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Welsh Government

INTEGRATED SUSTAINABILITY APPRAISAL OF LLWYBR NEWYDD – A NEW WALES TRANSPORT STRATEGY – CONSULTATION DRAFT

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ABBREVIATIONS

AA	Appropriate Assessment
AQMA	Air Quality Management Area
CRIA	Child Rights Impact Assessment
cSAC	Candidate Special Area of Conservation
CVL	Core Valleys Lines
DNS	Developments of National Significance
EA	Environment Agency
EC	European Council
EU	European Union
EqIA	Equalities Impact Assessment
FPI	Foundation Phase Indicator
GI	Green Infrastructure
GIS	Geographic Information Systems
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HRA	Habitats Regulations Assessment
ISA	Integrated Sustainability Appraisal
LDP	Local Development Plan
LSE	Likely Significant Effect
LSOA	Lower Super Output Area
NAPPA	Noise Action Planning Priority Area
NPPF	National Planning Policy Framework
NRP	Natural Resources Policy
NRW	Natural Resources Wales
NTS	Non-Technical Summary
MPA	Marine Protected Area
PHV	Private Hire Vehicle

PPW	Planning Policy Wales
pSPA	Potential Special Protection Area
SA	Sustainability Appraisal
SEA	Strategic Environmental Assessment
SMNR	Sustainable Management of Natural Resources
SoNaRR	State of Natural Resources Report
SPP	Statement of Public Participation
SRN	Strategic Road Network
UK	United Kingdom
UNCRC	United Nations Convention on the Rights of the Child
WBFG Act	Well-Being of Future Generations Act (2015)
WHIASU	Welsh Health Impact Assessment Support Unit
WIMD	Welsh Index of Multiple Deprivation
WLIA	Welsh Language Impact Assessment
WTS	Llwybr Newydd – A New Wales Transport Strategy

NON-TECHNICAL SUMMARY

Purpose of the Non-Technical Summary

This document provides a summary in non-technical language of the Integrated Sustainability Appraisal (ISA) of the Welsh Government's 'Llwybr Newydd – A New Wales Transport Strategy – Consultation Draft' (WTS). Further details can be found in the ISA Report.

What is 'Llwybr Newydd – A New Wales Transport Strategy'?

- 1.1.1 The WTS is a statutory document required by the Transport (Wales) Act 2006 (The Act). The Act places a duty on Welsh Ministers to prepare and publish a WTS setting out its policies and how they will be discharged. The WTS sets out Welsh Government's strategic priorities and desired outcomes; the WTS addresses all transport modes, including walking, cycling, public transport, electric vehicles and the private car.
- 1.1.2 The Welsh Government is seeking to develop the new WTS in order to provide a long-term vision for transport over the next 25 years, recognising a number of recent changes and looking to address future opportunities and challenges. 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, as these will be set out in the 5-year detailed National Transport Delivery Plan and Local Transport Plans.

What is the Integrated Sustainability Appraisal?

- 1.1.3 ISA is a process of appraising the contents of the WTS, as it is written, against a series of sustainability objectives in order to help promote sustainable development and test the WTS before it comes into force. ISA has been undertaken throughout the preparation of the WTS and it has been able to feedback recommendations to improve the relative sustainable development performance of the WTS. The ISA incorporates statutory and Welsh Government required assessments and it meets the legal requirements of the European Strategic Environmental Assessment (SEA) Directive. The ISA is high-level and considers both positive and negative effects of the WTS. The purpose of this is to help ensure that future land-uses in Wales over the next 20 years are sustainable.
- 1.1.4 One of the 'ways of working' that form part of the Welsh Government sustainable development principle is the need to take an integrated approach to what we do. The ISA, therefore, includes a number of other statutory and non-statutory assessments. This allows us to take a more rounded view of the sustainability implications and opportunities arising from the WTS. The ISA integrates the following assessments and legislative requirements: Sustainability Appraisal; SEA; Well-being of Future Generations Act (2015); Welsh Language (Wales) Measure 2011; Equalities Impact Assessment; Children's Rights Impact Assessment; Sustainable Management of Natural Resources and the Natural Resources Policy (Environment (Wales) Act 2016). The ISA also accounts for the non-legislative requirements of assessments relating to Rural Proofing; Health Impacts; Climate Change; and Economic Development.
- 1.1.5 The integration of these assessments ensures that a collaborative approach is undertaken on different issues, sharing knowledge and recognising links between topics in a consistent and transparent manner.

ISA and NDF Processes So Far

- 1.1.6 The WTS preparation commenced with a process of evidence gathering and stakeholder engagement in early 2020. Consultation on the draft ISA Scoping Report was undertaken between 05 May – 31 July 2020. In addition, a workshop was held in early May 2020 with stakeholders who represent the range of assessment processes to be integrated into the ISA. The ISA Scoping Report was issued to statutory stakeholders for comment, as well as other relevant or interested stakeholders.

- 1.1.7 In September 2020 an early iteration of the WTS was assessed in the ISA. The results of this process were fed back to the WTS-making team in order to help inform their decision making process and to ensure that environmental and sustainability considerations are integrated into the WTS from the outset.
- 1.1.8 In October 2020, a revised draft of the WTS was prepared and this is the focus of this ISA Report. It is anticipated that the WTS will be published for consultation later in 2020, accompanied by this ISA Report, after which the responses received would be considered and the WTS and this ISA amended accordingly.

How the ISA has been undertaken

- 1.1.9 The geographical scope of the ISA has been driven by the geographical scope of the WTS i.e. the whole of Wales. The WTS is intended to apply for 25 years after adoption. This timescale has been reflected in the ISA. The intention of the ISA was to enable the principles of sustainable development to be embedded into the WTS from the outset.

ISA Framework

- 1.1.10 A key output of the ISA Scoping Stage was the ISA Framework. 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 during the ISA Scoping Stage. The ISA Objectives are listed in Table NTS-1. These ISA Objectives have been used to test the performance of the WTS by appraising each element of the WTS for its likely effects on each ISA Objective.
- 1.1.11 The ISA Framework allows for an integrated approach to assessing the effects of the NDF by bringing together the various impact assessments listed above into a single appraisal framework.

Table NTS-1: ISA Objectives in the ISA Framework, against which the WTS is appraised

No.	ISA 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
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

Appraisal of the WTS

- 1.1.12 The WTS is structured in the following way:

- 1. Vision
 - *Sets out what the NDF is, how it fits with wider Welsh Government policy and the structure of the Welsh planning system.*

- 2. Our Long Term Ambitions for Transport in Wales
 - *Good for people and communities*
 - *Good for the environment*
 - *Good for the economy and places in Wales*
 - *Good for Welsh culture and language*
- 3. Our 5-Year Priorities
 - *Priority 1: Planning for better connectivity*
 - *Priority 2: Public transport services that people can use, want to use and do use*
 - *Priority 3: Safe, accessible, well-maintained transport infrastructure*
 - *Priority 4: Behaviour change*
 - *Priority 5: Adopt innovations that deliver more sustainable transport choices*
- 4. What We Will Measure;
- 5. How We Will Deliver;
- 6. The Five Ways of Working; and
- 7. Mini Plans: Transport Modes and Sectors
 - *Mini Plan for Active Travel;*
 - *Mini Plan for Bus;*
 - *Mini Plan for Rail;*
 - *Mini Plan for Roads, Streets and Parking;*
 - *Mini Plan for Community and not-for-profit Transport Sectors;*
 - *Mini Plan for Taxis and Private Hire Vehicles;*
 - *Mini Plan for Freight and Logistics;*
 - *Mini Plan for Ports and Maritime Transport;*
 - *Mini Plan for Aviation.*

1.1.13 The appraisal in the ISA has focused on Chapters 1 (Vision), 2 (Ambitions), 3 (Priorities), and 7 (Mini Plans). Chapter 4 (What We Will Measure) has been considered as part of the development of the monitoring framework.

Assessment Results

1.1.14 The ISA report and its appendices present the full and detailed assessment results for the WTS. A summary of these results is provided in Table NTS-2.

Table NTS-2: Summary of the effects identified during the ISA of the October (2020) draft of the WTS

Summary of effects for each ISA 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	<p>The WTS would help to make public transport more accessible for a wider range of people, particularly as a result of the Ambitions, Priorities 1, 2, 3 and 5 as well as the Mini Plans on Active Travel, Bus and Rail. Improved access to higher quality public transport options that get people to where they need to go, and when they need to get there, would help ensure that more people are better able to access health and social care facilities, exercise, leisure and recreational opportunities as well as a diverse range of semi-natural habitats. Public transport also helps to combat the risk of social isolation by providing a means for informal community interactions with local neighbours. Social interaction is not possible when people are reliant on cars for most of their journeys. Roads, and particularly busy roads, can also lead to severance for communities.</p> <p>The WTS seeks to ensure that new developments are increasingly accessible by ensuring that transport infrastructure is situated in proximity to homes and developments are accessible via walking and cycling. This is reinforced throughout the Ambitions in the WTS as well as the Mini Plans on Active Travel, Bus, Rail and Community Transport. It is therefore likely that new community facilities, leisure and recreational spaces as well as new health facilities and open spaces, can be accessed by all local people efficiently and sustainably.</p> <p>The Ambitions, Priorities and the Mini-Plan on Active Travel could facilitate significantly higher rates of walking and cycling for people in Wales, which have remained stagnant in recent years. Walking and cycling is not only the most sustainable form of travel but provides significant health benefits, for example due to physical exercise and to increased community interactions. Improvements to active travel links may prove to be particularly beneficial for certain groups of society, including the elderly, those who do not have access to a car, and children travelling to and from school.</p> <p>The WTS would ensure that the strategic road network is maintained, as per the Government's legal obligations. It would look to ensure that new services and facilities are in proximity, or in accessible locations, for people needing to access them (e.g. see Priority 1). This would enable more efficient and quicker journey times for people, thereby providing them with more free time outside of their travelling or commuting, to pursue their personal interests. This could be highly beneficial to people's health and well-being. Air pollution is hugely detrimental to people's health, with particulate matter and nitrogen dioxide pollution thought to be associated with around 2,700 deaths in Wales each year¹. The transport sector is responsible for a major portion of these forms of pollution. The WTS would encourage and facilitate higher rates of active travel and public transport use that would be likely to reduce the number of high-polluting vehicles on the road and, in so doing, would help to reduce the rate of mortality in Wales associated with air pollution. In-combination, the improvements to public transport and active travel links, combined with services being in accessible locations and better air quality would make a significant contribution towards creating a synergistic effect in combating health inequalities and would help to ensure that the transport system facilitates improvements in people's physical and mental health and well-being.</p> <p>With improvements to digital technology, more people are working from home on a regular basis. The pandemic and lockdown in 2020 has significantly increased the number of people working from home and, for many people, this may represent the new normal from 2021 onwards. The WTS recognises the need for improvements to digital infrastructure to accommodate this. The commute to and from work is a key opportunity for exercising via walking and cycling and, with people commuting less, the WTS recognises that it will be increasingly important to ensure that the other places people need to go (e.g. shops, services, amenities, cultural spaces) are accessible via walking and cycling. It should be noted that, whilst working from home presents significant opportunities in terms of reducing the need for people to travel and reducing the number of cars on the road, it can pose a risk to people's mental well-being as they miss out not only on opportunities for active travel but also on opportunities for social and community interaction.</p>
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	<p>The Ambitions and Priorities of the WTS, as well as the Mini Plans on Active Travel, Bus, Rail and Community Transport, would help to combat social and economic inequalities through developing a system that is accessible for, and utilised by, all members of society irrespective of background, gender, age, and disability. In doing so it would improve equality of opportunity in terms of access to services, employment, leisure and education facilities.</p> <p>Utilising digital innovations, as per the Priorities, Ambitions and the Mini Plan for Rail, and ensuring that the views of the transport system users are taken into consideration, would help to ensure that the diverse needs of Wales' growing population are catered for. Public transport that can be, and is, utilised by all people irrespective of their background, would help to enhance social cohesion.</p>

¹ 'Estimating the mortality burden of air pollution in Wales' <http://www.wales.nhs.uk/sitesplus/888/pendoc/317890>

Summary of effects for each ISA Objective

The WTS recognises the barrier that language can present, particularly for those who do not speak English (e.g. see the Ambition for 'Good for Welsh Culture and Language' as well as the Priorities and Mini Plans), and it is likely that as a result of the WTS these barriers will be increasingly eroded and users of Wales' three official languages (Welsh, British Sign Language and English) would be able to make equal use of the transport system (including active travel, public transport and the road network) equally. Access to public transport and active travel links is particularly limited for rural communities. Whilst there may be good access to public footpaths in rural areas, these are unlikely to be feasible options for travelling to and from services and facilities. The WTS recognises that, for rural communities, roads and driving are essential and would look to maintain and enhance the road network to preserve the connectivity of rural communities and combat the social isolation that can be prevalent here. The WTS recognises the importance of enhancing the safety of the transport system, for all users, and ensuring that it is welcoming for all people. The Ambitions, Priorities 2 and 3 as well as the Mini Plans on Bus, Rail and Community Transport would be particularly beneficial for members of society who may feel less safe, or vulnerable members of society who are statistically less safe, when using active travel links or public transport.

3. To support sustainable economic development and diversity

The WTS would have a cumulatively positive effect on development and the Welsh economy. Enhanced active travel links and public transport options, which would be made increasingly accessible to all people and all communities, would help to ensure more equitable access to education and employment opportunities, particularly due to the Ambitions on Community and the Economy, Priority 1 and the Mini Plans on Bus and Community Transport. With people able to travel more efficiently and more freely, there could be an increase in footfall at important economic areas, thereby providing a boost to the local economies. This would be particularly the case where active travel links are enhanced as there would be higher rates of walking and cycling. This would provide businesses with access to a wider pool of potential employees. The WTS could help diversify the employee market and reduce employment inequality between rural and urban areas through promoting working from home, particularly due to Priority 1 and the Mini Plans on Bus, Rail and Community Transport. Public transport use is correlated with a stronger economy, due to spending on the transport service itself and ancillary services (such as food and drink outlets) in the vicinity. Therefore, in encouraging public transport use, the WTS could lead to economic growth. Improving the ease of access to town centres and high streets, as well as large cultural events and historic and environmental assets (as per Priorities 2 and 3 and the Mini Plans on Bus and Community Transport), would further help to stimulate the economy. The WTS could have a positive impact on the Welsh economy through encouraging the development of new 'work hubs'. More efficient journey times, via more welcoming and safer routes, as per Priorities 4 and 5 and the Mini Plans on Bus, Rail and Community Transport, would improve the customer experience when travelling and, for those commuting to and from work, would mean that they arrive at work less stressed and more able to work productively, thereby benefiting the Welsh economy. More efficient journey times would also be significantly beneficial to the movement of goods and services throughout Wales, particularly for business-to-business connections and freight movements. This would be achieved by reducing the number of cars on the road, a well maintained road network, safer routes, and by taking advantage of technological innovations in the freight and logistics sector as per Priorities 4 and 5 and the Mini Plans for Road, Freight and Logistics, Aviation and Ports and Maritime Transport. A more connected Wales with more efficient, more attractive and safer routes, (as a result of, for example, the Ambitions, Priorities 2, 3 and 5 as well as the Mini Plans for Bus, Rail and Community Transport in-combination) would be of significant benefit to the tourism sector, with people now able to more safely and efficiently access Wales from abroad, or to travel throughout Wales. Improvements to the active travel infrastructure in Wales could also enhance the attractiveness of the active tourism sector, such as hiking or mountain biking. Over the course of the 25-year WTS period climate change will impact on the economy. As per Priority 3 and the Mini Plans, the WTS seeks to ensure that the transport system is future proofed and resilient to the impacts of flood risk, extreme weather events or coastal erosion. This would help to ensure that economic benefits of the WTS are sustainable and resilient.

4. To protect and promote Welsh culture and improve access to cultural and recreational spaces

The WTS promotes, and seeks to deliver, more sustainable, resilience and equitable access for all people to cultural and recreational spaces, particularly due to the combined effect of the Ambitions, Priorities 2, 3 and 5 as well as the Mini Plans for Bus, Rail and Community Transport. More efficient and sustainable access to these spaces, including for local people and tourists, would enhance economic viability and vitality and allow continued benefits to local people over the course of the WTS period.

