction</p> <p>Climate change consequences, at local level, are likely to affect the health of the population, particularly with an increase in flooding, summer temperatures, levels of solar radiation and frequency of extreme weather events leading to, for example, increased levels of fatalities, injuries, infectious diseases, heat related deaths, skin cancer cases and cataracts.</p>
	<p>Operation</p> <p>Transport schemes may reduce the efficiency in the use of roads or a reduction in car usage. These aspects could decrease the use of fossil fuels, which could lead to a reduction in GHG emissions.</p>	<p>Operation</p> <p>In addition to the above, a reduction in GHG emissions could have positive implications for public health.</p>
<p>Employment</p> <p>The implementation of infrastructure projects generates new employment opportunities. Employment is a positive factor for health, providing financial security, promoting equality and contributing to self-esteem.</p>	<p>Construction</p> <p>New employment opportunities can be generated by construction activities.</p>	<p>Construction and Operation</p> <p>The HUDU planning tool states that unemployment generally leads to poverty, illness and a decrease in personal and social esteem. People in employment are healthier, particularly those who have more control over their working conditions. Employment is also associated with income, a feeling of security, increase friendship networks and social status. In turn, these are linked to better health. These positive impacts are particularly important at a time where economic downturn is recent, which may have had negative effects on mental health.</p>
	<p>Operation</p> <p>Transport schemes may improve access to employment opportunities for various social groups.</p>	

Source: Adapted from *Highways England: M4 Junctions 3 to 12 smart motorway* (Arcadis Ltd, October 2015) and *Atkins Limited, South Bristol Link: Environmental Statement Volume 2: Health Impact*, July 2013

An HIA considers the effects of a project on both the health of the population affected by a project overall and the distribution of those impacts within the affected population. However, it is necessary to identify particular priority groups because changes to overall health determinants can have greater or lesser effects on population sub-groups depending on, for example, their age, health status, income and social support. The term "Vulnerable or Priority Groups" is derived from the HUDU guidance.

Vulnerable sub-groups are more likely to be susceptible to the WTS's impacts than other social groups due to various factors as explained in Table 4-4. Other wider target groups including adults and professionals and the general population living in Wales may also be impacted by the WTS.

Table 4-4 Vulnerable or Priority groups and health outcomes related to the WTS

4.1.4 Vulnerable or Priority Groups

Vulnerable/ Priority Group	Explanation and Health Outcomes
Younger people (children and young people, up to 18)	<p>Children and adolescents constitute a vulnerable population group due partly to their need to be able to move around freely to and from school and recreational activities, whilst they lack the experience and judgement displayed by adults when moving around in traffic and public spaces. Hence, children and adolescents as pedestrians and cyclists are at elevated risk from danger distributed by motorised transport.</p> <p>Furthermore, children are more sensitive than adults to air pollution, noise and other environmental factors. A particularly sensitive group is children in low-income families.</p> <p>Walking, cycling and travel by bus are important modes of travel for young people. Over half of children will walk to school for at least part of the week and 40 per cent will travel by bus. Bus travel is important for young people to access college, leisure facilities and work. Affordability of travel is an issue for younger people.</p> <p>16-24 year olds have higher risk of becoming a road casualty. They represent 12 percent of the population but 25 percent of fatal and serious casualties. The Plan contains schemes to improve active travel opportunities, support and improve access to key services by bus, address affordability of bus fares for young people and reduce road casualties.</p>
Women	<p>Women are more likely to not own a car and as a result can find it harder to travel to shops, employment, healthcare and other services. They are more reliant on the provision of public transport. Women may also have more safety and security concerns when travelling alone and when there are more strangers in an area e.g. resulting from an influx of construction workers.</p> <p>Estimates for 2011/12 indicate 80 percent of men and 67 percent of women in Wales hold a full driver's licence, nearly identical to Great Britain as a whole. The National Travel Survey reports that women have different travel patterns to men and this has major implications for travel requirements. In particular women are:</p> <ul style="list-style-type: none"> • more likely to work irregular shifts and need to commute outside normal working hours • more likely to be carers and to take escort trips • more likely to travel with luggage, bags and pushchairs • more likely to have a physical condition which makes it difficult to use the bus • are more likely than male users to say they would prefer to travel by car • are twice as likely as male users to say they feel unsafe using the bus at night <p>The Welsh Bus Passenger Survey also reported that a substantial number of bus users who are women were also travelling with children and / or with a pushchair.</p> <p>Women are less likely to travel to work by car (80 percent compared to 85 percent of men) and more likely to travel by bus (6 percent compared to 3 percent).</p> <p>Overall distance travelled per year by all modes is greater for men than women. Men tend to</p>

Vulnerable/ Priority Group	Explanation and Health Outcomes
	<p>make more commuting and more business trips than women and travel further for both purposes. Both men and women will benefit from schemes to improve the road network, public transport and active travel facilities.</p> <p>Women tend to be more likely to use rail transport less than buses, and less often than men. In 2016/17, the expenditure on UK public transport (2016/17) was £29.1bn. 54% of this was spent on rail, compared to 8% on 'public transport' including local buses. As of 2018, in Wales there has been a cut of 39% in funding for buses since 2010/11.</p> <p>Women are less likely to be safe, and less likely to feel safe, when using public transport, public toilets and taxis, including due to physical or verbal aggression, sexual harassment or other forms of violence.</p> <p>Women earn less on average, and use public transport more on average, than men. Women also typically have higher rates of trip chaining with diverse patterns due to carrying out a multitude of tasks, particularly when accompanying a child. Women are therefore more economically sensitive to the cost of transport and are therefore more likely to face financial constraints to mobility.</p> <p>The way women, non-binary people and men interpret accessibility in physical, cognitive, financial and emotional terms can vary greatly and define how they use transport.</p>
Older People (50+)	<p>Generally, the older people are, the slower their movement and reactions are and the poorer their hearing and vision can be. Therefore, older people are considered to be more sensitive as users when compared with younger and middle-aged adults. Older people can be more at risk from injury, may fear falls, and may be concerned about a lack of safe crossing points and short crossing times at safe crossing points. This can deter them from outdoor activity, especially walking, which can be critical for muscle strength and reduces the risk of falls, amongst other benefits.</p> <p>Older people can feel more vulnerable using public transport. They also often need to seek health services. Their continuing independence at home is often dependent on having availability to a range of transport mode and route options.</p> <p>Around 48 percent of pensioner households do not have access to a car compared to 26 percent of all households. The Plan contains commitments to provide funding to support socially necessary services and continue a concessionary fares scheme for older people. Public and Community Transport services provide access to key services including health but also enable improved social interaction for older people helping to tackle chronic loneliness.</p>
People who are disabled	<p>This group may not be able to access many forms of transport or need special arrangements and/or support to access those. They are more likely to find it difficult to walk or travel independently and can also be disadvantaged by the cost of transport.</p> <p>Chronically ill persons, for example, people with impaired lung function, can be more adversely affected by air pollution. The same is true of hypersensitive individuals such as asthmatics. Noise can cause hypertension and cardio-vascular problems. Those who already have these conditions can be more troubled by noise than others.</p> <p>People with existing physical and mental illnesses, including sleep disturbance, anxiety and depression, can be more sensitive to even small changes to their local environment.</p> <p>Disabled people or people with a long term illness are less likely than other people to have the use of a car (six of ten do so compared to 8 out of 10 other people). Employed disabled people are nearly twice as likely not to have the use of a car as other people.</p> <p>The 2010 Welsh Bus Passenger Survey reported that 25% of respondents had a disability or long term illness. Within this group, around 12% of bus users had mobility problems and 1% used wheelchairs.</p> <p>Disabled passengers who use buses use them as intensively as other passengers.</p> <p>Some 75% of disabled bus users use a bus three or more times a week, compared to 72% of bus users without a disability. This is despite disabled users having a different pattern of bus use. Compared to non-disabled bus users, disabled people are less likely to use a bus to commute and travel to education, but more likely to use a bus for shopping, visiting friends and relatives, and for leisure. Around two-thirds of passengers reporting that they had a</p>

Vulnerable/ Priority Group	Explanation and Health Outcomes
	<p>disability or long-term illness were entitled to free concessionary bus travel because they met either the age or disability criteria of that scheme.</p> <p>The availability of accessible information, including on-board audio and visual announcements and a high standard of customer care are key factors impacting on equality of travel opportunities.</p> <p>Rail – Passenger focus published its report on the experiences of disabled rail passengers in October 2012. Key conclusions from the report were:</p> <ul style="list-style-type: none"> • About 5% of rail journeys are made by passengers with disabilities or long term illness; • Half of these journeys are undertaken by people with impaired mobility; • About 1% of passengers have sensory impairment; • Passengers with disabilities tend to be older and are less likely to be in work compared to passengers in general; • 30% of journeys by disabled people are for commuting although this rises to 40% in peak time; • 78% of passenger journeys by disabled people are made alone, although disabled passengers are more likely to travel with another adult than other passengers (22% compared to 15%); • A railcard is used in 43% of journeys made by disabled passengers; <p>Disabled travellers will benefit from schemes to secure improved quality and accessibility of bus services, including bus driver training, to provide funding to support socially necessary services and continue to provide a concessionary fares scheme for disabled people.</p>
Those in low-income groups/ People without access to a car	<p>People on low incomes (living in a deprived area is used as a proxy for a low income) and without access to a car are likely to walk further. Their lack of transport options, which may include affordability of public transport, may limit life and work opportunities.</p> <p>People living in deprived areas can be particularly vulnerable to road traffic incidents (deaths and injuries), noise and air pollution. Deprived areas are often characterised by higher traffic volumes as well as other environmental burdens such as industrial facilities.⁴⁶ This group is generally more likely to already have reduced access to health and social care as well as other services and amenities.</p> <p>This group may have existing increased stress levels due to the factors above. A poor physical environment can also act as a barrier to active travel, or travel in general. In addition, this group is more vulnerable to food insecurity (meaning “consistent access to adequate food is limited by a lack of money and other resources at times during the year”), which has an access dimension.⁴⁷</p>
Ethnic minority people e.g. Asian, Black	<p>The National Travel Survey data shows that minority ethnic adults are more likely to live in a household without access to a car compared to a white British adult, so a greater reliance on public transport may exist in parts of Wales (South East and North East) where the majority of train and bus services are provided. About 60% of the passenger activity on the Wales and Borders Franchise area is focused on the Valleys Lines and Cardiff area. The same survey also suggested that minority ethnic adults make twice as many local bus trips as white adults.</p> <p>The ethnic background of bus users as compiled from the 2010 Welsh Bus Passenger Survey is that 93% reported that they were white, 5% were from another ethnic background, and 2% declined to answer. In comparison, around 4% of people in Wales are from a</p>

⁴⁶ Greater London Authority, London Health Commission and London Health Observatory (2002) Rapid review of health evidence for the draft London Plan; and Jarvis, S., Towner, E. et al 1995 cited in Cave, B (2001) “Accidents” in The health of our children ed. Botting, B, London, Office of Population Censuses and Surveys, HMSO

⁴⁷ S.Tsang, MHSc, RD (1); A.M.Holt, MHSc(2); E.Azevedo, MSc, RD (1), An assessment of the barriers to accessing food among food-insecure people in Cobourg, Ontario, Chronic Diseases and Injuries in Canada, Volume 31, no.3, June 2011

Vulnerable/ Priority Group	Explanation and Health Outcomes
	<p>minority ethnic group.</p> <p>Rail – Railway crimes reported by British Transport Police and published by the Office of National statistics reported that 77 racially aggravated offences on the railways were reported in the three years to 2011/2012, representing almost 13% of the reported violent offences against the person. (Source Rail transport statistics 2011/2012 published by ONS 30 October 2012). Schemes to improve public transport, including personal safety at waiting facilities and on vehicles, and the availability and accessibility of public transport information in the Plan will impact positively on all public transport users including those from minority ethnic backgrounds.</p>

Source: Adapted from *Highways England: M4 Junctions 3 to 12 smart motorway* (Arcadis Ltd, October 2015) and *Atkins Limited, South Bristol Link: Environmental Statement Volume 2: Health Impact, July 2013*⁴⁸ as well as the *National Transport Finance Plan 2015 – Impact Assessments*⁴⁹

Data Gaps

- Up to date national data relating to access to open space.
- Up to date data regarding the specific distribution of hospital or healthcare facilities in Wales.
- Information relating to the potential impact of the WTS on transgender people.
- Information relating to the potential impact of the WTS on people by religion and belief or non-belief.
- Information relating to the potential impact of the WTS on people by sexual orientation.
- Information relating to the potential impact of the WTS on Asylum Seekers and Refugees
- Information relating to the potential impact of the WTS on Gypsies and Travellers
- Information relating to the potential impact of the WTS on Migrants
- Impact of health emergencies on transport
- The health impacts of schemes such as smart motorways
- Data relating to the national cycle network
- Data relating to the national walking networks and Wales Coastal Path
- There are also relevant data gaps to be considered from the data collated from the 2011 Census, as it may not be accurate to the current population and these figures will not be updated until 2021/2022.
- Information relating to the percentage of men and women using different modes of public transport within Wales.
- For all data collected, there may be gendered differences that are not reflected in the sources they were collected from.

4.2 Key Issues relevant to the WTS and opportunities for it to address them

Issues

Overall health statistics for Wales are improving with life expectancy increasing and fewer people with reported poor health over the past decade however health gains are not distributed equally across the country and in particular access to services is varied, being good in more urban areas, notably the south, but

⁴⁸ The APHO website includes the SBL report as a good practice example of an HIA for a road project:
<http://www.apho.org.uk/resource/item.aspx?RID=136453>

⁴⁹ <https://gov.wales/sites/default/files/publications/2017-08/national-transport-finance-plan-2015-impact-assessments.pdf>

relatively poor across much of rural Wales. Although the health of those living in rural communities is generally good compared to those of urban environments.

Factors specific to a rural environment compared to those of urban environments that can impact on health more significantly and lead to inequalities and poorer health, such as distance from public services and support, availability of transport, and the ageing population. Access to healthcare can be limited in many parts of rural Wales. Public transport is important for both the sustainability and independence of rural communities.

Whilst people are living longer and the rates of some diseases is decreasing, challenges such as living environment and modern lifestyles can contribute towards increasing levels of chronic diseases such as diabetes, joint problems, heart disease and some cancers which in turn can lead to disability and increased demand on health services. In addition, poor mental health can also be an underpinning factor in a number of physical diseases and unhealthy lifestyles. Poor air quality, noise and light pollution as well as road traffic crashes can have direct effects on the physical and mental health of the population.

The transport system could be put under strain through a projected increase in net-migration mainly from within the UK and with urban areas projected to see greatest increase.

Increasing levels of those aged 65 and over could present pressures across the country (dependent on whether healthy life expectancy i.e. the number of years you live a healthy life, continues to track overall life expectancy) e.g. provision of appropriate services for an older generation (e.g. transport).

Issues relating to young people relate to their transition from dependence to independence, as transport plays an important role at particular 'trigger points' such as the move from primary to secondary school, and the move from education to employment.

Health inequalities reflect inequalities in the distribution of health determinants, such as access to transport, education and employment opportunities.

Disabilities and/or mobility impairments can be both physical and mental barriers to using the transport network across all modes.

Road transport has five main impacts on public health: air pollution, physical inactivity, road safety, noise and the isolation faced by vulnerable people due to fear of road danger, which prevents them accessing employment or educational opportunities, social networks, local amenities and services (including healthcare), adding to the risk of mental and physical ill-health.

Issues relating to women specifically can relate to a fear of crime on public transport.

Physical accessibility to transport may have an effect on disabled people accessing public transport.

There is still a high risk of road casualty for younger people which must be addressed by the WTS.

There is still a large disparity between the number of drivers licenses owned by women and men, with women having much fewer, this makes it more difficult for women to have the same access to facilities and amenities as men.

Chronically ill or disabled people are extremely sensitive to noise or air pollution in their local environment, with impacts ranging from sleep disturbance to hypertension.

People on low incomes (living in a deprived area is used as a proxy for a low income) and without access to a car are likely to walk further. Their lack of transport options, which may include affordability of public transport, may limit life and work opportunities. People living in deprived areas can be particularly vulnerable to road traffic incidents. This group may also have increased stress levels, a poor physical environment can be considered a barrier to active travel.

Minorities are more likely to live in a household without a car and so will be more reliant on public transport. 77 racially aggravated offences took place across three years on British railways. The WTS must provision for the safety and inclusion of minorities across all modes of public transport.

Women and minority groups are more likely to travel by bus, however more investment is being put into rail as a method of public transport. The WTS must provision for a more equal Wales by placing the necessary investment in the public transport most used by these groups or removing any potential barriers to other types of transport to these groups.

Levels of noise pollution around key roads within Wales are high. Noise can have multi-ranging effects, including on landscape receptors, ecological resources and human health.

The gender pay gap overall is increasing within Wales. The WTS must ensure that men and women working for the transport system are paid equally for carrying out the same job.

Women are more likely to have diverse patterns of trip chaining, particularly when accompanying a child. They therefore tend to be more economically sensitive to the costs of public transport, particularly buses, and particularly as women tend to earn less on average than men.

Opportunities

Overall, the WTS could help to achieve the important balance of economic and social improvement that is also sustainable and respects the country's valuable natural and cultural environment.

The WTS could recognise the potential for natural green spaces as places for health and recreation, connecting habitats and supporting community interaction. Improving the access to green and open spaces, including National Parks, could greatly encourage healthier lifestyles and a healthier population could enable people (including children) to achieve their potential and to make Wales a more equal society.

Protecting and enhancing green infrastructure throughout Wales is an opportunity to enhance people's access to green and open spaces. Access to a diverse range of semi-natural and natural habitats, as well as providing space for outdoor exercise and community engagement, is fundamental to physical and mental wellbeing.

The WTS has an important contribution to make towards ensuring that human health is provisioned through improved access to health facilities, a focus on reducing air pollution emissions, road safety and the encouragement of active travel in order to improve health and well-being and reduce inequalities. (It should be noted that a lot of active travel occurs within the context of trip chaining).

Overall, the WTS can help to address issues surrounding the aging population through facilitating the provision of accessible transport services supported by connective infrastructure to meet local population growth needs and the needs of individual groups.

An equal Wales can enable people to reach their full potential whilst addressing social, economic, cultural and environmental inequality. The WTS could provide an opportunity to reduce isolation and encourage the development of integrated and liveable communities through provisioning the inclusivity of public transport to allow everyone to have the same level of access.

The transport system should ensure that all groups are able to access public transport and the transport network equally and without fear or prejudice.

Reducing inequality can be achieved by increasing access for the most deprived more than the least deprived or increasing access for the most deprived and keeping the least deprived constant, any other form would involve the reduction of access to either or both groups so should not be an aim of the WTS.

Health inequalities can also be addressed through policies and infrastructure to promote active travel, thereby increasing physical activity, reducing pollution and noise. Active travel measures should be focussed in areas of deprivation to reduce inequalities.

5 Well-Being Goal: A Wales of Cohesive Communities

This section provides baseline data relating to the following well-being goal:

‘Attractive, viable, safe and well-connected communities.’

The data relates primarily to:

- Crime and Safety

5.1 Overview of Baseline Conditions

5.1.1 Crime and Safety

Relevance to the WTS

The creation of cohesive communities which are attractive, well-connected, safe and meet the needs of the population are important for Wales and the Wales Transport Strategy. The WTS has a key role to play in helping to guide decisions through the planning process relating to the development of space which can help to reduce crime related to transport. Further information on this topic is included in Chapter 4 relating to Health and Well-being. Other aspects relating to the connectivity of communities are included throughout this Appendix.

Baseline Conditions and trends

Percentage of people feeling safe at home, walking in the local area and when travelling

In 2019, In the National Survey⁵⁰, people were asked how safe they felt in a variety of situations after dark:

- 81% of people said they felt safe walking alone in their local area after dark;
- 97% of people felt safe at home after dark;
- 79% of people felt safe on public transport after dark; and
- 97% of people felt safe travelling by car after dark.

Percentage of people satisfied with local area as a place to live

In 2019, the National Survey included a series of questions on the quality of the local area. These were included in the survey to help investigate the environmental dimension of well-being.

- 72% of people were satisfied with the level of traffic noise in their local area; and
- 73% of people were satisfied with the level of air pollution in their local area.

Latest figures for year ending September 2019⁵¹ show the total crime rate per 1000 number of vehicle owning households / unweighted base households in England and Wales. Broken down in key transport related crime statistics the crime rates compared to the change from year ending September 2018 figures are as follows (Source ONS):

- Total Vehicle related theft – 45/1000 (-5%)
- Theft from vehicles – 33/1000 (-4%)
- Theft of vehicles – 3/1000 (-19%)
- Attempts of and from vehicles – 9/1000 (-2%)
- Criminal damage to a vehicle – 36/1000(-8%)
- Bicycle theft – 25/1000 (-2%)

⁵⁰ National Survey for Wales, 2018-19 Community cohesion and safety in the local area Statistical Bulletin

<https://gov.wales/sites/default/files/statistics-and-research/2019-11/community-cohesion-and-safety-local-national-survey-wales-april-2018-march-2019-739.pdf>

⁵¹ Office for National Statistics

<https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingseptember2019>

In the report, Family Spending in the UK: April 2017 to March 2018⁵², it was found that the top spending category in Wales is transport, with households in Wales spending 15% of their total expenditure in this category, this mirrors the statistic that 85% of households in Wales owned a car or van in this three-year period. Households in Wales spent an average of £25.80 a week on the purchase of vehicles, which was 5% of total expenditure.

Crime on the rail network in Wales in 2017-18 increased by 15% compared to the previous year. Prior to this, the number of offences had been relatively stable. The largest categories of recorded offences were public order (308), violence against the person (294) and theft of passenger property (199), which accounted for 59%⁵³.

Transport user's satisfaction

Passenger satisfaction figures were collected by the National Passenger Survey (NPS)⁵⁴, in a report called 'Overall passenger satisfaction with their journey on Arriva Trains Wales', it was found that in August 2018, 7% of passengers were dissatisfied with the service, 11% were neither satisfied nor dissatisfied and 82% were satisfied with the service. Across all regional operators 79% of passengers were satisfied with the service.

A study of Public Service Vehicles (buses and taxis) found that bus fares in Wales increased by 3.6% from 2017 to 2018⁵⁵.

Road accidents by area by year and people killed or seriously injured on roads

In 2018, 103 people were killed (2 more than in 2017) and 1,028 people seriously injured on Welsh roads (69 more than in 2017).

In 2018, there were 4,215 road accidents in Wales involving personal injury recorded by the police, a reduction of 333 on 2017 (7.9% reduction). These recorded accidents resulted in 5,759 casualties.

Although there has been a slight increase in road traffic deaths and serious injuries, the number of road traffic accidents in general in Wales is trending downwards as the volume of traffic on the roads is trending upwards.⁵⁶

In 2019 police forces in Wales recorded 4,317 road accidents involving personal injury. These recorded accidents resulted in 5,789 casualties⁵⁷, an increase from 2018.

Within the 5,789 casualties:

- 98 people were killed, 10 fewer (9.2% lower) than in 2018.
- 1,092 people were seriously injured, 63 more (6.1% higher) than in 2018.
- 4,599 people were slightly injured, 32 fewer (0.7% lower) than 2018.

Railway Incidents

In 2017, there were 13 railway fatalities, 11 of which were suicides.

⁵² Office for National Statistics

<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/bulletins/familyspendingintheuk/financialyearending2018#spending-levels-on-transport-in-fye-2018-remained-similar-to-fye-2017>

⁵³ Rail Transport, April 2017 to March 2018, Welsh Government, 2019 <https://gov.wales/sites/default/files/statistics-and-research/2019-04/rail-transport-april-2017-to-march-2018-824.pdf>

⁵⁴ StatsWales.gov <https://statswales.gov.wales/Catalogue/Transport/rail/rail-transport/overallpassengersatisfactionwiththeirjourneyonarrivatrainswales-by-timeofsurvey>

⁵⁵ Public service vehicles (buses and taxis), 2017-18 Statistical Bulletin Source: https://gov.wales/sites/default/files/statistics-and-research/2019-03/public-service-vehicles-buses-and-taxis-april-2017-to-march-2018_0.pdf

⁵⁶ Police recorded road accidents, 2018 Statistical Bulletin Source: <https://gov.wales/sites/default/files/statistics-and-research/2019-06/police-recorded-road-accidents-2018.pdf>

⁵⁷ <https://gov.wales/police-recorded-road-accidents-2019-html>

In 2017-18 there were 1,369 notifiable offences reported on Welsh railways, an increase of 15.3 per cent from previous years.⁵⁸

Data Gaps

Data gaps relating to crime and death/injury on buses or in bus stations.

Data gaps relating to crime and death/injury on active travel routes.

Data gaps relating to gendered differences within the data captured.

5.2 Key Issues relevant to the WTS and opportunities for it to address them

Issues

Bus fares are rising in cost at a rate higher than inflation, this could exclude some people or communities from this form of transport due to a price barrier.

The number of deaths on the road is remaining consistent year to year when it should be improving, more efforts should be made to provision the safety of drivers and other road users as much as possible.

Levels of noise pollution around key roads within Wales are high. Noise can have multi-ranging effects, including on landscape receptors, ecological resources and human health.

Rural Isolation and loneliness can lead to mental health problems, this can be caused by a less accessible transport system reducing access to communities, but also cars travelling through communities can sever communities and promote isolation.

When people are travelling, they should be able to do so without the fear or threat of crime.

Opportunities

The WTS could support the creation of connections between and within safe and well-maintained communities through public transport opportunities and active travel opportunities including foot and cycle paths.

The WTS could also plan for reducing the need to travel; and provide opportunities to access new and existing development and services by a range of sustainable travel modes and or improvements to digital connectivity. By reducing the amount of single-occupancy car journeys, the risk to non-motorised users could be reduced and the issue of isolation be lessened.

The WTS could consider strategic transport proposals in terms of the opportunities they present to encourage regional equality as well as improving human health, landscape and nature conservation from a reduction in noise and light pollution. Transport schemes can improve road safety, which can improve actual and perceived road safety. Driver stress can also be improved by the introduction of transport schemes,

⁵⁸ Rail Transport, April 2017 to March 2018 Statistical Bulletin Source: <https://gov.wales/sites/default/files/statistics-and-research/2019-04/rail-transport-april-2017-to-march-2018-824.pdf>

6 Well-Being Goal: A Wales of Vibrant Culture and Thriving Welsh Language

This section provides baseline data relating to the following well-being goal:

‘A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.’

The data relate primarily to:

- Welsh Language;
- Landscape and Townscape Character; and
- Cultural and Heritage Assets.

6.1 Overview of Baseline Conditions

6.1.1 Welsh Language

Relevance to the WTS

Wales is a bilingual country and the Welsh language is an important component of Welsh national identity and culture. As such, the protection and promotion of Welsh Language needs to be a core element of the WTS. Cymraeg 2050⁵⁹ sets out that Welsh-medium immersion education is our principal method for ensuring that children can develop their Welsh language skills, and for creating new speakers. Cymraeg 2050 incorporates three key themes: Increasing the number of Welsh speakers, increasing the use of Welsh and creating favourable conditions – infrastructure and context.

The WTS should seek to ensure that access to Welsh-Medium education facilities is specifically targeted as part of this aim, to support the strategy seeking to expand Welsh-Medium education provision. The WTS could also seek to support the aim to increase the range of services offered to Welsh speakers, and an increase in use of Welsh-language services. The WTS could also seek to ‘support the socioeconomic infrastructure of Welsh-speaking communities’ through its policies, helping to support the aim of ‘Develop[ing] a new regional focus to economic development to help all parts of Wales to benefit from prosperity and support each area to develop its own distinctive identity.’ Within the WTS there will be opportunities to promote the Welsh language through its use in station announcements, road signs and signs within rail and bus stations.

Baseline conditions and trends

The historic decline in use of the Welsh language has been halted and has now been on a general upward trend since the early 1990s. This is, in part due to Welsh entering the national curriculum and being a compulsory subject in schools. However, levels of fluency are still low and there are large regional variations. The February 2020 report ‘The Welsh Language and the economy: a review of evidence and methods’⁶⁰ presents the findings of a review of the evidence available on the relationship between the Welsh language, and other languages relevant to the linguistic context in Wales, and the economy.