Summary of effects for each ISA Objective

The WTS recognises the strain that large scale cultural and tourist events, such as major sporting events, can place on the transport system. Through Priorities 1, 3 and 5, as well as the Mini Plans on Bus and Rail, the WTS seeks to ensure that these events can continue to take place and to continue having a significantly positive effect on Wales' economy, society, and culture.

It is likely that in some areas, the enhancements to safe and attractive active travel links could improve the setting or character of the local area. Combined with a reduction in the number of vehicles on the road, which can have an adverse effect on the tranquillity of recreational or cultural areas due to noise, air and light pollution, enhancements would help improve the quality and attractiveness of cultural and recreational spaces.

5. To encourage the protection and promotion of the Welsh Language

The Ambitions of the WTS, as well as the Mini Plans, seek to ensure that the transport system encourages the regular use of the Welsh Language as part of a system that is "accessible for all".

Enhancing active travel and public transport links throughout Wales would be likely to lead to more equitable access to education opportunities for people regardless of their background. In so doing, this would facilitate more equitable access to Welsh language learning opportunities, either as a part of their learning at school or due to the school being a Welsh-medium facility.

6. To reduce greenhouse gas emissions from transport

Proposals in the WTS in-combination would be likely to lead to significant reductions in the GHG emissions associated with Wales' transport sector. This would primarily be achieved as a result of encouraging and facilitating higher rates of walking, cycling and public transport usage with subsequent reductions in the number of cars on the road, as per the Ambitions, Priorities 1-5 and the Mini Plans for Active Travel, Bus and Roads.

Taking advantage of technological innovations and ensuring that services and facilities are in proximity to where people live, as per the Ambitions, Priority 1 and the Mini Plan for Rail, would further reduce the need for people to travel and to allow them to travel more efficiently when they do so. More efficient journeys for freight movements could help to combat the carbon footprint of Wales' freight sector.

The WTS would make owning an electric or cleaner vehicle a more viable option over a petrol or diesel vehicle through supporting technologies such as electrification and hydrogen as a fuel, as well as the implementation of more electric vehicle charging points, which would contribute to lowering emissions. The WTS also promotes the electrification of public transport. This would be primarily achieved through a combination of Priorities 1- 5 as well as the Mini Plans for Bus, Rail and Community Transport. However, whilst the WTS would be likely to facilitate significant reductions in GHG emissions associated with movements on the road network, there is a risk of this being undermined to some extent by the aviation industry as well as due to the large population of rural living people for whom active travel or public transport opportunities are unlikely to significantly improve.

The WTS is committed to maintaining a healthy aviation sector in Wales for its significant economic benefits. The Mini Plan for Aviation recognises that there will be challenges for the aviation sector when seeking to achieve Wales' carbon budgets. It seeks to ensure that, for example, Cardiff Airport puts in place a robust decarbonization strategy and that people access airports via public transport instead of car to help offset these emissions. However, the measures described in the WTS and the Mini Plan for aviation, such as the decarbonization strategy or increase in the public transport access of airports, would be unlikely to truly offset the emissions associated with aviation. Cars and HGVs are a much greater source of GHG emissions in Wales than aviation currently is, and so the commitment to a 'healthy aviation sector' would not lead to an overall adverse effect on this ISA Objective as a result of the WTS, but it would be likely to prevent, or at least make more difficult, and overall significant reduction in GHG emissions.

Rural people account for just over a third of Wales' population and in order for them to access key services and facilities they typically need to travel longer distances than those living in urban areas. The WTS would be unlikely to solve this problem. Whilst there would be some improvements to the road network allowing more efficient journeys, greater support for electric vehicles, and enhancements to community transport services that are particularly important in rural areas, it would be unlikely to allow people living in rural areas to travel as efficiently, sustainably or low-emission as those living in urban areas. It is unclear the extent to which the emissions associated with the transport movements of people living in rural areas would be discernibly reduced as a result of the WTS.

Any reduction in GHG emissions should be seen in the context of Wales' carbon budgets, which currently seek an 80% reduction on baseline GHG emissions by the year 2050. The WTS will be in place for 25 years, and so it would need to help ensure that these carbon budgets are met. It is unlikely that a 'healthy aviation sector', or a continuation of around a third of Wales' population being unable to rely on active travel or public transport, truly complies with, or contributes towards the successful achievement of, these carbon budgets.

Whilst the proposals in the WTS would be likely to result in a net reduction in GHG emissions, which is highly positive, it is uncertain the extent to which this would be undermined by a healthy aviation sector and a continued reliance of the rural population on personal car use. It appears to be unlikely that the measures in the WTS would reduce GHG

Summary of effects for each ISA Objective

emissions at the rate required for the transport sector to comply with Wales' carbon budgets and the climate emergency, although these measures may be more apparent in the delivery plans that are developed as a result of the WTS.

7. To enable climate change resilience

The WTS aims to improve the sustainability of land management and to future-proof existing infrastructure, which will help to make the transport system more resilient to the potential effects of climate change, particularly as a result of the Ambitions and the Mini Plans. Priorities 2 and 3, as well as Mini Plans for Bus, Rail and Community Transport, would see public transport improved in terms of its adaptability and its emergency procedures to protect from flooding and other unexpected events.

New and improved walking and cycling links, as promoted throughout the Ambitions, Priorities, and the Mini Plan for Active Travel, could result in an increase in the green infrastructure cover along these routes that helps to manage surface run off and to alleviate flood risk.

Through creating a transport system that is equally accessible for all members of society, the WTS should recognise and combat the inequalities experienced in access to transport in extreme weather events; this would help increase the resilience of the transport system to climate change and reduce inequalities between urban and more rural, isolated areas. The WTS encourages the use of more sustainable, low-carbon modes of transport, such as active and public transport, over private vehicles, which would help reduce GHG emissions from the transport sector and subsequently limit Wales' contribution to climate change.

8. To protect and improve air quality

Air pollution often originates from the same activities that contribute towards climate change. The transport sector, and particularly car, HGV, aviation, and port related transport, are significant sources of both GHG emissions and air pollution.

The WTS seeks to make a significant reduction in people's reliance on cars for travel. It would do so by enhancing the infrastructure across Wales relied upon by low-emission modes of travel, such as public transport and active travel, as per the Ambitions, Priorities 1 - 5 and the Mini-Plans for Bus and Active Travel. The net reduction in the number of cars would help to reduce the air pollution associated with the transport sector in Wales, particularly in more urban areas where air quality is significantly poorer than more rural areas.

Through the Ambitions and Priorities 2 – 5 the WTS seeks to support the continuing transition towards cleaner vehicles, electric vehicles and other modes of transport that adopt innovative technologies such as hydrogen. This would help to ensure that, for those cars that remain on the road and in frequent use, their emissions are reduced. Improved maintenance and management of the existing road network, as per Priority 3 and the Mini Plan for Roads, would also be likely to allow for more efficient journeys that result in less pollution, including as a result of less congestion and idling. It is likely that such management and maintenance would present opportunities for enhancing the GI coverage along road corridors, which help to filter out and sequester air pollutants.

However, as described above with regards to ISA Objective 6 on GHG emissions, the WTS is committed to maintaining a healthy aviation sector in Wales for its significant economic benefits. As a result, air pollution associated with Wales' aviation sector is unlikely to discernibly decrease over the course of the WTS period.

The potential issue with regards to the population in Wales living in rural locations, whereby they often have no option but to rely on personal car use for accessing services or amenities, is also unlikely to be resolved. It is therefore likely that the air pollution associated with the movements of people living rurally are unlikely to be significantly reduced. Because of the outstanding issue of air pollution associated with aviation and the high reliance on car use for rural living people, it is considered that, overall, the WTS would make a minor, rather than major (significant) contribution towards this ISA Objective.

9. To protect and enhance the local distinctiveness of our landscapes and townscapes

The WTS Vision recognises the importance of protecting and enhancing Wales' distinctive landscapes and townscapes.

The likely reduction in the number of cars on the roads, predominantly achieved through the Ambitions, Priorities and Mini Plans for Active Travel and Bus, would help to avoid and minimise the adverse effects that busy roads can have on landscape and townscape character, including through noise, air and light pollution as well as by having low visual amenity value. This would be particularly beneficial to the historic centres of settlements as well as the distinctive natural landscapes prevalent in the more rural areas of Wales. The WTS aims to improve management and maintenance of existing transport infrastructure, as per Priorities 2 and 3, which could include improved cleanliness and enhancement measures which would benefit landscapes and townscapes.

Summary of effects for each ISA Objective

As per the Ambitions, Priorities and Mini Plans, the WTS also seeks to ensure that the historic and natural environment is conserved and enhanced and that this principle is embedded in all new transport infrastructure. In many cases, the distinctive townscapes and landscapes of Wales are of significant historic and/or biodiversity value. In protecting and, in some cases, enhancing this value it would be likely to benefit the character of local townscapes and landscapes.

10. To promote the conservation and enhancement of heritage assets

The WTS Vision, Priorities and Ambitions recognise the need to conserve and enhance Wales' heritage assets and historic areas. Throughout Wales, historic railroads, tunnels, and paths are of significant heritage value. It is likely that in many cases, the investment directed towards transport would help to protect and enhance these assets by ensuring that they do not fall into disrepair or out of use.

As with landscape and townscape character, the reduction in the number of cars on the road caused by the Ambitions, Priorities and Mini Plans on Active Travel, Rail, and Bus, and the subsequent avoidance and minimisation of noise, air, light, and other visual disturbances, would help to conserve the setting of heritage assets and historic areas. It is likely that the maintenance and management of existing transport infrastructure, and the delivery of any new transport infrastructure, would be required to consider the potential effects on any nearby heritage assets and historic areas, and to incorporate elements that help to enhance their setting.

Conserving and enhancing biodiversity is an approach embedded throughout the WTS and which could potentially benefit the setting of heritage assets and historic areas due to the high visual amenity value of GI and semi-natural habitats, as well as its role in screening areas from the visual impacts of new development.

Improving the public transport and active travel connectivity of places throughout Wales would be likely to help enhance the accessibility of historic areas and heritage assets for all people from all backgrounds, including local people and tourists. This would help to promote the importance of these assets and areas and could subsequently lead to new investment, such as through an increase in the number of visitors, that would help to preserve these assets and areas for future generations to enjoy.

11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems

Embedded throughout the WTS is an understanding of the need to conserve and enhance biodiversity, geodiversity and ecosystems and seeks to ensure that the transport system adopts sustainable land management strategies that incorporate ecosystem resilience into transport operations. In its current form, the transport sector can pose significant threats to habitats and species, including by fragmenting habitats, isolating species, and resulting in levels of pollution that exceeds the critical loads of sensitive habitats. Noise and light disturbances from the transport sector is also proving to be highly detrimental to certain species.

The WTS focuses on maintaining the existing road network whilst enhancing active travel links, as per the Vision, Ambitions and Priorities and the Mini Plan for Roads. It is likely that adverse effects on habitats, caused by new roads fragmenting them and isolating species, would generally be avoided. New road schemes can pose a risk to geodiversity due to the extensive groundworks that are required, and so avoiding new roads can be an effective means of preserving Wales' important geodiversity assets. There is an element of uncertainty here as it is unclear exactly under which circumstances the WTS would permit new road schemes.

The transition towards low-emission modes of travel, including active travel, public transport, and electrification, as per the Vision, Ambitions, Priorities and the Mini Plans on Bus, Rail, and Active Travel, would help to avoid and minimise adverse effects on habitats that are sensitive to air quality, particularly where their critical loads are already being exceeded.

The maintenance and management of existing transport infrastructure would likely present opportunities to incorporate GI elements that enhance their biodiversity value, such as by installing GI along road corridors. Where new walking and cycling paths are installed, these would present an opportunity to incorporate GI elements that are not only biodiverse but deliver wider ecosystem benefits including wildlife corridors, air quality improvements, water filtration, carbon sequestration and enhancements to landscapes and townscapes. The WTS appears to pursue walking and cycling links of this nature, although there is an element of uncertainty around the extent to which they would be delivered.

12. To ensure the sustainable use of natural resource

The WTS encourages the use of more sustainable, low-carbon modes of transport, such as active and public transport, over private cars, as well as the electrification of transport, which would be likely have a positive effect on efforts to reduce the consumption of natural resources such as fossil fuels.

Embedded throughout the WTS, as described in the Vision, is the pursuit of a sustainable transport system that encourages the use of recycled and sustainable materials in the development of transport infrastructure where possible. This could help to reduce the consumption of materials, and generation of waste, associated with the transport sector.

The Ambitions, Priorities 1 and 2 and Mini Plan for Roads explicitly seeks a reduction in waste and a more sustainable supply chain.

Summary of effects for each ISA Objective

The WTS would potentially lead to fewer new road schemes, whilst encouraging the use of materials that increase service life, meaning less materials are necessary and enabling greater scope to use recycled materials, as per Priorities 1-5. However, the maintenance of existing transport infrastructure, and the delivery of enhanced public transport services and active travel links, would require the consumption of natural resources to some extent.

The WTS would lead to fewer cars on the road. This would lead to a reduction in pollutants from exhaust or spills falling onto the tarmac; there is then less chance of surface water runoff carrying these pollutants into the soil, ground water and surface water, thereby potentially enhancing their quality. The wear of car tyres on roads can be a significant source of plastic pollution in the natural environment, including in the water environment, and it is likely that this would be reduced to some extent by proposals throughout the WTS due to the shift towards active travel and public transport.

13. To enable the protection of tranquil areas and prevention of noise and light pollution

The WTS would increase uptake of public and active transport modes, particularly due to the Ambitions, Priorities 1, 2 and 3 and the Mini Plans on Bus, Rail and Active Travel, thereby decreasing car use; this would be likely to lead to positive effects on the protection of tranquil areas due to a decrease in noise and visual disturbances.

Through its support of electric vehicles, as per Priorities 3, 4 and 5 and the Mini Plan for Roads, which are significantly quieter than petrol and diesel vehicles, the WTS would likely help reduce noise disturbances associated with transport.

How the ISA has Influenced the NDF

1.1.15 The ISA experts have worked closely with the planning team at Welsh Government since very early on in the WTS-making process. Through an iterative process, ISA experts have fed assessment results and recommendations to the planners to assist with their decision-making. This has played an important role in helping the plan-makers to take into consideration the sustainability performance of different options they may be considering for inclusion in the WTS, as well as the different measures they could consider adopting that would help to maximise positive effects or to minimise or avoid negative effects.

Avoiding, reducing or mitigating negative effects and maximising positive effects – summary of recommendations

1.1.16 During the iterative process of the ISA, the WTS has incorporated a range of recommendations that have helped to enhance the overall sustainability performance of WTS proposals. Throughout the appraisals of NDF policies recommendations have been made for each policy against each ISA Objective, where appropriate, in order to help avoid or mitigate negative effects and to help maximise positive effects. Overall, a large number of recommendations have been made in the ISA thus far and are presented in full in the main ISA Report.

Findings of HRA and how these have fed into assessment

1.1.17 A separate Habitat Regulations Assessment (HRA) process will be accompanying and informing the WTS-making process. HRA is an iterative process between ecological experts and plan-makers to determine if a plan could potentially have adverse effects on areas of high biodiversity value that are protected at an international level. These biodiversity designations are referred to collectively as Natura 2000/ Ramsar sites, of which there are many in Wales. Assessment results and recommendations in the ISA will be in accordance with any outcomes of the separate HRA process, when they are available.

Monitoring Significant effects

1.1.18 The ISA has identified the likely effects of the WTS on ISA Objectives over the short, medium and long terms. An indication of the certainty of these effects was also provided. However, there is a risk that the sustainability impacts of the WTS, including the impacts of specific policies or the cumulative impacts of policies in-combination, are different to those anticipated, such as due to unforeseen circumstances. It is therefore an essential component of delivering sustainable development to monitor the impacts of the WTS in relation to the predicted impacts. Regular monitoring then enables the relevant authorities to alter plans as necessary should unexpected negative effects arise or expected positive effects not arise.

1.1.19 A monitoring framework, comprising those effects being sought to be monitored, is presented in the ISA Report that sets out a range of indicators to be monitored relevant to the likely effects of the WTS. In addition to monitoring the extent to which the WTS results in the impacts identified in the ISA, the monitoring framework provides an indication of the impacts of the WTS on the environmental baseline in Wales and this can be compared with the future trends of this baseline.

Next Steps

1.1.20 It is expected that this ISA Report would be published for consultation alongside the WTS. The responses received during consultation will be reviewed and considered, and the ISA will then be updated accordingly. Any and all future iterations of the WTS will be accompanied by updated iterations of this ISA.

1 INTRODUCTION

1.1 What is Llwybr Newydd – A New Wales Transport Strategy?

- 1.1.1 Llwybr Newydd – A New Wales Transport Strategy (WTS) is a statutory document required by the Transport (Wales) Act 2006 (The Act). The Act places a duty on Welsh Ministers to prepare and publish a WTS setting out its policies and how they will be discharged. The WTS sets out Welsh Government's strategic priorities and desired outcomes; the WTS addresses all transport modes, including walking, cycling, public transport, electric vehicles and the private car.
- 1.1.2 Section 2(3) of the same Act requires the Welsh Ministers to keep the WTS under review and provides the ability to revise it from time to time.
- 1.1.3 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 and the publication of additional legislation (notably the Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act). Further changes are anticipated through Local Government reforms; post-Brexit funding and relationships; the devolution of further transport related responsibilities; as well as changes resulting from the impact of COVID-19.
- 1.1.4 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, recognising a number of these recent changes and looking 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.

1.2 What is the Integrated Sustainability Appraisal?

- 1.2.1 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. Integrated Sustainability Appraisal (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.
- 1.2.2 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)² which was transposed directly into Welsh law through the SEA Regulations³. SEA is a systematic 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'.
- 1.2.3 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

² 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

³ 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)

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.

1.2.4 It is best practice to integrate SA and SEA into one coherent process. As part of this, the SEA Directive specifies certain topics in Annex 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.

1.2.5 In addition to these specific topics, the Welsh Government has decided to integrate several other impact assessments with the SA/SEA to form an ISA. In addition to SA/SEA, the ISA therefore also accounts for the legislative requirements of:

- SA, as required by the Compulsory Purchase Act 2004⁴ as amended by Planning (Wales) Act 2015⁵, and as required by Planning Policy Wales 2018 (10th edition)⁶;
- Strategic Environmental Assessment (SEA), as required by 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 (SEA Directive)⁷, the requirements of which are transposed into Welsh law through The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (the SEA Regs)⁸;
- Welsh Language (Wales) Measure 2011 and Standards;
- Children's Rights Impact Assessment (CRIA), as required by the Rights of Children and Young Persons (Wales) Measure 2011⁹;
- Equalities Impact Assessment (EqIA), as required by the Equalities Act (2010)¹⁰;
- Well-being of Future Generations (WBFNG) Act (2015)¹¹; and
- Sustainable Management of Natural Resources (SMNR) and the Natural Resources Policy (NRP) as required by the Environment (Wales) Act (2016)¹².

1.2.6 The ISA also accounts for the non-legislative requirements of assessments relating to Rural Proofing; Health Effects; Climate Change; and Economic Development.

⁴ Available online at: <https://www.legislation.gov.uk/ukpga/2004/5/contents> [Accessed 06.08.20]

⁵ Available online at: <http://www.legislation.gov.uk/anaw/2015/4/contents/enacted> [Accessed 06.08.20]

⁶ Available online at: <https://gov.wales/sites/default/files/publications/2019-02/planning-policy-wales-edition-10.pdf> [Accessed 06.08.20]

⁷ Available online at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32001L0042> [Accessed 06.08.20]

⁸ Available online at: <http://www.legislation.gov.uk/wsi/2004/1656/contents/made> [Accessed 06.08.20]

⁹ Available online at: <http://www.legislation.gov.uk/mwa/2011/2/contents> [Accessed 06.08.20]

¹⁰ Available online at: <https://www.legislation.gov.uk/ukpga/2010/15/contents> [Accessed 06.08.20];

¹¹ Available online at: <http://www.legislation.gov.uk/anaw/2015/2/contents/enacted> [Accessed 06.08.20]

¹² Available online at: http://www.legislation.gov.uk/anaw/2016/3/pdfs/anaw_20160003_en.pdf [Accessed 06.08.20]

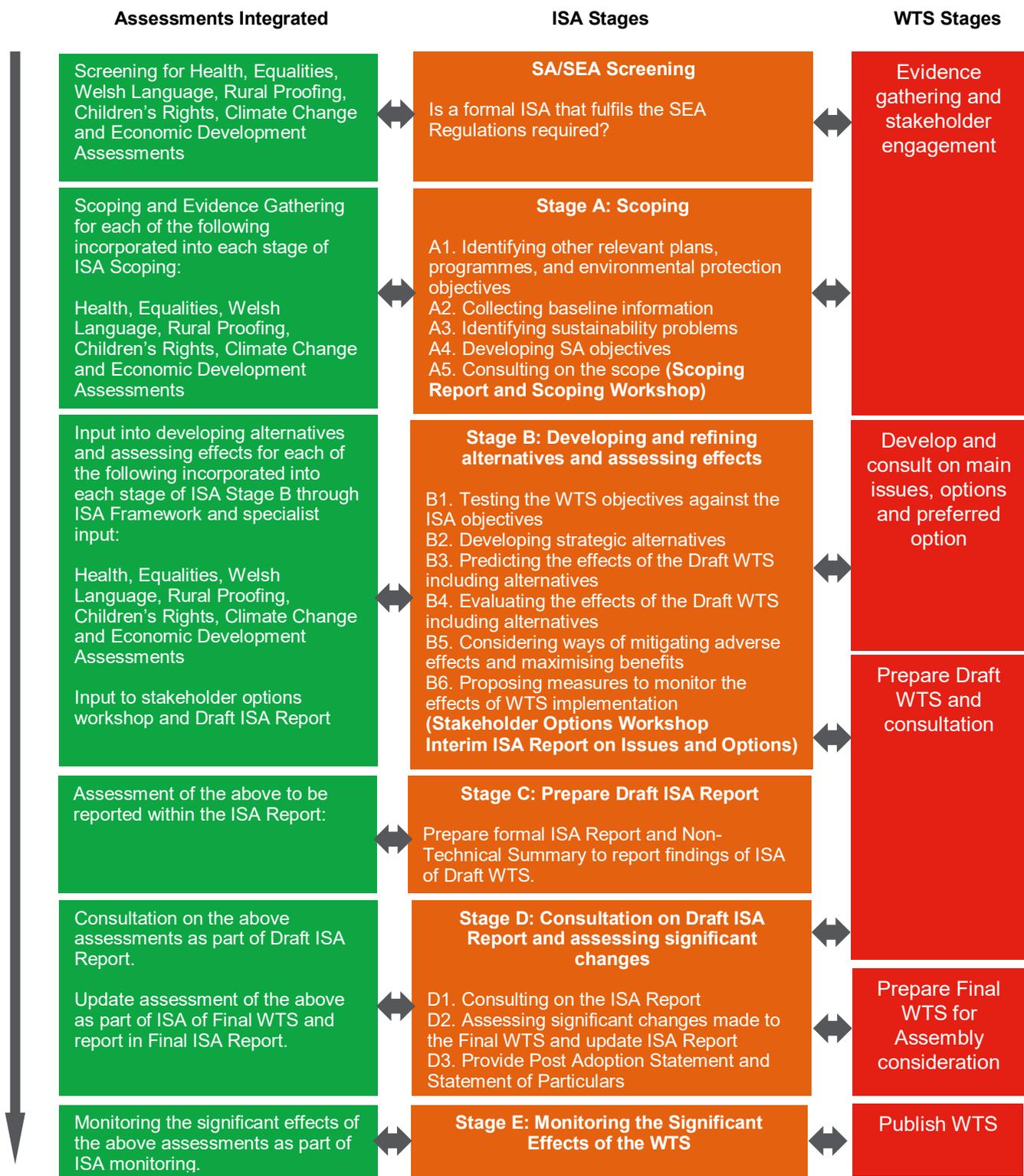
- 1.2.7 Integral to the principles of sustainable development is the need to adopt an integrated approach. The integration of these other assessments ensures that a collaborative approach is undertaken on different issues, sharing knowledge and recognising links between topics in a consistent and transparent 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.
- 1.2.8 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 Regulations¹³. The overarching process is referred to as Habitats Regulations Assessment (HRA). 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 the ISA Report.

1.3 Purpose of this ISA Report

- 1.3.1 This ISA Report represents Stages B and C of the ISA process (see Figure 1-1). The purpose of this report is to explain the iterative assessment process and how this has shaped the WTS from inception to the most recent version. It presents the potential positive and negative effects of the Draft WTS, to inform the consultation process.
- 1.3.2 The scope of the assessment of the WTS is based on the assessment framework of objectives, developed and refined at the ISA Scoping stage (see Appendices A and B). The assessment is high-level, reflecting the national remit of the WTS and its purpose. The assessment has taken into account what the WTS could potentially achieve and its national scope. It therefore recognises the role and influence of other stakeholders, such as education providers or health boards, in achieving common goals. Figure 1-2 provides an overview of the impact assessments integrated into this ISA.
- 1.3.3 The ISA demonstrates the transparent and robust decision-making process that has been adopted during the development of the WTS. The concurrent development of the ISA and the WTS has been iterative, with regular discussions between the ISA and WTS teams. Recommendations have been made for improvements or alternatives through the appraisal of an early iteration of the WTS. This ISA Report represents the second stage of full assessment. The collaborative process of working has included meetings with a wide range of department heads within Welsh Government, as well as informal review stages, to discuss the developing issues. The ISA process has therefore been able to provide the Welsh Government with accurate, robust and transparent information with regard to the sustainability of options (including individually and cumulatively), which has played a major role in the Government's decision-making about what to include in the WTS. It is noted, however, that no formal reasonable alternatives are presented in this ISA Report. The development of 'reasonable alternatives' was discussed at length with the WTS team, with various directions and possibilities being considered. At this stage, 'alternatives' to the approaches in the plan have not been considered, for reasons including the lack of spatial elements within the WTS. This is explained further in section 2.4 of this report.

¹³ The Conservation of Habitats and Species Regulations 2010 (SI 2010/490)

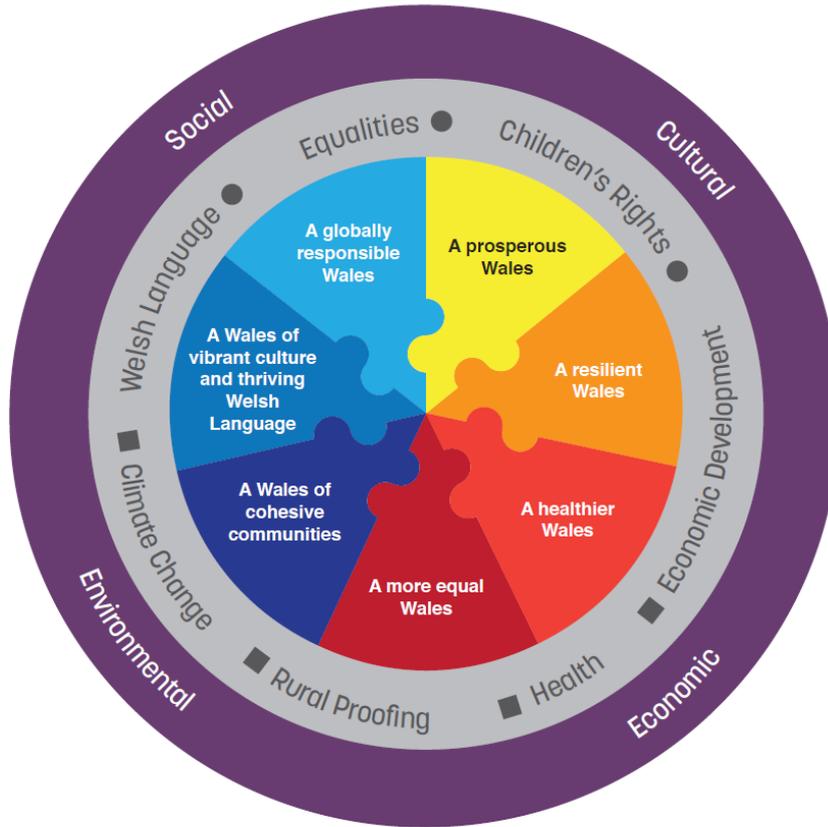
Figure 1-1: Stages in the ISA Process (adapted from ODPM 2005¹⁴) and WTS Development Stages



¹⁴ ODPM (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"

Figure 1-2: Impact assessments to be integrated alongside SA/SEA

Integrated Impact Assessments



Key:

- Government
- Statutory
- Well-being Goals
- Integrated Impact Assessments
- Sustainable Development Components

1.4 Well-Being of Future Generations (Wales) Act

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

1.4.2 The Planning (Wales) Act 2015 Section 2 sets out the definition of sustainable development for the planning system and directly refers to the definition in the WBFG Act.

1.4.3 Rather than an end in itself, sustainable development is a way of doing things; the Act guides public bodies in how they should operate to achieve it. Sustainable development is the process by which well-being can be improved. It acknowledges that there are many things that determine a person’s quality of life (their well-being), and that these can all broadly be categorised as environmental, economic, social and cultural factors. These are captured in the well-being goals. Improving the quality of our environment, our economy, society and culture can thereby improve the well-being of individuals and that of Wales as a whole. These well-being goals are indivisible from each other (see Table 1.1).

1.4.4 The WTS will have an important role in contributing towards the achievement of well-being goals over the 25-year period, and the ISA will help the Welsh Government to understand where the WTS can maximise that contribution. The well-being goals have been integral to the preparation of the ISA, including the review of evidence, baseline information, the identification of key sustainability issues and structure of the ISA Framework.

Table 1.1: The seven Well-being Goals of the WBFG Act (2015)

Well-being Goal	Description
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 thriving Welsh language	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.

Well-being Goal	Description
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

1.5 Ways of Working

1.5.1 The sustainable development principle defined by the WCFG Act is a fundamental part of how public bodies – including the Welsh Government – must now operate. They must act 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. This principle is made up of five ‘ways of working’ that public bodies are required to apply in order to maximise the contribution towards sustainable development. The five ways of working are:

- Looking to the **long term** so that Welsh Government does 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.

1.5.2 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: Ways of Working and the 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	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 tested emerging policy and assesses its ability to deliver the long term objectives. The options that were 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

	<p>projects, schemes, initiatives or interventions; these will be set out in the 5-year detailed National Transport Delivery Plan and Joint Local Transport Plans.</p> <p>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.</p>
Role of ISA	<p>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 incorporated a review of relevant plans, programmes and environmental objectives at national to international scale. This enabled 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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Involving people	
Development of WTS	<p>We will involve key stakeholders in the development of the WTS.</p> <p>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 Llwybr Newydd – A New 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.
Role of ISA	<p>The ISA provided 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>The ISA work has involved 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 incorporated the promotion and protection of the Welsh National language.</p>
Collaborating with others	
Development of WTS	<p>The WTS will not on its own be able to tackle the key transport challenges. Its role is to set out strategic priorities and desired outcomes providing a link to wider priorities as well as plans at the local authority level and those of other transport stakeholders. It's role is to identify what it can do both directly and in collaboration with others. There is the opportunity for the WTS to facilitate</p>

	<p>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 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>
Role of ISA	<p>The ISA, through the review of plans, programmes and environmental objectives and baseline evidence will help to identify the key sustainability issues and sets out opportunities for the WTS (Table 2.2); 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 have been tested in order to help to maximise collaborative opportunities and ensure the WTS is as sustainable as possible.</p>
Prevention	
Development of WTS	<p>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 to track progress. 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, and to reduce the impacts of transport. The WTS will provide for the safety and protection of disadvantaged and minority groups within Wales.</p> <p>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.</p>
Role of ISA	<p>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 2.2). 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.</p>

1.6 Legislative Impact Assessments

Strategic Environmental Assessment

- 1.6.1 SEA, as required by the SEA Directive and the SEA Regulations, is a structured and systematic decision supporting process designed to help ensure that environmental aspects are considered effectively during plan-making. The process is defined by set stages and tasks to be completed in order to satisfy the requirements of the SEA Directive. Table 1.3 sets out where these various requirements have been, or will be, satisfied in the ISA.