The Welsh language use survey is funded jointly by Welsh Government and the Welsh Language Commissioner. It provides information about Welsh speakers’ use of the Welsh language. The average fluency across Wales is 29%, this can be seen in Figure 6-1 which shows the fluency of Welsh people across local authorities.

Local Government has a vital role to play in the delivery of services through the medium of Welsh, in the economic development of predominantly Welsh-speaking areas and in the strengthening of the Welsh language in daily use in the workplace and the wider community. In addition to their status as major employers and spenders, Local Authorities also influence local economic development through functions

⁵⁹ <https://gov.wales/sites/default/files/publications/2018-12/cymraeg-2050-welsh-language-strategy.pdf>

⁶⁰ <https://gov.wales/sites/default/files/statistics-and-research/2020-02/the-welsh-language-and-the-economy-a-review-of-evidence-and-methods.pdf>

such as housing, education, regeneration and cultural activities. Some of these functions are statutory, others not⁶¹.

Attitudes towards the Welsh Language

In the National Survey for Wales 2017-18⁶², Welsh Language: Confidence and attitudes, it was found that:

In terms of ability –

- 19% of adults aged 16 and over reported that they can speak Welsh, with a further 12% reporting to have some Welsh-speaking ability.
- Younger people aged 16 to 24 were most likely to be able to understand, speak, read and write Welsh.

In terms of confidence –

- 68% of Welsh speakers felt confident speaking Welsh. 72% wanted to speak it with other Welsh speakers and 36% worried they would be judged on how well they spoke it.
- Welsh speakers' fluency levels were strongly correlated with their confidence when speaking Welsh.
- 95% of fluent Welsh speakers were confident speaking Welsh; however, 21% of fluent speakers worried they'd be judged on how well they speak it.
- Women were slightly more likely than men to worry about feeling judged.

In terms of attitudes –

- 86% of people felt the language was something to be proud of.
- 67% thought more effort needed to be put into supporting the language.
- 62% of those who couldn't speak Welsh would like to be able to speak it, and 85% of those with some ability in Welsh wanted to speak it better.
- People were least likely to agree with the statement 'The Welsh language will be stronger in 10 years' time': 40% agreed with that statement. Those living in the North East of Wales were least likely to agree with this statement.

The Annual Population Survey⁶³ (last updated January 2020) found the percentage of people who can speak Welsh by Local Authorities as per Figure 6-1.

The January 2014 Report of the Welsh Language and Economic Development Task and Finish Group to the Minister for Economy, Science and Transport⁶⁴ sets out 27 recommendations for how economic development, and the public sector, can assist with enhancing the Welsh language.

⁶¹ <https://gov.wales/sites/default/files/inline-documents/2018-11/written-statement-working-group-on-the-welsh-language-in-local-government-administration-and-economic-development.pdf>

⁶² National Survey for Wales, 2017-18 Welsh Language: Confidence and attitudes Statistical Bulletin <https://gov.wales/sites/default/files/statistics-and-research/2019-01/national-survey-wales-welsh-language-confidence-attitudes-2017-18.pdf>

⁶³ StatWales.gov <https://stats.wales.gov.wales/Catalogue/Welsh-Language/Annual-Population-Survey-Welsh-Language/annualpopulationurveyestimatesofpersonsaged3andoverwhosaytheycanspeakwelsh-by-localauthority-measure>

⁶⁴ <https://gov.wales/sites/default/files/publications/2019-05/report-of-the-welsh-language-and-economic-development-task-and-finish-group.pdf>

Figure 6-1: Percentage of Welsh Speakers who are fluent by local authority area

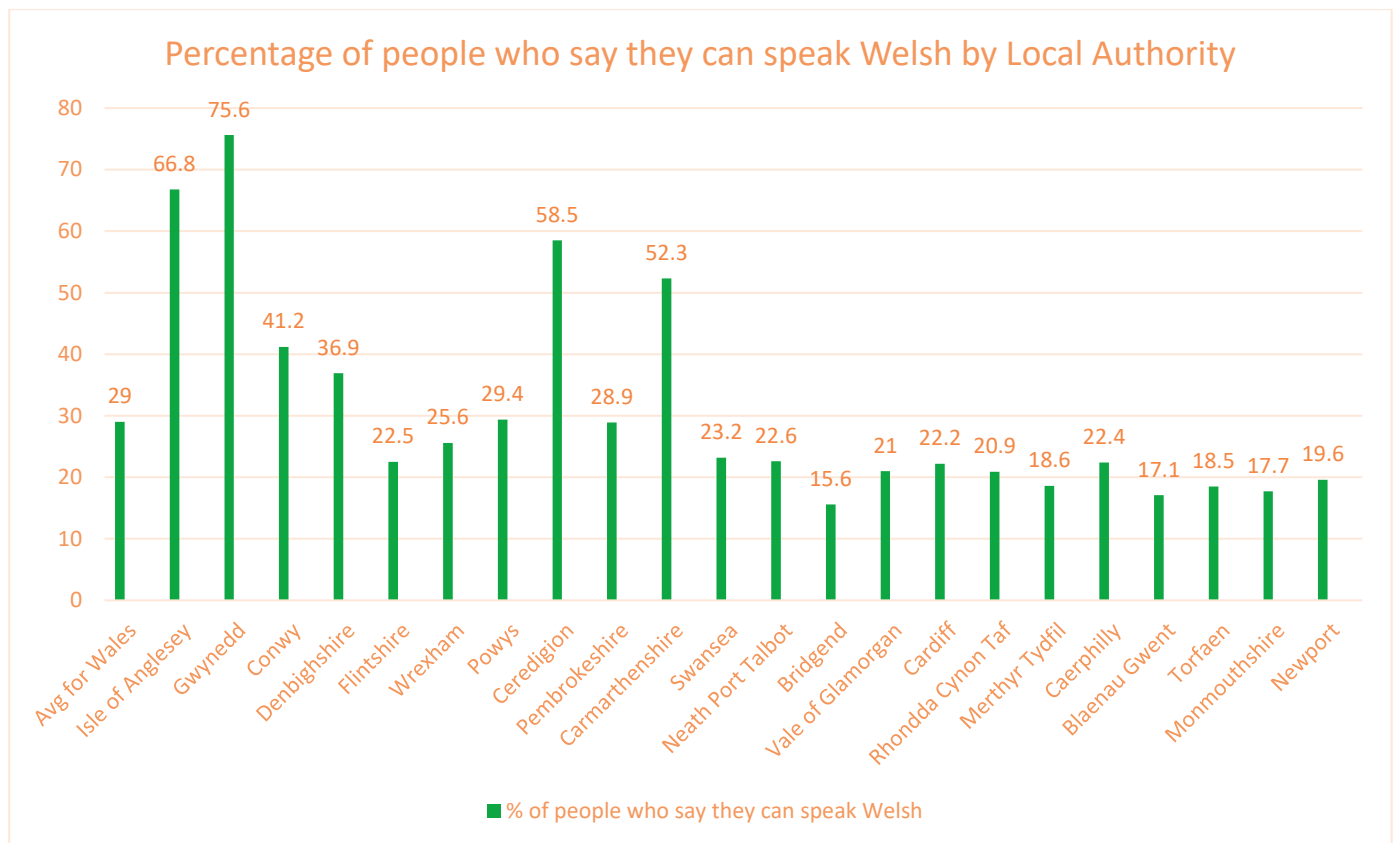
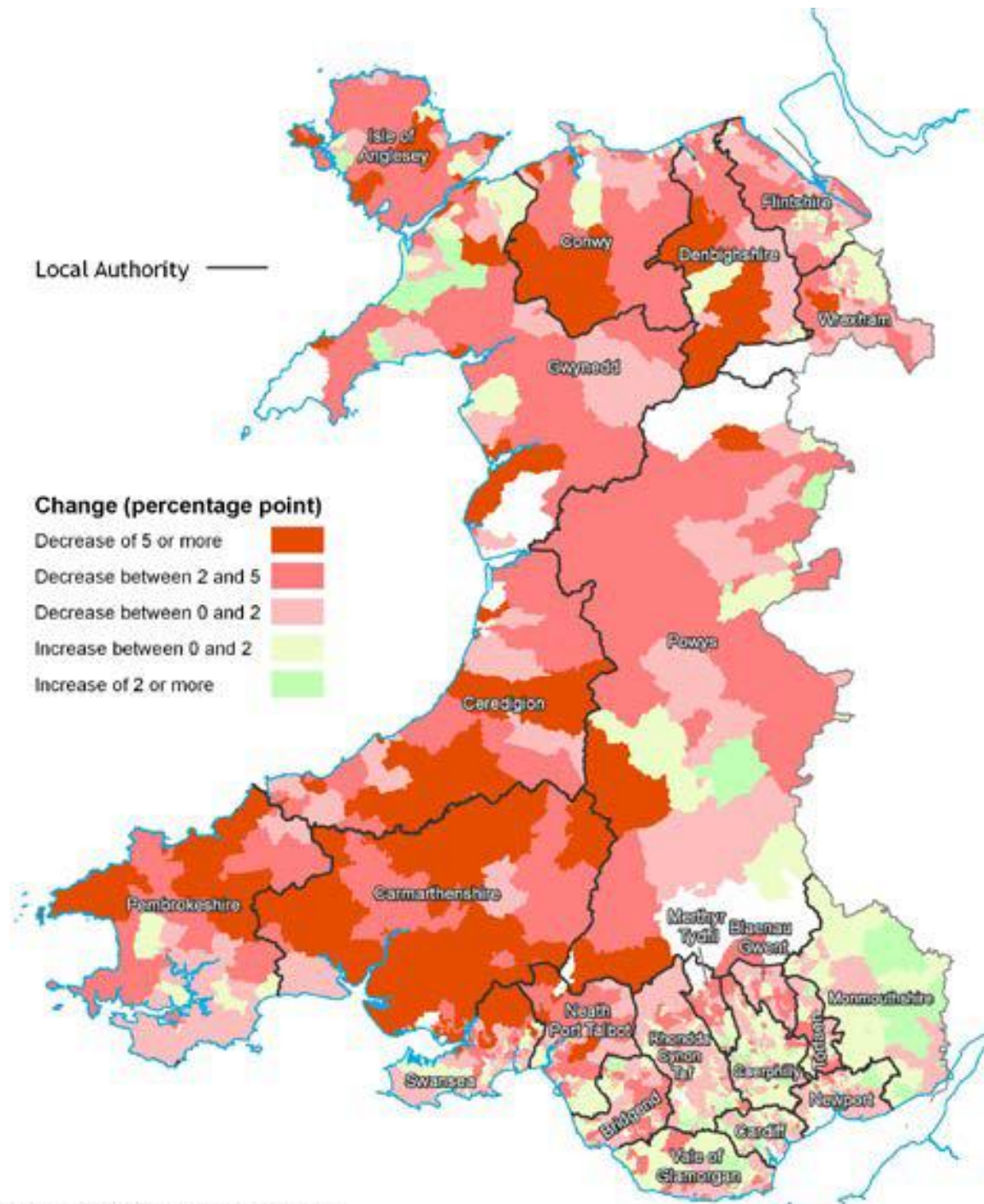


Figure 6-2 Change in proportion of people able to speak Welsh by LSOA, 2001 to 2011



Source: 2001 Census 2011 Census

(a) Presented for LSOAs that did not change between 2001 and 2011 only.

193.12-13

Geography & Technology

© Crown Copyright and database right 2013. All rights reserved.
Welsh Government. Licence number 100021874.



Source: Cymraeg 2050⁶⁵

⁶⁵ <https://gov.wales/sites/default/files/publications/2018-12/cymraeg-2050-welsh-language-strategy.pdf>

Data Gaps

There are no specific statistics found with regards to the satisfaction of Welsh speakers and their ability to travel using Welsh.

Data gaps relating to gendered and age differences in Welsh speakers.

Data gaps relating to access to Welsh Language education and the role transport plays

6.1.2 Landscape and Townscape Character

Relevance to the WTS

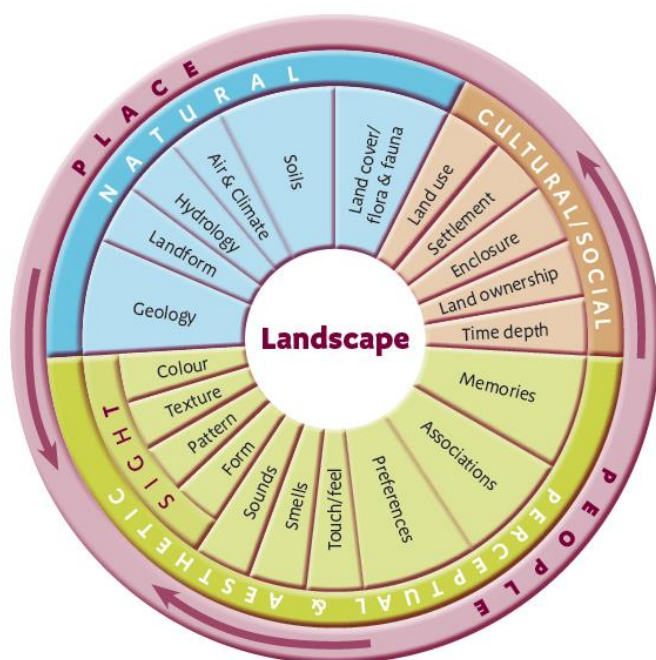
Welsh landscapes reflect the extent and condition of a range of natural resources and ecosystems against the complexity of human influences and land-use decisions. Townscapes and urban character also reflect a long history of human development. Similarly, seascape information complements the landscape/townscape information and together the two types of information provide an understanding of the cultural benefits to be had from both the terrestrial and the marine environment.

These elements have been strongly shaped by human intervention and land-uses throughout history and the WTS will continue to play an important role in shaping this character through its guidance on transport infrastructure planning. Landscape, townscape and seascape character are important in terms of Wales' strong sense of place and cultural identity with close links to the tourism industry.

Transport can have many potential impacts on landscape and townscape character, negative impacts could be new infrastructure developments reducing the visual amenity of a valued landscape by building a new road through it, or the removal of buildings or green spaces within towns for road widening schemes that may have value to the local community. A positive potential impact could be enhanced access to greenspaces and viewpoints.

Figure 6-3 is from the 2014 Landscape Character Assessment (LCA Approach directly adapted from the 2002 guidance) and shows the range of factors generally considered to be part of landscape⁶⁶.

Figure 6-3 The range of factors generally considered to be part of landscape



⁶⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691184/landscape-character-assessment.pdf

Baseline conditions and trends

Wales has a varied and, generally high-quality landscape with over 50% of the land area being nationally valued for its scenic quality and character. Many Welsh landscapes are iconic with a clear sense of place and recognisable identity (SoNaRR, 2016). The country is predominantly rural in character with 60% of the landscape defined as Field Pattern/Mosaic and 20% is categorised as Open Land (SoNaRR, 2016).

National landscape change to 2015 has been small overall, but some changes have been substantial locally. The key contributors to landscape change in the built environment include: the expansion of settlements, commercial and industrial developments, quarries and road improvements, onshore windfarms, turbines and large recreational related developments. In the rural environment examples include: the felling of conifers and replanting with broadleaves, woodland expansion and changing bracken cover.

Climate change over time is likely to have significant impacts on landscape character, local distinctiveness and quality, directly through changing land cover (migrating habitat and species ranges) and indirectly by influencing land use decisions. Landscape changes may also be evident from mitigation measures, such as renewable energy generation, water resource management and adaptation through the planned expansion of woodland. Climate change also poses a risk to landscapes from pests, pathogens and invasive species and from changes in frequency and/or magnitude of extreme weather and wildfire events.

25% of Wales is designated as either National Park or Area of Outstanding Natural Beauty.

Protected Landscapes

Within Wales there are three National Parks; Brecon Beacons, Pembrokeshire Coast and Snowdonia. Each National Park also has local planning authority status in Wales. Combined these National Parks in Wales cover around 20% of the land area of Wales. The locations of the National Parks in Wales are presented on Figure 2 – Landscape Features.

Brecon Beacons

The Brecon Beacons National Park contains some of the most distinctive upland landforms in southern Britain. The Park covers 520 square miles (1344 square kilometres) and lies between rural Mid Wales and the industrial South Wales Valleys. It is a diverse landscape, where sweeping uplands contrast with green valleys, with dramatic waterfalls, ancient woodland, caves, forests and reservoirs. The highest point is Pen y Fan, at the centre of the National Park. Its distinctive table topped summit stands at 886m, and it is climbed by hundreds of thousands of people each year.

The National Park is also home to 33,000 people, over 9000 different plants and animals, and has a strong Welsh heritage and rich economic, social and cultural life. The largest settlement is the cathedral town of Brecon with a population of approximately 7,500⁶⁷.

Snowdonia National Park

The Snowdonia National Park takes its name from Snowdon which, at 1085m (3,560 feet), is the highest peak in Wales. The Snowdonia National Park is rich in landscape and townscape and has 60km of coastline. In addition to this, Snowdonia has extensive areas of woodlands and over 96,000 hectares of moorland. The landscape within the National Park has been formed over millions of years. Since the end of the last Ice Age, 10,000 years ago, the interaction between people and nature has shaped the landscape of the National Park and there are strong cultural associations between people and place. The traditional rural character of settlements is distinct to the National Park and forms part of its historic landscape character. Fourteen towns and villages in Snowdonia have Conservation Areas and there are 1,900 listed buildings, 13 being Grade I and 116 buildings at Grade II*, there are also 21 Historic Parks and Gardens within the National Park. The Welsh language is a fundamental part of the area's culture. Welsh is the spoken and written language of approximately 62% of the population of Snowdonia and in some communities the percentage is as high as 85%. The 2001 Census showed a population of 25,482, with a small increase to 25,745 in the Mid-2006 Population Estimates for National Parks⁶⁸.

⁶⁷ Brecon Beacons National Park Authority Local Development Plan 2007-2022

⁶⁸ Eryri Local Development Plan 2007-2022

Pembrokeshire Coast National Park

Pembrokeshire Coast National Park boasts some of the most spectacular scenery and diverse wildlife in Britain including internationally important nature reserves, geology and archaeology. The Park was designated in 1952 and remains the only UK National Park recognised primarily for its coastline. It is one of the smallest UK National Parks; but has one of the most diverse landscapes – sandy beaches, rugged cliffs and islands, quiet wooded estuary and hill country with big sea views. The Park covers 232.5 square miles (602 sq km). At the widest point, it is about 16km, at its narrowest about 100m. Around 22,500 people live in the National Park⁶⁹.

In Wales, there are five AONBs: Anglesey, Gower, Llŷn, the Clwydian Range and Dee Valley and Wye Valley. See Figure 2 – Landscape Features.

Anglesey AONB

Designated in 1966 the Isle of Anglesey's AONB, has one of the most distinctive, attractive and varied landscapes in the British Isles. It is also home to approximately 7,000 people. Some of the main features of the Anglesey AONB are:

- Low cliffs alternating with coves and pebble beaches;
- Sheer limestone cliffs interspersed with fine sandy beaches; and
- Stretches of sand dunes with beaches.

A number of the habitats found on Anglesey are afforded even greater protection both through UK and European designations because of their nature conservation value, these include:

- 5 Special Areas of Conservation;
- 3 Special Protection Areas;
- 1 National Nature Reserve;
- 31 Sites of Special Scientific Interest; and
- 75 Scheduled Monuments⁷⁰

Gower AONB

The Gower AONB was designated in 1956 for its classic limestone coast and the variety of its natural habitats, it was the first AONB designated in the UK. Rich and diverse, Gower's scenery ranges from fragile dune and salt marsh in the north to the dramatic limestone cliffs along the south coast, intercut by sand beaches. Inland, the hills of Cefn Bryn and Rhossili Down dominate the landscape of traditional small fields, wooded valleys and open commons⁷¹.

Pen Llŷn AONB

The Pen Llŷn was designated as an AONB in 1956, the third to be designated in the UK. The Llŷn Peninsula is renowned for its diverse and interesting coastline. The AONB encompasses around one quarter of the peninsula a total of 15,500 hectares, mostly along the coast, but it also extends inland and includes prominent igneous protrusions. Llŷn, whose complex geology includes ancient pre-Cambrian rock formations, is a natural extension of the Snowdonia massif. The geology is typified by the wide variation of coastal landscapes, ranging from the steep cliffs of Aberdaron Bay and promontories to the sand dune systems in the Abersoch area. The highest point in Llŷn is the Eifl (564m) mountain range which levels out to a plateau that extends towards the sea and the black rocks of Mynydd Mawr at the tip of the Peninsula. The area is typified by narrow and winding roads, farms and whitewashed cottages and also includes open areas of ancient common land⁷².

Clwydian Range and Dee Valley AONB

The Clwydian Range was designated as an AONB in July 1985, then in November 2011 the Welsh Government's Environment Minister confirmed a southerly extension to include much of the Dee Valley from

⁶⁹ <http://www.pembrokeshirecoast.org.uk/?PID=552>

⁷⁰ <http://www.anglesey.gov.uk/planning-and-waste/countryside/areas-of-outstanding-natural-beauty-aonbs/aonbs-in-wales/>

⁷¹ <http://www.swansea.gov.uk/aonb>

⁷² Penrhyn Llŷn Area of Outstanding Natural Beauty, Management Plan, 2010-2015

Corwen to Newbridge along with stunning natural features such as the Eglwyseg Escarpment, Horseshoe Pass and Esclusham Mountain. At the same time the whole area became known as the Clwydian Range and Dee Valley AONB. Its special qualities include historic landmarks such as Pontcysyllte Aqueduct and Canal and the Iron Age hillforts that crown the Clwydian Range. They also include cultural and artistic inspirations such as the eisteddfodau held all over the area, its quarrying and mining heritage⁷³.

Wye Valley AONB

The rich combination of breath taking views, impressive geology, historic legacies and diverse wildlife in the valley of the River Wye between Hereford and Chepstow led to the designation, in 1971, of the valley and adjoining plateaux and hills as an AONB. The Wye Valley AONB covers 92km (58 miles) of the lower reaches of the River Wye totalling an area of 327km². It stretches from Mordiford in the north, just east of the city of Hereford, southwards to the outskirts of Chepstow⁷⁴.

The location of AONBs in Wales are presented on Figure-002 Landscape Features.

Quality of Landscapes

The most detailed landscape baseline in Wales reporting on landscape state, condition and trend is LANDMAP. LANDMAP is an all-Wales landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated. LANDMAP explains the physical, geological, ecological, visual, historic and cultural landscape: the summary descriptions, evaluations and management recommendations aid understanding of landscape and identify important landscape qualities and characteristics. By capturing multi-dimensional landscape information, it ensures that all aspects of the landscape can be taken into account. It is the focus for landscape monitoring in Wales, enabling the tracking of change and identifying key factors determining landscape change, condition and resilience.

Landscape Character Areas (LCAs) are identified at both a local planning authority level and at a national level, with 48 National Landscape Character Areas (NLCA) identifying regional landscapes. They offer overall landscape summaries linked to the five LANDMAP layers, key characteristics, and forces for change, and may be linked to design or sensitivity studies.

Special Landscape Areas that identify areas of high landscape importance, often linked to LCAs, are identified by some authorities (SoNaRR, 2016) within Wales there are many of these landscapes designated.

Marine Character Areas

70% of Wales' coastline is designated or registered AONB, National Park, Heritage Coast or Historic Landscape (Seascapes and Marine Planning in Wales, 2014). Seascape information complements available landscape information and together the two types of information provide an understanding of the cultural benefits to be had from the marine environment. There 29 national Marine Character Areas (MCAs) (National Seascape Assessment for Wales, NRW Evidence Report 80⁷⁵, the 50 Regional Seascapes (Welsh seascapes and their sensitivity to offshore developments, CCW Policy Research Report 08/5, 2009) and the local Seascape Character Assessments (SCA) of Pembrokeshire, Snowdonia and Ynys Mon provide comprehensive seascape information for Wales as a whole.

Landscapes of Historic Importance

The landscape of Wales is a vital resource for social, economic, cultural and environmental well-being. It has also been historically shaped by human activity and is rich in evidence of the past. To recognise the value of historic landscapes, and raise awareness of their importance, Cadw, in partnership with NRW and the ICOMOS UK compiled a Register of Landscape of Historic Interest in Wales. The Register identifies 58 landscapes of outstanding or special historic interest, which are considered to be the best examples of different types of historic landscapes in Wales. Figure 3 – Heritage Features shows the locations of historic landscapes.

The Register provides information to decision makers and landscape managers, to help ensure that the historic character of the landscape is sustained, and that where change is contemplated, it is well-informed (Cadw).

⁷³ <http://www.clwydianrangeaonb.org.uk/landscape/>

⁷⁴ Wye Valley Area of Outstanding Natural Beauty (AONB), Management Plan, 2015 – 2016

⁷⁵ <http://naturalresources.wales/our-evidence-and-reports/marine-character-areas/?lang=en>

Data Gaps

Data relating to transport within, to and from AONB's in Wales.

Data relating to transport to major cultural events in Wales

6.1.3 Dark Skies and Tranquil Areas

Relevance to the WTS

It is recognised that dark skies and tranquil areas can bring benefits to an area including enhancing the environment, attracting visitors and can boost the local economy. The WTS has a key role to play in helping to guide decisions through the planning of new transport networks.

Baseline Conditions and trends

Dark sky areas are a good indicator of very low light pollution. There are three locations in Wales that have been designated as part of the International Dark Sky Places Program. These are:

- Brecon Beacons National Park (Dark Sky Reserve status)
- Snowdonia National Park (Dark Sky Reserve status)
- Elan Valley Estate, Powys (A Silver-tier International Dark Sky Park)

The Countryside Council for Wales (now NRW) commissioned a tranquil areas assessment in 2009, following an earlier assessment in 1997. This identified 55% of Wales (11,600 km²) as tranquil in 2009, a loss of 1500km² of tranquil landscapes from 1997.

The two largest Tranquil Areas on the 2009 Map are both over 1,000km². These areas are parts of the Berwyn Mountains, bordered by the towns of Dolgellau, Bala, Llangollen and Welshpool, and the southern part of the Cambrian Mountains, bordered by Llangurig, Rhayader, Llandovery, Lampeter and Tregaron.

Between 1997 and 2009, there was a loss of Tranquil Areas of nearly 1,500km² of land. This is over 6% of the total land area of Wales; and is greater than the area of the Brecon Beacons National Park.

Data Gaps

No significant data gaps have been identified for this topic at this stage.

6.1.4 Historic Environment, Cultural and Heritage Assets

Relevance to the WTS

Cultural heritage comprises archaeological remains, intact structures and relict landscapes associated with past human activity. This section also covers cultural activities undertaken by the population. Wales has a large number of designated and non-designated cultural heritage assets reflecting its long history of human occupation. Many of these provide important tourist attractions in addition to being central to Welsh cultural identity.

The WTS has a key role to play in the provisioning of access, protection and enhancement of cultural heritage through guiding decisions made in the planning system. New development can have a range of direct and indirect effects on heritage assets which need to be avoided or mitigated. This includes effects from noise and air pollution from construction of busy traffic routes in close proximity to culturally significant areas which may make them less appealing to visit or decrease their visual amenity (indirect effects), it also includes the physical removal of heritage assets as this may be required for the development of new travel infrastructure. Impacts on the historic environment can include the intensification of existing traffic or the construction of new road or rail. Increasing levels of congestion can affect historic towns, cities and the countryside, while development of new transport infrastructure can affect historic landscapes and may cause direct damage to heritage assets.

Transport infrastructure may also be an important historic asset in its own right from prehistoric trackways and Roman roads, to medieval bridges, the development of canals and railways during the industrial revolution and the introduction of motor transport and aviation in the 20th century.

Baseline conditions and trends

Heritage assets in Wales are numerous. This section describes the key types of asset present.

World Heritage Sites

World Heritage Sites are regarded as being universally important and 'belonging to all the peoples of the world, irrespective of the territory on which they are located'. They are listed by UNESCO.

Wales currently has three world heritage sites:

- The Castles and Town Walls of Edward I in Gwynedd at Caernarfon, Conwy, Beaumaris and Harlech in North-West Wales;
- Blaenavon Industrial Landscape in South-East Wales; and
- Pontcysyllte Aqueduct and Canal in North-East Wales.

Each of these cover large areas straddling a number of local authorities and have management plans which detail the planning policies of each authority regarding the protection of the World Heritage Sites. Some, such as Pontcysyllte, have buffer zones to add a supplementary degree of protection within the landscape adjacent to the site while others, such as Edward's Castles, have defined their Essential Setting and Significant Views within the management plan to protect the surrounding area. Each of the Welsh World Heritage Sites, their buffer zone, or their essential setting/significant view contain privately owned houses or land. Figure 3 – Heritage Features shows the locations of the World Heritage Sites in Wales.