Table 1.3: Requirements for a SEA Environmental Report and where these have been, or will be, completed

Question	Yes/No/Where
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 (SEA Directive) Annex I - Information referred to in Article 5(1)	
(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	ISA Scoping Report, Sections 1.1, 2.1 and Appendix A in this Report
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	ISA Scoping Report and Section 2.2 and Appendix B in this report
(c) the environmental characteristics of areas likely to be significantly affected;	ISA Scoping Report and Table 2.2 and Appendix B of this report
(d) 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 Directives 79/409/EEC and 92/43/EEC;	ISA Scoping Report and Appendix B of this report
(e) 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;	ISA Scoping Report and Appendix A of this report
(f) the likely significant effects (1) on the environment, including on issues such as 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;	Chapter 3 and Appendix C of this report
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Chapter 3 and Appendix B of this report
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Section 2.4 in this report
(i) a description of the measures envisaged concerning monitoring in accordance with Article 10;	Table 3.5 in this report
(j) a non-technical summary of the information provided under the above headings.	Front end of this report

Environment (Wales) Act

- 1.6.2 The Environment (Wales) Act 2016 introduces the Sustainable Management of Natural Resources (SNMR) and sets out a framework to achieve this as part of decision-making. The objective of the SMNR is *'using natural resources in a way and at a rate that... maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing, meet the needs of present generations of people without compromising the ability of future generations to meet their needs and contribute to the achievement of the well-being goals.'* Planning Policy Wales translates the principles of SMNR into use for the planning system.

- 1.6.3 The requirements of the Environment Act including the priorities identified by the Natural Resource Policy (NRP) have been included in the ISA framework and will inform the development of the WTS. These have a focus on Welsh natural resources, with SoNaRR¹⁵ 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.
- 1.6.4 Through addressing social, economic, environmental and cultural issues and opportunities, the WTS takes an all-embracing approach to sustainable development where decisions on short- and long-term needs and cost and benefits come together. The ISA helps to secure these outcomes through identifying where multiple benefits can be provided as part of the plan and avoiding or minimising negative effects.
- 1.6.5 The key features of the SMNR approach to which the planning system can contribute are:
- Improving the resilience of ecosystems and ecological networks;
 - Maintaining and enhancing biodiversity;
 - Maintaining and enhancing green infrastructure based on seeking multiple ecosystem benefits and solutions;
 - Ensuring resilient locational choices for infrastructure and built development, taking into account water supplies, water quality and reducing, wherever possible, air and noise pollution and environmental risks, such as those posed by flood risk, coastal change, land contamination and instability;
 - Taking actions to move towards a more circular economy in Wales; and
 - Facilitating the move towards decarbonisation of the economy.
- 1.6.6 It is recognised how the translation of SMNR into the planning system is an integral part of the essential components of sustainable places, through encouraging approaches based on identifying and securing outcomes which deliver multiple ecosystem benefits. The WTS looks to address these key features and the ISA sets out how this is achieved.

Equalities

- 1.6.7 The WTS could potentially have an impact on equalities and human rights. The ISA Framework and associated decision aiding questions have ensured that the duties within the Equality Act 2010 have been addressed and will continue to be addressed through the ISA and WTS..
- 1.6.8 Under the equality duty (set out in Section 149 of the Equality Act 2010), public authorities such as 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 (including age, disability, gender reassignment, race, religion or belief, sex, sexual orientation, marriage and civil partnership and pregnancy and maternity) and those who do not.
- 1.6.9 The requirements for the Equalities Impact Assessment (EqIA) are predominantly addressed through ISA Objectives 1 and 2.

Impact Assessment	ISA Objectives
Equalities	1, 2

¹⁵ Available online at: <https://naturalresources.wales/evidence-and-data/research-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainable-management-of-natural-resources/?lang=en> [Accessed 06.08.20]

Welsh Language

- 1.6.10 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 negative 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 are reduced.
- 1.6.11 The WTS could potentially have an impact on the Welsh language. ISA Objective 5 therefore encompasses the Welsh language to ensure that it is incorporated into the ISA Framework. This will ensure opportunities to promote the Welsh language, facilitate its use, safeguard its future and see the language thrive, are considered and identified where possible through this work. The Welsh Government has a statutory obligation to fully consider the effects of its work on the Welsh language. The development of all policies, projects, research, legislation, grants, and services must be accompanied by appropriate consideration to the Welsh language, Welsh speaking people and communities; this includes children and young people.
- 1.6.12 The Welsh Government must seek opportunities to promote the Welsh language and facilitate its use to safeguard its future and see the language thrive. A Welsh Language Impact Assessment (WLIA) is the process undertaken to ensure these duties are fulfilled.
- 1.6.13 The ISA Framework and associated decision aiding questions ensure that effects on the Welsh language have been addressed as the WTS is assessed, recognising direct and indirect effects.
- 1.6.14 The requirements for the WLIA are predominantly addressed through ISA Objective 5:

Impact Assessment	ISA Objective
Welsh Language	5

Children's Rights Impact Assessment

- 1.6.15 There is a duty placed on Welsh Ministers 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.
- 1.6.16 The scoping work 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 36. 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. The SPP outlines the details of the consultation on the WTS and the approach to engagement. Children and young people will continue to be engaged to ensure their voices are heard in the development of the WTS.
- 1.6.17 The ISA Framework and associated decision aiding questions ensure that the relevant articles within the UNCRC are addressed as the WTS is assessed; this recognises the direct and indirect effects the transport system can have on children and young people. It will help to ensure that the WTS positively affects children through, for instance, access to education; creating opportunities within which age inequality may be reduced; creating opportunities to ensure children can relax and play

and join in a wide range of activities; and creating opportunities for the built environment to be designed in a way that is accessible for all. The Welsh Language Impact Assessment considers how the WTS will impact on all members of society in learning and using the Welsh language, including children and young people.

- 1.6.18 The requirements for the Children’s Rights assessments are predominantly addressed through ISA Objectives 1, 2, 3, 4, and 5:

Impact Assessment	ISA Objectives
Children’s Rights	1, 2, 3, 4, and 5

Habitats Regulations Assessment

- 1.6.19 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 effect upon a Natura 2000 site (Special Areas of Conservation (SAC), candidate Special Areas of Conservation (cSAC), Special Protection Areas (SPA)), 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 UK law via the Habitats Regulations. The overarching process is referred to as Habitats Regulations Assessment (HRA). Proposed Special Protection Areas (pSPA) and Ramsar sites are also included as Natura 2000 sites for the purposes of HRA in government policy, but this is not covered within the law.
- 1.6.20 This ISA report does not satisfy the requirements of HRA. The HRA is a separate process, with reports publicly available. Appraisals carried out in the ISA will be informed by outcomes of the HRA Screening, once available.

1.7 Non-Legislative Impact Assessments

Rural Proofing

- 1.7.1 The WTS will have a potential impact on rural communities and therefore, objectives encompassing aspects of rural life such as access to services and the economy have been incorporated into the ISA Framework. This will help to ensure that the potential direct and indirect effects the transport system can have on rural areas and communities are addressed.
- 1.7.2 How and where in ISA various requirements for rural proofing have been predominantly met are as follows:

Impact Assessment	ISA Objectives
Rural Proofing	1, 2, 3, 4, 5, 9, and 13

Climate Change

- 1.7.3 The WTS will have a potential impact on climate change. Relevant objectives have therefore been incorporated into the ISA Framework to ensure the causes and consequences of climate change are considered and identified where possible.
- 1.7.4 The ISA Framework and associated decision aiding questions ensure that effects on climate change, including adaptation, mitigation and resilience are addressed as the WTS is assessed, recognising direct and indirect effects the planning system can have on these areas.
- 1.7.5 The assessments in relation to climate change have primarily been incorporated through:

Impact Assessment	ISA Objectives
Climate Change	6, 7, and 11

Health

- 1.7.6 The WTS could potentially have an effect on human health, including physical and mental health and well-being. The Health Impact Assessment (HIA) has been based on the broad, participatory and inclusive methodology as advocated in Wales and described in 'HIA: A Practical Guide' (WHIASU, 2012) and has used the wider determinants of health as a framework for discussion. The ISA Framework encompasses health objectives that reflect the Public Health Wales indicators.
- 1.7.7 The ISA Framework and associated decision aiding questions ensure that effects on health, including well-being, physical and mental health and wider determinants of health are addressed as the WTS is assessed, recognising direct and indirect effects the planning system can have on these areas.
- 1.7.8 How and where in the ISA the various requirements of HIA have primarily been met are as follows:

Impact Assessment	ISA Objectives
Health	1 and 2

Economic Development

- 1.7.9 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.
- 1.7.10 The ISA Framework and associated decision aiding questions ensure that effects on economic development, including increasing employment opportunities, promoting economic inclusion and sustainable economic growth, diversity and competitiveness as well as third sector opportunities are addressed as the WTS is assessed, recognising direct and indirect effects the planning system can have on these areas.
- 1.7.11 How and where in the ISA the various requirements for assessments of effects on the economy have been met are as follows:

Impact Assessment	ISA Objective
Economic Development	3

1.8 The ISA and WTS processes

- 1.8.1 As described earlier, the ISA process follows that which set out in Figure 1-1. This report represents Stage C of this process, the Draft ISA Report.

Evidence Gathering, ISA Scoping and Stakeholder Engagement

- 1.8.2 Stage A of the ISA (Scoping) commenced in early 2020, and included further evidence gathering and analysis of sustainability issues and opportunities which dovetailed into the WTS evidence. The draft Scoping Report for the ISA of the WTS was one of the first stages in engagement and collaboration for the WTS. Consultation on the draft Scoping Report was undertaken between 05 May – 31 July 2020. In addition, a workshop was held in early May 2020 with stakeholders who represent the range

of assessment processes to be integrated into the ISA. The ISA Scoping Report was issued to statutory stakeholders for comment, as well as other relevant or interested stakeholders.

1.8.3 Stage A, 'Setting the Context and Objectives, Establishing the Baseline and Deciding on Scope' included the following five tasks:

- A1: Identifying other relevant policies, plans and programmes and ISA objectives;
- A2: Collecting baseline information;
- A3: Identifying sustainability issues and problems;
- A4: Developing the ISA Framework; and
- A5: Consulting on the scope of ISA.

1.8.4 The Final Scoping Report (October 2020)¹⁶ represents the initial stage of the ISA. It follows an integrated approach which has been shaped through engagement and involvement of stakeholders and follows the methodology set out in the published guidance¹⁷ which:

- Sets the scope and level of detail of the ISA;
- Identifies relevant plans, policies, programmes and initiatives that will inform the ISA process and the WTS;
- Identifies relevant information about existing and predicted future social, economic, cultural and environmental conditions in Wales at a national scale;
- Identifies key sustainability issues and opportunities; and
- Presents a framework for the ISA, against which the WTS has been appraised.

1.8.5 Responses to the comments received, and how they have influenced the revisions to the ISA, are set out in Appendix C.

1.9 How the ISA has been undertaken

Geographical Scope

1.9.1 The geographical scope of the ISA has been driven by the geographical scope of the WTS i.e. the whole of Wales and up to the mean low-water spring tide. The Welsh National Marine Plan sets the policy context from the mean high-water spring tide. The relationship between marine plans and land-use planning under the Marine Act¹⁸, sees a shared overlap in the intertidal zone. The geographical scale of particular baseline issues means that they will relate closely to neighbouring England and potentially Ireland as well as with the marine environment. This also means that both terrestrial and marine effects are possible and will need to be considered.

Temporal Scope of the ISA

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

ISA Framework

1.9.3 A key output of the ISA Scoping Stage was the ISA Framework. Whilst the SEA Directive does not require the use of sustainability objectives, they are a recognised tool for undertaking ISA. The ISA Framework (Table 2.3) is the main assessment tool used during the ISA and comprises a series of

¹⁶ ISA Scoping report is available online at: <https://gov.wales/wales-transport-strategy-scoping-report> [Accessed 20.10.20]

¹⁷ 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"

¹⁸ The Marine and Coast Access Act 2019 (the Marine Act) <http://www.legislation.gov.uk/ukpga/2009/23/contents> (accessed 17.06.19)

13 Objectives covering social, economic, cultural and environmental issues. These Objectives have been used to test the sustainability performance of the WTS. Each Objective links to the baseline information; key sustainability issues and opportunities in Wales; and other plans, programmes and strategies relevant to the WTS. These were established during the scoping stage and subsequently form the basis of the assessment. The ISA Framework also incorporates the requirements of the other integrated assessments.

- 1.9.4 Annex 1(f) of the SEA Directive lists the following twelve topics that require consideration in any SEA, as well as the interrelationship between these topics.

SEA Directive (Annex 1) Requirements for environmental problems and topics to be considered during SEA

Information to be provided in SEA includes:

“(d) 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 Directives 79/409/EEC and 92/43/EEC; ...

(f) the likely significant effects (1) on the environment, including on issues such as 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;...”

- 1.9.5 The topics listed in Annex 1(f) were carried through into the ISA Objectives set out in the ISA Framework (see Table 2.3). In some cases, several topics are incorporated into one ISA Objective, such as the topics of biodiversity, fauna and flora being incorporated into ISA Objective 11 ‘To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems’. In other cases, ISA Objectives account for one particular SEA topic, such as ISA Objective 8 ‘To protect and improve air quality’, which is focused on the Annex 1(f) topic of air quality. The topic of ‘material assets’ is varied and is considered to comprise all natural and built assets in Wales, such as transport infrastructure, built infrastructure and buildings. The varied elements of material assets come through in nearly all ISA Objectives. Where Annex 1(f) requires the ‘interrelationship between the above factors’, this is brought out in the cumulative and synergistic effects assessment in Chapter 2 as well as more generally in all assessments, such as where assessments identify the potential effects of development on air quality and the implications of this for human health or biodiversity (e.g. new development could lead to an increase in road traffic, which could worsen air quality, and this could have a potential adverse effect on human health and any nearby habitats sensitive to atmospheric nitrogen deposition).
- 1.9.6 The ISA Objectives go beyond the SEA topics to also factor in social and economic elements that are not a focus of the SEA Directive but are a key element of SA and the other legislative and non-legislative impact assessments incorporated into the ISA.
- 1.9.7 The intention of the ISA is to enable the principles of sustainable development to be embedded into the WTS from the outset. The appraisal framework of objectives and decision aiding questions has been designed to embed the principles of sustainable development in the context of what the WTS could potentially achieve. Each stage of the ISA has been undertaken using an iterative process, with feedback and communication between the WTS and ISA teams. This process enables the WTS to take a more sustainable direction in its development. Appraisals are primarily qualitative and undertaken by professional ISA practitioners.
- 1.9.8 The approach is reflective of the requirements of the SEA Regulations and SA, as well as the requirements of the other statutory and non-legislative impact assessments incorporated into the ISA (as described above in Sections 1.4 and 1.5).

Methodology

- 1.9.9 The approach taken towards appraising the WTS has included the following steps (refer to Figure 1-1):

- B1: Testing the plan objectives against the SA Objectives;
- B2: Developing the plan options;
- B3: Predicting the effects (including cumulative and secondary effects) of plan options and alternatives;
- B4: Evaluating the effects (including cumulative and secondary effects) of plan options and alternatives;
- B5: Consider ways of mitigating negative effects and maximising beneficial effects; and
- B6: Proposing measures to monitor the significant effects of the plan's implementation.

1.9.10 The Vision and Ambitions of the WTS have been tested for their compatibility with the ISA Framework in order to identify potential gaps or conflicts (B1). The Priorities and Mini-Plans in the WTS have been assessed in detail (B3 and B4) for their potential effects on each ISA Objective.

1.9.11 Table 1.4 and Table 1.5 set out the scoring method for each of the assessments presented in this report.

1.9.12 Assessments in the ISA follow an integrated approach. It primarily relies on the ISA Framework, which sets out 13 ISA Objectives that, combined, bring together the various impact assessments. The assessments predict and evaluate the likely minor and significant positive and negative (including direct, indirect, secondary and cumulative) effects on each ISA Objective. Set in the context of the seven well-being goals, the various areas for consideration cover the social, economic, environmental and cultural aspects of Wales both now, and in the future.