Listed Buildings

The National Assembly for Wales is required by law to compile lists of buildings of special architectural or historic interest; and listed buildings. The lists are used to help planning authorities make decisions with the interests of the historic environment clearly identified. Compilation of the lists is undertaken by Cadw. Listed buildings are classified in grades to show their relative importance. The grades are:

- I — Buildings of exceptional, usually national, interest. Currently, fewer than two per cent of buildings listed in Wales qualify for this grade;
- II* — Particularly important buildings of more than special interest; and
- II — Buildings of special interest, which warrant every effort being made to preserve them.

There are over 30,000 Listed Buildings (Grade I, Grade II and Grade II *) within Wales (Cadw) distributed across its counties varying from medieval halls and castles to Edwardian villas.

Scheduled Monuments

Cadw compile and maintain a Schedule of Ancient Monuments. The monuments included on this Schedule are of national importance and cover a diverse range of archaeological sites. Some examples may be completely buried below ground and may only be known through archaeological excavation. Others are more prominent and include the great standing ruins of well-known medieval castles and abbeys. The oldest known example in Wales is a natural cave — found to contain the earliest evidence of people in Wales — dating to a quarter of a million years ago. At the other end of the spectrum are twentieth-century military structures. Scheduled monuments are often in a ruinous or semi-ruinous condition or take the form of earthworks.

Over 4,000 monuments have now been scheduled across Wales and the number is increasing as part of an ongoing planned policy of enhancing the Schedule (Cadw).

Scheduled monuments in Wales are distributed throughout its counties and their locations are presented on Figure 3 – Heritage Features.

Registered Historic Battlefields

The locations where historic battles took place can be significant historic assets. They often retain topographical and archaeological evidence, including war graves, which can increase understanding of these events. To date there is no formal Register of Historic Battlefields in Wales. However, this is something that is being developed by Cadw.

Conservation Areas

There are over 500 conservation areas in Wales. They are designated by local planning authorities for their special architectural and historic interest. Many local planning authorities have undertaken conservation area character appraisals which identify areas where enhancement through development may be desirable (Cadw).

Conservation areas in Wales are distributed throughout its counties and are largely situated within urban settlements from small villages to areas within towns and cities.

Heritage Coasts

Heritage coasts are 'defined' rather than designated, so there isn't a statutory designation process like that associated with National Parks and AONBs. However, they are largely located within areas that are afforded with National Park or AONB status.

Within Wales there are 14 heritage coasts:

- Glamorgan;
- Gower;
- South Pembrokeshire;
- Marloes and Dale;
- St Brides Bay;
- St Davids Peninsula;
- Dinas Head;
- St Dogmaels and Moylgrove;
- Ceredigion;
- Llŷn;
- Aberffraw Bay;
- Holyhead Mountain;
- North Anglesey; and
- Great Orme.

The location of heritage coasts is presented on Figure 3 – Heritage Features.

Historic Parks and Gardens

Wales has a rich inheritance of historic parks and gardens. They form an important and integral part of the historic and cultural fabric of the country.

Cadw has undertaken a comprehensive survey of historic parks and gardens in Wales. Those thought to be of national importance are included on the Cadw / ICOMOS Register of Parks and Gardens of Special Historic Interest in Wales. The Register was compiled in order to aid the informed conservation of historic parks and gardens by owners, local planning authorities, developers, statutory bodies and all concerned with them. Through the Historic Environment (Wales) Act 2016 it is now statutory and has six volumes. It was completed in 2002 however, sites can be added (or subtracted) at any time. There are currently almost 400 sites on the Register.

Sites on the Register are Graded I, II* and II in the same way as listed buildings. Approximately 10% are Grade I and 23% Grade II*. Grade I sites, such as Bodnant, Powis Castle, Dynevor Park, Margam Park, Erddig, Plas Brondanw and Raglan Castle, are of international importance.

Parks and gardens on the Register range from medieval to late twentieth century. Many are multi-period, with features of different styles and periods (Cadw).

Locations of historic parks and gardens are presented on Figure 3 – Heritage Features.

Heritage at Risk

A key element of Cadw's heritage regeneration activity is action related to heritage assets in a deteriorating condition. Cadw have been working to identify the number and type of listed buildings at risk in Wales. Surveys of the condition of listed buildings have been carried out in Wales for more than 15 years. 2015 data shows that the trend for buildings at risk is moving in the right direction. The number of buildings in an 'at risk' or 'vulnerable' condition has decreased since the last comparable data available (2013) and the percentage of buildings at risk has fallen from 8.92% to 8.54%. This figure is calculated using existing survey data and the most up-to-date data available from the 20% of the building stock which has been re-surveyed in the past year (Cadw). The percentage of building at risk over time has fallen since 2013.

Over time, there have been additional buildings given listed status. The Historic Environment (Wales) Act 2016 aims to give more effective protection to listed buildings and scheduled monuments, to improve the sustainable management of the historic environment and to introduce greater transparency and accountability into decisions taken on the historic environment. These seek to preserve the cultural heritage and historic environment of Wales and in turn will provide greater financial gain for the Welsh tourism sector.

Cultural activity

According to the National Survey for Wales⁷⁶ 75% of people attended or participated in arts, culture or heritage activities at least three times in the past year. 68% of people had been to an arts event in the previous 12 months, 40% of people had visited a museum in the last 12 months and 63% of people had visited a heritage site within the past 12 months (88% of these were in Wales).

34% of people had used a public library service in the past 12 months; 98% of these had visited a library in Wales. 5% went at least once a week. 58% of people said they had library in their local area. 39% of people with a library in their local area had visited one in the last 12 months, compared with 28% of those who did not.

When people were asked why they had not attended a museum in the past 12 months, only 3% cited a lack of transport as their reason (consistent with previous years), with 6% saying "Not enough museums close to where I live".

When people were asked why they had not visited a historic place in Wales in the past 12 months, only 5% cited a lack of transport as their reason (consistent with previous years), with 3% saying "Not enough museums close to where I live".

(National Survey for Wales, 2017 – 2018).

When people were asked "Whether they would go to more arts events if they were nearer, 2018-19", 25% strongly agreed and 26% agreed, 21% were neutral, 19% disagreed and only 9% strongly disagreed.

(National Survey for Wales, 2018 – 2019).

Data Gaps

The heritage value of transport infrastructure itself.

⁷⁶ <https://gov.wales/national-survey-wales-results-viewer>

6.2 Key Issues relevant to the WTS and opportunities for it to address them

Issues

Welsh Language

There has been an upward trend since the 1990s in the number of people using the Welsh language, noting large regional variations; there are opportunities to increase levels of fluency.

In some cases, opportunities to use the Welsh language when utilising public transport is limited, such as due to customer service staff not speaking Welsh.

Landscape and Townscape Character

Wales is renowned for its high-quality landscapes with over 50% of the land area being nationally valued for its scenic quality and character. National Parks and Areas of Natural Beauty are internationally recognised Designated Landscapes and cover 25% of Wales. This has implications for new transport infrastructure within these areas with a key challenge for sustainable management being to enable appropriate levels of growth whilst retaining the distinctiveness of places and landscapes. This must also recognise that the natural and historic components of landscape are important to both place and the cultural value of landscape.

The loss of visual amenity and character could have impacts on local people and tourists.

Motor traffic, parking and associated impacts can blight the character of landscapes and townscape.

Historic Environment, Cultural Heritage and Assets

Wales has a wealth of historic and cultural assets which are important components of national cultural identity. Many such assets are at risk from, for example, decay, climatic factors, neglect and inappropriate development. As with other environmental factors, protecting and provisioning fair access to cultural heritage assets is a key challenge for sustainable planning of the transport system.

New development can have a range of direct and indirect effects on heritage assets which need to be avoided or mitigated. This includes effects from noise and air pollution from construction of busy traffic routes in close proximity to culturally significant areas which may make them less appealing to visit or decrease their visual amenity (indirect effects), it also includes the physical removal of heritage assets as this may be required for the development of new travel infrastructure. Effects on the historic environment can include the intensification of existing traffic or the construction of new road or rail. Increasing levels of congestion can affect historic towns, cities and the countryside, while development of new transport infrastructure can affect historic landscapes and may cause direct damage to heritage assets.

Opportunities

Welsh Language

The WTS has an opportunity to protect and promote the use of the Welsh language through the transport system through encouragement of its use in sign posting and employees of bus and train stations. The WTS could seek to ensure that access to Welsh-Medium education facilities is specifically targeted as part of this aim, to support the strategy seeking to expand Welsh-Medium education provision. The WTS could also seek to support the aim to increase the range of services offered to Welsh speakers, and an increase in use of Welsh-language services. The WTS could also seek to 'support the socioeconomic infrastructure of Welsh-speaking communities' through its policies, helping to support the aim of 'Develop[ing] a new regional focus to economic development to help all parts of Wales to benefit from prosperity and support each area to develop its own distinctive identity.' Within the WTS there will be opportunities to promote the Welsh language through its use in station announcements, road signs and signs within rail and bus stations.

Landscape and Townscape Character

The transport system has a major role to play in how future transport infrastructure development will affect landscape, townscape, and sense of place in general.

There is an opportunity for improved access to valued landscapes, townscape and viewpoints, including by sustainable and active travel modes to reduce the impact of motor traffic.

The WTS has an opportunity to provide high quality transport connections to National Parks for both tourists/visitors and local leisure users..

Historic Environment, Cultural Heritage and Assets

As with landscape, the WTS has a major role to play in the protection and enhancement of cultural heritage through guidance to the transport system. This could include the recognition that non-designated heritage assets are also an important part of the make-up of cultural identity and sense of place and that indirect effects on the setting of assets are also important considerations.

Opportunities also exist for the WTS to promote awareness of cultural heritage and encourage the enhancement of access to cultural education centres.

The WTS could seek to identify and protect transport infrastructure that may be of heritage value in its own right.

The WTS has the opportunity to contribute towards the efficient management of the transport system during major events, including sporting, leisure and recreational activities and cultural events

7 Well-Being Goal: A Globally Responsible Wales

This section provides baseline data relating to the following well-being goal:

'A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being.'

In many ways, this well-being goal relates to all of the ISA topics. However, for the purposes of presentation, the data in this section relate primarily to:

- Energy Consumption, Greenhouse Gas Emissions and Ecological Footprint

7.1 Overview of Baseline Conditions

7.1.1 Energy Consumption, Greenhouse Gas Emissions and Ecological Footprint

Relevance to the WTS

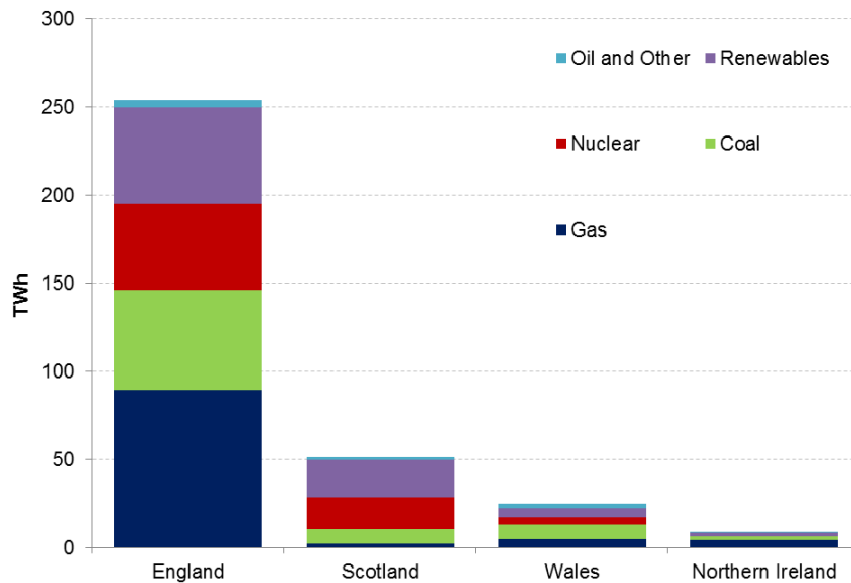
Wales is a globally responsible nation and the WTS has an important role in helping to guide planning and transport in a way that contributes positively to this. In particular energy consumption and greenhouse emissions are two things that occur locally through homes, businesses and transport but contribute to global consequences.

Baseline conditions and trends

Energy Generation

Energy generation in Wales is relatively evenly split between gas, coal, renewable and other sources with generation overall being significantly lower than in England and Scotland. Production has been in decline since 2010, largely due to the decline in energy from gas generation (Welsh Government, Energy Generation and Consumption Biennial Report, 2015). Figure 7-1 below shows energy generation by fuel in 2015 for England, Scotland, Wales and Northern Ireland in 2015.

Figure 7-1 Energy Generation by fuel in 2015 for England, Scotland, Wales and Northern Ireland in 2015



Sources: www.gov.uk

Between 2000 and 2013, the percentage of electricity generated from renewable energy sources has increased from less than 3% to over 10%. This is largely as a result of wind generation. However, this proportion of generation is still lower than any other UK country. The use of renewable energy could help to reduce Wales' carbon footprint over time. The Capacity (in GWh) of renewable energy generated in Wales in a recent study was 5,182.6 GWh (DECC).

Between 2016 and 2017 there was an increase from 12.3% of energy in Wales being generated by renewables to 20.0%, an increase of 7.7% in only a year⁷⁷.

Energy Consumption

Energy use in Wales in 2015 was about 25TWh which is about a 10th of the 250TWh energy used in England. Total energy consumption has been falling since 2005, though more so since 2007, which coincides with the economic downturn (as of 2015). The industry and commercial sector accounts for a large proportion of this decline⁷⁸.

The average energy efficiency of new homes in Wales is monitored. Percentage of dwellings with a Standard Assessment Procedure (SAP) rating of 65 or above is considered adequate. The SAP is a methodology used by Government for assessing the energy performance of dwellings. The SAP rating is expressed on a scale of 1 to 100 – the higher the number, the lower the running costs. Average SAP rating of new homes in Wales in 2008 was 77.6 and in 2009 this was 77⁷⁹.

Greenhouse Gas Emissions

Total greenhouse gas emissions in Wales in 2014 amounted to 46,402 ktCO_{2e}. This compares to 56,620 ktCO_{2e} in 1995, although that figure has fluctuated over the period showing a gradual decreasing trend overall. Total greenhouse gas emissions from Wales have reduced between 1990 and 2014 by 18%, whilst carbon dioxide emissions have fallen by 12%. These emission reductions are mainly due to efficiencies in energy generation and business sector heating, the use of natural gas to replace some coal and other fuels as well as abatement in some chemical industries, and variations in manufacturing output (e.g. in iron and steel, bulk chemical production)⁸⁰.

⁷⁷ Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2014 to 2017 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770766/Regional_Electricity_Generation_and_Supply.pdf

⁷⁸ Welsh Government, Energy Generation and Consumption Biennial Report, 2015

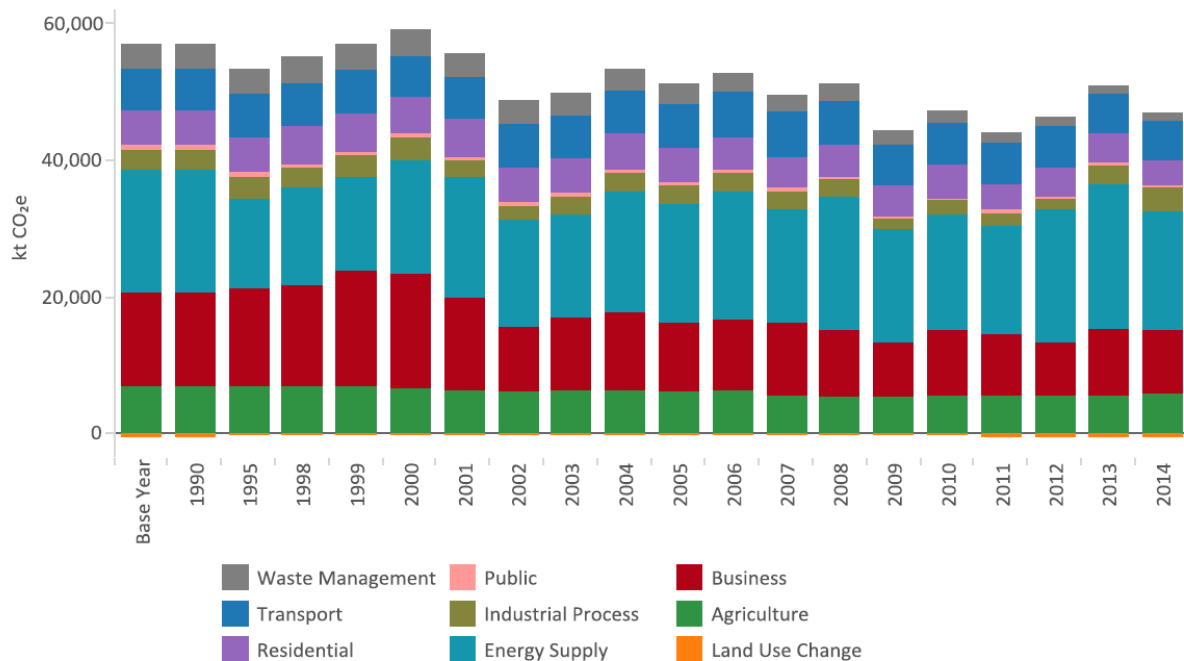
⁷⁹ data.gov.uk

⁸⁰ NAEI Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2014

Wales is moving in the right direction to help combat some of the most serious causes of climate change. The increase of renewable energy production is an example of this. A reduction of overall CO₂ emissions is helping Wales and the whole of the UK meet its reduction targets. However, although moving in the right direction, change needs to happen in Wales and across the UK to ensure reduction targets are met.

Figure 7-2 illustrates the split of emissions between different sources in Wales between 1990 and 2014. This shows that the largest contributor remains the energy supply industry. Since 1990, the sector that has decreased its proportion of emissions the most is the business sector (NAEI Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2014).

Figure 7-2 Total Greenhouse Gas Emissions per Sector in Wales (ktCO₂e)

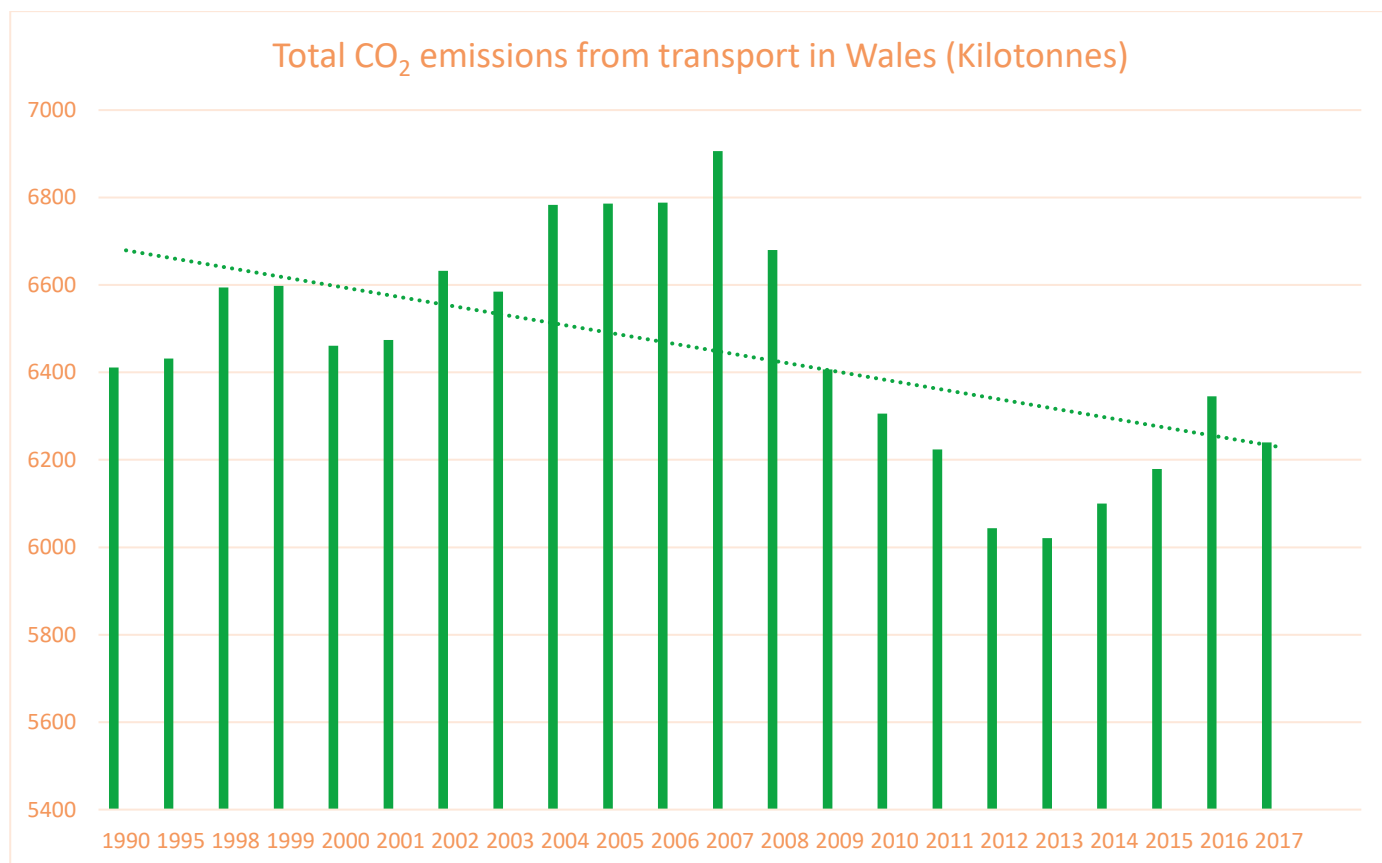


Change in greenhouse gas emissions from the transport sector

According to the National Atmospheric Emissions Inventory there is a declining rate of CO₂ emissions from the transport sector in Wales⁸¹.

⁸¹ <https://statswales.gov.wales/Catalogue/Environment-and-Countryside/Greenhouse-Gas/emissionsofgreenhousegases-by-year>

Figure 7-3 Total CO₂ emissions from the transport sector in Wales (kT)



Energy from renewable sources used by public transport

According to a report on energy generation in Wales⁸², around 91 TWh of energy per year is consumed in the country. 76.1 TWh of this is associated with transport, heating and industry.

7.4 out of 30.2 TWh of electricity generated in Wales is generated by renewable resources in 2018.

Ultra Low Emission Vehicles (ULEV)

There were 39% more licensed ULEVs at the end of 2018 compared to the previous year, this figure representing 200,000 ULEVs across the UK. ULEV's accounted for 0.5% of all licensed vehicles in the UK, regionally Wales had the lowest rate at 0.2% relating to 9,500 vehicles out of 1.9 million total vehicles in the country.⁸³

Journeys made by sustainable travel modes

The number of rail passenger journeys in Wales reached the highest level on record in 2017-18⁸⁴, there were 31 million rail passenger journeys which either started or ended in Wales, an increase of 1.9 per cent compared with the previous year.

⁸² Energy Generation in Wales, 2018 Welsh Government <https://gov.wales/sites/default/files/publications/2019-10/energy-generation-in-wales-2018.pdf>

⁸³ Vehicle Licensing Statistics: Annual 2018, Department of Transport https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800502/vehicle-licensing-statistics-2018.pdf

⁸⁴ Rail Transport, April 2017 to March 2018 Statistical Bulletin <https://gov.wales/sites/default/files/statistics-and-research/2019-04/rail-transport-april-2017-to-march-2018-824.pdf>

Rail passenger journeys within Wales increased to 21.5 million in 2017-18, a 1.3 per cent increase compared to the previous year. Cardiff was the most common destination for within-Wales journeys, accounting for 41% of all journeys.

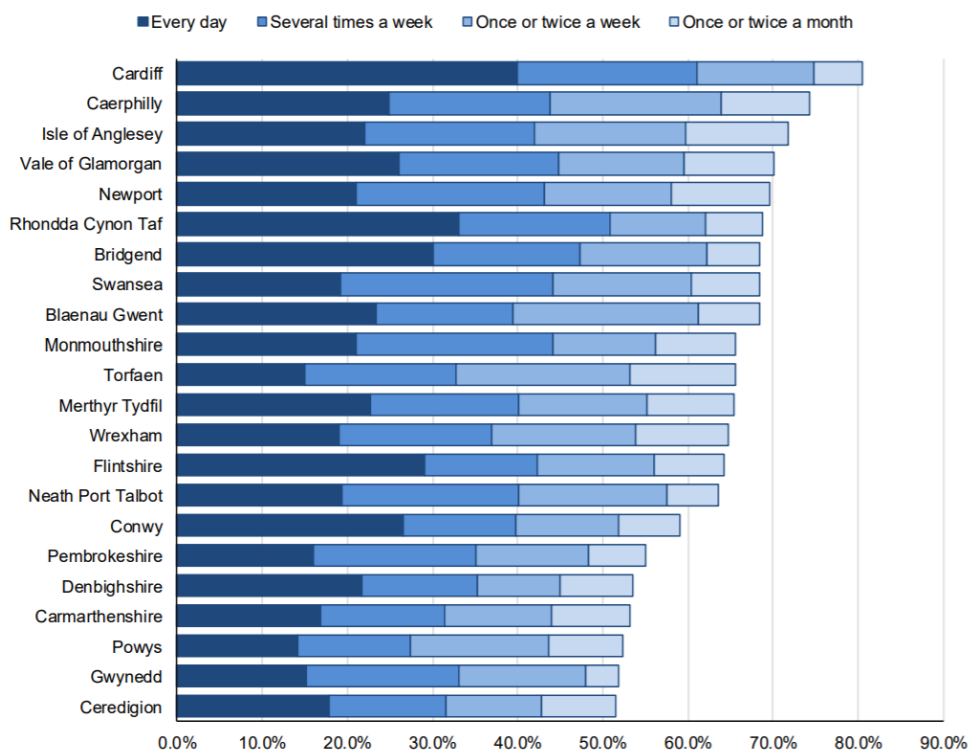
99.9 million passenger journeys were undertaken on local buses in Wales in 2017-18. These services covered a total 99.1 million vehicle kilometres.⁸⁵

Active travel

In a Statistical Bulletin on the use of active travel in Wales (2018-19)⁸⁶, it was found that:

- 6% of adults cycled at least once a week for active travel purposes. This has not changed very much in recent years.
- 57% of adults walked at least once a week for active travel purposes. This is broadly unchanged from the previous year.
- 70% of people in urban areas walked for more than 10 minutes as a means of transport at least once a month, compared with 56% of people in rural areas.
- 44% of children actively travel to primary school, and 34% to secondary school.
- 225 seriously injured pedal cyclists were admitted to hospital in 2018-19.