Table 1.4: Assessment Key for WTS Draft Policies and Reasonable Alternatives

Scoring of Assessment	
++	Strong positive – likely to result in progress towards the objective (significant)
+	Minor positive – likely to result in very limited progress towards the objective
O	Neutral outcome
+/-	Range of possible positive and negative outcomes
?	Uncertain outcome
-	Minor negative – likely to be to the very limited detriment of achieving the objective
--	Strong negative – likely to be to the limited detriment of achieving the objective (significant)

Table 1.5: 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 several developments each have insignificant effects but together have 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

2 ISA Scoping Stage

2.1 Relationship between the WTS and other Plans and Programmes

SEA Directive (Annex 1) Requirements for identifying other relevant plans

The identification of other relevant Plans should account for:

“(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes; ...

(e) 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; ...”

2.1.1 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. The WTS is a national-scale document so the other plans and programmes of relevance will primarily be focused at national, UK or international level. The WTS will, in-turn, seek to influence sub-national level planning in Wales. The ISA Scoping Report identified an extensive list of relevant plans and programmes and how the WTS and ISA should account for these.

2.1.2 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.

2.1.3 Many of the identified plans, policies and programmes are of relevance to the WTS and ISA. Of particular importance nationally are the following documents, with which the WTS shares 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 Plan¹⁹;
- The Natural Resources Policy for Wales, incorporating Sustainable Management of Natural Resources (SMNR) principles;
- Nature Recovery Action Plan; and
- The Welsh National Marine Plan²⁰.

¹⁹ <https://gov.wales/sites/default/files/publications/2020-03/advancing-gender-equality-plan.pdf>

²⁰ <https://gov.wales/marine-planning>

2.1.4 The iterative nature of the ISA allows new plans, policies and programmes that are published as the WTS develops to be taken into account, including the emerging Wales National Development Framework (to be renamed “Future Wales – the National Plan 2040”).

2.1.5 A summary of the documents reviewed, and the main findings are summarised in Table 2.1.

Table 2.1: 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 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.
Wales Plans and Programmes	<p>A review was undertaken of plans produced at the national level within Wales. 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 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. • The 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. The Nature Recovery Action Plan sets out how Wales will address the Convention on Biological Diversity's Strategic Plan for Biodiversity and the associated Aichi²¹ biodiversity targets in Wales. The Nature Recovery Action Plan identifies actions that can be delivered in the short term and

²¹ <https://www.biodiversitywales.org.uk/Nature-Recovery-Action-Plan>

Level	Summary
	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.

2.2 Baseline Conditions and Key Sustainability Issues and Opportunities

SEA Directive (Annex I) Requirements for baseline data and key sustainability issues
<p>The requirement to identify sustainability problems and issues arises from the SEA Directive, where the Environmental Report required under the Directive should include:</p> <p><i>“(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;</i></p> <p><i>(c) the environmental characteristics of areas likely to be significantly affected;</i></p> <p><i>(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EE...”</i></p>

- 2.2.1 Reviewing and analysing the baseline conditions (including social, economic, environmental and cultural conditions) identifies the key sustainability issues. Understanding baseline conditions is also essential in order to be able to accurately predict, evaluate and monitor the effects of the WTS. For example, it is only possible to predict and evaluate the effects of the WTS on the natural environment when there is a clear understanding of the current state of the natural environment.
- 2.2.2 As the WTS is a national-scale document, baseline evidence gathering has been focused on national-scale data with some additional sub-national data where appropriate. 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.
- 2.2.3 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 Wales²², which provide national-scale data across 44 indicators of progress against the seven well-being goals.
- 2.2.4 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. The full results of the baseline data review and the identification of the key sustainability issues are presented in Appendix B and summarised in Table 2.2.

²² <http://gov.wales/topics/people-and-communities/people/future-generations-act/national-indicators>

Table 2.2: Key Sustainability Issues and Opportunities in Wales that were identified during the review of baseline conditions. These have been updated in light of the responses received during consultation on the ISA Scoping Report (May - July 2020)

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
1. A prosperous Wales	<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 as risks to business from flooding, loss of coastal locations, water scarcity, reduced access to capital, reduced productivity from disruption to infrastructure, 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 access to schools and employment, particularly as these facilities are much more difficult to access by any means other than the private car</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 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 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>

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	<p>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>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. 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; 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. Terrestrial, freshwater and marine biodiversity is under threat from transport infrastructure development, pollution and climate change, all of which are effects that can arise from the transport network. Even relatively minor habitat loss, fragmentation and indirect impacts of an individual road project can, when added to other past, present and reasonably 	<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 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. <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, such as bats); and habitat creation. There is opportunity for the WTS to promote additional green infrastructure as part of future transport proposals to

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	<p>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> <p>Climate, 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, meaning 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. These may include 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. <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. 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 	<p>support 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 adaptation 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 Sustainable Drainage Systems (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 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 remains a possibility in Wales and its consideration will form a part of the emerging Welsh Government Energy Strategy. <p>Water Environment</p> <ul style="list-style-type: none"> 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>Minerals and Waste</p>

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	<p>during winter may also increase pressure upon sewerage and drainage systems and diffuse pollution (which may come from road surface run-off).</p> <ul style="list-style-type: none"> • 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). <p>Minerals and Waste</p> <ul style="list-style-type: none"> • Wales has substantial minerals resources. However, sustainable management of 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 had the greatest impact on the most vulnerable individuals and deprived communities. The long-term impacts of the pandemic are currently unknown and, whilst there have been some indirect 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 with relatively poor access across much of rural Wales. Despite this, 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 include distance from public services and support, availability of transport, and an ageing population. Access to healthcare in particular can be limited in many parts of rural Wales. Public transport is important for both the sustainability and independence of rural communities. 	<ul style="list-style-type: none"> • Overall, the WTS could help to achieve the important balance of economic and social improvement that 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 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

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	<ul style="list-style-type: none"> • 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, 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 continues to track overall life expectancy). Issues could include the provision of appropriate services for an ageing population, which may include transport. • For young people, issues 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 spatial inequalities in the distribution of factors such as access to transport, education and employment opportunities, all of which can impact health. • 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 can result in five areas of impact for public health: air pollution, physical inactivity, road safety, noise and the isolation faced by vulnerable people due to fear of road danger (preventing them accessing employment or educational opportunities, social networks, local amenities and services (including healthcare) and thereby 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. 	<p>semi-natural and natural habitats, as well as providing space for outdoor exercise and community engagement, is fundamental to physical and mental well-being.</p> <ul style="list-style-type: none"> • The WTS has an important contribution to make towards improving human health 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, whereby people make schedule multiple stops or activities in on journey, such as taking children to school, then going to the shops, and then going to work etc). • Overall, the WTS can help to address issues associated with an ageing 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 providing inclusive public transport. • 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 be addressed through policies and infrastructure to promote active travel, thereby increasing physical activity, reducing pollution and noise. Active travel

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	<ul style="list-style-type: none"> Physical accessibility to transport may have an effect on disabled people accessing public transport. Other barriers which may be impeding access to public transport, include 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. 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, can 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. Evidence shows that 77 racially aggravated offences took place across three years on British railways. 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. 	<p>measures should be focused in areas of deprivation to reduce inequalities.</p> <ul style="list-style-type: none"> The ISA can help to ensure that the WTS takes into consideration the Social Model of Disability. 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). The WTS can help ensure that men and women working for the transport system are paid equally for carrying out the same job.

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
4. A Wales of cohesive communities	<ul style="list-style-type: none"> • Bus fares are rising in cost at a rate higher than inflation; affordability could exclude some people or communities from this form of transport. • The number of deaths on the road is remaining consistent year to year when it should be improving; more efforts should be made to ensure the safety of drivers and other road users as far 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 traffic related severance can promote isolation. • When people are travelling, they should be able to do so without the fear or threat of crime. 	<p>The WTS could support the creation of connections between and within safe and well-maintained communities through public transport and active travel opportunities. The WTS could 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.</p> <p>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.</p>
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, for example 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 Outstanding Natural Beauty (AONBs) 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 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. 	<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 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 seek to ‘support the socio-economic 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. <p>Landscape and Townscape Character</p>

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	<ul style="list-style-type: none"> • 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 providing 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 infrastructure can affect historic landscapes and may cause direct damage to heritage assets. 	<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 and AONBs 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 of assets are also important considerations e.g. noise and air pollution from traffic. • Opportunities 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.

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
6. A globally responsible Wales	<ul style="list-style-type: none"> Wales' ecological footprint must be reduced and not compromised by transport developments. Measures must be taken to enable 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. 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. 	<p>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.</p> <p>The WTS has an opportunity to help promote low carbon transport modes and improved standards of energy efficiency in transport infrastructure.</p> <p>The WTS should aim to reduce the growth of motor traffic.</p> <p>The WTS must promote sustainable transport modes (including active travel and also Ultra Low Emission Vehicles (ULEVs) as an alternative to petrol/diesel).</p> <p>The WTS presents an opportunity to reduce the need to travel unsustainably:</p> <ul style="list-style-type: none"> To widen and promote more sustainable travel choices, and To make better use of the existing transport network.

2.3 ISA Framework

- 2.3.1 To test the performance of the WTS, an ISA Framework containing 13 ISA objectives (covering social, economic, environmental and cultural issues) has been established. The WTS is appraised against each ISA Objective individually and holistically. Topic areas have been grouped based on professional judgement for clarity, but in practice the assessment encompasses the interrelationships between each of the objectives and guide questions, where relevant to the assessment.
- 2.3.2 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.
- 2.3.3 In summary, the review of plans, programmes and objectives in Appendix A identified a range of key themes. 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 2.2), 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.
- 2.3.4 Table 2.3 presents the ISA Objectives and questions that have been 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.
 - Amendments made in light of the responses received during the May – July 2002 consultation on the ISA Scoping Report.
- 2.3.5 The decision aiding questions that are used to guide the assessment against each objective are based on ISA expert experience and best practice. Not all of the guide questions are used as part of the assessment at each stage; this will be dependent on what is being assessed and the relevance at that stage.
- 2.3.6 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 is assessed against all ISA Objectives to the same level of detail.

Table 2.3 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 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 can be achieved	<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? 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? 	<p>A Wales of cohesive communities A prosperous Wales A healthier Wales</p>
3. To support sustainable economic	<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? 	<p>A prosperous Wales A more equal Wales</p>

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
development and diversity	<ul style="list-style-type: none"> 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? 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? 	<p>A Wales of vibrant culture and thriving Welsh Language</p> <p>A globally responsible Wales</p>
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? 	<p>A Wales of vibrant culture and thriving Welsh language</p>
5. To encourage the protection and promotion of the Welsh Language	<ul style="list-style-type: none"> Encourage transport providers to meet Welsh Language standards? 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? 	<p>A prosperous Wales</p> <p>A more equal Wales</p> <p>A Wales of cohesive communities</p> <p>A Wales of vibrant culture and thriving Welsh Language</p> <p>A globally responsible Wales</p>
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? 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? 	<p>A prosperous Wales</p> <p>A resilient Wales</p> <p>A healthier Wales</p> <p>A more equal Wales</p> <p>A Wales of cohesive communities</p> <p>A globally responsible Wales</p>

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
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? 	<p>A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales</p>
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 remove existing Air Quality Management Areas and reduce the likelihood of new Air Quality Management Areas being required through transport initiatives? 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? 	<p>A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales</p>
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? 	<p>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</p>
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? 	<p>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</p>
11. To promote the conservation	<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? 	<p>A prosperous Wales A resilient Wales</p>

ISA Framework for the assessment of the WTS		
ISA Objectives	Decision aiding questions Will the WTS....?	Well-being goal
and enhancement of biodiversity, geodiversity and ecosystems	<ul style="list-style-type: none"> • Encourage the conservation and enhancement of designated nature conservation sites, habitats and species including their connectivity in the landscape? • 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? 	<p>A healthier Wales</p> <p>A Wales of cohesive communities</p> <p>A globally responsible Wales</p>
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</p> <p>A resilient Wales</p> <p>A healthier Wales</p> <p>A Wales of cohesive communities</p> <p>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</p> <p>A healthier Wales</p> <p>A Wales of cohesive communities</p>

2.3.7 Table 2.4 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 2.4 Directive topics and main ISA objectives of relevance

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

2.4 WTS Reasonable Alternatives (Task B.2)

SEA Directive requirements for considering reasonable alternatives

SEA Regulations Annex 1(h):

“an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken, including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.”

SEA Directive Art. 5(1):

“Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.”

- 2.4.1 For the purpose of satisfying the requirements of an SEA Environmental Report, it is necessary for the ISA report to identify and evaluate the environmental effects of proposals in the WTS, alongside the identification and evaluation of environmental effects of reasonable alternatives to these proposals. The purpose of using reasonable alternatives is to show that evidence has generated the proposed Plan rather than vice-versa.
- 2.4.2 Determining if an alternative is reasonable is typically an evaluative and qualitative assessment for the planning authority. SEA Guidance states that *“only reasonable, realistic and relevant alternatives need to be put forward”*. The SEA Directive and associated legislation do not define what constitutes a reasonable alternative, or how many alternatives must be considered.
- 2.4.3 The development of ‘reasonable alternatives’ was discussed at length with the WTS team, with various directions and possibilities being considered. As an outcome of these discussions, including that the need for the WTS to meet certain legislative requirements, ‘alternatives’ to the approaches in the plan, particularly, as there are no spatial elements to be considered, were not considered to be reasonable.
- 2.4.4 The WTS sets out a Vision for the transport sector in Wales. This is followed by Ambitions and Priorities which, if achieved, would ensure that the desired Vision becomes reality. In order to successfully achieve the Vision, Ambitions and Priorities, the WTS then sets out detailed mini-plans for each sector of transport that describe in detail the approach that will be taken by the Welsh Government.
- 2.4.5 The Vision, Ambitions, Priorities and Mini-Plans are designed to ensure legal compliance, including with the various relevant plans and programmes identified during Scoping (Appendix A). They are also designed to ensure that Wales’ transport sector becomes increasingly sustainable (in terms of its environmental, social, economic and cultural effects) during the lifetime of the WTS. An alternative approach to this i.e. one which is not legally compliant or does not enhance the sustainability of the transport sector in Wales, would clearly not be ‘reasonable’.

Initial Appraisals, September 2020

- 2.4.6 An initial and early draft of the WTS was provided to Arcadis in August/September 2020 and this was assessed using the ISA Framework. The ISA assessment results and recommendations were fed back to the plan-makers, providing them with insight into the performance of the different options against each of the legislative and non-legislative impact assessments. Following this, the WTS was refined.
- 2.4.7 Table 2.5 provides a summary of the assessment results for the early draft version of the WTS. Table 2.6 provides a summary of the recommendations made in the ISA assessments for

consideration by those preparing the WTS. This was a crucial element in the development of the WTS and helped with the production of the October 2020 draft that will be published for consultation.

- 2.4.8 The assessment of the initial early draft of the WTS in September 2020 identified largely positive effects. It was considered that the WTS comprehensively addressed the key sustainability issues and opportunities associated with Wales' transport sector and sought to address these. Recommendations were made to maximise these positive effects in order to deliver more major positive effects, as well as to fill any potential gaps.