Figure 7-4 Active Travel by Walking, by Local Authority



Source: gov.wales

Ecological footprint

A study in 2008 estimated that Wales' ecological footprint at 10.05 million global hectares (gha), which is roughly five times the size of Wales, or 3.28 global hectares per capita (gha/c). Wales' carbon footprint is

⁸⁵ Public service vehicles (buses and taxis), 2017-18 Statistical Bulletin https://gov.wales/sites/default/files/statistics-and-research/2019-03/public-service-vehicles-buses-and-taxis-april-2017-to-march-2018_0.pdf

⁸⁶ Walking and cycling in Wales: Active travel, 2018-19 Statistical Bulletin <https://gov.wales/sites/default/files/statistics-and-research/2019-11/active-travel-walking-and-cycling-april-2018-march-2019-073.pdf>

estimated at 34 Mt CO_{2e}, or 11 t CO_{2e} per capita. In comparison with other developed countries, Wales' ecological footprint is significantly higher (Stockholm Environment Institute/University of York).⁸⁷

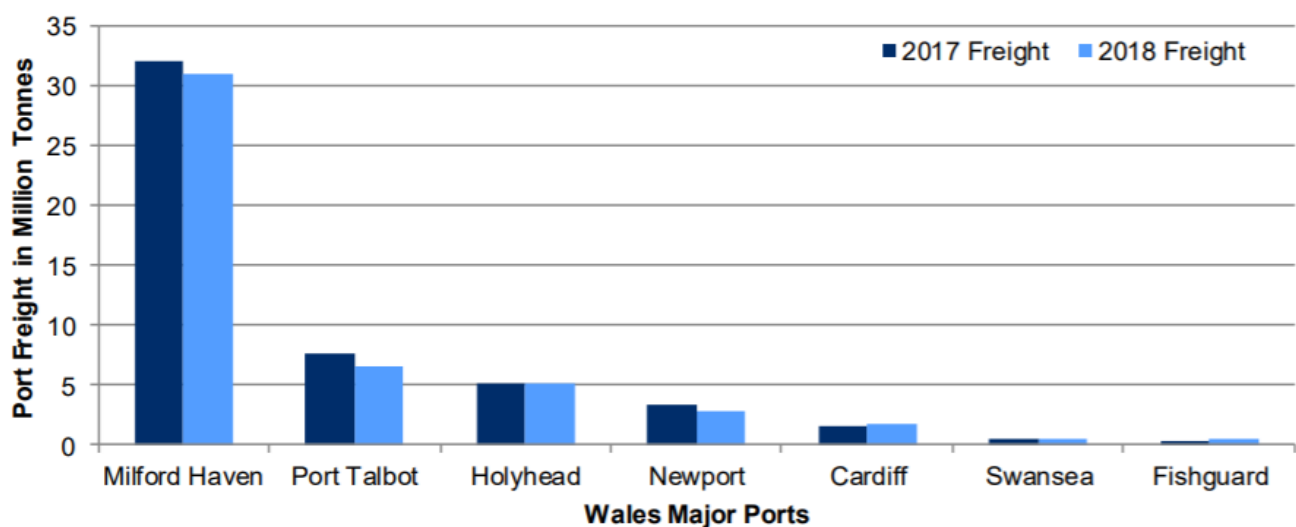
Hectares of healthy ecosystems that form part of the transport network

It states in the Welsh Transport Planning Appraisal Guidance (2008) that about 70% of the Welsh coastline is safeguarded in one way or another and 10% of all the land area in Wales is designated as a SSSI. There are over 1,500 protected sites across the country.⁸⁸

Freight⁸⁹

Freight traffic at Welsh ports was 49.2 million tonnes in 2018, a decrease of 4.8% from the previous year. Figure 7-5 below shows the total freight through major ports within Wales.

Figure 7-5 Total Freight through Wales Major Ports 2017 and 2018.



Source: Welsh Government, 2019.

Milford Haven handles the 5th highest traffic tonnage in the UK, accounting for 6.4% of UK traffic. The decrease in Wales' port traffic can be seen in Figure 7-6 which compares it to other UK countries and their change in port traffic.

⁸⁷ Ecological and Carbon Footprint Report: Wales

⁸⁸ Welsh Transport Planning and Appraisal Guidance <https://gov.wales/sites/default/files/publications/2017-09/welsh-transport-appraisal-guidance-weltag.pdf>

⁸⁹ <https://gov.wales/sites/default/files/statistics-and-research/2019-11/sea-transport-2018-624.pdf>

Figure 7-6 All port traffic inwards and outwards across the UK, 2017 and 2018

	Million tonnes		Per cent	
	2017	2018	% change	2017 to 2018
England				
Inwards	231	240	4.2%	▲
Outwards	105	100	-4.8%	▼
All	336	340	1.4%	▲
Wales				
Inwards	35	33	-5.7%	▼
Outwards	17	16	-3.0%	▼
All	52	49	-4.8%	▼
Scotland				
Inwards	19	20	4.2%	▲
Outwards	48	45	-5.6%	▼
All	67	65	-2.8%	▼
Northern Ireland				
Inwards	17	17	3.7%	▲
Outwards	10	11	6.0%	▲
All	27	28	4.6%	▲
United Kingdom				
Inwards	301	310	3.0%	▲
Outwards	181	173	-4.2%	▼
All	482	483	0.3%	▲

Source: Welsh Government analysis of Department for Transport data

The tonnes of goods transported by freight on the roads in Wales has decreased in the last 15 years⁹⁰.

Table 7-1 Goods transported via road freight in Wales 2004-2019

Year	Million Tonnes
2004	86
2005	94
2006	89
2007	96
2008	89
2009	66
2010	73
2011	64
2012	71
2013	59

⁹⁰ <https://www.gov.uk/government/statistical-data-sets/rfs01-goods-lifted-and-distance-hauled#domestic-road-freight-by-region>

2014	59
2015	63
2016	67
2017	70
2018	62
2019	64

Data Gaps

Data relating to freight transported on railways in Wales.

Data relating to gendered differences in data captured.

Transport Budget Headline Figures

Figure 7-7 Revenue and Capital of rail transport in Wales

2020/21 (£m)

Capital 610

Approx 50% on public transport and active travel, including:

Rail enhancements	47
South Wales Metro	142
North Wales Metro	23
Sustainable and AT	89

Revenue 530

But only around 10% of revenue budget could be considered as discretionary expenditure.

Rail franchise	185
Bus services	58
Trunk road opex	71
Depreciation	188

Source: Economy, Skills and Natural Resources Group, Welsh Government

Figure 7-8 Pounds sterling per kilometre travelled by different transport modes

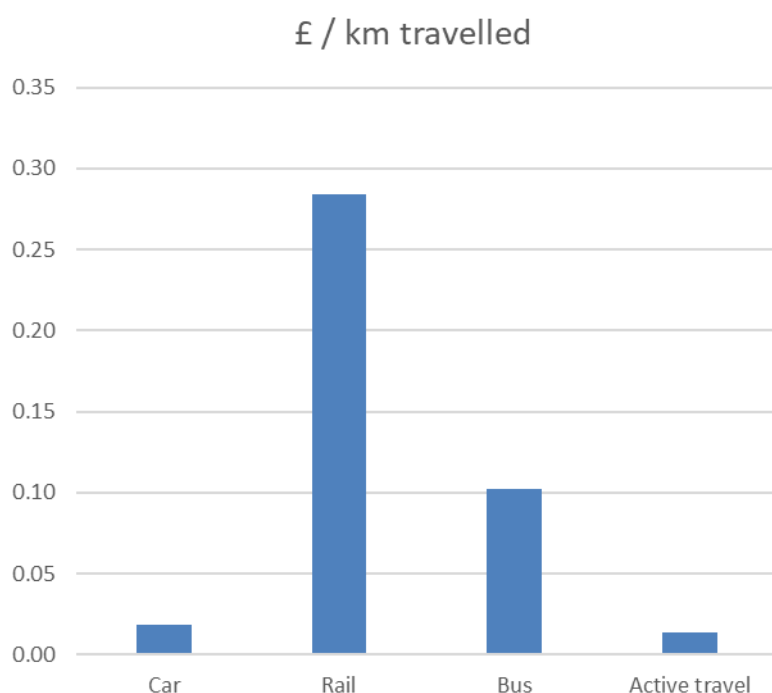


Figure 7-9 Money spent across different transport modes in Wales

	£m spent	Journeys (millions)	Modal share	Distance (billion km)	£ / journey	£ / km travelled
Car	682	849	62%	36.6	0.80	0.02
Rail	397	34	2%	1.3	11.63	0.31
Bus	198	103	8%	0.9	1.92	0.22
Active travel	42	384	28%	1.6	0.11	0.03
Total	1319					

Caveats

1. Funding levels not linear with patronage
2. Latest available data from each source has been used to produce these figures, meaning they are not always from directly comparable time periods
3. Wales-specific data not available for all modes, in which case estimates have been made using data for England

Source: Economy, Skills and Natural Resources Group, Welsh Government

Data Gaps

The largest gap in data is how specifically the transport network interacts with these factors e.g. how many hectares of healthy ecosystems does the transport network cross, how much energy used by the transport network is sourced from renewable resources, how many recycled materials are used in construction of transport infrastructure.

7.2 Key Issues relevant to the WTS and opportunities for it to address them

Issues

Greenhouse gas emissions have been steadily falling in Wales; there is still a long way to go to meet the emissions targets. This reduction is partly as a result of a gradual shift in energy generation to renewable and cleaner fuels together with technological and efficiency improvements in industry. However, again there are challenges to maintain these positive trends.

Wales' high ecological footprint must be maintained and not compromised by transport developments.

Measures must be taken to provision the safety of pedestrians and cyclists on the road in order to promote it as a viable form of transport.

The estimated global footprint of Wales is high compared with other developed countries. There is a challenge to reduce this whilst also accommodating new development and economic growth.

Opportunities

The WTS has an opportunity to help promote low carbon fuels and improved standards of energy efficiency in transport infrastructure.

The WTS should aim to reduce the growth of motor traffic.

The WTS must promote sustainable transport modes (including active travel and Ultra Low Emission Vehicles (ULEVs)).

The WTS presents an opportunity to implement the sustainable transport hierarchy:

Firstly, by reducing the need to travel unsustainably:

- bring services closer to people, integrated planning (communities built around transport hubs)
- ICT, flexible working, homeworking

Secondly, by widening and promoting more sustainable travel choices:

- integration, modal shift.

Thirdly; by make better use of the existing transport network:

- managing demand, facilities, capacity.

APPENDIX C Internal Compatibility of ISA Objectives

The 13 ISA Objectives have been tested for their compatibility with each other. The internal compatibility of the ISA Objectives was generally assessed as neutral i.e. no clear impact or as positive as they all seek to improve the quality of the environment and sustainability within Wales. However, the compatibility of some ISA Objectives was assessed as uncertain.

These uncertainties are outlined in the paragraphs below.

Uncertainty was scored against SA Objective 6 'To create the conditions within which greenhouse gas emissions can be reduced and limited' and SA Objective 9, 10 and 13 because the provision of renewable energy infrastructure such as wind turbines has the potential to affect landscape character, heritage assets, tranquillity and quality.

The compatibility was assessed as uncertain between SA Objective 3 'To support sustainable economic growth and diversity' and a number of the ISA objectives, as measures to promote the economy may lead to increased land requirements and thus, leading to some environmental and social effects.

Internal Compatibility of ISA Objectives

ISA Objective	1							Objectives are compatible = + Mutually incompatible = - Compatibility unknown = ? No clear impact on each other = (left blank)						
	2	+												
	3	+	+											
	4	+	+	+										
	5	+	+	?	+									
	6	+	+	?										
	7	+	+	?			+							
	8	+	+	?			+	+						
	9	+	+	?	+	?	?	+	+					
	10	+	+	?	+	+	?	+	+	+				
	11	+	+	?			+	+	+	+	+			
	12	+	+	?			+	+	+	+	+	+		
	13	+	+	?			?	?	?	+	+	?	+	
	1	2	3	4	5	6	7	8	9	10	11	12	13	
	ISA Objective													

The ISA Objectives are listed below:

1. To contribute to an improvement in physical, mental and social health and well-being for all, including contributing towards a reduction in health inequalities across Wales
2. To create the conditions within which an improvement in social cohesion and equality can be achieved
3. To support sustainable development and diversity

4. To protect and promote Welsh culture and improve access to cultural and recreational spaces
5. To encourage the protection and promotion of the Welsh Language
6. To reduce greenhouse gas emissions from transport
7. To enable climate change resilience
8. To protect and improve air quality
9. To protect and enhance the local distinctiveness of our landscapes and townscapes
10. To promote the conservation and enhancement of heritage assets
11. To promote the conservation and enhancement of biodiversity and geodiversity
12. To ensure the sustainable use of natural resources
13. To enable the protection of tranquil areas and prevention of noise and light pollution

APPENDIX D

Response Log

Integrated Sustainability Appraisal Response Log		Arcadis Response
Q1	Do you support the findings of the review of relevant plans, programmes, and environmental protection objectives? Are there any additional plans, programmes, or environmental protection objectives you think should be added? Are there any that you would like to remove from the review?	
	I believe that there should be a comprehensive assessment of the existing transport network throughout Wales to ascertain whether it is fit for purpose. I believe that the lack of a modern transport network is a major contributory factor to the issues of poverty & deprivation and adverse effects on the environment. The paucity of the current network fails to attract the businesses to Wales and does little to stimulate tourism and existing businesses in the rural economy.	Agree, comment noted.
	<p>I do not understand what you mean by 'scoping'. Indeed, much of the document is difficult to read and by the time I have read to the end of a paragraph, I can hardly remember the beginning. The document is opaque and regrettably difficult to comprehend. It should be written in far simpler and preferably shorter language.</p> <p>I know I am not all that bright, but I have been to University, have a couple of degrees and have worked in the National Health Service for almost 40 years, talking and communicating with all sorts of people. Would you allow me to raise the unworthy suspicion that your document has been written in such a way so that few people will understand it or write comments on it?</p> <p>Or are the people who wrote it unable to express themselves in plain language?</p> <p>Sorry....</p>	Scoping is the legally required first stage of the ISA process and best efforts have been made to present the diverse and extensive range of data in as-readable as format as possible. Following this stage, all ISA outputs will be accompanied by a non-technical summary to enhance their accessibility.
	We should be encouraging Active Travel by providing facilities that children & families can use to get to work, places of education etc., rather than using vehicles	Active travel opportunities will be a key consideration of the WTS and its ISA.
	There is no reference to plans for shared resources - for example community owned electric vehicles. There is one such scheme in Bethesda which is very popular. I think it would be great if Wales could be a leading example of best practise in terms of environmental conscientiousness, by providing this kind of cutting edge solution to green transportation	This comment is directed towards the contents of the WTS.

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>The Covid-19 aspects should be widened to consider spread of infectious diseases more generally. Transport strategies ought to be considering how they can avoid promoting the spread of disease by spreading the peak load, increasing capacity on mass transit, and promoting active travel. The socio-economic duty was introduced in Scotland in 2018, and the Scottish Government's Transport Strategy, published in February this year, was subject to it. TfW is taking steps to prepare for commencement. The purpose of the duty is to ensure that specified public bodies, when making strategic decisions, such as determining priorities and setting objectives, have due regard to the need to reduce the inequalities of outcome resulting from socioeconomic disadvantage</p>	<p>Advice noted.</p> <p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.</p>
<p>The plans set out a lot with regard to the environment but little about transport and its delivery. Although the Town Council supports the policy of environmental protection the scoping plan does not outline what aims and objectives are to be met with regard to transport delivery. Throughout the 58 page document there is little or nothing about change or improvement in public transport services that could result in increased usage</p>	<p>Public transport is a key consideration of the WTS and the Scoping Report.</p>
<p>Jacobs welcomes Welsh Governments commitment to sustainable solutions which aligns with our own PlanBeyond initiative</p>	<p>Noted.</p>
<p>Yes we do and we agree that the WTS should be shaped to help deliver social, economic, environmental and cultural benefits that are consistent with the seven goals of the Wellbeing of Future Generations Act</p>	<p>Agreed.</p>
<p>Reference to the Active Travel (Wales) Act 2013 to be included in the Scoping Report; also current Planning Policy Guidance</p>	<p>Active Travel Wales Act has now been included.</p>
<p>It is noted that existing plans and programmes have been reviewed to shape the ISA. However, it must be emphasized that where proposed schemes, that are well developed and substantially address the 'Well-being of Future Generation Act Goals' (such as Magor and Undy Walkway Station), must not be compromised, undermined or slowed because of the process mechanics of the ISA when they are clearly in line with its aims</p>	<p>It is not anticipated that the ISA could conceivably slow down the delivery of any permitted developments.</p>
<ol style="list-style-type: none"> 1. The scoping should recognise the value and purpose of Wales' National Parks and their contribution to overall national well-being. 2. The review should include 'Valued and Resilient' which sets out the Welsh Government's priorities for the National Parks and AONBs. 	<p>National Parks will be an important consideration of appraisals in the ISA.</p> <p>Valued and Resilient and National Park Management Plans</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
NRW/WG guidance advises that National Park Management Plans are of 'national significance' and therefore the relevant Plans for Brecon Beacons, Pembrokeshire Coast and Snowdonia National Parks should be included in the review	now included in the Scoping Report
The plans set out a lot with regard to the environment but little about transport and its delivery. Although the Association supports the policy of environmental protection the scoping plan does not outline what aims and objectives are to be met with regard to transport delivery	The Scoping Report is not intended to outline plans for transport delivery at this stage.
There is no reference to bus service provision with particular regard to rural areas	Bus services are an important element of the baseline data, including for rural areas to avoid and minimise the risk of isolation.
Given recent events and the impacts of the COVID Pandemic it is obvious that focus should also now be on any plans/programmes associated with the pandemic that will directly impact the WTS moving forward. Particular emphasis should be on ensuring consistent and complimentary aims and objectives with the Prosperity for All, Low Carbon Wales and A Climate Conscious Wales policies.	During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.
I have answered such, as I'm not 100% sure what the current document is seeking to deliver. There are many words but the document lacks clarity in its purpose and direction. It appears to be a document which seeks to tick boxes in process, but doesn't deliver much in terms of strategy. Plain language would help the reader. One positive is that a strategy will be delivered for the longer term – 25 years. If this is the case there will need to be a formalised review process every 5 years or so, but this must be adhered to strictly. Finally, Planning Policy Wales (PPW, v10) should be listed in section 3.1 (page 15).	The Scoping Stage is the first legally required stage of the ISA Process and is intended to establish the scope for the appraisal process. Planning Policy Wales Edition 10 added to Section 3.1
CUK broadly supports the findings of the review presented in Chapter 3. We agree that the WTS should be shaped to deliver social, economic, environmental and cultural benefits, in accordance with the seven goals of the Well-being of Future Generations Act, and with the need to identify potential synergies with these wider goals, as well as possible inconsistencies and constraints. We strongly welcome the recognition of the "particular importance" of documents such as <ul style="list-style-type: none"> Prosperity for All: A Low Carbon Wales Prosperity for All: A Climate Conscious Wales 	Public Health Wales' Long Term Strategy and Strategic Plan added. Review Contains Clean Air Action Plan and Connected Communities.

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>· The Natural Resources Policy for Wales, incorporating Sustainable Management of Natural Resources (SMNR) principles, such as public access to the natural environment; However, we would suggest adding in references to several plans, programmes and environmental objectives relating to transport's various public health impacts, notably air pollution, physical inactivity, road injuries, noise, and the social isolation (and hence mental and physical health impacts) of road danger on vulnerable groups.</p> <p>The relevant plans, programmes and environmental objectives should therefore also include those set out in:</p> <ul style="list-style-type: none"> · Public Health Wales's Long Term Strategy, and its Strategic Plan 2019-22; · The Clean Air Action Plan for Wales; · Wales's Sport and Physical Activity Strategy ('Climbing Higher'); · The emerging Road Safety Framework for Wales (this was reviewed in 2018, though a final version has yet to be adopted); · The Noise and Soundscape Action Plan; · Tackling Loneliness and Social Isolation through Connected Communities; · Welsh 20mph Task Force Group, Final Report, July 2020; · The National Cycle Network - sustrans.org.uk <p>We welcome the recognition of "Promote sustainable patterns of mobility and enhance sustainable transport provision to improve air quality" as one of the key themes (Table 3-2). However we would suggest adding "and active" after both occurrences of the word "sustainable". This would contribute not just to improving air quality but also to reducing greenhouse gas emissions, ill-health relating to physical inactivity, noise, road injuries, the isolation (and consequent health and well-being impacts) suffered by those most vulnerable to road danger, and the disproportionate burden of these impacts on disadvantaged groups.</p> <p>"Promote sustainable and active patterns of mobility" would therefore contribute not just to the four national well-being goals listed, but also to the goals of a 'more equal' and a 'more cohesive' Wales – for more on this, see our comments (in answer to question 2) on the treatment of these two goals in table 4-1.</p>	<p>Physical activity strategy, Road safety framework, noise and soundscape action plan, 20mph task force report added.</p> <p>"Sustainable and Active patterns..." added to key themes</p>
<p>Yes, the list of plans, programmes and environmental protection objectives appears to be comprehensive</p>	<p>Noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>We welcome the Integrated Sustainability Appraisal in ensuring that sustainable development will be central to the development of the Wales Transport Strategy and that it will be aligned to the well-being goals of the Well-being of Future Generations (Wales) Act 2015.</p> <p>We welcome the establishment of the ISA Working Group. We hope that women are well represented in the membership of the Group as often women have not been equally represented in policy-decisions relating to transport. Equally, it will be vital that the views and experiences of women are represented during stakeholder engagement on the draft strategy and that the consultation and engagement process reaches those groups who rely on public transport.</p> <p>Under the theme 'Create safe, sustainable, balanced and cohesive communities, including in both rural and urban areas', we would suggest that you consider the Violence Against Women, Domestic Abuse and Sexual Violence (Wales) Act 2015 and the National Strategy on Violence Against Women, Domestic Abuse and Sexual Violence - 2016 -2021. Women need to feel safe on public transport and during active travel. There is also a need to ensure that women, wherever they live, are equally able to access violence against women support services using public transport.</p> <p>We would also suggest that The Future Generations Report 2020 is considered, particularly in relation to the findings and recommendations on transport.</p>	<p>National Strategy on Violence Against Women, Domestic Abuse and Sexual Violence - 2016 - 2021 included in Appendix A.</p> <p>The Future Generations Report 2020 added also.</p>
<p>Generally yes. The document should also consider the Wales Spatial Plan and be consistent with other aims and objectives such Prosperity for All and a Low Carbon Wales along with Tackling Transport Poverty in Wales.</p> <p>Further, the Covid impacts now need consideration.</p>	<p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.</p>
<p>We are pleased to see that the ISA provides a long list of relevant plans across a range of departments that will relate to the Wales Transport Strategy. Transport is cross cutting so will relate in some way to</p>	<p>Noted. Wales NRAP and Future Generations 2020 Report added to review.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>most plans and strategies. As a result, there should be a cross-departmental approach to developing the WTS, recognising that transport is essential for the success of strategies across Government.</p> <p>We note that Habitat Regulations Assessments are not being undertaken at this stage and that it is felt that it is more appropriate to consider the protection of the Natura 2000 network at the next stage of transport plan-making and that a letter explaining this decision will be sent to NRW. In the principle of open government, we request that both the letter and any response are shared with stakeholders and that Welsh Government be prepared to reconsider this decision in light of any recommendations that NRW might suggest. We note that NRW has recognized both the climate and nature emergencies and that the Natura 2000 network has an irreplaceable role in addressing both.</p> <p>We welcome the detailed references to ecosystem resilience within the document and the intention to integrate the 5 'building blocks' of Diversity, Extent, Condition, Connectivity and Adaptability into the WTS. We suggest that this might be aided by explicit reference to both Wales's Nature Recovery Action Plan (NRAP) and the Convention of Biological Diversity's Strategic Action Plan that the NRAP supports. We note the recent recommendation in the Future Generations 2020 Report that Wales should aim to become 'an eco-literate nation' and suggest that inclusion of these key plans would contribute towards this. Explicit reference to these strategies will help raise awareness of the state of global ecosystems by helping raise both awareness, and action, on national and international commitments to biodiversity and ecosystem resilience.</p> <p>In addition, we recommend that the Welsh Government considers the DfT's Community Rail Development Strategy, adopted by the Welsh Government, which helps to show how engaging and empowering communities in regards to local transport provision can deliver benefits for sustainability, health, wellbeing and inclusion</p>	<p>DfT's Community Rail Development Strategy added also.</p>
<p>It is important to recognise that transport is a key enabler and essential for people to participate in society. It affects health outcomes both physical and mental by supporting access to services and facilities, social networks, jobs and more. Barriers to accessing transport costs the health service in missed appointments, loneliness and isolation, inability to live independently and so on. We believe that transport impacts on and has a role to play in most if not all of the Welsh Government's plans and strategies so much so that perhaps transport should be integrated into all of these rather than having a</p>	<p>Noted and agreed. The ISA will help to ensure that the cross cutting nature of transport is accounted for.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>separate strategy of its own. The cross-cutting nature of transport should be recognised by all and be addressed through a commitment to joint policy-making & commissioning across sectors and departments to ensure a strategic approach to investment.</p>	
<p>We support the findings of the review. However, we recommend that the following additional plans and programmes are included as part of the review</p> <ul style="list-style-type: none"> • Design Manual Roads and Bridges Volume 11 Section 3, Part 10, Annex I – Environmental Assessment Methods • Road Drainage and Water Environment LA 113; • National Development Framework • Shoreline Management Plans; • Welsh Government Noise and Soundscape Action Plan 2018-23 • Valued And Resilient: Welsh Government's Priorities for AONB's and National Parks 2018 • National Park and AONB Management Plans • Historic Environment and Climate Change Sectoral Adaptation Plan • Tranquillity maps • NRW LANDMAP, Landscape and a Changing Climate full report • National Flood & Coastal Erosion Risk Management Strategy for Wales (new strategy due to be published shortly). We recommend that reference to the following documents should be amended as follows: • The Environment Agency (2013) Groundwater Protection Policy and Protection (GP3) has been replaced with 'The Environment Agency's Approach to Groundwater Protection, February 2018 V1.2'; • Appendix A (Table 1.2, section re: flooding/coastal erosion), PPW Edition 10 should be referenced, not edition 9. • Replace 'Welsh Government (2011) Preparing Wales for Climate Change: Adaptation Delivery Plan' in Table 1.2: with 'Climate Conscious Wales (2019)'; • In Appendix A – National Plans – amend from Bill to Act: Public Health (Wales) Act 2017. 	<p>Comments noted</p> <p>Emerging National Development Framework included</p> <p>Noise and Soundscape Action Plan, Priorities for AONB's and National Parks, National Park Management Plans, Historic Environment And Climate Change Adaption Plan added</p> <p>Amendments made to documents</p>
<p>Welsh version: Cynlluniau a Rhaglenni</p> <p>Mae Deddf Llesiant Cenedlaethau'r Dyfodol yn ganolog i'r strategaeth arfaethedig; ac fel noda'r ddogfen ymgynghorol, mae 'Cymru â diwylliant bywiog lle mae'r Gymraeg yn ffynnu' yn un o'r saith nod llesiant.</p> <p>Mae'r ddogfen ymgynghorol yn rhestru'r dogfennau cenedlaethol sydd 'o bwysigrwydd arbennig' ac y 'bydd Strategaeth Drafnidiaeth Cymru'n gweithio â nhw ac yn rhannu nodau ac amcanion cyffredin.' Nodwn nad yw strategaethau eraill y Llywodraeth o ran y Gymraeg wedi eu rhestru yn y ddogfen ymgynghorol, er eu bod yn cael eu rhestru yn Atodiad 1.</p> <p>Argymhellion</p>	<p>Noted. Most of this comment refers to the contents of the WTS rather than the ISA.</p> <p>Listed documents in this response are now included in the ISA.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<ul style="list-style-type: none"> Datblygu'r Strategaeth Drafnidiaeth mewn ffordd sy'n ategu gweledigaeth strategaeth Cymraeg 2050: Miliwn o Siaradwyr (2016). Cysylltu'r strategaeth â'r gofyniad ar awdurdodau lleol i hwyluso mynediad at addysg Gymraeg yn unol â Mesur Teithio i Ddysgwyr (Cymru) 2008 a'u Cynlluniau Strategol y Gymraeg mewn Addysg. Cynnwys adran yn y strategaeth am ddyletswydd sefydliadau perthnasol i gydymffurfio â safonau'r Gymraeg yn unol â Mesur y Gymraeg (Cymru) 2011. <p>Rydym yn cytuno â'r cysylltiad rhwng nod llesiant y Gymraeg â'r amcanion canlynol:</p> <ul style="list-style-type: none"> Gwella cysylltedd cymunedau sydd wedi eu cynllunio a'u dylunio'n well, a hybu cyfle mwy cyfartal i bob dinesydd Diogelu a gwella unigrywedd ein tirweddau a'r amgylchedd hanesyddol, asedau hanesyddol a'u lleoliadau Cyfrannu at lesiant y Gymraeg, diwylliant a threftadaeth yn y dyfodol Creu cymunedau diogel, cynaliadwy, cytbwys a chydlynus, mewn ardaloedd gwledig a threfol Hybu twf economaidd cynaliadwy, amrywiaeth a chystadleurwydd busnes Sefydlu economi dwristiaeth gref, gan fanteisio'n sensitif ar asedau amgylcheddol, treftadaeth a hamdden <p>Argymhelliad</p> <p>Cysylltu nod llesiant y Gymraeg â'r amcanion canlynol:</p> <ul style="list-style-type: none"> Gwella iechyd a llesiant corfforol a meddyliol y boblogaeth a lleihau anghydraddoldebau iechyd i greu Cymru iachach Gallai Strategaeth Drafnidiaeth Cymru gynnig cyfle i leihau ynysigrwydd ac annog datblygiad cymunedau integredig y gellir byw ynddynt trwy ddarparu ar gyfer cynhwysiant trafnidiaeth gyhoeddus i ganiatáu i bawb gael yr un lefel o fynediad 	

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>English translated version:</p> <p>Plans and Programmes</p> <p>The Wellbeing of Future Generations Act is central to the proposed strategy; and as noted in the consultation document, 'Wales and a vibrant culture where the Welsh language thrives' is one of the of the 7 wellbeing objectives.</p> <p>The consultation document lists the national documents that are 'of special interest' and 'the Wales Transport Strategy will work with them and will share the general aims and objectives'. We note that the Government's other strategies with regards to the Welsh language are not listed in the consultation document, even though they are listed in Appendix 1.</p> <p>Recommendation</p> <ul style="list-style-type: none"> • Develop the Transport Strategy in a way which complements the Cymraeg 2050: A Million Welsh Speakers (2016) strategic vision. • Connect the strategy and requirement on local authorities to facilitate access to Welsh medium education in accordance with the Learner Travel (Wales) Measure 2008 and their Strategic Planning for Welsh in Education. • Include a section in the strategy about the responsibilities of relevant organisations to comply with Welsh language Standards in accordance with Welsh Language (Wales) Measure 2011. • We agree with the connection between the Welsh language wellbeing and the following objectives: • Improve community connectivity which have been designed and planned well, and promoting more equal opportunity for all citizens • Protect and improve the uniqueness of our landscapes and historical environment, historical assets and their locations. • Contribute to the well-being of the Welsh language, culture and heritage in the future • Create communities that are safe, sustainable, balanced and co-ordinated in rural and urban areas • Promote sustainable economic growth, range and competitiveness of businesses • Establish a strong tourism economy, by sensitively taking advantage of environmental, cultural and leisure assets <p>Recommendation</p> <p>Connect the well-being of the Welsh language aim with the following objectives:</p> <ul style="list-style-type: none"> • Improve the population's physical and mental health and well-being and reduce health inequalities to create a healthier Wales <p>The Wales Transport Strategy could offer an opportunity to reduce isolation and encourage the development of integrated and habitable communities by providing for inclusive public transport which would allow the same access to everyone</p>	
<p>The document has a strong public transport focus and, as such, has a reasonably comprehensive coverage at a National Level. However, there is no mention of the various regional level policies produced by the transport consortia in the period to 2014.</p>	<p>Noted</p> <p>Agree, Wales freight Strategy added to the Scoping Report.</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
However, freight transport related policies have been ignored and this is then reflected in the final review table. Looking at Appendix A, the Wales Freight Strategy is an obvious omission. If looking at regional level strategies too, then the Marches and Mid Wales Freight Strategy (2018) should also be included.		
Yes we do and we agree that the WTS should be shaped to help deliver social, economic, environmental and cultural benefits that are consistent with the seven goals of the Wellbeing of Future Generations Act		Noted
Q2	Do you agree with the sustainability issues that we have identified? Are there additional issues and opportunities that the ISA should consider? If so, what are they?	
So far as I can understand them...		Comment noted
<p>Long term, people need to be able to feel able to wean themselves off driving their car everywhere. I think there should be safer cycle paths, providing more joined up routes.</p> <p>I also feel there should be more incentives to make greener choices. I personally would give up my car if this was a feasible option, but it can be impossible to get anywhere that is only a 20 minute drive away - by the time you've got the multiple buses there it's time to get the last bus home... I appreciate that running bus services must be expensive, especially if they're not used much, I also feel that bus prices per year should not equate to more than it costs to run a car (including petrol)</p>		Agreed, comment noted
<p>In the Opportunities section for A Prosperous Wales there's potential to mention the ability to support employment through the promotion and support for active tourism e.g. considering the designation of the National Cycle Network as a strategic transport facility which could be adopted by LAs, and expanded and funded to encourage cycle/active tourism with appropriate links to the public transport network. This should also include mention of the potential to introduce additional green infrastructure as part of future transport proposals (biodiversity is mentioned but this should be explicitly stated as well) to support placemaking as well as biodiversity, flora, and fauna. Consider mention of opportunities for inclusion of SuDS approach to reduce impact of new schemes on flood risk. Should this not this refer to road users not just drivers, assuming that the casualties of road accidents are not just drivers. For opportunities, consider inclusion of reduction in unnecessary short distance single-occupancy car journeys to reduce risk to NMUs</p>		<p>Comment Noted</p> <p>Added National Cycle Network and active tourism to Opportunities</p>
The Town Council agrees with the what the ISA should consider and the plan for taking policy forward as set out below subject to our comments on 'transparency and clear aims and objectives'		Support noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>Yes we do. We recognise that there are sustainability issues associated with the economy, the climate, air quality, noise, biodiversity, flood risk, geology and soils, the water environment, minerals and waste, welsh language, landscape and townscape character, the historic environment and our other cultural heritage and assets</p>	<p>Support noted</p>
<p>In terms of climate change, we're not sure whether current carbon reduction targets are stated and explained in detail: there is a need for sectoral analysis of transport modes and their capacity to change carbon outputs by greater efficiency and new technologies, and the capacity to question sectoral commitments and trajectories</p>	<p>Comment noted</p>
<p>MAGOR (Magor Action Group on Rail) have been lobbying for seven years to open Magor & Undy Walkway Station. This would be the first dedicated 'Walkway Station' to be purpose-built in 100 years. It would be a first for Wale/UK – positioned and designed to allow the majority of residents to walk or cycle to it (with only drop-off and disabled-parking facilities for cars, but assuring bus integration). The station would have the potential to remove up to 100,000 car journeys per year off the B4245. The road carries circa 11000 vehicles per day. The area is in a pollution hotspot. Most of this traffic passes three primary schools. Therefore, the opening of Magor & Undy Walkway Station is an unmissable opportunity for this community, of what will be 10,000 in the next few years. Hence -</p> <ul style="list-style-type: none"> • Creating the conditions within which air quality can be protected and improved where necessary. • Encouraging a reduction in the negative effects of transport on local air quality. • Reducing the likelihood of new Air Quality Management Areas being required through transport initiatives. • Creating the conditions within which potential emissions from traffic and industry may be reduced. • As far as is possible, ensuring that the most vulnerable communities are not disproportionately affected by poor air quality. 	<p>Comment noted</p>
<ol style="list-style-type: none"> 1. An interim version of the 2019 SoNaRR is available and provides more up to date information than the 2016 version cited in the consultation document (section 4.2 and 4.3.1). 2. As part of the rural-proofing of the document it is important to recognise the needs of tourists and leisure users in rural areas. The population of the National Parks is more than doubled during busy holiday periods with visitors which are a crucial element of the local economies. The transport needs of visitors and leisure users differ greatly to those of the usual resident population and high numbers of visitors to popular, natural tourist attractions – mountains, rivers, beaches - has significant impacts in terms of congestion, impact on local communities and the environment. 	<p>Comments noted</p> <p>SoNARR interim report added</p> <p>Added opportunity to provide transport connections to National Parks</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>3. Town centres are changing and are likely to experience significant change following the current Covid 19 crisis with regular news of retailers going out of business. These areas need redefinition and repurposing. Our transport systems are set up to bring large number of people into these areas from suburbs or countryside for education, work, retail, health etc but the switch to home-working combined with the short-term cautionary approach of only using public transport where necessary is having an impact on behaviours and choices – some of which may endure into the longer term.</p> <p>4. Improved access may not always mean ‘more’ – it should be ‘appropriate’ in terms of volume and type – and so may mean a shift of mode rather than an overall increase in some places. Examples would be town and city centres and popular tourist attractions (including natural attractions).</p> <p>5. E-bikes and e-scooters need to be taken fully into consideration.</p> <p>6. Opportunity to improve access to valued landscapes, townscape and viewpoints should ensure that all Wales communities have integrated services to connect them with their protected landscapes with further opportunity to promote awareness of cultural heritage and cultural education centres.</p> <p>7. Table 3.2 omits to recognise the significance of connecting Wales’ population with their National Parks thereby losing the contribution they bring to national well-being</p>	<p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.</p>
<p>The Association agrees with the what the ISA should consider and the plan for taking policy forward as set out below subject to our comments on ‘transparency and clear aims and objectives’:</p>	<p>Support noted</p>

Integrated Sustainability Appraisal Response Log			Arcadis Response
<div> <div>Key Stages in ISA Process</div> <div>Key Stages in WTS Process</div> </div> <div> <div>ISA Scoping</div> <div>ISA of WTS Options</div> <div>ISA of Draft and Final WTS</div> <div>Monitor Significant Effects</div> </div> <div> <div>Evidence gathering and stakeholder engagement</div> <div>Develop and consult on main issues, options and preferred option</div> <div>Prepare Draft WTS and consultation</div> <div>Prepare Final WTS for Assembly consideration</div> <div>Publish WTS</div> </div>			
<p>The Scoping Report obviously needs to be mindful that the environmental, social, economic and cultural baseline from which the sustainability information is developed is an ever evolving dataset, and as the WTS has 25 year horizon, many factors can and will influence its development and require amendment during that period. e.g. impact of COVID</p>			<p>Agree, Comment noted</p> <p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>Sadly there are some tainted views over the issues and opportunities referenced in table 4.1 of the document, particularly the understanding of minerals issues. These are misleading and does not necessarily reflect Welsh Government policy</p>	<p>Noted. Table 4.1 has been refined further.</p>
<p>We certainly support the broad thrust of the analysis presented in Chapter 4. We agree with the importance of understanding the economic, social, cultural and environmental characteristics of Wales in order to assess the impacts of the WTS.</p> <p>We particularly welcome the ISA's recognition of climate change and ecosystem resilience as "overarching considerations" in preparing and assessing the new WTS (Section 4.3). We very strongly endorse the sentiment that "The WTS could help to lower greenhouse (gas) omissions by promoting active travel and ULEVs as well as implementing the sustainable transport hierarchy:" However, we think the key need, to reduce the growth of motor traffic, should be explicitly identified and endorsed. As regards the summary of key issues and opportunities for the WTS to address (as set out in table 4-1), we make the following comments on points of detail:</p> <p>Well-being goal 1: A prosperous Wales</p> <p>The list of 'key issues' needs to include the economic disbenefits of congestion due to a transport system which is over-dependent on motorised road transport after many decades of failure to plan for and invest adequately in healthy and sustainable alternatives (i.e. walking, cycling and public transport). The 'opportunities' column should include the opportunities:</p> <ul style="list-style-type: none"> • To redesign roads, streets, junctions and public spaces to be safer and more attractive for walking and cycling; • To reallocate road-space in favour of transport modes that make more efficient use of that space (i.e. walking, cycling and public transport); • To improve the integration of walking and cycling with public transport services, enabling more people to use clean and healthy travel for the whole of longer door-to-door journeys; • To reduce the need to travel through better planning, from broadband investment to land-use policies which concentrate new developments where they facilitate shorter journeys and/or journeys that can be more easily be made by walking, cycling and public transport. <p>Well-being goal 2: A resilient Wales</p> <p>We agree with both the 'issues' and 'opportunities' identified.</p>	<p>Support and comments noted. noted</p> <p>Agree, need to reduce the growth of motor traffic added</p> <p>Agree, congestion added to issues for A Prosperous Wales</p> <p>Opportunities to reduce congestion added</p> <p>Support noted.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>that the number of friends and acquaintances people have among their neighbours correlates with the levels of motor traffic on their streets. An overview of these references and other related literature is available at https://discovery.ucl.ac.uk/id/eprint/1540724/1/Street%20Mobility%20Toolkit_What%20we%20know.pdf.</p> <p>It follows that:</p> <ul style="list-style-type: none"> • The 'issues' column should highlight the isolation felt not just by people in rural areas (penultimate bullet-point), but also those living on roads with fast or heavy traffic. • The 'opportunities' column should highlight the potential to overcome this isolation by improving provision for journeys on foot or by cycle, both utilitarian (active travel), and for leisure (active recreation). <p>The 'key issues' column includes the statement "more efforts should be made to provision (sic) the safety of drivers as much as possible". This is wholly inadequate and fails to recognise settled Welsh Government policy to reduce injuries to all road users - not just drivers. UK road casualty data is sophisticated and detailed; the simplistic and erroneous statement that "the number of deaths on the road is remaining consistent (sic) year to year" does not do justice to the readily available statistics. The current WG targets for 2020 are a 40% reduction in casualties since 2013; progress is way off target for two of the three categories.</p> <p>Casualty rates amongst pedestrians and pedal cyclists are similar to each other - but around ten times higher than for car occupants, per billion miles travelled (Pedal Cycling Road Safety Factsheet: March 2018, UK Department for Transport). In striving for a 'more equal Wales' the new WTS needs to address this disparity proactively.</p> <p>Importantly and in addition, road safety is more than the avoidance of being injured. It must also address the perception of risk of harm and freedom from harm and its manifestation at the individual, community and societal levels (Welsh 20mph Task Force Group Final Report, July 2020, p8). The proposed 20mph default speed limit in Wales will improve overall well-being in our communities, but its main aim is road danger reduction (a much preferable, broader, aim than casualty reduction). The new WTS should recognise this.</p> <p>Well-being goal 5: A Wales of vibrant culture and thriving Welsh language</p> <p>The 'issues' column should recognise that road traffic (including noise) and parking can blight the character of landscapes, townscapes, and the settings of environmental, cultural and heritage assets.</p>	<p>Issue of cars travelling through communities promoting isolation added and opportunity added</p> <p>Other road users added to issues</p> <p>Agree, comment noted</p> <p>Agree, comment noted.</p> <p>Motor traffic and parking can blight landscape and townscapes added to issues and opportunities columns</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>The 'opportunities' column should note the opportunities to reduce motor traffic, including the blight of noise and parking, through the promotion of sustainable and active travel, and specifically the opportunities to travel to, or through, Wales's environment and landscapes, or its heritage and cultural assets, by walking or cycling. The Welsh Government has set up working groups to discuss proposals (set out in 'Taking forward Wales's Sustainable Management of Natural Resources') to open up most footpaths as multi-user trails. There is an opportunity to blend Rights of Way Improvement Plans with the Active Travel Network Maps (ATNMs), extending the latter out into surrounding areas. This would not only increase opportunities for active travel (e.g. for school pupils in rural areas to walk or cycle safely to schools in nearby towns) but also for active recreation, (e.g. allowing families living in those towns, or visitors staying in those towns, to get out into the surrounding countryside on foot or by cycle, without needing to drive to 'honeypot' locations. The same approach could also reduce car dependence in the most popular areas for outdoor recreation. An enhanced National Cycle Network, adopted as an integral part of the Welsh national transport infrastructure, has a large part to play</p> <p>Well-being goal 6: A globally responsible Wales We agree with both the 'issues' and 'opportunities' identified.</p>	Support noted
Yes, the key sustainability issues have been identified	Support noted
We welcome the comprehensive summary of the key issues and opportunities that the ISA should consider	Support noted
<p>Generally yes. Sustainability in the wider context needs to be considered as there many factors linked to environmental, social, economic and cultural that need consideration.</p> <p>The current pandemic now also needs consideration in regard the wider "sustainability" context</p>	Support and comment noted
<p>We welcome the wide range of issues that the ISA has identified and support this holistic approach in line with the Well-Being of Future Generations Act. As above, we think there is an opportunity to contribute towards an increase in 'eco-literacy' in Wales through inclusion of reference to the Nature Recovery Action Plan, which would also support those considering and implementing the WTS to meet the Environment Act Section 6 duty to maintain and enhance biodiversity and ecosystem resilience.</p> <p>Under Objective 3 - To support sustainable economic growth and diversity, there is an opportunity to consider how the WTS might support the foundational economy, which provides opportunities for local employment and stronger communities. As the First minister has noted, the foundational economy can'</p>	<p>Support and comment noted</p> <p>Nature Recovery action plan added</p> <p>Comment noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>help keep money in communities, create better employment conditions and increase prosperity across Wales’.</p> <p>It would be useful to know how the WTS will consider the goal of a Globally Responsible Wales and relevant issues here might be consideration of ethical and sustainable supply chains, particularly if there is a prospect that items could be sourced from vulnerable communities or habitats internationally and issues of Modern Day Slavery.</p> <p>We recommend that the role of community engagement and empowerment in delivering positive outcomes for sustainable transport, health, wellbeing and inclusion, is recognised in the WTS and explored in the ISA. A range of research attests to the importance of community engagement and empowerment in achieving more sustainable forms of development, and sustainable transport behaviours. Our experience, across our member organisations, of working with communities in Wales on transport matters also shows the range of positive outcomes that can be delivered, aligning with the Wellbeing of Future Generations Act. We would also raise the importance of community resilience, the benefits of which have been highlighted through the local response to COVID19.</p> <p>Empowering communities to be involved in the development and provision of local transport, and ensuring local knowledge informs developments and transport management and decision-making – going well beyond ‘consultation’ should be central to the WTS. Transform Cymru members have strong links with communities across Wales and the capability this provides should be used to inform and deliver plans. We are able and enthusiastic about advising further on this topic.</p> <p>Finally, there is little direct mention of those with disabilities or mobility impairments, which can be both physical and mental barriers to using the transport network (across all modes). It is important to separate these issues out so that they are not covered in a collective sense, which risks exclusion of those with specific needs</p>	<p>Comment noted</p> <p>Agree and advice noted</p> <p>Advice and comment noted</p> <p>Agree, Advice noted</p> <p>Physical and mental barriers of the transport network added to issues under A More Equal Wales</p>
<p>In exploring sustainability, the scoping report focuses on environmental resilience. We believe that community sustainability and resilience is another aspect that should be included here. Now more than ever, we understand the importance of community resilience and this has relevance to any transport strategy. In particular, we believe that communities should be involved in shaping policy and developing</p>	<p>Agree, comment noted.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>solutions, preferably through co-production rather than traditional methods of consultation where people are generally asked if they agree with things that are being proposed. The Well-being of Future Generations Act commits public bodies to principles of involvement and collaboration however, whilst reference is made in the consultation document to this, it is unclear how it will be realised. Our preferred approach would involve taking steps to listen and understand people's priorities and objectives i.e. What do they want transport to achieve for them? Why do they need transport services? Third sector organisations have strong links with communities with community transport in particular having in-depth knowledge of local transport needs and this should be recognised with steps taken to ensure expertise is fully utilized in the development of this work with continued engagement as the strategy is delivered</p>	<p>Agree, further detail on the Third Sector and community transport added.</p>
<p>We generally support the sustainability issues that have been identified. However, we recommend that the following additional issues and opportunities should be considered by the ISA: Table 4.1. Wellbeing Goal: A Resilient Wales Opportunities for the WTS to address Covid19 • We recommend that the evidence and assumptions underpinning the Wales Transport Strategy, need to be reviewed, to take into account post Covid19 circumstances as set out in the recent Welsh Government Ministerial letter requesting a review of the evidence base underpinning local development plans. Climate and Flood Risk • Consideration of the existing transport infrastructure at the coast and sections that may be affected by coastal adaptation – to ensure that the significant infrastructure in the coastal zone is in a sustainable position and is secure in the long term. Shoreline Management Plans have a key role here. • Coastal erosion: There have been numerous coastal flood/erosion events in recent years which have affected coastal roads and railways, examples are included in the 2013/14 storms Coastal Flooding Review: https://naturalresources.wales/evidence-and-data/research-and-reports/reports-evidence-and-data-on-flooding/wales-coastal-flooding-review-phase-2/?lang=en. We recommend coastal erosion is included as an additional consideration for the WTS to address.</p>	<p>Agree, support and advice noted</p> <p>The impacts of Covid-19 added under A resilient Wales</p>
<p>Welsh version: Ceir cydnabyddiaeth yn y ddogfen ymgynghorol o'r cyfleoedd i hybu'r Gymraeg drwy'r Strategaeth Drafnidiaeth arfaethedig.</p> <p>Argymhelliad</p>	<p>This comment refers to the contents of the WTS, rather than the ISA.</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
<p>Cyflwyno dyhead y Llywodraeth i hybu'r Gymraeg drwy'r strategaeth yn glir: drwy gynyddu'r defnydd o'r iaith ar drafnidiaeth gyhoeddus, gwella mynediad at addysg a gwasanaethau Cymraeg, a hwyluso cyfleoedd economaidd a mynediad at weithgareddau cymdeithasol yn yr iaith</p> <p>English translated version</p> <p>The consultation document acknowledges the opportunities to promote the welsh language in the proposed Transport Strategy.</p> <p>Recommendation</p> <p>Presenting the Government's aspiration to promote the Welsh language clearly through the strategy: increasing the use of the Welsh language on public transport, improve access to education and Welsh language services, and facilitate economic opportunities and access to social activities through the medium of Welsh.</p>		
<p>Again, the summary of issues in Table 4-1 has a significant focus on passenger transport and there needs to be a greater recognition of freight transport users of the transport network. This would then also be reflected in the opportunities for the WTS to address. In Figure 4, the Port of Mostyn is omitted, which handles significant traffic for the energy sector (and especially offshore wind). Also, the map neglects to include the Swansea District line which does have a small number of passenger trains per day currently, with a proposal for a Parkway station currently being developed</p>		<p>Agree, advice noted.</p> <p>Freight transport added</p> <p>Port of Mostyn and Swansea District Line added to Figure 4</p>
<p>Yes we do. We recognise that there are sustainability issues associated with the economy, the climate, air quality, noise, biodiversity, flood risk, geology and soils, the water environment, minerals and waste, welsh language, landscape and townscape character, the historic environment and our other cultural heritage and assets</p>		<p>Support noted.</p>
Q3	Are there any particular topics or geographical areas of specific concern to you or your organisation?	
<p>I live in Torfaen and the north of the County continues to suffer from a lack of connectivity. For example there is a World Heritage Centre in Blaenavon that should attract much greater numbers of visitors than at present. I believe the lack of decent transport is wholly responsible for not just this but the general lack of employment and tourism opportunities in the area. People living in the area have to rely on the private car to access employment and retail venues.</p>		<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p>
<p>North Wales</p>		<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
Little happening in North Wales. There is life north of Brecon!	This comment is focussed on the contents of the WTS, rather than the ISA.
The bus routes can be so poorly linked that it takes several hours and costs around £10 to make a journey that would take 20 minutes in a car (I'm thinking of Rachub to Llanberis). In a previous job, it used to be faster for me to cycle to work in Llanbedrgoch, Anglesey, than to get 3 buses, but meant I was exhausted before even starting a 2 day shift	This comment is focussed on the contents of the WTS, rather than the ISA.
Should make reference to addressing gender pay gap, as well as equal pay issues. No mention of regional connectivity	The gender pay gap, gender inequality, and regional connectivity is a key consideration of the baseline data and key issues and is reflected in the ISA framework.
Jacobs believes integration across the whole of the UK is of great benefit and would encourage Welsh Government to consider all linkages across borders in depth. This is particularly important in accommodating Brexit related issues across the Irish Sea	This comment is focussed on the contents of the WTS, rather than the ISA.
Public transport in North Wales and particularly Gwynedd has been decimated over the past 10 years. An integrated, sustainable network cannot be maintained commercially. Promoting services, in particular, providing network timetable booklets essential (well done Yns Mon and Conwy who still do). Competent bus operators should be fully involved in the process if issues such as Padarn and Express Motors are to be avoided	This comment is focussed on the contents of the WTS, rather than the ISA.
Yes there are. The ongoing Covid 19 pandemic has seriously damaged the Welsh economy and employment prospects. Short term interventions may need to be prioritised in order to support economically deprived areas. The WTS should be shaped to assist the development of Wales' national, regional and local economies including those that are largely dependent on recreation and tourism	This comment is focussed on the contents of the WTS, rather than the ISA.
We would cease arbitrary distinctions between strategic and non-strategic transport provision, and include all modes including active travel, recognising the pressing need to rebalance travel as means to achieve greater and more sustainable access to social, economic, and environmental services	This comment is focussed on the contents of the WTS, rather than the ISA.