Table 2.5: Summary of results of the initial appraisal of the September 2020 draft of the WTS

	ISA Objective												
	1. Health	2. Cohesion	3. Economy	4. Welsh culture	5. Welsh language	6. GHGs	7. CC Resilience	8. Air quality	9. Landscape	10. Heritage	11. Biodiversity	12. Natural resources	13. Tranquillity
Vision	+	+	+	+	+	+	+	+	+	+	+	+	+
Chapter 2: Good for society	+	+	+	+	+	+	0	0	0	0	0	0	0
Chapter 2: Good for Environment	+	0	+	0	0	+	+	+	0	0	+	+	+
Chapter 2: Good for Culture/Language	?	?	+	+	+	+	0	0	+	+	0	0	0
Chapter 2: Good for Economy	+	+	+	+		0	0	0	0	0	0	+	0
Priority 1: Reducing the need for private car and vehicle travel	+	+	+	+	+	+	+	+	+	0	+	+	+
Priority 2: Public transport services that people can use, want to use, and do use	+	+	+	0	+	+	+	+	+	0	+	+	+
Priority 3: Safe well maintained transport infrastructure	+	+	+	0	0	+	+	+	+	0	+	+	+
Priority 4: Behaviour change	+	+	+	0	+	+	0	+	0	0	0	0	0
Priority 5: Innovation that delivers more sustainable transport choices	+	+	+	0	0	+	+	+	0	0	+	+	+
Chapter 5: How we will deliver	+	+	+	+	+	+	+	+	0	0	+	+	+

Key:

Scoring of Assessment	
++	Strong positive – likely to result in progress towards the objective (significant)
+	Minor positive – likely to result in very limited progress towards the objective
0	Neutral outcome
+/-	Range of possible positive and negative outcomes
?	Uncertain outcome
-	Minor negative – likely to be to the very limited detriment of achieving the objective
--	Strong negative – likely to be to the limited detriment of achieving the objective (significant)

Table 2.6: Summary of recommendations made in the initial ISA of the September 2020 draft of the WTS

WTS	Summary of recommendations in the initial ISA of the September 2020 draft of the WTS
Vision	<ul style="list-style-type: none"> • The definition given for ‘transport system’ could include walking and cycling links – as currently worded, it could be considered to be dominated by high pollution travel modes. It could potentially demonstrate the hierarchy of preference, with low-carbon modes at the top. • Could refer to investment in ‘affordable’ transport. • The vision could recognise that the locations of where people want to travel to are changing – and will continue to change as technology advances – and so this would need monitoring during the lifetime of the WTS. • Specific mention of the Welsh language in the definitions could be important, potentially under ‘accessible’. It is currently unclear how language is covered in ‘accessible, effective, affordable’. • The Vision could refer to resilience, in addition to a ‘greener Wales’. • It might be useful to refer to electric vehicle infrastructure. • Reference and inclusion of climate resilience could be made stronger. • Could specifically mention the aspects of the well-being goals, particularly the importance of resilience. • Could make reference to the Natural Resources Wales Sustainable Management of Natural Resources principles.
Chapter 2: Good for society	<ul style="list-style-type: none"> • There is potentially a gap with rural access to healthcare – the WTS could specifically refer to the particular needs of rural areas and more deprived areas. • It is unclear how the measures described will enhance safety - particularly with reference to COVID-19 • Cycling to work is effective at delivering positive health incomes. Various studies and datasets show it to be significantly better for health, compared to walking and it can significantly reduce obesity/heart disease/death from sedentary lifestyles. But only around 6% of people in Wales cycle at least once a week for active travel – improvements to this should be sought, with subsequent benefits to health – followed by benefits to the National Health Service (NHS). The WTS could place much more focus on enhancing cycling infrastructure. • “Ensuring that transport services and infrastructure are designed, planned and delivered” seems to focus on new infrastructure and developments. The WTS should also remove existing physical barriers that cause, for example, severance within communities. • With more people working from home, as well as the effects of the global pandemic, mental health and well-being is becoming a larger issue in society. Whilst planning transport for routes to employment is important, so is providing high quality, local leisure routes and public realm improvements in neighbourhoods. This is also true for those who reside in Wales having inexpensive to access to national parks for leisure and recreation. • People not feeling comfortable on public transport is more evident during the Covid-19 pandemic due to health concerns. It is no longer particular groups that need to be listened to or worked with; it is society as a whole. The WTS does state people have lost confidence in public transport which is true but should go into further detail of how this confidence will be restored, rather than just “creating a culture of safety awareness”. • Restrictions on pavement parking could improve accessibility on footways, but not necessarily safety, especially if it leads to cars parking unsafely elsewhere or blocking the carriageway, causing danger for other road users. If pavement parking is restricted there must be viable, alternative parking options provided – although not to the extent that it encourages high rates of driving. • Rather than stating that “Many people do not feel comfortable” it is recommended that this should describe the vulnerable groups that may not feel comfortable more specifically, based on gender, disability etc - and why they do not feel comfortable. • The WTS could mention the regeneration of deprived areas and how transport can play a part in this. Various studies: (Ahern et al, 2016; Mouratidis, 2020; Lucas et al, 2008) have shown there is a direct link between areas of deprivation and lack of access to transport. • Welsh language could be mentioned as an access barrier. • Potential to refer to equal access to safe walking/cycling links as well as electric vehicle infrastructure. • Consider requiring all new developments with parking spaces to include electric car charging infrastructure.
Chapter 2: Good for Environment	<ul style="list-style-type: none"> • Good for environment is limited to only climate change. Ideally the WTS would be expanded to afford closer attention to the biodiversity crisis (existing transport infrastructure is a key cause of fragmented and isolated habitats). • The WTS should refer to the need for the transport system to reduce the immediate impacts on the climate as well as long-term. • Reducing the need for car travel and implementing clean air zones and Ultra Low Emission Zones should be good for the environment, however these measures are not sustainable if there is no viable alternative. There needs to be a comprehensive and complete public transport system in place in order to encourage modal shift from the car to see any benefit to the environment. Implementing fiscal measures such as clean air zones will only have a disproportionate impact on the poorest in society. The chapter could refer to the need for all measures to be delivered simultaneously, and committed to long-term, for discernible improvements to be realised.

WTS	Summary of recommendations in the initial ISA of the September 2020 draft of the WTS
	<ul style="list-style-type: none"> • Could potentially consider later running transport links in order to reduce some of the need for people to be driving at night • The WTS could place much more focus on enhancing cycling infrastructure as well as walking routes. This infrastructure could also be of high biodiversity value and provide new or enhanced wildlife corridors that improve local character; enhance heritage; alleviate surface run off; filter out air pollutants etc. Road space could be reassigned for green spaces or walking/cycling links. • The WTS could specifically refer to the particular needs of rural areas and more deprived areas. • Making use of clean air zones and Ultra Low Emission Zones may have a disproportionate effect on more deprived socio-economic groups. • The WTS could refer to equal access to safe walking/cycling links and equal access to electric vehicle infrastructure. • The WTS could recognise the risk of flooding and coastal erosion and how the transport system can adapt. It should discuss adapting the current transport system to the effects of climate change in order to remain resilient. • The WTS could mention AQMAs and make specific reference to the air quality improvement, as well as net-zero carbon, targets.
Chapter 2: Good for Culture/ Language	<ul style="list-style-type: none"> • The WTS could state that the transport system needs to be accessible, welcoming and usable for people from all cultures and backgrounds, and not just those who speak English and Welsh. • The WTS could mention inward investment, which might include projects such as re-purposing former rail lines/cycleways as tourist attractions. • The WTS could refer to the potential for re-using old railway lines and tunnels as a way to create habitats to increase biodiversity, or for new cycling/walking routes.
Chapter 2: Good for Economy	<ul style="list-style-type: none"> • Enabling people to access work, leisure etc is important but there needs to be mention of improving the current transport system to make it more reliable and efficient. Congestion and journey delays have a direct impact on the economy through lost productivity and the delivery of goods. The WTS could consider adding "Improve the efficiency, reliability and quality of the existing transport system to enable people to get to work on time, access education and training reliably and deliver goods efficiently for business continuity". • The WTS could make specific reference to the likely benefits to equality that would be delivered as a result of economic enhancements.
Priority 1: Reducing the need for private car and vehicle travel	<ul style="list-style-type: none"> • The distinction between Priority 1 and Priority 2 is unclear at this stage. • Much of what is included in the priority appears to be in line with the status quo e.g. homes are being situated in proximity to existing services. • Perhaps the priority 'reduce the need to travel by car' could be reworded to be 'increase the uptake of active travel and public transport' in order to make the onus on active travel and public transport, not car use. • A lot of emphasis is placed on ensuring that developments are accessible via walking and cycling. It may be appropriate to set out a definition for 'accessible' in this context which, ideally, would refer to coherent and comprehensive GI routes that deliver a wide range of sustainability benefits. • User focus should be on more than just crossing times. In major urban areas, there are issues with pedestrian routes not following desired lines and cycle infrastructure being disjointed and ending abruptly. • The priority could seek to ensure that there are showers, storage and changing facilities provided in retail, leisure and recreation facilities – not just workplaces – in order to enhance the uptake of walking/cycling. • Cardiff are leading the way with dedicated cycleways – this could be implemented elsewhere in other cities, including Swansea and Newport. • Funding could be provided for cycle hire facilities in all major towns and cities to make cycling accessible for all. • This priority appears to focus primarily on new developments rather than improving existing accessibility or connections to existing employment, leisure and residential areas. In order to facilitate nationwide behaviour change, there needs to be improvements to the existing network and connections within and between communities; not just ensuring new developments make provision for sustainable modes. • Increasing the uptake of walking and cycling would require improvements to the safety and perceived safety of these modes of travel. Priority 1 could include efforts to improve the safety of active travel links, including by improving cycling infrastructure; ensuring safe cycle storage at new development; ensuring well-lit cycle and footpaths that allow for high rates of natural surveillance that are linked with new developments; making space on roads for cycle paths. This would help to increase the uptake of cycling, with benefits to people's health, whilst reducing the risk of harm. There is a gender imbalance in rates of walking and cycling. Including measures to improve the safety, and perceived safety, of walking and cycling routes (as recommended against ISA Objective 1) could help to encourage more women to cycle and thus combat this inequality. It's noted that this is partially addressed in Priority 2.

WTS	Summary of recommendations in the initial ISA of the September 2020 draft of the WTS
	<ul style="list-style-type: none"> • Encouraging people to work from home could be reworded to allow space for choice i.e. those who think their health or mental well-being could be adversely affected by working from home should have the option to work at their place of employment, or elsewhere, instead. • The WTS could include ways to improve accessing open space including national parks and other forms of leisure and recreation. The WTS mentions locating leisure close to where people live but fails to mention sustainable connections from existing residential areas to leisure facilities. • The priority could look to recognise that not all people are able to walk or cycle, such as those due to certain disabilities, age or pregnancy for example. Ensuring good access to public transport will be particularly important for these groups to allow them to travel sustainably. • Employers could be encouraged to provide cycle-to-work schemes. They could also be encouraged to ensure that the place of work is highly accessible via walking and cycling as well as public transport. Car-parking spaces at places of work, where they are highly accessible via active travel and public transport, could be discouraged. • Showing leadership could potentially include efforts to limit parking provision at public sector developments, and to include high-quality and secure cycle storage. • Could there be a commitment to provide financial, or other, support to community cycling groups? There are several out there making real efforts to change people's behaviour towards cycling. • Limited crossover between this priority and climate change resilience. However, walking and cycling links could be of high GI value that is well integrated and provides natural flood risk alleviation services where it is located. • Limiting car use will help to reduce Greenhouse Gas (GHG) emissions, but also other forms of pollution e.g. atmospheric nitrogen deposition. Tyre wear is responsible for a large quantity of plastic pollution. This important benefit of reducing car use could be specifically referred to in the priority. • Reducing the need to use car should help to reduce the need to build roads. This would be of significant benefit to habitats and wildlife as roads fragment and isolate habitats, and block the free movement of wildlife. Reductions in air pollution also good for sensitive habitats. This could be referred to as part of the driver behind this priority and a reason to avoid building new roads. • The WTS could encourage the electrification of Wales' public transport. • New public sector developments could be encouraged to employ the latest low-carbon technologies and materials during construction
<p>Priority 2: Public transport services that people can use, want to use, and do use</p>	<ul style="list-style-type: none"> • A strong focus of the WTS should be on electric vehicles and it is unclear where this sits between Priorities 1 and 2. Access to electric vehicles could be more equitable, through affordability and electric vehicle charging infrastructure, particularly in rural areas. This could be done through incentives such as electric vehicle only lanes on the strategic road network (SRN). • Whilst integrated ticketing is important, there needs to be the transport infrastructure in place in order to facilitate integration, for example, bus stops outside train stations or cycle hire facilities next to transport hubs. Fully integrated transport hubs will also help. • The South Wales Metro and North East Wales Metro when they are rolled out will be innovative and make public transport more accessible, however restricted to these regions. Improvements should be made to Mid Wales and North Wales. Improvements to the Cambrian line, reopening stations such as Carno and reopening lines including the Aberystwyth to Carmarthen Line and Amlwch line will go some way to helping. • The Priorities and WTS avoid referring to specific roads/lines etc. There may be value in doing so. For example, public transport is not viable for some strategic connections: <ul style="list-style-type: none"> ○ From Cardiff to Aberystwyth: By Car: 2 hours 40 minutes By Train: 4 hours 32 Minutes ○ From Cardiff to Bangor: By Car: 4 hours 30 minutes By train: 5 hours 29 minutes ○ St Davids to Bangor: By Bus (3 buses) – 8 hours 43 minutes By Car – 4 hours 18 minutes • Various studies: (Ahern et al, 2016; Mouratidis, 2020; Lucas et al, 2008) have shown there is a direct link between areas of deprivation and lack of access to public transport. Strategic improvements to public transport should not impact on local transport and should complement and improve it. • To aid congestion in cities/towns, park and ride services on urban peripheries could be a viable option and may encourage further public transport use and behavioural change. • There could be a priority dedicated to active travel – active travel is the most sustainable transport mode with significant benefits for people and environment – public transport benefits are more limited. • “Ensure that public transport services can adapt efficiently and effectively...” These are two very separate points. To have a contingency plan for unexpected emergencies such as is very different compared to planning additional transport for planned events. This should be two separate bullet points.

WTS	Summary of recommendations in the initial ISA of the September 2020 draft of the WTS
	<ul style="list-style-type: none"> Patronage on public transport is lower compared to before the COVID-19 pandemic – DfT statistics for transport use since 1st March 2020 show that during lockdown, for bus excluding London, patronage was between 10-15% of an equivalent day/week pre-pandemic. Up to 21st September, the peak patronage was 59%. The figures are worse for National Rail – between 4% and 7% of patronage during lockdown, with peak patronage reaching 43%. COVID-19 has made public transport services less attractive and this section needs to acknowledge this. The Priority could refer to the heightened need for cleanliness and space in light of the COVID-19 pandemic When outlining that planning for, delivering and designing public transport, more attractive services will be important – this could include existing services/facilities too. Specific reference could be made to the different health and safety challenges faced by different groups of society on public transport. It could also mention that increased public transport use will correlate with a stronger economy as more people are travelling and spending.
Priority 3: Safe well maintained transport infrastructure	<ul style="list-style-type: none"> No mention of enhancing the safety of cycling infrastructure. Probably the biggest impediment to high rates of cycling is the lack of safety on roads for cyclists. This could be a fundamental focus of this priority – make it safer for people to travel actively – including by enhancing the safety of infrastructure as it is (e.g. designate cycle paths on roads); revamp the infrastructure (e.g. close roads to cars and make them walking/cycling only) or provide new infrastructure (e.g. new cycle paths). The incentivising walking/cycling that's discussed in priority 4 is unlikely to do much if cycling infrastructure and safety is not drastically improved. “Meeting our statutory responsibilities for maintain the road network...” is a legal obligation so should be met anyway. More focus needs to be put on going above and beyond these to make safe active travel provision whilst also not impeding the safety of the SRN. “Well-maintained” should go further to incorporate new technologies to manage demand on the SRN and innovative maintenance, rather than just what is legally obligated. Note that rates of cycling are low – 91% of people cycling less than once a week or never – but rates for women are much lower than for men – around 94% of women never cycle vs 87% of men. More work may be needed to determine the extent to which the safety and perceived safety of cycling is causing this. Health inequalities are evident among different groups, particularly children and old people and although it is stated that infrastructure will be “inclusive” it is a vague statement. The Priority could mention maintaining bilingual signage on SRN (not just Welsh and English). The Priority could seek to include measures to decarbonise the SRN.
Priority 4: Behaviour change	<ul style="list-style-type: none"> The measures outlined will make car use less equitable, in that it will penalise those who need to use a car, for example rural residents, or impact the poorest in society. This could be reworded so that access to electric vehicles is more equitable, for example through affordability and electric vehicle charging infrastructure, particularly in rural areas. ‘Transform the image of public transport’ could be reworded to also include ‘and active travel’. Something should be mentioned about extending public transport and active travel networks to those who currently do not have sufficient access. It does not go far enough to state that those who “have the choice” should be encouraged – the choice should be given to all. Stating that the solutions that work in cities may not work in rural areas could be elaborated upon. It is suggested that incentives to encourage sustainable transport and sustainable transport networks should be extended to rural areas, with improved reliability and punctuality to follow. “Better integrate between modes” Whilst integrated ticketing is important, there needs to be the transport infrastructure in place in order to facilitate integration, for example, bus stops outside train stations or cycle hire facilities next to transport hubs. Consider rewording to include the provision of infrastructure. User focus should be on more than just crossing times. In major urban areas, there are issues with pedestrian routes not following desire lines and cycle infrastructure being disjointed and also not following desire lines. Crossing times are one issue but so is the quantity and location of crossings for example, particularly for vulnerable groups such as the elderly or people with mobility or sight impairments. There needs to be collaboration between neighbouring local authorities to provide integrated transport. Commuting data from StatsWales, 2019, showed that for Cardiff alone, 98,600 people commute into the area from other local authorities each day. Newport sees 35,300 people commuting from elsewhere each day. Although Cardiff and Newport are neighbouring local authorities, there is no safe, direct, cycle-friendly route between the two employment cores. When Welsh Government allocate transport funding to each individual local authority, they should encourage collaboration to provide integrated services. A commitment to working with relevant community groups could be included. Fiscal measures should not be the answer until sufficient and viable alternatives are in place. For example, congestion charging or workplace parking levies should not be introduced to Cardiff until the Metro is introduced, so as not to disadvantage those in more deprived socioeconomic groups. Public transport and active travel have to be seen to be better value than owning and driving a car. This is not just in monetary terms; reliability, access, convenience and journey time all come into it too. People will not