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>Monmouthshire is a county that has relatively poor public transport links. Whilst this is particularly true of the more rural parts, it is also relevant to the Severnside corridor in the south of the county. In Severnside it is believed everyone has access to personal transport. This assumption deprives many people of all age-groups the connectivity to workplaces, education establishments, medical facilities and leisure pastimes</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p>
<ol style="list-style-type: none"> 1. The three Welsh National Parks. 2. Please see the response to Q2 above. 3. Coastal adaptation is happening in some locations – eg. Newgale in Pembrokeshire. This will have significant implications for transportation and communication links in some locations 	<p>National Parks will be an important element of appraisals in the ISA. Coastal adaptation will also be an important element of appraisals in the ISA.</p>
<p>The geographical area of Mid Wales is rural with small communities. Public transport to these areas is important. A policy with reference to the retention of local buses is essential</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p>
<p>Ceredigion is obviously supportive of the fact that 'welsh language' and 'rural proofing' impact assessments are to be included in the ISA process</p>	<p>Support noted.</p>
<p>In response to Table 4.1 and in particular page 28 – Minerals and Waste. Firstly, the author has a disappointing, rather archaic and possibly tainted opinion of the minerals industry, demonstrating an ill-informed understanding of the subject. This questions whether or not the document is “fit for purpose”. The section of the report fails to acknowledge the many and substantial benefits of a sustainable minerals industry in Wales, not just supplying the raw materials to build infrastructure, including transport infrastructure, but the significant opportunities to delivery biodiversity net benefit/net gain on a landscape scale. A steady and adequate supply of minerals is essential to deliver society’s needs and never more so has this been demonstrated, than in the recent Covid-19 crisis. This supply of minerals is essential to the economic health of the country. We seek clarification on the author’s statement that “extraction can be very damaging to the natural and human environment”. Indeed we challenge this perception most strongly and trust this is not a representative view of Welsh Government (WG). Through Planning Policy Wales (PPW), the planning system employs the principle of Buffer Zones, together with industry establishing known mitigation measures to ensure the effects of mineral operations on the environment are properly controlled. If WG is to deliver a green revival (infrastructure, energy, etc.), a steady and</p>	<p>Comment noted.</p> <p>The statement “extraction can be very damaging to the natural and human environment” has been removed by the author</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>adequate supply of minerals and mineral products is essential. However, it must be stressed that the supply of minerals and mineral products cannot be assumed. It is important that their availability and deliverability should be properly planned when considering the long term objectives of the Wales Transport Strategy. Within this the proximity principle is important for minerals supply, but recognising the criticality of high specification aggregates to Wales' transport system and its wider economy. Further, the issues identified in this section appear somewhat conflicting. The first bullet point makes reference to "substantial resources", whilst the second bullet point refers to the "strain on limited resources". The report also fails to acknowledge the need to safeguard minerals resources from sterilisation from incompatible development. Mineral resources should be afforded the same level of consideration as other matters such as cultural heritage assets and landscape designations to ensure they remain available in the longer term. Once a mineral resource is sterilised, it becomes inaccessible for future generations</p>	
<p>Yes, we wish to see a modal shift in Wales to more environmentally-friendly forms of transport - that is to walking and cycling for short-distances and to public transport for longer distance trips. Walking and cycling offer important health and well-being benefits and contribute to the UK's and the WG's targets for cleaner air and net-zero carbon. This modal shift requires motor traffic reduction, so connects with strategies designed to facilitate a more local, circular or foundational economy, notably in the areas of economic strategy, spatial planning and broadband (e.g. the WG's Circular Economy Strategy). Spatial planning is particularly important for reducing dependence on private motorised travel. Planning policies need to support the aim of minimising the need to travel, by fostering self-contained developments, and/or by guiding development to locations where journeys can most easily be made by walking, cycling and public transport. Shorter journeys are not only less carbon-intensive in themselves, but are also more easily switched to these clean and healthy modes</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p>
<p>Of key concern to Public Health Wales is the need to recognise the fact that transport, including access to different transport options, is linked to health, both directly and indirectly, in terms of ability to access health services. In addition, health related inequalities may be exacerbated or alleviated by transport systems, depending on the provision and delivery; Public Health Wales is always keen to assess provision of this type to ensure that inequalities are not exacerbated</p>	<p>Health inequalities has been covered in the PPP review, baseline data and is recognised as a key sustainability issue that will be addressed in the ISA.</p>
<p>Since its inception, sustainable development has been at the heart of the WI.</p>	<p>Agree, The WTS must place the necessary investment in public transport, particularly bus and</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>One area where WI members find it difficult to be more environmentally friendly is transport. To mark the centenary of the WI in 2015, the NFWI undertook research with WI members. The WI at 100 Report found that while 63% of WI members use public transport to varying degrees, 46% of members say that their use of these services could improve as part of efforts to reduce environmental impact at household level. During the focus groups, members discussed the challenges in accessing public transport in rural areas. They highlighted 'scanty provision' and noted problems in accessing the services that were available, for instance where bus stops were located at a distance and on a road with no footpath.</p> <p>Decline in local bus services – In 2019, WI members passed a resolution calling on local and national governments to take action to address the decline in local bus services. The NFWI's Get on Board for a Better Bus Service campaign is currently taking forward this resolution. The campaign seeks to raise awareness of the importance of local bus services and empower members, WIs and federations to make the case for buses in their local communities.</p> <p>Rural communities - We are concerned about the current provision of bus services in rural communities. Without access to a local bus service, there is concern that those who do not have access to a car are unable to reach local services, particularly those living in rural communities. This can lead to social isolation and impact on the health and wellbeing of individuals who rely entirely on public transport. With 14% of the population of Wales without access to a car, it is vital that communities across Wales have access to affordable and reliable bus services that meet their needs in order to help reduce inequalities and social exclusion.</p> <p>Climate change – Climate change is a key area of concern for the WI. The public transport sector has a key contribution to make in supporting the Welsh Government to reach its ambition of net zero by 2050.</p> <p>Impact of Covid-19 – As the recovery begins, it will be important to build on the increase we have seen in active travel and also to give people the confidence to use public transport in order to help reach the modal shift that is required to cut our carbon emissions and tackle climate change.</p> <p>Provision of bus services that meet the needs of women – Cuts to bus services disproportionately impact on women. In addition, the provision that is available often does not support the travelling patterns of</p>	<p>removing barriers to transport. The ISA will help to ensure that public transport, including regional, rural/urban, and gender inequalities are tackled.</p> <p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>women. More women than men work part-time and often women also have caring responsibilities that they fit around their work commitments. To achieve long term behavioural change , there needs to be investment in bus services to ensure that the provision meet the needs of women and the wider public in order to address the continuing decline in passenger numbers.</p>	
<p>The WTS needs to fully recognise the regional and local variations and ensure that access to the most deprived areas is critical to ensure there are opportunities to increase prosperity within these communities. Good, affordable transport links and infrastructure are crucial</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p>
<p>We stress the importance of inclusion for all communities and groups across Wales. The transport network typically supports those who are 'easy to help' and the strategy needs to ensure that all people can access services and facilities regardless of financial status, location, background or ability. We are especially concerned about the impact of COVID19 on transport services, in particular rural services and urge that the WTS explores all options to mitigate this impact and mobilise all opportunities to ensure communities remain connected.</p> <p>Again, we point to the cross-cutting nature of this strategy and the impact other policy areas, strategies and plans could have on its success. For example, national planning guidance should ensure that transport is considered in the initial stages of service design to ensure people can access facilities without needed to rely on a private vehicle which a substantial number of people across Wales do not have access to. The failure to consider access early on in service planning further exacerbates social exclusion and poverty which is unacceptable.</p> <p>In terms of safety, we note that the benchmarking data includes safety 'on public transport' but suggest that access points must be made safe also which includes lighting for car parks and entry ways. In addition, we stress the importance of ensuring that children are able to travel safely across all modes which would include ensuring provision for active travel with segregated cycle-ways and walking routes that would increase levels of confidence for those under 18 and their parents.</p> <p>The scoping report references the need to tackle 'driver stress' which could be reduced through reducing levels of private car use and tackling congestion. Evidence shows that journeys combining active travel and public transport are good for mental health and wellbeing, and even enhance people's productivity at work. We therefore recommend a strong focus on influencing behaviours and achieving modal shift.</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p> <p>Advice noted Agree, Objective 1 decision aiding question amended to</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>There are further opportunities to tackle driver stress through education to enable a better understanding of new active travel facilities from a driver perspective. The Highway Code is likely to be updated in the near future to help with this. The number of killed and seriously injured road users has remained stagnant for some time; whilst the scoping report recognises that efforts need to be made to reduce this, the WTS needs to include clear and achievable goals for road safety across all modes.</p> <p>We welcome the recognition of gendered patterns in transport use and the typical needs of women. We suggest however, that the scoping report could be strengthened with the inclusion of these aspects:</p> <p>1) Gender pay – we welcome the reference to gender pay and importance of taking steps to reduce the gap within the transport sector. We would also advise that transport has a role to play in making sure work pays for women. For example, a paper published by Sustrans and Chwarae Teg in 2013 highlighted the significant difference in pay for full and part-time workers, demonstrating that travel discounts, benefitting those travelling more than 3 days, were aimed at the group of people already financially better off not just because they work more hours but also because the rate of pay for part-time workers is lower on average. As such, the strategy could look to ensure fair fares for part-time workers, ensuring they can purchase multiple tickets for use over a period of time. A more recent article from Campaign for Better Transport calls for flexible season tickets for part-time workers, recognising the change in working patterns created by COVID-19.</p> <p>2) Travel patterns – whilst the scoping report recognises the different ways men and women use transport, the data provided in the baseline report looks at home to work travel suggesting that this is a direct journey. For many parents, this journey is far more complex with women more likely than men to go to work via school (7%), escorting others (5%) or other purpose (2%). ‘Trip-chaining’ as it is known, is attributed to part-time workers more than full-time and women more than men. The rate varies depending on the age of the child but in a household with a child under the age of 5, a working woman will increase her trip-chaining by 54% compared with 19% for men.</p> <p>Finally, we note that the third sector is referenced in the report but require further clarity of the role identified for the sector. As a coalition that has significant representation of third sector organisations, we would advise that authorities should utilise the expertise of these organisations in engaging with</p>	<p>“driver stress and potential stresses caused to other road users”</p> <p>Support and advice noted. It is not expected that the pay gap will be within the Scope of the WTS.</p> <p>Gender pay, travel patterns and trip chaining have been discussed at length in the ISA Scoping Report documents and will be an important consideration of the appraisals.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>communities and drawing on technical expertise, and that the community and voluntary sector as a whole could be involved and empowered to play an important role in the WTS.</p> <p>We also note that whilst there is reference in the scoping report to bus, rail and active travel, there is no mention of community transport which we believe is a significant oversight. The third sector plays a key role in the provision of transport to many communities and individuals who face barriers to access and the impact and potential of these organisations should be recognised in the scoping report. We are happy to advise further on this.</p>	<p>The impacts on the Third Sector will be assessed as part of this ISA.</p> <p>Agree, further detail on the Third Sector and community transport added.</p> <p>Community transport added to Objective 2</p>
<p>Transport for rural communities is a particular concern for us as we know what many communities are poorly served by public transport and community transport services play an important role in mobilising these communities. In some of these areas, there are no transport options at all aside from private cars and that includes no local taxi service. Where there are options, the infrequency of bus for example or cost of taxis creates barriers for those who need to access services outside of their local community. Rural bus routes were already insecure and the current public health crisis (and resulting financial crisis) makes these services especially vulnerable. The future has to provide a focus on sustainable solutions developed at a local level in partnership with communities to resolve the challenges faced by these communities.</p> <p>Following COVID-19, we anticipate a significant reduction in commercial bus and coach operations which will widen the gaps in transport provision across bus networks, school transport and leisure travel. The importance of the third sector in addressing this challenge needs to be recognised in the Wales Transport Strategy. For decades, the sector has delivered socially necessary transport, facilitating mobility through shared modes such as demand-responsive bus, community car schemes, moped hire and more. These are bespoke services developed by community organisations in response to local</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p> <p>Community Transport added to Objective 2</p> <p>Agree, further detail on the Third Sector and community transport added.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>needs. Through CTA's Connecting Communities in Wales project, CTA has supported the sector to secure £2m additional funding for transport services for an investment of £300k. There is clear potential to develop and grow the community transport sector which would allow many of the problems we face in transport today and are likely to meet in the future to be addressed in a sustainable and inclusive manner.</p> <p>Another concern for us is accessibility for vulnerable groups and those with disabilities. Much of the public transport network serves those who are able-bodied and 'easy to help' which leaves large groups of people excluded and unable to access key services, facilities and social networks, all of which are essential for a basic quality of life. Having access to transport allows people to live independently for longer and in particular, community transport services facilitate this. This is a pressing matter given that we have an ageing population and we must ensure a framework for provision that recognises the needs of these groups and the cost savings for health that are associated with transport provision.</p> <p>A further way of ensuring equity of provision would be for minimum standards of public transport provision to be adopted across Wales, ensuring that good public and community transport is regarded as something that all citizens have a right to wherever they are, moving away from the current situation where levels of service are dictated by a host of circumstances (e.g. historic factors and commercial interests). We suggest that this should be considered to ensure quality of life for all.</p>	
<p>Of key concern to Public Health Wales is the need to recognise the fact that transport, including access to different transport options, is linked to health, both directly and indirectly, in terms of ability to access health services. In addition, health related inequalities may be exacerbated or alleviated by transport systems, depending on the provision and delivery; Public Health Wales is always keen to assess provision of this type to ensure that inequalities are not exacerbated</p>	<p>Comment noted.</p>
<p>Climate Emergency Page 22 Page 22 (Section 4.3.1) of the Integrated Sustainability Appraisal of the Wales Transport Strategy Draft Scoping Report (ISA Report) refers to climate change. We consider that the statement of reducing Wales' contribution towards the causes of climate change (such as greenhouse gas emissions) will reduce the magnitude of climate change impacts needs to acknowledge that even if Wales became carbon neutral, the impacts of climate change would still be felt. We recommend that the paragraph should be amended to recognise the need for climate change adaptation in addition to other measures to help reduce the magnitude of impacts. The Wales Transport Strategy should identify what adaptation measures may be needed to ensure long term resilience.</p>	<p>Agree, advice noted.</p> <p>Adaptation is an element of resilience, which is discussed in length in 4.3.1 just before the text on the impacts of climate change.</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
<p>Welsh version</p> <p>Mae angen gwella gwasanaethau trafnidiaeth mewn ardaloedd gwledig sydd â dwysedd uchel o siaradwyr Cymraeg. Byddai cysylltiadau trafnidiaeth effeithiol yn yr ardaloedd hyn yn sicrhau mynediad dirwysr at wasanaethau allweddol yn y Gymraeg, yn creu cyfleoedd economaidd yn yr ardaloedd yn ogystal â hwyluso mynediad at weithgareddau cymdeithasol yn yr iaith.</p> <p>Mae gan y Gymraeg statws swyddogol yng Nghymru, ac mae dyletswydd ar sefydliadau cyhoeddus i hybu'r iaith a darparu cyfleoedd i bobl ei defnyddio lle bynnag bônt yn byw. Dylai darpariaeth trafnidiaeth yng Nghymru hybu mynediad rhwydd at ganolfannau addysg, gwasanaethau, gweithleoedd a gweithgareddau cymdeithasol yn y Gymraeg ar draws Cymru</p> <p>English translated version</p> <p>There's a need to improve transport services in rural areas which have high densities of Welsh speakers. Effective transport links in these areas would ensure unobstructed access to key Welsh medium services, created economic opportunities in these areas together with facilitating access to social activities in Welsh.</p> <p>The Welsh language has official status in Wales, and organisations have a duty to promote the language and provide opportunities for people to use it wherever they live. Transport provision in Wales should promote easy access to educational centre, services, workplaces and social activities in Welsh throughout Wales.</p>		<p>Noted. This comment refers to the contents of the WTS rather than the ISA.</p> <p><i>'Contribute towards an improvement in the accessibility of Welsh medium health/welfare services?'</i> has been added as a decision aiding question in the ISA Framework.</p>
<p>Yes there are. The ongoing Covid 19 pandemic has seriously damaged the Welsh economy and employment prospects. Short term interventions may need to be prioritised in order to support economically deprived areas. The WTS should be shaped to assist the development of Wales' national, regional and local economies including those that are largely dependent on recreation and tourism</p>		<p>Comment noted.</p>
Q4	Are there any changes you consider should be made to the ISA Objectives or Questions?	
<p>There should be more emphasis on economic development</p>		<p>Economic development forms an important element of the ISA including the ISA Framework.</p>
<p>written in simpler language so that I may understand it</p>		<p>Comment noted</p>
<p>"Sustainably manage natural resources and tackle the causes of climate change" -....."A globally responsible Wales"</p> <p>I agree with this whole heartedly, but feel my previous suggestions would make this more genuinely achievable</p>		<p>Support noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>The ISA objectives seem to support a more integrated approach to transport infrastructure (so Metro within a street environment rather than segregated)</p> <p>The ISA objectives have nothing in respect of affordability. Objective One - suggests a car-focussed approach and that only drivers get stressed on the transport network. This should be reworded to highway users if specifically referring to road users but should apply equally to all transport users in Wales (particularly for public transport users considering their lack of control over travel consistency and in the aftermath of COVID 19)</p>	<p>Advice noted</p> <p>Agree, Objective 1 decision aiding questions amended to “driver stress and potential stresses caused to other road users”</p>
<p>The Town Council supports the policy to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. This will no doubt be difficult in some areas of transport provision but should be an objective.</p> <p>We would add that environmental issues should be considered at all stages, but they should not be the overriding objective. Welsh Transport Policy needs to be about enhancing services as a priority but taking environmental matters into consideration</p>	<p>This comment is focussed on the contents of the WTS, rather than the ISA.</p> <p>As is best practice for ISA, the economic, environmental and social themes of sustainability are equally weighted and cross-cutting. The ISA accounts for sustainability on the whole, with no theme overriding the other.</p>
<p>Yes there are. The 13 ISA objectives would appear to be equally weighted. Perhaps more weight should be placed on economic objectives at least in the short to medium term. Social, environmental, and cultural objectives are very important but major (transport) interventions are costly, have a long lead in time and need to be affordable, effective and deliverable</p>	<p>The ISA accounts for sustainability on the whole, with no theme overriding the other.</p> <p>Placing greater weight on economic objectives would risk significant adverse effects on environment or social themed Objectives, which would be unacceptable and not best practice.</p>
<p>We're continuing to learn more about the ways in which the Covid-19 pandemic will continue to change the ways in which we live, whether in work or in accessing services and products, especially public</p>	<p>Comment noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
services. This needs more consideration of proposed outcomes, evidence collecting, and measures adopted for monitoring	During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.
To make sure that schemes that already fit the ISA are promoted for early adoption and used as a model for the future	Comment noted
<p>1. When considering access to health and social care services – take into account the needs of those needing to visit/support users of these services to reduce social isolation. The need to improve access to many health-care services in rural areas is hindered by the WG policy to reduce the number of hospitals which requires patients to travel greater distances – in West Wales this can involve round trips of 70 or 80 miles – with no realistic public transport options. For those supporting those having treatment this is a significant barrier.</p> <p>2. Access to employment – in rural areas the lack of affordable housing requires many people to travel long distances to their place of (typically low-paid jobs) as they cannot afford to live in the same locality. This is particularly true for those working in the tourism sector.</p> <p>3. Table 5.3 should include the need for the Welsh population to have access to and travel around the three Welsh National Parks by means of inexpensive and accessible public transport, walking and cycling (including e-bikes and e-scooters)</p>	<p>Agree, Comment noted</p> <p>Agree, access to national parks included in ISA Objective 1 decision aiding questions.</p>
<p>The Association supports the policy to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.</p> <p>This will no doubt be difficult in some areas of transport provision but should be an objective</p>	Support and comment noted
<p>The Committee supports the policy to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.</p> <p>This will no doubt be difficult in some areas of transport provision but should be an objective</p>	Support and comment noted
Ceredigion believes that the WTS should be a mechanism for contributing to and promoting social, economic and environmental stewardship/sustainability, and suggests that rather than seeking to	Advice and comment noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
'encourage' within some of the objectives these should be amended to 'contribute', 'enable', 'promote', 'ensure' and a more pro-active emphasis given to its role	Agree, language amended to more pro-active words
Yes, the issue of minerals, mineral products and minerals safeguarding should be appropriately considered in the development of objectives, as outlined above	Comment noted
<p>We support the objectives proposed in Table 5-3, but we suggest slightly rewording one of them, and adding one more.</p> <p>The amendment is to the wording of objective 6. In our opinion “Create the conditions within which greenhouse gas emissions can be reduced” is too indirect. It should simply be “To reduce greenhouse gas emissions from transport”.</p> <p>The additional objective we wish to propose is an explicit one “to reduce the volume of road traffic.”</p> <p>The ‘decision-aiding questions’ for this additional objective could be whether the WTS (or a reasonable alternative) would:</p> <ul style="list-style-type: none"> · Reduce the need to travel · Reduce journey distances · Increase the options available for people to meet their travel needs by walking, cycling and public transport. <p>N.B. An alternative would be to add these ‘decision-aiding questions’ to the objective for reducing greenhouse gas emissions. However we believe it would be preferable to include this additional objective explicitly, to highlight the cultural and societal changes necessary.</p> <p>In addition, we wish to propose a number of changes of detail to the existing proposed Objectives:</p> <p>i) Under Objective 1 (relating to mental and physical health, and tackling health inequalities), in the 3rd bullet point, after “promote healthy lifestyles through...”, we suggest deleting the remaining words of this bullet-point and replacing with “the promotion of active travel”.</p> <p>ii) Again under Objective 1, we suggest deleting the fifth bullet point “improve road safety” and replacing it with “reduce road danger” to take account of the much broader concept which better fits the well-being goals.</p>	<p>Support and advice noted Agree Objective 6 amended to be Reduce Greenhouse Gas Emissions from Transport</p> <p>Reduce the volume of road traffic added to Objective 6</p> <p>Promotion of active travel added to Objective 1</p> <p>Reduce road danger added to Objective 1</p> <p>Third bullet point replaced with “Improve the safety, convenience and accessibility of walking and cycling routes so that walking and cycling are seen as realistic, safe and attractive options for people of all ages, backgrounds and abilities”.</p> <p>Agree – Added education and training to first bullet point of Objective 3</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>iii) Again under Objective 1, we suggest deleting the sixth bullet point; its purpose will be covered in the previous point about road danger</p> <p>iv) Under Objective 2 (relating to social cohesion and equality), we suggest replacing the 3rd bullet point with the following question:</p> <ul style="list-style-type: none"> [Will the WTS] "Improve the safety, convenience and accessibility of walking and cycling routes so that walking and cycling are seen as realistic, safe and attractive options for people of all ages, backgrounds and abilities". <p>v) Under Objective 3 (relating to sustainable economic growth and diversity), after the word "employment", we suggest inserting "education and training" before "opportunities".</p> <p>vi) Under Objective 4 (relating to Welsh culture), we suggest adding "sustainable and" before "resilient".</p> <p>vii) Under Objective 8 (relating to air quality), we suggest replacing the words of the final bullet-point, to say:</p> <ul style="list-style-type: none"> [Will the WTS] "Reduce the disproportionate impact of poor air quality on the most disadvantaged and vulnerable communities?" The current wording is unacceptably weak. <p>viii) Under Objective 9 (relating to the protection and enhancement of landscapes and townscapes), add:</p> <ul style="list-style-type: none"> [Will the WTS] "Reduce the adverse impacts of road traffic and parking (e.g. visual intrusion and noise) on Wales' valued landscapes and townscapes?" <p>ix) Under Objective 12 (relating to the sustainable use of natural resources), add</p> <ul style="list-style-type: none"> [Will the WTS] "Increase opportunities to enjoy Wales' natural environment and rights of way network through all forms of active travel?" <p>There is also a need to clarify the weighting of these objectives and the questions under each objective - and how any such weighting process would operate. Given the statement (on p21) that climate change and ecosystem resilience are "overarching considerations" we suggest that the objectives relating to these considerations are given additional weight.</p>	<p>Agree – Added sustainable before resilient in first bullet point of objective 4</p> <p>Agree – replaced final bullet point of objective 8 with "Reduce the disproportionate impact of poor air quality on the most disadvantaged and vulnerable communities?"</p> <p>Agree – added Reduce the adverse impacts of road traffic and parking (e.g. visual intrusion and noise) on Wales' valued landscapes and townscapes? to objective 9</p> <p>Agree – added "Increase opportunities to enjoy Wales' natural environment and rights of way network through all forms of active travel?" to objective 12</p> <p>All ISA Objectives are weighted equally and combine to provide a comprehensive understanding of 'sustainability' on the whole.</p>
<p>In terms of ISA objectives, we agree with objective 1, but note that the only direct health harm associated with the transport system that is mentioned is in terms of road safety. There are no questions that refer to emissions affecting air quality and therefore respiratory and cardiovascular health, and no</p>	<p>Comment noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>questions about noise having similar effects. Another issue that could be covered is the current transport system directly and indirectly limiting the ability to be physically active and the health harms that are associated with this.</p> <p>Driver stress, and the need to reduce it, is listed, but there is no mention of stress for active travellers or public transport users; this implies that driving and driver stress is more important than travel and stress of other road users. If the sustainable travel hierarchy is to be adopted, logically, the system should offer minimal stress for active travellers and public transport users, but be less concerned about driver stress. Low driver stress will encourage continued driving.</p> <p>Healthy lifestyles are referenced and presumably this is intended to cover active travel and public transport use, but it may be useful to be more explicit about this.</p> <p>Mental health is highlighted in the initial objective, but not in any of the accompanying questions. Community severance does account for some of these issues, but not for wider issues associated with loneliness, isolation and stress and anxiety associated with the transport system and, in many cases, speeding traffic.</p> <p>Objective 2 does encompass some of the issues around access to walking and cycling routes and the reference to improving equitable access to these is welcomed. The Active Travel Act is the key, and most important, connection that follows from here in that not only does access need to be equitable, but it needs to be extended. In theory, it would also be possible to make the system equitable by removing it completely. Therefore the availability of routes also needs to be equitable. These routes also need to be safe, and perceived to be safe, in terms of traditional views of crime and also crash and injury risks.</p> <p>Objective 3 highlights the need to reduce travel for work. While we agree with this, it also needs noting that full time home working can have negative effects on mental health. It is also important to ensure that those people who have to travel to and from work have choices in the way they travel and do not suffer disadvantages associated with long journey and travel times.</p> <p>Objective 8 states that the WTS will aim to create the conditions where air quality can be protected and improved where necessary (emphasis added). There is no safe level of air pollution and this is</p>	<p>Agree, Added decision aiding questions on air quality, noise and Objective 1</p> <p>Agree, Objective 1 decision aiding questions amended to “driver stress and potential stresses caused to other road users”</p> <p>Agree, “promotion of active travel” added to third bullet point of objective 1</p> <p>Agree – Added accessibility and availability of public transport to bullet point 2 of objective 2</p> <p>Agree – rephrased bullet point 1 of Objective 8 to “Create conditions within which air quality can be improved and protected”</p> <p>Agree – bullet point 2 of Objective 8 rephrased to “Reduce the negative....”</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>recognised in Prosperity for All, which aims to deliver continuous improvements in air quality. The WTS needs to be consistent with these aims.</p> <p>Objective 8 also states that the WTS will aim to encourage a reduction in the negative effects of transport on local air quality. It would be useful if rather than encouraging a reduction, a more robust statement was made. It is also important to be mindful of the fact that electric vehicles do still produce emissions; exhaust emissions are reduced, but production of particulate matter due to tyre and brake wear will still compromise air quality.</p> <p>Finally, objective 8 states that the likelihood of new air quality management areas (AQMA) being needed will be reduced. We feel that this would be better phrased as “reduce traffic pollution to help get rid of existing AQMA and prevent new ones being declared.”</p>	
<p>ISA Objective 1 - Will the WTS contribute towards reducing loneliness and social isolation?</p> <p>ISA Objective 3 - To support sustainable economic growth and diversity, we would suggest that that this objective could consider the impact the WTS could have in supporting access to / promoting local high streets and town centres.</p>	<p>Loneliness and isolation included in decision aiding questions. High Streets will comprise an important element of the more economic themed appraisals.</p>
<p>There needs to be a focus on achieving measurable outcomes rather than vague statements such as “contribute to”.</p> <p>Climate change is a big influencing factor and is not prominent within the document as it stands.</p>	<p>Agree, Comment noted</p> <p>Language amended to more pro-active words</p>
<p>Objective 2. To create the conditions within which an improvement in social cohesion and equality can be achieved</p> <p>In line with our comments above, we recommend that this objective, and the related questions, could overtly recognise the importance of community engagement, empowerment and resilience.</p> <p>Objective 3. To support sustainable economic growth and diversity</p>	<p>Comment noted</p> <p>Comment and advice noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>We note that there is a question under Objective 3 that asks if the TWS supports and encourages third sector activities. It would be useful to have further clarity on the role of the third sector in the strategy to better understand this question. We believe that there is an important role for the third sector in supporting authorities to engage with communities, providing technical expertise and local knowledge along with the delivery of transport services. Not all of these things would sit under Objective 3 so this needs to be considered and addressed accordingly.</p> <p>We would also highlight that the wording of this objective would align better with global thinking on sustainability, the Wellbeing of Future Generations Act, and the aspirations of communities, if it were to refer to 'sustainable development and diversity'. It is widely documented that the pursuit of economic growth often undermines sustainability objectives, whereas 'sustainable development' is a concept that attempts to marry up economic prosperity and sustainability.</p> <p>Objective 6. To create the conditions within which greenhouse gas emissions can be reduced</p> <p>It might be helpful to include a question to address impact on the National Forest to consider how the WTS could contribute towards maintenance, restoration or creation of this Wales-wide asset and avoid unintended detrimental impact on its ecological connectivity or carbon sequestration capacity. With the current emphasis on the Green Recovery there is a huge opportunity to also consider how infrastructure created by WTS might link with adjacent green spaces and amenity areas to enhance the National Forest and other nature and climate gains.</p> <p>Objective 11. To encourage the conservation and enhancement of biodiversity and geodiversity</p> <p>Section 6 of the Environment Act places a legal duty on public authorities exercising their functions in relation to Wales. It states that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems. Rather than considering if the WTS will encourage the conservation and enhancement of biodiversity and geodiversity therefore we feel that the more pro-active language used in other objectives would be more appropriate here e.g.</p>	<p>Agree, further detail on the Third Sector and community transport added.</p> <p>Amended Objective 3 – “To support sustainable development and diversity.</p> <p>Comments noted</p> <p>Agree, language amended to “promote” rather than encourage</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>Objective 11: To create the conditions within which the conservation and enhancement of biodiversity and geodiversity can be increased</p> <p>Or simply, the language of the s6 duty could be used instead</p> <p>Objective 11: To maintain and enhance biodiversity</p> <p>We also note that there is an aspiration to protect geodiversity and invite consideration of whether there could be a simple equivalent question assessing if the WTS will protect biodiversity, particularly as protection may be a more pro-active term, and perhaps more widely-used and understood, than conservation.</p> <p>12. To encourage the sustainable use of natural resources</p> <p>Sustainable management of natural resources is now defined in the Environment Act as: “using natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide. In doing so, meeting the needs of present generations of people without compromising the ability of future generations to meet their needs, and contributing to the achievement of the well-being goals in the Well-being of Future Generations Act.”</p> <p>Given increasing awareness of the pressures that Wales’s natural resources are under, we again feel that a stronger and more pro-active term than ‘encourage’ may be helpful. Encouraging something suggests that it is not already the norm, and making sustainable use of natural resources the norm is a clear intention of both the Environment Act and the Well-Being of Future Generations Act.</p> <p>Another way to approach this challenge might be to rephrase this objective as:</p> <p>12. To discourage the unsustainable use of natural resources</p>	<p>Agree, language amended to “ensure”</p>
<p>There are a number of comments we would make on the objectives and corresponding questions which we set out as follows:</p>	<p>Comments noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>In terms of ISA objectives, we agree with objective 1, but note that the only direct health harm associated with the transport system that is mentioned is in terms of road safety. There are no questions that refer to emissions affecting air quality and therefore respiratory and cardiovascular health, and no questions about noise having similar effects. Another issue that could be covered is the current transport system directly and indirectly limiting the ability to be physically active and the health harms that are associated with this. Driver stress, and the need to reduce it, is listed, but there is no mention of stress for active travellers or public transport users; this implies that driving and driver stress is more important than travel and stress of other road users. If the sustainable travel hierarchy is to be adopted, logically, the system should offer minimal stress for active travellers and public transport users, but be less concerned about driver stress. Low driver stress will encourage continued driving. Healthy lifestyles are referenced and presumably this is intended to cover active travel and public transport use, but it may be useful to be more explicit about this. Mental health is highlighted in the initial objective, but not in any of the accompanying questions. Community severance does account for some of these issues, but not for wider issues associated with loneliness, isolation and stress and anxiety associated with the transport system and, in many cases, speeding traffic. Objective 2 does encompass some of the issues around access to walking and cycling routes and the reference to improving equitable access to these is welcomed. The Active Travel Act is the key, and most important, connection that follows from here in that not only does access need to be equitable, but it needs to be extended. In theory, it would also be possible to make the system equitable by removing it completely. Therefore the availability of routes also needs to be equitable. These routes also need to be safe, and perceived to be safe, in terms of traditional views of crime and also crash and injury risks. Objective 3 highlights the need to reduce travel for work. While we agree with this, it also needs noting that full time home working can have negative effects on mental health. It is also important to ensure that those people who have to travel to and from work have choices in the way they travel and do not suffer disadvantages associated with long journey and travel times. Objective 8 states that the WTS will aim to create the conditions where air quality can be protected and improved where necessary (emphasis added). There is no safe level of air pollution and this is recognised in Prosperity for All, which aims to deliver continuous improvements in air quality. The WTS needs to be consistent with these aims. Objective 8 also states that the WTS will aim to encourage a reduction in the negative effects of transport on local air quality. It would be useful if rather than encouraging a reduction, a more robust statement was made. It is also important to be mindful of the fact that electric vehicles do still produce emissions; exhaust emissions are reduced, but production</p>	<p>Comments noted</p> <p>Agree, decision aiding questions on air quality and noise added to Objective 1</p> <p>Agree, Objective 1 decision aiding questions amended to “driver stress and potential stresses caused to other road users”</p> <p>Comments noted</p> <p>Agree, Objective 8 amended to “Improve air quality in order to get rid of existing Air Quality</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>of particulate matter due to tyre and brake wear will still compromise air quality. Finally, objective 8 states that the likelihood of new air quality management areas (AQMAs) being needed will be reduced. We feel that this would be better phrased as “reduce traffic pollution to help get rid of existing AQMAs and prevent new ones being declared.”</p>	<p>Management Areas and reduce...”</p>
<p>Table 5.3 ISA Objectives and Questions</p> <p>Objective 1: ‘To contribute to an improvement in physical, mental and social health and well-being for all, including contributing towards a reduction in health inequalities across Wales’: Page 39 We advise that the reference to health protection in the objectives could be made more explicit as an outcome. We recommend that the significance of the protection and improvement of physical and mental health, and improving air quality, is highlighted as a specific objective. Objective 6 ‘To create the conditions within which greenhouse gas emissions can be reduced’; Page 40 We recommend that the wording for the following objective, ‘To create the conditions within which greenhouse gas emissions can be reduced’, should be amended as follows: ‘To enable greenhouse gas emissions to be reduced’. This wording change is recommended because it would strengthen the objective to be more positive with the expected outcome. Objective 7: ‘To encourage climate change resilience’: Page 41 We advise that an additional decision aiding question is included: ‘Will the WTS reduce the risk of flooding and/or coastal flooding and promote protection of floodplains or areas of managed flood risk having regard to Shoreline Management Plans and coastal management proposals?’ We recommend that this question is included to place greater emphasis on planning for sustainable transport infrastructure which has regard to Shoreline Management Plans and coastal adaptation proposals. Objective 7: ‘To encourage climate change resilience’: Page 41 We advise that this ISA objective should also encourage measures that prioritises green infrastructure that contributes climate change resilience by maximising ecosystem resilience and ecosystem functions. This could be assessed as a new question: ‘Will the WTS maximise opportunities for improving ecosystem resilience and functions that help reduce climate vulnerability?’. Objective 7: ‘To encourage climate change resilience’: Page 41 We also recommend the addition of a further decision aiding question to the objective: ‘Will the WTS contribute to the implementation of coastal adaptation?’ so that it encompasses avoiding/ minimising adverse effects from the inappropriate location of assets. Recommendation of New Objective regarding ‘Water Quality’: Page 41 We recommend that there is a new objective for water quality, separate from air quality. We advise this is worded as: ‘To encourage the protection and improvement of water quality’. We also advise that a decision aiding question is added to this objective, ‘Will the WTS ensure a reduction in diffuse pollutant</p>	<p>Comments noted</p> <p>Air quality added to decision aiding questions of Objective 1</p> <p>Objective 6 amended to “reduce greenhouse gas emissions from transport”</p> <p>Decision aiding question added</p> <p>Decision aiding question added</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
loading, notably for water resources in the longer term?'. This is particularly important if greater seasonality and hence water-scarcity is going to become a norm.		
<p>Welsh language version: Fel nodwyd uchod, dylid cysylltu nod llesiant y Gymraeg ag amcanion eraill sy'n ymwneud ag iechyd a llesiant unigolion yn y strategaeth. Mae mynediad at wasanaethau iechyd a lles drwy gyfrwng y Gymraeg yn angen clinigol, ac mae hyn yn arbennig o wir pan ystyrir plant, pobl hŷn ac unigolion bregus, er enghraifft pobl yn byw â dementia neu ag anhwylderau iechyd meddwl</p> <p>English translated version: As noted above, the well-being of the Welsh language should be linked to the other objectives in the strategy which relate to the health and well-being of the individual. Access to health and welfare services through the medium of Welsh is a clinical need, and this is particularly the case when considering children, older people and vulnerable individuals, for example, people living with dementia or have mental health disorders.</p>		Access to Welsh language medium health and welfare services will form an important part of the ISA in terms of assessments against health and welfare, as well as Welsh language. ' <i>Contribute towards an improvement in the accessibility of Welsh medium health/welfare services?</i> ' has been added as a decision aiding question in the ISA Framework.
Given the above, there is a need to ensure that freight is included within the decision aiding questions. In terms of the ISA Objectives, we note that only one relates to economic issues and that there may need to be a greater focus on this as it links to the achievement of other objectives		Advice noted Freight transport added to decision aiding questions
Yes there are. The 13 ISA objectives would appear to be equally weighted. Perhaps more weight should be placed on economic objectives at least in the short to medium term. Social, environmental and cultural objectives are very important but major (transport) interventions are costly, have a long lead in time and need to be affordable, effective and deliverable.		Advice noted.
Q5	Do you have any comments regarding how reasonable alternatives should be developed?	
Your group who wrote a previous questionnaire for children should be involved		Comment noted
I feel it is fair enough that prices for bus tickets are what they are. However I think your annual tickets should be significantly more affordable. Community vehicles would be a good idea - even if they aren't electric. The concept of sharing common resources is something that should be promoted for a resilient future		Comment noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
There needs to be greater emphasis on Active Travel as one of the key ways to tackle climate change and reinforce the desired hierarchy	Comment noted
Services should be accessible to all and not just local residents. Demand responsive services will not attract tourists and casual users and local users may not be able to plan their journeys in advance	Comment noted
Alternatives should be developed in collaboration with others and in consultation with stakeholders. They should be designed to deliver social, economic, environmental and cultural benefits. Non-essential journeys should be discouraged. Modal shift should be encouraged. That is to say, the WTS should encourage more and better use of public transport (when Covid 19 allows) and of low emission vehicles and of active travel (walking and cycling) for short trips. Use of the private car for non-essential journeys should be discouraged	Comment noted
These should be open to a wide range of public and political stakeholders, acknowledging that there may be new voices and visions to be captured through the consultations on wellbeing goals. This may involve new ways of engaging stakeholders	Comment noted
1. Section 4.3 and Table 4.1 fails to reference the need for Wales' population to connect with the three National Parks as a key sustainability issue and opportunity. The existing wording – “There is an opportunity for improved access to valued landscapes, townscapes and viewpoints” fails to convey the importance of access to the Parks to national well-being of the population having access to the cultural ecosystem services within	Comment noted
Significant thought and co-ordination needs to take place in relation to integrated transport (including the ongoing review of bus services and development of a freight network) and the introduction/promotion of EV and Hydrogen alternatives and how this would be facilitated across the network. Linkages and funding opportunities need to be strengthened and aligned in order to develop and deliver a coherent national approach and strategy. Ambitious targets need to be established, but these need to be supported by appropriate funding on a national basis for infrastructure improvements and a clear lead provided by Welsh Government	Comment noted
Yes, the issue of minerals, mineral products and minerals safeguarding should be appropriately considered in the development of alternatives, as outlined above	Comment noted
The development of one or more “reasonable alternatives” should take account of the seven well-being goals, the Welsh Government’s legal obligations to reduce greenhouse gas and pollutant emissions, and the recognition in this framework of climate change and eco-system resilience as “overarching	Comment noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>considerations". The proposed WTS and the 'reasonable alternatives' should therefore be developed as alternative approaches for achieving these goals. There should be no preconception that the (initially) 'preferred' WTS will necessarily perform better in meeting the proposed objectives than the "reasonable alternative(s)". On the contrary, there needs to be an openness to the possibility of adopting the reasonable alternative(s), or elements from them, if it turns out that they score better against the ISA framework.</p> <p>One approach might be to develop a WTS that was focussed more on technological solutions (e.g. electric vehicles, use of broadband to reduce the need to travel), and another that was focused more on improved infrastructure for walking and cycling, on the assumption that both strategies would be supported with similar budgets. A composite strategy could then be developed (again, with an assumption of a similar overall budget, so that this composite strategy didn't automatically 'win'). This would help determine an optimal mix between investment in measures to reduce the need to travel, decarbonise existing motor travel, and replace existing motor travel through investment in healthy and sustainable alternatives</p>	
<p>Reasonable alternatives need to focus on technological advancements and where transport is likely to move in the future e.g. hydrogen, active travel, etc</p> <p>There needs to be consideration of whether Covid has now given an environment where the old ways are no longer the right ways. Consideration of what the "new norm" will look like needs to be built into the document</p>	Comment noted
<p>The role of the third sector in the Wales Transport Strategy should be explored and developed in partnership with the sector. We advocate for a co-production approach to ensure the strategy reflects the role and capability of the third sector appropriately and offer our support to facilitate this</p>	<p>Comment noted</p> <p>Agree, further detail on the Third Sector and community transport added.</p>
<p>We have identified some small tweaks in our response to Q4 but in terms of representing the third sector appropriately in this scoping work, we would suggest engagement with key stakeholders to ensure the sector's role is reflected appropriately</p>	<p>Comment noted</p> <p>Agree, further detail on the Third Sector and community transport added.</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
<p>We acknowledge that until the Wales Transport Strategy is developed further it is challenging to set reasonable alternatives out in detail. However, we recommend the options for reasonable alternatives include:</p> <ul style="list-style-type: none"> • The Covid19 pandemic has resulted in increased home working. We advise that an alternative option should be to permanently reduce road traffic levels if people continue to work from home and hence reduce the pollution loading to air, soils and water. Greater resourcing on improving the ethernet/computer network across Wales, thereby reducing the need to travel for many who are able to work from home. • Increasing the rail network/public transport network as an alternative to developing the road network because of less need for road traffic. The positive consequences would be less congestion; improved wellbeing; reducing the contaminant loading on air quality, soils and water; benefits for biodiversity and human health, as a result of reduced road users. 		Comment noted
Engaging with a wide range of stakeholders throughout the development process for the WTS is essential		Comment noted
<p>Alternatives should be developed in collaboration with others and in consultation with stakeholders. They should be designed to deliver social, economic, environmental and cultural benefits. Non-essential journeys should be discouraged. Modal shift should be encouraged. That is to say, the WTS should encourage more and better use of public transport (when Covid 19 allows) and of low emission vehicles and of active travel (walking and cycling) for short trips. Use of the private car for non-essential journeys should be discouraged</p>		Comment noted
Q6	Do you have any further suggestions regarding the scope of the ISA and its proposed appraisal of the Wales Transport Strategy?	
There seems to be an assumption throughout this appraisal that the current infrastructure is fit for purpose when it clearly is not. Any appraisal needs to recognise this as a fact		Comment noted
You have taken little note of the lesser railways of Wales. Note that Porthmadog Harbour has more passengers in a year than Llandudno		Comment noted
There is a need to give high level recognition in the ISA to issue of public safety on the road network in Wales. This could be alongside but separate from health impacts. Sadly the rate of road accidents in Wales, especially on rural trunk roads, is worse than in many other parts of the UK. The location and seriousness of road accidents should be identified in the ISA and there should be a clear commitment to		Comment noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>resolving the most significant hazard locations by effective remedial measures. In certain circumstances minor safety improvements may suffice but in others more substantial improvement works will be appropriate, Where significant improvement is needed to resolve a safety issue there should of course be attention to mitigating environmental impacts and the incorporation of active travel provision</p>	
<p>The language is non-committal in Table 4-1. "Could", "can", "could consider" etc. We also note that under the Environment Habitat Assessment that TfW have no licence to operate. However During the CVL Vegetation Programme we successfully negotiated with Natural Resources Wales the Bats on Tress/Bridges and Dormice Working Licence 5 years certificate. The first licence issued in Wales</p>	<p>Comment noted</p> <p>Agree, language amended to more pro-active words</p>
<p>In clause 1.2 it states 'Covering all modes, it sets out our strategic priorities and desired outcomes, providing a link to the wider priorities as well as plans at the local authority level.' However, the Town Council cannot identify clear priorities or desired outcomes.</p> <p>In clause 3.2 it sets out 'Key Themes Resulting from the Review' but all it says in the column headed 'National well-being goals' is a list of headings 'A prosperous Wales A resilient Wales A healthier Wales A globally responsible Wales'. This does not set out any aims or objectives regarding transport. The aims and objectives should be included from those plans into the Transport Strategy in a similar way to the impact assessments referred to.</p> <p>The appraisals in themselves are good as a base for taking forward objectives, however these have not been identified in an understandable way. The plan lacks substance in 'what is actually going to be done'. It is suggested that a clear schedule of aims and objectives is included so that the plan can be measured. As an overriding comment there is a lot of content about aims etc but nothing on strategy – ie how anything is going to be done.</p> <p>On many occasions the Town Council has discussed cycling and the danger that it poses to pedestrians by allowing cyclists to use the same pathway. 'The active travel wales act (2013) should be amended so as to keep cyclists and pedestrians apart. We would strongly urge that the WG policy is to keep pedestrian and cyclists apart at all times with no future combined facilities considered. In addition all existing combined facilities below the design width of 10 feet should be closed to either pedestrians or</p>	<p>Comment noted</p> <p>As part of the ISA and WTS process, the scoping report is an evidence gathering stage and involves engaging with stakeholders. The next stage is to develop and consult on the main issues , priorities and outcomes</p> <p>The key themes are identified from the review of plans, programmes and environmental objectives and are considered against the seven well-being goals. The ISA objectives are then presented in Table 5-3 which were initially designed to reflect these key themes</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
cyclists. There is evidence that an impact of 17 .6 mph between a pedestrian and a cyclist may result in death to the pedestrian. This is supported by judgements in the common law.	
All forms of public transport should be treated equally. Far more journeys are made by bus yet receive a fraction of the support given to TfW rail services	Comment noted
We live in an age of uncertainty. The integrated sustainability appraisal framework should be stress-tested in order to ensure it delivers robust results	Comment noted
<p>"Transport" can be open to interpretation as means / modes of giving access to places of work, education and health services, and to the supply of goods and materials. These should be challenged if they are not open to question as the most suitable and sustainable solutions to the movement of people and produce.</p> <p>There is also a need to have fair, equitable, and robust measures of economic and social benefits and disbenefits</p>	Comment noted
Wales' National Parks are a National resource for all to enjoy and an important contributor to well-being. Affordable access to and around the National Parks is essential for everyone to be able to enjoy them without the environmental impact of car travel. Failure to address this will result in a significant proportion of the population being excluded from enjoying this rich and natural resource, whilst the continued increase in visitors arriving by cars fails to address key objectives of factors contribute to climate change, environmental and health impacts	Comment noted
<p>In clause 1.2 it states 'Covering all modes, it sets out our strategic priorities and desired outcomes, providing a link to the wider priorities as well as plans at the local authority level.' However we cannot identify clear priorities or desired outcomes.</p> <p>In clause 3.2 it sets out 'Key Themes Resulting from the Review' but all it says in the column headed 'National well-being goals' is a list of headings 'A prosperous Wales A resilient Wales A healthier Wales A globally responsible Wales'. This does not set out any aims or objectives regarding transport. The aims and objectives should be included from those plans into the Transport Strategy in a similar way to the impact assessments referred to.</p> <p>The appraisals in themselves are good as a base for taking forward objectives, however these have not been identified in an understandable way.</p> <p>The plan lacks substance in 'what is actually going to be done'.</p>	<p>Comment noted</p> <p>As part of the ISA and WTS process, the scoping report is an evidence gathering stage and involves engaging with stakeholders. The next stage is to develop and consult on the main issues, priorities, and outcomes</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
It is suggested that a clear schedule of aims and objectives is included so that the plan can be measured. The details of how the aims and objectives are to be delivered will no doubt be in future documents.	The key themes are identified from the review of plans, programmes and environmental objectives and are considered against the seven well-being goals. The ISA objectives are then presented in Table 5-3 which were initially designed to reflect these key themes
Whilst the ISA should rightly consider all other relevant plans and programmes the WTS should not be constrained, nor its vision compromised unduly by those. Delivery of the WTS is key to the future social, economic and environmental sustainability of the nation, and it is therefore essential that deliverability is not compromised	Comment noted
Yes, the issue of minerals, mineral products and minerals safeguarding should be appropriately considered in the scope of the ISA and its appraisal of the WTS	Comment noted
The scope is broad, and the objectives are probably about right. However, as noted in our response to question 4, the report does not state what weight is attached to each objective. We recommend giving additional weight to objectives relating to climate change and ecosystem resilience, given their recognition as “overarching considerations”. A mechanism for this weighting will need to be developed	Comment noted
The scope should clearly now also consider what the “new norm” is likely to look like in recognition of the recent changes as a result of the pandemic.	Comment noted During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.
The ISA references a range of modes such as bus, rail and active travel. We note, however, the absence of community transport in the scoping report. Community transport provides essential services for many communities and should be acknowledged in the scoping exercise	Comment noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
	Community transport added to Objective 2
<p>The scoping report references public transport, bus, rail and active travel but excludes community transport completely. We welcome the commitment to ‘recognising and promoting the Third Sector’ however, this commitment could be evidenced by providing specific information about how the sector is expected to be involved in the development or delivery of the strategy.</p> <p>Community transport operators provide essential services across Wales which help to address transport poverty and exclusion. The Minister himself has said that there cannot be an integrated transport network for Wales without community transport. The sector must be explicitly referenced in these plans in an appropriate manner. The Community Transport Association is able to support colleagues to ensure this is developed in line with the sector’s role and capabilities.</p>	<p>Comment noted</p> <p>Community transport added to Objective 2</p>
<p>Table 3.1: We recommend a reference to the Environment (Wales) Act in Table 3.1 would be appropriate as it underpins the Natural Resources Policy and SoNaRR and connects these with the Wellbeing of Future Generations Act.</p> <p>Table 5-3 (ISA objective 7): We recommend that reference is made to coastal erosion in this section. Whilst it is currently focused on ‘flood’ issues it should also address wider representatives of climate change impacts.</p> <p>Table 3.2 Key Themes page 18: We suggest the following wording change in bold to ‘Protect and enhance the distinctiveness of our landscapes, National Parks and AONBs, Seascapes, historic environment....’, to ensure protection of designated landscapes isn’t overlooked.</p> <p>Table 3.2 also refers to green infrastructure, but it would also be appropriate to refer to resilient ecological networks (RENs) alongside this. Green infrastructure can be considered alongside RENs, distinguished from them by the specific recognition they receive within the land use planning system.</p> <p>Section 4.3.1: Overarching considerations: Climate Change and Ecosystem Resilience:</p> <p>Section 4.3.1 refers to the aspects of ecosystem resilience as defined in the Environment Act. The Act acknowledges that these aspects are not exhaustive and as part of its ongoing work NRW has identified two further significant aspects, recovery and resistance, that are important to consider and would be appropriate to refer to as part of the building blocks list of aspects.</p>	<p>Comment noted</p> <p>Agree - Environment (Wales) Act added to Table 3.1</p> <p>Agree – Coastal erosion added to decision aiding questions for Objective 7</p> <p>Agree – Changed Key theme to ‘Protect and enhance the distinctiveness of our landscapes, National Parks and AONBs, Seascapes, historic environment....’,</p>
<p>We live in an age of uncertainty. The integrated sustainability appraisal framework should be stress-tested in order to ensure it delivers robust results</p>	<p>Comment noted.</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
Q7	Do you support the approach to the integration of the impact assessments?	
	Not sure what you mean	Comment noted
	The document is almost identical to the ISA for the National Development Framework which was consulted on in 2017. The WTS needs a different approach to that of the NDF	Comment noted
	To consider all impact assessments together is a much better approach than having separate ones which need to be collated	Support noted
	Whilst the integration of the impact assessments is to be welcomed, as it allows advantage to be taken of synergies and opportunities, it is unclear how potential inconsistencies and constraints will be addressed if they adversely impact the aspirations of the WTS, and its delivery of the improvements it seeks to achieve and direction it looks to set	Support and comment noted
	An integrated approach would be beneficial, but greater clarity is needed over what this will entail and ultimately seek to deliver	Support and comment noted
	Yes, in principle. We strongly commend the aim of integrating the assessment of health and equality impacts into the process for carrying out Strategic Environmental Assessments. However, as we have said before, this does not appear to have been done sufficiently comprehensively. We feel the assessment framework needs to better reflect the range of public health impacts of the transport system (i.e. physical inactivity, air pollution, noise, road safety and casualties, and isolation), together with the fact that these impacts fall disproportionately on lower income and other disadvantaged groups	Support and comment noted
	Yes, bringing the assessments together is important to avoiding duplication. It also allows for a more balanced view of the relative importance of different initiatives and the potential for assessment of actions that will benefit one area contributing to harms in another	Support and comment noted
	Yes, we very much support this approach. It is important that impact assessments are not carried out in isolation	Support noted
	In general yes. The approach recognises the importance and coverage of Wellbeing of Future Generations	Support noted
	We support the approach to integrate the impact assessments and believe this is a sensible way to assess all aspects	Support noted
	Yes. We believe it is a sensible approach to integrate the necessary impact assessments although it is important to ensure they remain robust	Support and comment noted

Integrated Sustainability Appraisal Response Log		Arcadis Response
Yes, bringing the assessments together is important to avoiding duplication. It also allows for a more balanced view of the relative importance of different initiatives and the potential for assessment of actions that will benefit one area contributing to harms in another.		Support noted
We support the approach to the integration of the impact assessments subject to regulatory requirements of SEA Regulations being met		Support noted
<p>Welsh language version: Er bod y ddogfen ymgynghorol yn talu sylw i'r Gymraeg mewn sawl adran, a bod rhai o'r prif ystyriaethau perthnasol yn cael eu hamlinellu ar dudalen 31, credwn y dylid integreiddio anghenion y Gymraeg a'i siaradwyr fel thema lorweddol ar draws y strategaeth, ac nid ei thrin fel mater unigol i'w thrin ar wahân yn unig. English translated version: Even though the consultation document pays attention to the Welsh language in several sections, and that some of the main relevant considerations are outlined on page 31, we believe that the needs of the Welsh language and its speakers should be integrated as a horizontal theme across the strategy, and not treated like a singular matter to be treated separately.</p>		Noted and agreed. The ISA Scoping Report sets out baseline data, key issues and Objectives for each topic of the ISA. In practice, the ISA appraisals will provide appraisals on an individual-topic basis followed by amore holistic and cumulative appraisal that treats the topics 'horizontally'
Q8	Do you support the findings of the initial screening work for the impact assessments?	
Again, I am not sure what you mean		Comment noted
The document is almost identical to the ISA for the National Development Framework which was consulted on in 2017. The WTS needs a different approach to that of the NDF		Comment noted
<p>To a limited extent yes. The impact assessments have little reference to rail use and the provision of improved rail services. Further study is required to assess both the existing rail passenger issues and those which can be identified into the future. Without a sustainable plan for rail services it will lag behind demand as has happened in the past. For example the last rail Franchise to Arriva Trains Wales was based on no growth in passenger numbers.</p> <p>It is recognised that Covid 19 may have an impact on future travel but as things stand Government appears to hold the view that life will return to normal at some point in the future few years. It is unlikely to do so with the certainty that commuter travel will be less and that will impact on the revenue from key sectors such as Chester to Manchester, Crewe to Manchester, Shrewsbury to Birmingham and the Valley Lines into Cardiff.</p>		<p>Comments noted</p> <p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.</p> <p>Rail, and public transport, is a key consideration. Extensive baseline</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
Once again, the Town Council has to comment that there is nothing in the ISA about improved rail services and what are the key passenger issues giving the impression that those key user issues are unrecognised		data provided on rail in the appendices and it will be an important consideration of the appraisals.
Yes we do but we notice that there is no mention of the national cycle network which needs to be maintained, developed and improved and which offers social, environmental, economic and cultural benefits. This network has the potential to deliver economic (recreation and tourism) benefits in sparsely populated and economically deprived areas		Support and comment noted. National Cycle Network is shown on Figure 4.
Yes, subject to the need for further immediate research into the impact of Covid-19, with input from that into impact assessments; and the need to take into account the urgent timescale of climate change and loss of biodiversity, to which the Wales Transport Strategy must contribute		Support and comment noted
To a limited extent yes. The impact assessments have little reference to rail use and the provision of improved rail services. Further study is required to assess both the existing rail passenger issues and those which can be identified into the future. Without a sustainable plan for rail services it will lag behind demand as has happened in the past. For example the last rail Franchise to Arriva Trains Wales was based on no growth in passenger numbers). It is recognised that Covid 19 may have an impact on future travel but as things stand Government appears to hold the view that life will return to normal at some point in the future few years.		Comment noted. During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.
The need for local buses in rural areas is essential, particularly along the west coast of Wales		Comment noted
See comments above. Clearly further consideration needs to be given to the role played by the Minerals Industry in supporting the achievement of the well being goals. A better understanding of the industry would be beneficial		Comment noted
The left hand column of Table 2-1 identifies the right overall headings. However the summary of the screening results for 'health' (top line of the table) again fails to mention the range of public health impacts, and the issue of 'health inequalities', as set out in Q7 and previous answers		Comment noted
	We believe there are some gaps in the initial screening as evidenced above and would welcome the inclusion of the points raised in this response.	Comment noted
It is not clear the range of options for classifying impact but the WTS will have a definite impact on all aspects rather than 'potential' as stated. This has the potential to be either positive or negative. The		Comment noted

Integrated Sustainability Appraisal Response Log		Arcadis Response
summary of issues and opportunities provides a balanced view of issues which evidences the positive and negative impacts that the strategy could address		
Yes we do but we notice that there is no mention of the national cycle network which needs to be maintained, developed and improved and which offers social, environmental, economic and cultural benefits. This network has the potential to deliver economic (recreation and tourism) benefits in sparsely populated and economically deprived areas		Support and comment noted
Q9	Are there additional pieces of baseline data or evidence that the ISA should consider with specific regard to the impact assessments?	
	This seems to be focussed on environmental impact etc. and can be interpreted as against the construction of improved infrastructure and more on better ways to make do with the existing networks	Comment noted
	Traffic returns from bus and railway companies. I saw no reference - or I forgot it in the fog of uncertainty as to what you mean - to figures from the use of roads. Enough roads have rubber traffic measures on them	Comment noted
	Has there been any data to confirm if the previous Wales transport strategy met with its objectives? This would help determine where further work was required on Impact assessments	This is a comment for the WTS itself, and not the ISA.
	<p>The impact of reduced capacity on our trains leads to the following:</p> <ul style="list-style-type: none"> i) People not wanting to use the trains due to it being uncomfortable. ii) Trains being overcrowded to an extent where health and safety are an issue. iii) Fares should be at affordable levels for those on lower incomes and who cannot afford a car. If those in this bracket do not have access to public transport then they will find themselves in a restricted job market. iv) If a good rail service delivery is not achieved then people will continue to use private transport. <p>Public transport (buses, taxis and trains) should be integrated in the centre of major settlements (ie Rhyl, Flint, Prestatyn, Bangor, Llandudno and Llandudno Junction) where-ever possible. This to date has not be well achieved anywhere in the UK outside of the major cities.</p> <p>From the perspective of a North Wales Town Council we would add that if rail ridership numbers are to increase then the cost per mile rail fares in north Wales compared to south Wales should be eliminated</p>	This is a comment for the WTS itself, not the ISA specifically.