WTS	Summary of recommendations in the initial ISA of the September 2020 draft of the WTS
	<p>switch from the car until there are viable options for the entirety of their journeys, hence why the joined up, collaborative approach is necessary.</p> <ul style="list-style-type: none"> • Could implement car sharing lanes and/or electric vehicle only lanes on the SRN. • Ensure access to electric vehicles is more equitable. Through affordability and electric vehicle charging infrastructure, particularly in rural areas. • Under incentives, could include concessions for events/cultural and heritage assets and make public transport to these more affordable and convenient than car parking, to encourage behavioural change.
Priority 5: Innovation that delivers more sustainable transport choices	<ul style="list-style-type: none"> • There are inequalities between rural and urban areas with regards to broadband and mobile coverage. A report by Ofcom in 2018 found that Wales has the biggest urban-rural divide for 4G coverage. While 79% of urban homes and offices have complete 4G coverage, the figure for rural premises is less than half that (36%). In some remote parts of the country, there is no coverage at all, 10% of Wales (9% UK) is not covered by a good 4G service from any operator. It is therefore likely that enhancements made to the sustainability of people's travel, as a result of technological advancements, are unlikely to benefit rural and urban people equally.
Chapter 5: How We Will Deliver	<ul style="list-style-type: none"> • Investment hierarchy will be a key determinant of the magnitude and nature of effects from the WTS, as it will be one of the key delivery mechanisms. At this stage it is difficult to appreciate the scale of effect without further insight into how the new investment hierarchy will look. • Currently the wording suggests that some new roads would be acceptable in some cases. Ideally the WTS would be discouraging any and all new roads. • Significant new road infrastructure projects should be defined. • A commitment to continue using WelTAG appears to be a continuation of the norm i.e. to continue to get people to do WelTAG appraisals. Perhaps the WelTAG requires revision/amendments to make it fit for the climate emergency. • National Transport Delivery Plan (NTDP) – it would be useful to have more information on this in terms of timescales, consultation etc. Much of what the WTS says would be beneficial, but assessments have low certainty as it is difficult to determine how it would be achieved in practice – NTDP would likely clarify this and so would ideally be publicly consulted on and be subject to sustainability assessments etc. • Marginalised and at risk groups should be included in section 5.5 of user groups who will be giving feedback.

3 ASSESSMENT OF THE DRAFT WTS (OCTOBER 2020)

3.1 Contents of the Draft WTS

3.1.1 The WTS is structured in the following way:

- 1. Vision
 - *Sets out what the NDF is, how it fits with wider Welsh Government policy and the structure of the Welsh planning system.*
- 2. Our Long Term Ambitions for Transport in Wales
 - *Good for people and communities*
 - *Good for the environment*
 - *Good for the economy and places in Wales*
 - *Good for Welsh culture and language*
- 3. Our 5-Year Priorities
 - *Priority 1: Planning for better connectivity*
 - *Priority 2: Public transport services that people can use, want to use and do use*
 - *Priority 3: Safe, accessible, well-maintained transport infrastructure*
 - *Priority 4: Behaviour change*
 - *Priority 5: Adopt innovations that deliver more sustainable transport choices*
- 4. What We Will Measure;
- 5. How We Will Deliver;
- 6. The Five Ways of Working; and
- 7. Mini Plans: Transport Modes and Sectors
 - *Mini Plan for Active Travel;*
 - *Mini Plan for Bus;*
 - *Mini Plan for Rail;*
 - *Mini Plan for Roads, Streets and Parking;*
 - *Mini Plan for Community and not-for-profit Transport Sectors;*
 - *Mini Plan for Taxis and Private Hire Vehicles;*
 - *Mini Plan for Freight and Logistics;*
 - *Mini Plan for Ports and Maritime Transport;*
 - *Mini Plan for Aviation.*

3.1.2 The appraisal in the ISA has focused on Chapters 1 (Vision), 2 (Ambitions), 3 (Priorities), and 7 (Mini Plans). Chapter 4 (What We Will Measure) has been considered as part of the development of the monitoring framework.

3.2 Summary of Assessment Results

3.2.1 The WTS is a national strategy and so the appraisals identify broad and general trends of potential effects at the national level. The appraisals are intended to be strategic and are designed to ensure that sustainability considerations are factored into the plan-making process from the outset.

3.2.2 The Vision and Ambitions of the WTS have been B1 assessed for their compatibility with the ISA Objectives. This was a qualitative appraisal based on expert opinion and guided by the decision aiding questions in the ISA Framework. Table 3.1 provides a summary of the B1 compatibility test results.

3.2.3 The Five-Year Priorities and each of the Mini Plans were assessed in more detail against each ISA Objective. Table 3.2 summarises the results of this process. As the WTS does not have any spatial/land-use elements, however, the prediction of effects with high certainty and detail has not been possible.

Table 3.1: Compatibility between the ISA Objectives and the WTS Vision and Ambitions

WTS	1. Health	2. Cohesion & equality	3. Economic development	4. Welsh culture	5. Welsh language	6. GHG emissions	7. Climate change resilience	8. Air quality	9. Landscape & townscapes	10. Heritage	11. Ecosystems	12. Natural Resources	13. Tranquility
Vision	✓	✓	✓	✓	✓	?	✓	?	✓	✓	✓	✓	✓
Ambitions													
1. Good for People and Communities	✓	✓	✓	✓	✓	✓	○	✓	○	○	○	○	○
2. Good for the Environment	✓	○	✓	✓	○	✓	✓	✓	✓	✓	✓	✓	✓
3. Good for the Economy and Places in Wales	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓	○
4. Good for Welsh Language and Culture	✓	✓	✓	✓	✓	○	○	○	✓	✓	○	○	○

Key:

Compatible	✓	Neutral	○
Incompatible	✗	Uncertain	?

Table 3.2: Effect scores recorded for the Five Year Priorities and Mini Plans against each ISA Objective.

WTS	ISA Objective												
	1. Health	2. Cohesion & equality	3. Economic development	4. Welsh culture	5. Welsh language	6. GHG emissions	7. Climate change resilience	8. Air quality	9. Landscapes & townscapes	10. Heritage	11. Ecosystems	12. Natural Resources	13. Tranquility
Priority 1: Planning for better connectivity	+	+	++	+	+	+	+	+	+	+	+	+	+
Priority 2: Public transport services that people can use, want to use and do use	+	++	++	+	+	++	+	+	+	+	+	+	+
Priority 3: Safe, accessible, well-maintained transport infrastructure	+	+	++	+	+	++	+	+	+	+	+	+	+
Priority 4: Behaviour Change	+	+	+	0	0	+	0	+	+	0	0	+	+
Priority 5: Adopt innovations that deliver more sustainable transport choices	+	+	++	+	0	+	0	+	0	0	+	+	+
Mini Plan: Active Travel	+	+	+	+	?	++	+	++	+	+	+	+	+
Mini Plan: Bus	+	+	+	+	+	+	?	+	+	+	+	+	+
Mini Plan: Rail	+	+	+	+	?	+	?	+	+	+	+	+	+
Mini Plan: Roads, Streets, and Parking	+	+/-	+/-	+	+	+	+	+	+	+	+	+	+
Mini Plan: Community and Not for Profit Transport Sectors	++	++	+	+	+	+	0	+	0	+	+	+	0
Mini Plan: Taxis and Private Hire Vehicles	+	+	+	+	+	+	0	+	+	+	+	+	+
Mini Plan: Freight and Logistics	+	+	+	0	+	+	+	+	-	0	+	+	+
Mini Plan: Ports and Maritime Transport	+	+	++	++	+	+	-	+	0	+	+	+	0
Mini Plan: Aviation	-	-	++	+	0	--	0	--	0	0	0	+	--

Key:

Strong positive (significant)	++	Uncertain outcome	?
Minor positive	+	Minor negative	-
Neutral outcome	0	Strong negative (significant)	--
Range of positive and negative outcomes	+/-		

3.3 Cumulative Effects Assessment

3.3.1 In addition to appraising each of the proposals in the WTS separately, they have been appraised in combination for their likely cumulative, secondary and synergistic effects against each ISA Objective. The results of this process are summarised in Table 3.3 and presented in full in Table 3.4.

Table 3.3: Cumulative effects assessment summary of scores (full assessment in Table 3.4)

ISA Objective													
	1. Health	2. Cohesion & equality	3. Economic development	4. Welsh culture	5. Welsh language	6. GHG emissions	7. Climate change resilience	8. Air quality	9. Landscape & townscapes	10. Heritage	11. Ecosystems	12. Natural Resources	13. Tranquility
WTS	++	++	++	+	+	+/-	+	+	+	+	+	+	+

Key:

Strong positive (significant)	++	Uncertain outcome	?
Minor positive	+	Minor negative	-
Neutral outcome	0	Strong negative (significant)	--
Range of positive and negative outcomes	+/-		

Table 3.4: Cumulative effects assessment for the Draft (October 2020) WTS

Cumulative effects	Overall effect score
<p>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</p>	<p>++</p>
<p>The WTS would help to make public transport more accessible for a wider range of people, particularly as a result of the Ambitions, Priorities 1, 2, 3 and 5 as well as the Mini Plans on Active Travel, Bus and Rail. Improved access to higher quality public transport options that get people to where they need to go, and when they need to get there, would help ensure that more people are better able to access health and social care facilities, exercise, leisure and recreational opportunities as well as a diverse range of semi-natural habitats. Public transport also helps to combat the risk of social isolation by providing a means for informal community interactions with local neighbours. Social interaction is not possible when people are reliant on cars for most of their journeys. Roads, and particularly busy roads, can also lead to severance for communities.</p> <p>The WTS seeks to ensure that new developments are increasingly accessible by ensuring that transport infrastructure is situated in proximity to homes and developments are accessible via walking and cycling. This is reinforced throughout the Ambitions in the WTS as well as the Mini Plans on Active Travel, Bus, Rail and Community Transport. It is therefore likely that new community facilities, leisure and recreational spaces as well as new health facilities and open spaces, can be accessed by all local people efficiently and sustainably.</p> <p>The Ambitions, Priorities and the Mini-Plan on Active Travel could facilitate significantly higher rates of walking and cycling for people in Wales, which have remained stagnant in recent years. Walking and cycling is not only the most sustainable form of travel but provides significant health benefits, for example due to physical exercise and to increased community interactions. Improvements to active travel links may prove to be particularly beneficial for certain groups of society, including the elderly, those who do not have access to a car, and children travelling to and from school.</p> <p>The WTS would ensure that the strategic road network is maintained, as per the Government's legal obligations. It would look to ensure that new services and facilities are in proximity, or in accessible locations, for people needing to access them (e.g. see Priority 1). This would enable more efficient and quicker journey times for people, thereby providing them with more free time outside of their travelling or commuting, to pursue their personal interests. This could be highly beneficial to people's health and well-being.</p> <p>Air pollution is hugely detrimental to people's health, with particulate matter and nitrogen dioxide pollution thought to be associated with around 2,700 deaths in Wales each year²³. The transport sector is responsible for a major portion of these forms of pollution. The WTS would encourage and facilitate higher rates of active travel and public transport use that would be likely to reduce the number of high-polluting vehicles on the road and, in so doing, would help to reduce the rate of mortality in Wales associated with air pollution.</p> <p>In-combination, the improvements to public transport and active travel links, combined with services being in accessible locations and better air quality would make a significant contribution towards creating a synergistic effect in combating health inequalities and would help to ensure that the transport system facilitates improvements in people's physical and mental health and well-being.</p> <p>With improvements to digital technology, more people are working from home on a regular basis. The pandemic and lockdown in 2020 has significantly increased the number of people working from home and, for many people, this may represent the new normal from 2021 onwards. The WTS recognises the need for improvements to digital infrastructure to accommodate this. The commute to and from work is a key opportunity for exercising via walking and cycling and, with people commuting less, the WTS recognises that it will be increasingly important to ensure that the other places people need to go (e.g. shops, services, amenities, cultural spaces) are accessible via walking and cycling. It should be noted that, whilst working from home presents significant opportunities in terms of reducing the need for people to travel and reducing the number of cars on the road, it can pose a risk to people's mental well-being as they miss out not only on opportunities for active travel but also on opportunities for social and community interaction.</p> <p>Overall it is considered to be likely, with a high level of certainty, that the proposals in the WTS would cumulatively result in long-term major positive (significant) effects, both directly (e.g. by reducing air pollution) and indirectly (e.g. by enhancing the accessibility of health facilities as a result of improved public transport services), on the physical and mental health and well-being of people throughout Wales.</p>	

²³ 'Estimating the mortality burden of air pollution in Wales' <http://www.wales.nhs.uk/sitesplus/888/opedoc/317890>

Cumulative effects	Overall effect score
<p>2. To create the conditions within which an improvement in social cohesion and equality can be achieved</p>	<p>++</p>
<p>The Ambitions and Priorities of the WTS, as well as the Mini Plans on Active Travel, Bus, Rail and Community Transport, would help to combat social and economic inequalities through developing a system that is accessible for, and utilised by, all members of society irrespective of background, gender, age, and disability. In doing so it would improve equality of opportunity in terms of access to services, employment, leisure and education facilities.</p> <p>Utilising digital innovations, as per the Priorities, Ambitions and the Mini Plan for Rail, and ensuring that the views of the transport system users are taken into consideration, would help to ensure that the diverse needs of Wales' growing population are catered for. Public transport that can be, and is, utilised by all people irrespective of their background, would help to enhance social cohesion.</p> <p>The WTS recognises the barrier that language can present, particularly for those who do not speak English (e.g. see the Ambition for 'Good for Welsh Culture and Language' as well as the Priorities and Mini Plans), and it is likely that as a result of the WTS these barriers will be increasingly eroded and users of Wales' three official languages (Welsh, British Sign Language and English) would be able to make equal use of the transport system (including active travel, public transport and the road network) equally.</p> <p>Access to public transport and active travel links is particularly limited for rural communities. Whilst there may be good access to public footpaths in rural areas, these are unlikely to be feasible options for travelling to and from services and facilities. The WTS recognises that, for rural communities, roads and driving are essential and would look to maintain and enhance the road network to preserve the connectivity of rural communities and combat the social isolation that can be prevalent here.</p> <p>The WTS recognises the importance of enhancing the safety of the transport system, for all users, and ensuring that it is welcoming for all people. The Ambitions, Priorities 2 and 3 as well as the Mini Plans on Bus, Rail and Community Transport would be particularly beneficial for members of society who may feel less safe, or vulnerable members of society who are statistically less safe, when using active travel links or public transport.</p> <p>Overall it is considered to be likely, with a high level of certainty, that the proposals in the WTS would cumulatively result in long-term major positive (significant) effects, including directly (e.g. by ensuring more equitable access to public transport that is also made safer) and indirectly (e.g. economic growth than benefits all people in Wales), on social cohesion and equality.</p>	
<p>3. To support sustainable economic development and diversity</p>	<p>++</p>
<p>The WTS would have a cumulatively positive effect on development and the Welsh economy. Enhanced active travel links and public transport options, which would be made increasingly accessible to all people and all communities, would help to ensure more equitable access to education and employment opportunities, particularly due to the Ambitions on Community and the Economy, Priority 1 and the Mini Plans on Bus and Community Transport.</p> <p>With people able to travel more efficiently and more freely, there could be an increase in footfall at important economic areas, thereby providing a boost to the local economies. This would be particularly the case where active travel links are enhanced as there would be higher rates of walking and cycling. This would provide businesses with access to a wider pool of potential employees.</p> <p>The WTS could help diversify the employee market and reduce employment inequality between rural and urban areas through promoting working from home, particularly due to Priority 1 and the Mini Plans on Bus, Rail and Community Transport.</p> <p>Public transport use is correlated with a stronger economy, due to spending on the transport service itself and ancillary services (such as food and drink outlets) in the vicinity. Therefore, in encouraging public transport use, the WTS could lead to economic growth.</p> <p>Improving the ease of access to town centres and high streets, as well as large cultural events and historic and environmental assets (as per Priorities 2 and 3 and the Mini Plans on Bus and Community Transport), would further help to stimulate the economy.</p> <p>The WTS could have a positive impact on the Welsh economy through encouraging the development of new 'work hubs'.</p> <p>More efficient journey times, via more welcoming and safer routes, as per Priorities 4 and 5 and the Mini Plans on Bus, Rail and Community Transport, would improve the customer experience when travelling and, for those commuting to and from work, would mean that they arrive at work less stressed and more able to work productively, thereby benefiting the Welsh economy.</p> <p>More efficient journey times would also be significantly beneficial to the movement of goods and services throughout Wales, particularly for business-to-business connections and freight movements. This would be achieved by reducing the number of cars on the road, a well maintained road network, safer routes, and by taking advantage of technological innovations in the freight and logistics sector as per Priorities 4 and 5 and the Mini Plans for Road, Freight and Logistics, Aviation and Ports and Maritime Transport.</p>	