Integrated Sustainability Appraisal Response Log	Arcadis Response
Why are services not being used? A few years ago, evening journeys were operated on Lloyds Coaches 28 service between Tywyn and Dolgellau to measure if there was a need. This was conducted in the winter. Surprise, surprise - uptake was low. Was the timing deliberate?	This is a comment for the WTS itself, not the ISA specifically.
Demographics. The WTS should be forward looking, we need to plan for the future	This is a comment for the WTS itself, not the ISA specifically.
As Q4 and Q8, above. The use of timeline baseline data should be considered and adopted where feasible for all transport modes, without distinction between 'strategic' and other transport modes: this includes active travel modes	Comment noted
Studies and reports that have been carried out for specific projects, e.g. GRIP reports and technical assessments that have been or are being prepared for 'New Station Fund' and 'Reversing Beeching/Your Ideas Fund' bids, should be appraised	This is not within the scope of the ISA.
Please see comments above in relation to the inclusion of National Parks and their contribution toward national health and well-being. 2. The current COVID19 crisis has prompted the need for instant change of behaviour. Whilst the timescales for taking account of any lessons learned from the lockdown and outcomes post-lockdown, this would be an important consideration in terms of travel impacts and how we recover from such imposed change	Comment noted During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.
The impact of reduced capacity on our trains leads to the following: i) People not wanting to use the trains due to it being uncomfortable. ii) Trains being overcrowded to an extent where health and safety are an issue. iii) Fares should be at affordable levels for those on lower incomes and who cannot afford a car. If those in this bracket do not have access to public transport then they will find themselves in a restricted job market. iv) If a good rail service delivery is not achieved then people will continue to use private transport.	Comment noted

Integrated Sustainability Appraisal Response Log	Arcadis Response
Public transport (buses, taxis and trains) should be integrated in the centre of major settlements (ie Rhyl, Flint, Prestatyn, Bangor, Llandudno and Llandudno Junction) where-ever possible. This to date has not be well achieved anywhere in the UK outside of the major cities.	
The data considered in Appendix B, para 3.1.7 is dated 2014. Whilst this may well be based upon data obtained from the SoNaRR 2016 report, more up to date minerals production data is available from the Regional Aggregate Working Party reports for North and South Wales. Further, and going forward UK Government is in the process of undertaking the AM2019 survey, the results of which should be available later in 2020. Such data should be used in considering aggregate production going forward, if this is available	Comment noted
<p>1. We believe it will be important to consider regional variations across Wales.</p> <p>2. We have suggested public health as an area that does not seem to have been sufficiently broadly considered. There is extensive, relevant, public health data that does not seem to have been reviewed. Much of this is available in the health-related (and other) strategies we have listed in our response to question 1.</p> <p>3. There is a mass of road safety data that has not been adequately reviewed. Road safety, in the broad sense of road danger reduction that we have recommended above (see our answer to Q2), must be a central issue in any new WTS</p>	<p>Comment noted</p> <p>Datasets have been reviewed and updated. Public health and safety will be a key consideration of the WTS and the ISA.</p>
<p>In terms of evidence, we note Oxfam Cymru's report 'The Welsh Doughnut 2020' which includes a section on transport. The report points to the lack of data on transport and inclusion which creates a challenge for the delivery of access and inclusion and makes it extremely difficult to assess and tackle transport poverty. We suggest that consideration could be given to a review of transport data to identify ways to strengthen the evidence base to ensure access and inclusion.</p> <p>We have already provided information on gender which we raise again here and we also suggest that further data is sought on safety of access to public transport in addition to that identified for safety on the vehicles.</p> <p>We believe there may be additional indicators to explore on children's access to transport and the impacts of this on their opportunities. For example, we know that in rural areas children may miss out on after-school activities due to bus times if the family does not have access to a private vehicle.</p>	<p>Comments noted</p> <p>The Welsh Doughnut 2020 added to policies review</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>Finally, we know that a lack of transport leads to a significant number of missed health appointments and so suggest this is considered as an indicator in the report</p>	
<p>Earlier this year, CTA was involved in the development of 'A Welsh Doughnut 2020: A framework for environmental sustainability and social justice' published by Oxfam Cymru¹ which describes a social floor and environmental ceiling and provides indicators that set boundaries for delivering a decent standard of living whilst remaining within environmental limits. Transport is understood to play a central role in social exclusion and poverty with accessibility in terms of availability and price identified as a critical issue in 'The Wales We Want'. The report points to the lack of data available for transport in Wales which prevents the benchmarking required to identify issues and measure progress. Dr Karen Lucas, a research associate at the Transport Studies Unit at Oxford University, promotes an improvement in data and metrics for transport and inclusion which is something we support. The Oxfam report has identified an indicator from the National Survey for Wales which asks people about services available in their local area whilst recognising that the indicator does not assist with the identification of transport availability. In developing the WTS, Welsh Government may wish to strengthen data collected on transport access and inclusion.</p> <p>In terms of the data provided in the baseline report, we welcome the recognition that community transport offers transport services for older people but stress that services support all those who face barriers to access such as those in rural areas with little or no public transport provision and sometime long distances to travel; those who need to travel out of hours perhaps for hospital visiting or social activities; and those who are marginalised in some way such as people with disabilities, asylum seekers and so on.</p> <p>As identified in the report, WIMD provides data on access to services. In addition, it may be useful to include data on missed medical appointments given that we know a major reason for this a lack of transport and can evidence projects that have supported hospitals and surgeries to reduce the number of missed appointments and the costs associated with this through community transport support. A project support by CTA's Connecting Communities in Wales project was featured in the NHS Confederation Wales report on community transport and health 'Making Health Accessible to All'. The case study highlights the number of missed appointments due to a lack of accessible transport options and the pressures created by infrequent public transport services, estimating the cost of this to be £9.56m for Betsy Cadwaladr UHB alone.</p>	<p>Comment noted The Welsh Doughnut 2020 added to policies review</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>We recommend that the following pieces of evidence should be considered by the ISA, with regard to the impact assessments:</p> <p>Additional Evidence Requirements</p> <p>WINS Maps</p> <ul style="list-style-type: none"> • We recommend that The WINS maps are evidence that should be considered by the ISA. They aim to promote more holistic management of natural resources through spatial mapping of opportunity areas for land management interventions at a regional scale. The mapping focusses on priorities of the Welsh Government Natural Resources Policy (2017), which puts an emphasis on taking a place-based approach and delivering nature-based solutions. • The four policy themes, drawn from the NRP, were: <ol style="list-style-type: none"> 1. Marine and Freshwater Water Quality 2. Natural Flood Management 3. Woodland Planting (for various objectives) 4. Urban and Peri-Urban Green Infrastructure <p>Groundwater</p> <ul style="list-style-type: none"> • Data on groundwater (saline intrusion) in coastal settings as a result of predicted sea-level rise from a changing climate: somewhere in the order of 0.5m to 1m depending on the scenario modelled. For example, this may lead to more corrosion risks of steel infrastructure in coastal settings. <p>Drainage System Failures</p> <ul style="list-style-type: none"> • Data of failing sewers; drainage and stormwater systems resulting in leakages; capacity and conveyance constraints; treatment limitations and diffuse pollution increases. Some of these risks may be worsened as a result of warmer, wetter winter events arising from a changing climate. <p>Areas of Hardstanding</p> <ul style="list-style-type: none"> • Monitoring data on increases in areas of hardstanding over time from infrastructure buildout resulting in greater volumes of stormwater runoff and management requirements and reduced aquifer recharge. <p>Water Demand in Wales Report</p> <ul style="list-style-type: none"> • Reference should be made to the 'Water Demand in Wales Report from May 2020 (authored by Arups for NRW and Welsh Government) as there are a number of threads associated with various Climate Change Risk Assessment scenarios (CCRA2 and CCRA3) in the report that are relevant to the ISA of the Wales Transport Strategy. <p>Role of Local Authorities</p>	<p>Comments noted</p> <p>Natural resources will be considered in detail through the ISA. At this stage WINS data has not been included in the data review.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>https://llyw.cymru/sites/default/files/publications/2019-05/adroddiad-y-grwp-gorchwyl-a-gorffen-ar-yr-iaith-gymraeg-a-datblygu-economaidd.pdf</p> <p>Y Gymraeg a'r economi: adolygiad o'r dystiolaeth a'r dulliau https://llyw.cymru/sites/default/files/statistics-and-research/2020-02/y-gymraeg-ar-economi-adolygiad-or-dystiolaeth-ar-dulliau.pdf</p> <p>Gweithgor ar yr Iaith Gymraeg ym maes Datblygu Economaidd a Gweinyddu Llywodraeth Leol https://llyw.cymru/sites/default/files/inline-documents/2018-11/datganiad-ysgrifenedig-gweithgor-ar-yr-iaith-gymraeg-ym-maes-datblygu-economaidd-a-gweinyddu-llywodraeth-leol.pdf</p> <p>Ymateb Comisiynydd y Gymraeg i ymgynghoriad ar y Fframwaith Datblygu Cenedlaethol drafft http://www.comisiynyddygymraeg.cymru/Cymraeg/Rhestr%20Cyhoeddiadau/20191115%20LL%20C%20Ymateb%20i%20ymgynghoriad%20y%20Fframwaith%20Datblygu%20Cenedlaethol.pdf</p> <p>English translated version: You refer to the source data used in Appendix B. Furthermore, recommend that you refer to the relevant following reports: Report of the Welsh Language and Economic Development Task and Finish Group to the Minister for Economy, Science and Transport https://gov.wales/sites/default/files/publications/2019-05/report-of-the-welsh-language-and-economic-development-task-and-finish-group.pdf The Welsh language and the economy: a review of evidence and methods https://gov.wales/sites/default/files/statistics-and-research/2020-02/the-welsh-language-and-the-economy-a-review-of-evidence-and-methods.pdf Working Group on the Welsh Language in Local Government Administration and Economic Development https://gov.wales/sites/default/files/inline-documents/2018-11/written-statement-working-group-on-the-welsh-language-in-local-government-administration-and-economic-development.pdf The Welsh Language Commissioner's response to the draft National Development Framework consultation http://www.comisiynyddygymraeg.cymru/English/Publications%20List/20191115%20LL%20S%20Ymateb%20i%20ymgynghoriad%20y%20Fframwaith%20Datblygu%20Cenedlaethol.pdf</p>	
<p>There are significant shortcomings in the understanding of existing freight data in the context of section 7 (A Globally Responsible Wales). The statement that there is no data relating to freight transported on</p>	<p>Comment noted</p>

Integrated Sustainability Appraisal Response Log		Arcadis Response
roads in Wales is incorrect. Regional figures for road freight can be found here: https://www.gov.uk/government/statistical-data-sets/rfs01-goods-lifted-and-distance-hauled (sets RFS0121 - RFS0124). We acknowledge that rail freight statistics for Wales are not readily available (but could be obtained through working with Network Rail). Air freight statistics could also be included, at least for Cardiff Airport, through Civil Aviation Authority statistics		Freight data has been included in Appendix B.
Demographics. The WTS should be forward looking, we need to plan for the future		Comment noted
Q10	Do you have any other comments?	
The use of some roads is highly seasonal - this is the case on North Wales. You can go through the winter months without traffic trouble, but as soon as summer comes, there are traffic jams. My father used to say he was imprisoned for three months; I tend to clear off elsewhere for those same months - even England		This comment refers to the contents of the WTS rather than the ISA.
I think that transport options and alternatives should be part of the curriculum in schools - so that the next generation can be open to making more ethical choices than everyone having a car each and constantly driving everywhere. It shouldn't be seen as 'only poor people get the bus'. Which is a sad reality at the moment. I could afford a car at age 26 and it has transformed my life - but only because the buses are not sufficient. It's now really hard to go back to my more green younger lifestyle. People are significantly disadvantaged if they are relying on bus services in rural areas - socially and in terms of work		This comment refers to the contents of the WTS rather than the ISA.
The document is repetitive, with an increasingly complex policy integration picture and we question who the intended audience is?		This comment refers to the contents of the WTS rather than the ISA.
The document is full of words with little substance as to what is the overall delivery plan actually means. A summary with the objectives and aims of the scoping plan is recommended so everyone knows what we are actually going to do to achieve the objectives. The Town Council would like to suggest that the following policies should be included in the scoping plan: i) That train services into the future provide not only for existing passenger numbers but future demand. This as a minimum should mean retention of the current number of seats per train.		This comment refers to the contents of the WTS rather than the ISA.

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>ii) ii) The buses for both town and rural areas are an important part of any strategy which removes cars off the roads. A policy of retaining a public transport service to as many areas as possible should be part of the scoping strategy</p>	
<p>At one time, you could travel all over Gwynedd and the surrounding areas with ease. Those in charge of planning services came from the industry and worked hard to provide a cohesive network, backed up with the provision of timetables. They took a holistic approach to planning. This no longer happens. In particular, issues with Padarn, Express and Tacsí Gwynedd has led to crisis management and a further erosion of services. To conclude, work to create an integrated transport network for the future needs to draw on a highly trained staff with the necessary expertise to move the project forward and not newly trained graduates, fresh from university. Experience matters</p>	<p>This comment refers to the contents of the WTS rather than the ISA.</p>
<p>We need to get the most out of the roads we have, to make our roads safer, to encourage modal shift and to enable more and better use of public transport, active travel and ultra-low emission vehicles (ULEV). Effective planning and development control will need to be applied in order to limit and manage the demand for transport. We should encourage home-working and make more and better use of information technology for business and other purposes.</p> <p>Your email address given does not work, here is the text from the full response (excluding the specific questions)</p> <p>Dear Sir or Madam,</p> <p>We appreciate having this opportunity to comment on the Wales Transport Strategy (WTS) Scoping Report. Our response comes in three parts: firstly we have some introductory remarks, secondly, we respond to the specific questions that you have posed and thirdly we draw some conclusions and make some concluding remarks.</p> <p>Introductory Remarks</p> <p>The Institution of Civil Engineers is an independent professional association for civil engineers and a charitable body in the United Kingdom. Based in London, the ICE has over 95,000 members, of whom three-quarters are located in the UK, while the rest are located in more than 150 other countries. We award professional qualifications that are the industry standard, lead debates around infrastructure and the built environment and provide an unmatched level of training, knowledge and thinking on infrastructure.</p>	<p>Comments noted.</p> <p>Much of this comment refers to the contents of the WTS rather than the ISA.</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>ICE Wales Cymru supports and represents more than 3,600 civil engineers working and living in Wales. It aims to influence public infrastructure policy, promote the civil engineering profession and provide support, training and networking opportunities for ICE members.</p> <p>This year's ICE State of the Nation 2020 report: 'Infrastructure and the 2020 Net-Zero Target' builds on the Committee on Climate Change's (CCC) Net Zero - The UK's contribution to stopping global warming by examining the role the UK's infrastructure networks and wider built environment sector can play in meeting the target.</p> <p>We note that the current WTS, which was published in 2008, set out to achieve social, economic and environmental outcomes. The scoping report for the new (2020) WTS has added a fourth category – cultural outcomes. This, we recognise, is particularly important here in Wales which has a rich cultural heritage which needs to be cherished and protected.</p> <p>The current (2008) WTS identified five strategic priorities:</p> <ol style="list-style-type: none"> 1. Reducing greenhouse gas emissions and other environmental impacts; 2. Integrating local transport; 3. Improving access between key settlements and sites; 4. Enhancing international connectivity; and 5. Increasing safety and security. <p>These are all important today but it's probably fair to say that the first two are even more pressing now than they were in 2008. The first because of the climate emergency and the second because of the predominance of the private car recently recognised in the work of the South East Wales Transport Commission.</p> <p>The 2008 WTS identified 3 key actions:</p> <ol style="list-style-type: none"> 1. Shifting freight from road to rail. Using freight facilities grant, support for intermodal transfer facilities and freight quality partnerships; 2. Encouraging short sea shipping by improving access to ports and support for port development; and 3. Modal shift to public transport, park and ride, walking and cycling. Providing more infrastructure to support that shift. Education and promotion of alternative modes. <p>Rail freight undoubtedly has a part to play but is best suited to the regular shipment of large amounts of heavy materials over long distances. Our motorways and trunk roads on the other hand provide suitable routes for heavy commercial vehicles carrying a wide range of products. The problem is that they are</p>	<p>Support noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>often congested with single occupancy private cars that are used for commuting between home and work at peak periods. Wales' ports continue to be important for passenger and freight movements to and from Ireland and the continent. The third key action listed above is perhaps more important and urgent today than it was 12 years ago. We do need to discourage unnecessary trips, to encourage home-working, peak spreading, modal shift, more and better use of public transport and active travel (walking and cycling) for short purposeful journeys.</p> <p>Closing Remarks</p> <p>The need to mitigate climate change is not new. The impacts of climate change are already being felt. The Earth is warming, rainfall patterns are changing and sea levels are rising resulting in an increased severity and frequency of heatwaves, floods, droughts and fires. Climate change presents a major threat to the world's people, environment, economies and public health.</p> <p>We have long known about the importance of reducing greenhouse gas emissions. The UK has had a statutory target for reducing emissions since 2008. But the establishment of the net-zero target in mid-2019 has refocused this mission and brought a renewed sense of urgency to the task. Achieving the net-zero carbon target by 2050 will require an unprecedented transformation of infrastructure systems. The vital infrastructure systems on which the UK is built – such as energy, transport and utilities – currently contribute the majority of the UK's emissions. Transport and energy alone account for around 60% of the UK's CO2 emissions. Given the urgency of the climate emergency and the long lead times and life cycles of infrastructure, the challenge of transitioning these systems over the next 30 years will be immense.</p> <p>Meeting the net-zero target will require unparalleled innovation across the economy – innovation not just in new technologies and processes, but in new and better ways of deploying existing infrastructure and technologies. This will require new business models, new consumer services and, most importantly, new policy, regulation and market design.</p> <p>The new Wales Transport Strategy will have a critical role to play in order to help the UK achieve its net-zero carbon target. Wales has, in recent years, introduced some ground-breaking legislation – the Active Travel Wales Act , the Wellbeing of Future Generations Act, and Planning Policy Guidance. We now have an opportunity to deliver an effective and forward looking Wales Transport Strategy.</p> <p>Yours sincerely, Keith Jones, Director ICE Wales Cymru</p>	

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>John Mather, Secretary, ICE North Wales Branch Institution of Civil Engineers (ICE)</p> <p>Founded in 1818, the Institution of Civil Engineers (ICE) is a UK-based international organisation with over 95,000 members, ranging from students to professionally qualified civil engineers. As an educational and qualifying body, with charitable status under UK law, we support our members throughout their careers, and help society to have trust and confidence in infrastructure professionals. Under our Royal Charter, ICE has become recognised worldwide for its excellence as a centre of learning, a public voice for the profession and a leading source of expertise in infrastructure and engineering policy.</p>	
<ol style="list-style-type: none"> 1. Appendix B – include ERAMMP information and STEAM data. 2. Figure 2 – National Parks are a landscape designation with a public health purpose and not merely a ‘landscape feature’. 3. Table 3.2 – last key theme – this could be more ambitious – “The WTS aims to develop world-leading public transport, promoting sustainability, quality, social integration and inclusion to a degree that make it effortlessly preferable over private transport.” 	<p>Comment noted</p> <p>The SEA directive takes a proportionate approach with regard to targeted data collection to identify the issues, and it is not necessary to include every data set available, as this would not be efficient.</p>
<p>The document (in our view) is full of words with little substance as to what is the overall delivery plan actually means. A summary with the objectives and aims of the scoping plan is recommended so everyone knows what we are actually going to do to achieve the objectives.</p> <p>The Association would like to suggest that the following policies should be included in the scoping plan:</p> <ol style="list-style-type: none"> i) That train services into the future provide not only for existing passenger numbers but future demand. This as a minimum should mean retention of the current number of seats per train. ii) The buses for both town and rural areas are an important part of any strategy which removes cars off the roads. A policy of retaining a public transport service to as many areas as possible should be part of the scoping strategy. 	<p>Comment noted</p>
<p>It is important that the resource implications of the Wales Transport Strategy are considered at the earliest opportunity, through the provision of a resource assessment. Further, this should also detail supply chain considerations to ensure materials are available to facilitate the delivery of the strategy. An effective and efficient transport network is essential to ensure minerals and mineral products aswell as</p>	<p>Comment noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>other goods, can be delivered to market. This transport network is also uniquely reliant on the effective and efficient delivery of minerals and mineral products to ensure roads and rail can be maintained. Recycled and secondary sources of construction aggregates supplied 28% of total demand in Great Britain in 2018, well ahead of the European average. MPA Members are at the forefront of delivering such materials. This includes materials such as road planings and spent ballast, for use in downstream markets. More detail is available in the attached document link.</p> <p>https://mineralproducts.org/documents/Contribution_of_Recycled_and_Secondary_Materials_to_Total_Aggregates_Supply_in_GB_in_2018.pdf</p> <p>WG may wish to consider specifications used in the road transport network. Overspecification may lead to an unnecessary increase in transport miles associated with a development, when in reality, a lower specification of materials may bring more local sources of material in to play. Over specification also increases pressure on the use of those resources that can only be used for high specification end uses</p>	
<p>The new WTS should fully recognise the importance of the Welsh part of the UK National Cycle Network. The NCN should become an integral part of the national transport infrastructure (it is noticeably missing from the national map at Appendix 4), in accordance with the key themes identified in the scoping report of promoting both well-being and our sustainable tourist industry</p>	<p>Comment noted</p> <p>National Cycle Network is shown on Figure 4</p>
<p>Other issues that may need to be considered:-</p> <p>Active travel to school is important, but there needs to be a recognition that much of this occurs within the context of trip chaining. It is only once it is firmly embedded in the context of adult travel that sustainable change will be possible.</p> <p>Please refer to road traffic crashes, rather than accidents. Accident implies that the crash is not preventable, when in reality it is.</p> <p>In relation to inequalities, it is worth noting how narrowing of the inequalities gap is brought about in relation to transport access:-</p> <ol style="list-style-type: none"> 1) Increase access for the most deprived more than the least deprived 2) Increase access for the most deprived and hold the least deprived constant 3) Reduce access for the most deprived but reduce access for the least deprived more 4) Reduce access for the most deprived but hold the least deprived constant. 	<p>Comment noted</p> <p>Active Travel (Wales) Act added to important national documents</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>5) Make no change to the most deprived but reduce least deprived access.</p> <p>It is worth considering whether the WTS needs to make it acceptable to only narrow inequalities by means of the approaches listed in points 1 and / or 2 only.</p> <p>The WTS will be delivered in a Wales where the Active Travel Act is already in place, but there is relatively little recognition here of the scale of ambition and opportunities stated there. It would be useful to see these reinforced in the WTS, as well as show how the WTS will contribute to, and enhance the ambition of, the Active Travel Act.</p>	
<p>As part of its Get on Board for a Better Bus Service campaign, the NFWI has been gathering case studies of members' views and experiences of local bus services. In addition, during the coming months, the NFWI will be launching a survey to gather further quantitative and qualitative data from WI members, focusing on their access to local bus services, and the impact this has had on their lives.</p>	<p>Comment noted</p>
<p>We welcome the discussions we have had so far with Welsh Government and repeat our commitment to supporting the development of the WTS in whatever way we can. We would suggest that this engagement should continue as the strategy is implemented to ensure we can support successful delivery.</p> <p>The recent Covid-19 pandemic has resulted in a big shift in travel patterns and behaviour (albeit largely temporarily) including a big uptake in active travel. There is an opportunity to gather relevant data from this situation to help inform the WTS to show what is possible, as opposed to a more traditional predict and provide approach</p>	<p>Comment noted</p> <p>Agree – continued engagement is important as the strategy develops and is implemented.</p> <p>During the preparation of the WTS careful consideration will be given to the potential impacts of Covid-19 including how it could influence the WTS and its implementation.</p>
<p>In terms of engagement, we would stress the importance on continued engagement as the strategy is implemented, recognizing that the range of expertise that has been contributed in the development stage, is also valuable in the delivery stage. Ensuring those involved in the development of the strategy remain 'in the loop' on an ongoing basis will be important for success</p>	<p>Comment noted</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
	Agree – continued engagement is important as the strategy develops and is implemented
<p>Other issues that may need to be considered:- Active travel to school is important, but there needs to be a recognition that much of this occurs within the context of trip chaining. It is only once it is firmly embedded in the context of adult travel that sustainable change will be possible. Please refer to road traffic crashes, rather than accidents. Accident implies that the crash is not preventable, when in reality it is. In relation to inequalities, it is worth noting how narrowing of the inequalities gap is brought about in relation to transport access:- 1) Increase access for the most deprived more than the least deprived 2) Increase access for the most deprived and hold the least deprived constant 3) Reduce access for the most deprived but reduce access for the least deprived more 4) Reduce access for the most deprived but hold the least deprived constant. 5) Make no change to the most deprived but reduce least deprived access.</p> <p>It is worth considering whether the WTS needs to make it acceptable to only narrow inequalities by means of the approaches listed in points 1 and / or 2 only. The WTS will be delivered in a Wales where the Active Travel Act is already in place, but there is relatively little recognition here of the scale of ambition and opportunities stated there. It would be useful to see these reinforced in the WTS, as well as show how the WTS will contribute to, and enhance the ambition of, the Active Travel Act.</p>	Comment noted
<p>Section 5</p> <p>This section should be redrafted to reflect the potential longer-term implications of the Covid19 pandemic lockdown on the Wales Transport Strategy e.g. increased working from home; need for faster broadband connectivity, increased active travel and consequential implications for future land use and allocation.</p> <p>Table 3.2</p> <p>The key theme around flood risk is missing a word. It should read as “reduce the risk of flooding and/ or coastal erosion...” The 6th key theme in the table (bottom of page 17), we recommend that this should also identify the need for climate change adaptation.</p> <p>Section 4.3.1</p> <p>This section refers to attributes and aspects inter-changeably. Aspects of ecosystem resilience include diversity, condition, extent, and connectivity, adaptability, recovery and resistance. Ecosystem attributes are those aspects of ecosystem resilience which are well understood and measurable. The ecosystem attributes listed in section 4.3.1 currently only includes diversity, condition, extent, and connectivity. It</p>	<p>Comments noted</p> <p>Implications of Covid-19 added to Section 5</p> <p>Agree-Added erosion to 4th theme of Table 3-2.</p> <p>Agree – recovery and resistance added</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>would be appropriate to make this distinction within the text and to emphasise that resilient ecosystems only arise as a result of an interplay between all four ecosystem attributes, as such they should not be considered in isolation from one another.</p> <p>Table 4.1</p> <p>Table 4.1 (Resilient Wales section) refers to biodiversity, flora and fauna but given the legislative context in Wales it would be more appropriate to refer to biodiversity and ecosystem resilience. This section should also include reference to Sites of Special Scientific Interest, protected species, section 7 habitats and species, and to resilient ecological networks. It would be appropriate to consider and brigade the key issues and opportunities for biodiversity and ecosystem resilience in Table 4.1 against the ecosystem attributes of diversity, extent, condition and connectivity to reflect and provide a clearer read across from the legislative requirements of the Environment (Wales) Act. The potential impact that fragmentation can have on the commuting, dispersal, movement routes of certain species should be referred to in Table 4.1. The opportunity that active transport links could play in helping to reinforce resilient ecological networks could also be emphasised in Table 4.1.</p> <p>Appendix B It would be appropriate for appendix B to include an analysis of resilient ecological networks – level II networks developed as part of NRW's Habitat Networks spatial data set for various terrestrial habitats would be a useful starting point for consideration (available for download via Lle).</p>	<p>Added ecosystem resilience.</p>
<p>Welsh Language version: Nodwn fod y ddogfen ymgynghorol ar gael yn Gymraeg, ond nid yr atodiadau</p> <p>English translated version: Please not that this consultation document is available in welsh, but not the appendices</p>	<p>Noted</p>
<p>We need to get the most out of the roads we have, to make our roads safer, to encourage modal shift and to enable more and better use of public transport, active travel and ultra-low emission vehicles (ULEV). Effective planning and development control will need to be applied in order to limit and manage the demand for transport. We should encourage home-working and make more and better use of information technology for business and other purposes.</p>	<p>Comment noted</p>