Cumulative effects	Overall effect score
<p>A more connected Wales with more efficient, more attractive and safer routes, (as a result of, for example, the Ambitions, Priorities 2, 3 and 5 as well as the Mini Plans for Bus, Rail and Community Transport in-combination) would be of significant benefit to the tourism sector, with people now able to more safely and efficiently access Wales from abroad, or to travel throughout Wales. Improvements to the active travel infrastructure in Wales could also enhance the attractiveness of the active tourism sector, such as hiking or mountain biking.</p> <p>Over the course of the 25-year WTS period climate change will impact on the economy. As per Priority 3 and the Mini Plans, the WTS seeks to ensure that the transport system is future proofed and resilient to the impacts of flood risk, extreme weather events or coastal erosion. This would help to ensure that economic benefits of the WTS are sustainable and resilient.</p> <p>Overall it is considered to be likely, with a high level of certainty, that the proposals in the WTS would cumulatively result in long-term major positive (significant) effects, including directly (e.g. enhancing the efficiency of the movement of goods and services) and indirectly (e.g. by investing more in public services that deliver wider economic benefits), on economic development and diversity.</p>	
<p>4. To protect and promote Welsh culture and improve access to cultural and recreational spaces</p>	+
<p>The WTS promotes, and seeks to deliver, more sustainable, resilience and equitable access for all people to cultural and recreational spaces, particularly due to the combined effect of the Ambitions, Priorities 2, 3 and 5 as well as the Mini Plans for Bus, Rail and Community Transport.</p> <p>More efficient and sustainable access to these spaces, including for local people and tourists, would enhance economic viability and vitality and allow continued benefits to local people over the course of the WTS period.</p> <p>The WTS recognises the strain that large scale cultural and tourist events, such as major sporting events, can place on the transport system. Through Priorities 1, 3 and 5, as well as the Mini Plans on Bus and Rail, the WTS seeks to ensure that these events can continue to take place and to continue having a significantly positive effect on Wales' economy, society, and culture.</p> <p>It is likely that in some areas, the enhancements to safe and attractive active travel links could improve the setting or character of the local area. Combined with a reduction in the number of vehicles on the road, which can have an adverse effect on the tranquillity of recreational or cultural areas due to noise, air and light pollution, enhancements would help improve the quality and attractiveness of cultural and recreational spaces.</p> <p>Overall it is likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by ensuring that public places are accessible via walking and cycling) and indirectly (e.g. improving the setting of recreational spaces and thereby making them more attractive to visitors), on Welsh culture.</p>	
<p>5. To encourage the protection and promotion of the Welsh Language</p>	+
<p>The Ambitions of the WTS, as well as the Mini Plans, seek to ensure that the transport system encourages the regular use of the Welsh Language as part of a system that is "accessible for all".</p> <p>Enhancing active travel and public transport links throughout Wales would be likely to lead to more equitable access to education opportunities for people regardless of their background. In so doing, this would facilitate more equitable access to Welsh language learning opportunities, either as a part of their learning at school or due to the school being a Welsh-medium facility.</p> <p>Overall it is likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by ensuring that public transport encourages use of the Welsh language) and indirectly (e.g. enhancing the accessibility of Welsh-medium schools), on the Welsh language.</p>	
<p>6. To reduce greenhouse gas emissions from transport</p>	+/-
<p>Proposals in the WTS in-combination would be likely to lead to significant reductions in the GHG emissions associated with Wales' transport sector. This would primarily be achieved as a result of encouraging and facilitating higher rates of walking, cycling and public transport usage with subsequent reductions in the number of cars on the road, as per the Ambitions, Priorities 1-5 and the Mini Plans for Active Travel, Bus and Roads.</p>	

Cumulative effects	Overall effect score
<p>Taking advantage of technological innovations and ensuring that services and facilities are in proximity to where people live, as per the Ambitions, Priority 1 and the Mini Plan for Rail, would further reduce the need for people to travel and to allow them to travel more efficiently when they do so. More efficient journeys for freight movements could help to combat the carbon footprint of Wales' freight sector.</p> <p>The WTS would make owning an electric or cleaner vehicle a more viable option over a petrol or diesel vehicle through supporting technologies such as electrification and hydrogen as a fuel, as well as the implementation of more electric vehicle charging points, which would contribute to lowering emissions. The WTS also promotes the electrification of public transport. This would be primarily achieved through a combination of Priorities 1- 5 as well as the Mini Plans for Bus, Rail and Community Transport. However, whilst the WTS would be likely to facilitate significant reductions in GHG emissions associated with movements on the road network, there is a risk of this being undermined to some extent by the aviation industry as well as due to the large population of rural living people for whom active travel or public transport opportunities are unlikely to significantly improve.</p> <p>The WTS is committed to maintaining a healthy aviation sector in Wales for its significant economic benefits. The Mini Plan for Aviation recognises that there will be challenges for the aviation sector when seeking to achieve Wales' carbon budgets. It seeks to ensure that, for example, Cardiff Airport puts in place a robust decarbonization strategy and that people access airports via public transport instead of car to help offset these emissions. However, the measures described in the WTS and the Mini Plan for aviation, such as the decarbonization strategy or increase in the public transport access of airports, would be unlikely to truly offset the emissions associated with aviation. Cars and HGVs are a much greater source of GHG emissions in Wales than aviation currently is, and so the commitment to a 'healthy aviation sector' would not lead to an overall adverse effect on this ISA Objective as a result of the WTS, but it would be likely to prevent, or at least make more difficult, and overall significant reduction in GHG emissions.</p> <p>Rural people account for just over a third of Wales' population and in order for them to access key services and facilities they typically need to travel longer distances than those living in urban areas. The WTS would be unlikely to solve this problem. Whilst there would be some improvements to the road network allowing more efficient journeys, greater support for electric vehicles, and enhancements to community transport services that are particularly important in rural areas, it would be unlikely to allow people living in rural areas to travel as efficiently, sustainably or low-emission as those living in urban areas. It is unclear the extent to which the emissions associated with the transport movements of people living in rural areas would be discernibly reduced as a result of the WTS.</p> <p>Any reduction in GHG emissions should be seen in the context of Wales' carbon budgets, which currently seek an 80% reduction on baseline GHG emissions by the year 2050. The WTS will be in place for 25 years, and so it would need to help ensure that these carbon budgets are met. It is unlikely that a 'healthy aviation sector', or a continuation of around a third of Wales' population being unable to rely on active travel or public transport, truly complies with, or contributes towards the successful achievement of, these carbon budgets.</p> <p>Overall, it is considered that, with a medium level of certainty, the WTS would result in a combination of both positive and adverse long-term effects on GHG emissions. Whilst the proposals in the WTS would be likely to result in a net reduction in GHG emissions, which is highly positive, it is uncertain the extent to which this would be undermined by a healthy aviation sector and a continued reliance of the rural population on personal car use. It appears to be unlikely that the measures in the WTS would reduce GHG emissions at the rate required for the transport sector to comply with Wales' carbon budgets and the climate emergency, although these measures may be more apparent in the delivery plans that are developed as a result of the WTS.</p>	
<p>7. To enable climate change resilience</p>	+
<p>The WTS aims to improve the sustainability of land management and to future-proof existing infrastructure, which will help to make the transport system more resilient to the potential effects of climate change, particularly as a result of the Ambitions and the Mini Plans. Priorities 2 and 3, as well as Mini Plans for Bus, Rail and Community Transport, would see public transport improved in terms of its adaptability and its emergency procedures to protect from flooding and other unexpected events.</p> <p>New and improved walking and cycling links, as promoted throughout the Ambitions, Priorities, and the Mini Plan for Active Travel, could result in an increase in the green infrastructure cover along these routes that helps to manage surface run off and to alleviate flood risk.</p> <p>Through creating a transport system that is equally accessible for all members of society, the WTS should recognise and combat the inequalities experienced in access to transport in extreme weather events; this would help increase the resilience of the transport system to climate change and reduce inequalities between urban and more rural, isolated areas. The WTS encourages the use of more sustainable, low-carbon modes of transport, such as active and public transport, over private vehicles, which would help reduce GHG emissions from the transport sector and subsequently limit Wales' contribution to climate change.</p> <p>Overall it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by improving the resilience of transport infrastructure to extreme weather events) and indirectly (e.g. by reducing the causes of climate change), on climate change resilience.</p>	

Cumulative effects	Overall effect score
<p>8. To protect and improve air quality</p> <p>Air pollution often originates from the same activities that contribute towards climate change. The transport sector, and particularly car, HGV, aviation, and port related transport, are significant sources of both GHG emissions and air pollution.</p> <p>The WTS seeks to make a significant reduction in people's reliance on cars for travel. It would do so by enhancing the infrastructure across Wales relied upon by low-emission modes of travel, such as public transport and active travel, as per the Ambitions, Priorities 1 - 5 and the Mini-Plans for Bus and Active Travel. The net reduction in the number of cars would help to reduce the air pollution associated with the transport sector in Wales, particularly in more urban areas where air quality is significantly poorer than more rural areas.</p> <p>Through the Ambitions and Priorities 2 – 5 the WTS seeks to support the continuing transition towards cleaner vehicles, electric vehicles and other modes of transport that adopt innovative technologies such as hydrogen. This would help to ensure that, for those cars that remain on the road and in frequent use, their emissions are reduced. Improved maintenance and management of the existing road network, as per Priority 3 and the Mini Plan for Roads, would also be likely to allow for more efficient journeys that result in less pollution, including as a result of less congestion and idling. It is likely that such management and maintenance would present opportunities for enhancing the GI coverage along road corridors, which help to filter out and sequester air pollutants.</p> <p>However, as described above with regards to ISA Objective 6 on GHG emissions, the WTS is committed to maintaining a healthy aviation sector in Wales for its significant economic benefits. As a result, air pollution associated with Wales' aviation sector is unlikely to discernibly decrease over the course of the WTS period.</p> <p>The potential issue with regards to the population in Wales living in rural locations, whereby they often have no option but to rely on personal car use for accessing services or amenities, is also unlikely to be resolved. It is therefore likely that the air pollution associated with the movements of people living rurally are unlikely to be significantly reduced. Because of the outstanding issue of air pollution associated with aviation and the high reliance on car use for rural living people, it is considered that, overall, the WTS would make a minor, rather than major (significant) contribution towards this ISA Objective.</p> <p>Overall it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by reducing air pollution associated with care use) and indirectly (e.g. incorporating air pollution sequestering GI into transport corridors), on air pollution. A major positive effect appears to be unlikely given the continued commitment to a health aviation sector as well as the unresolved problem of the rural population's reliance on personal car use.</p>	+
<p>9. To protect and enhance the local distinctiveness of our landscapes and townscapes</p> <p>The WTS Vision recognises the importance of protecting and enhancing Wales' distinctive landscapes and townscapes.</p> <p>The likely reduction in the number of cars on the roads, predominantly achieved through the Ambitions, Priorities and Mini Plans for Active Travel and Bus, would help to avoid and minimise the adverse effects that busy roads can have on landscape and townscape character, including through noise, air and light pollution as well as by having low visual amenity value. This would be particularly beneficial to the historic centres of settlements as well as the distinctive natural landscapes prevalent in the more rural areas of Wales.</p> <p>The WTS aims to improve management and maintenance of existing transport infrastructure, as per Priorities 2 and 3, which could include improved cleanliness and enhancement measures which would benefit landscapes and townscapes.</p> <p>As per the Ambitions, Priorities and Mini Plans, the WTS also seeks to ensure that the historic and natural environment is conserved and enhanced and that this principle is embedded in all new transport infrastructure. In many cases, the distinctive townscapes and landscapes of Wales are of significant historic and/or biodiversity value. In protecting and, in some cases, enhancing this value it would be likely to benefit the character of local townscapes and landscapes.</p> <p>Overall it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by reducing the visual impact of cars on the road) and indirectly (e.g. by conserving and enhancing biodiversity), on the distinctiveness of landscapes and townscapes.</p>	+

Cumulative effects	Overall effect score
<p>10. To promote the conservation and enhancement of heritage assets</p> <p>The WTS Vision, Priorities and Ambitions recognise the need to conserve and enhance Wales' heritage assets and historic areas. Throughout Wales, historic railroads, tunnels, and paths are of significant heritage value. It is likely that in many cases, the investment directed towards transport would help to protect and enhance these assets by ensuring that they do not fall into disrepair or out of use.</p> <p>As with landscape and townscape character, the reduction in the number of cars on the road caused by the Ambitions, Priorities and Mini Plans on Active Travel, Rail, and Bus, and the subsequent avoidance and minimisation of noise, air, light, and other visual disturbances, would help to conserve the setting of heritage assets and historic areas. It is likely that the maintenance and management of existing transport infrastructure, and the delivery of any new transport infrastructure, would be required to consider the potential effects on any nearby heritage assets and historic areas, and to incorporate elements that help to enhance their setting.</p> <p>Conserving and enhancing biodiversity is an approach embedded throughout the WTS and which could potentially benefit the setting of heritage assets and historic areas due to the high visual amenity value of GI and semi-natural habitats, as well as its role in screening areas from the visual impacts of new development.</p> <p>Improving the public transport and active travel connectivity of places throughout Wales would be likely to help enhance the accessibility of historic areas and heritage assets for all people from all backgrounds, including local people and tourists. This would help to promote the importance of these assets and areas and could subsequently lead to new investment, such as through an increase in the number of visitors, that would help to preserve these assets and areas for future generations to enjoy.</p> <p>Overall it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by investing in transport infrastructure that is also a heritage asset) and indirectly (e.g. by enhancing the accessibility of heritage assets that provides a greater income for these areas), on heritage assets.</p>	+
<p>11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems</p> <p>Embedded throughout the WTS is an understanding of the need to conserve and enhance biodiversity, geodiversity and ecosystems and seeks to ensure that the transport system adopts sustainable land management strategies that incorporate ecosystem resilience into transport operations. In its current form, the transport sector can pose significant threats to habitats and species, including by fragmenting habitats, isolating species, and resulting in levels of pollution that exceeds the critical loads of sensitive habitats. Noise and light disturbances from the transport sector is also proving to be highly detrimental to certain species.</p> <p>The WTS focuses on maintaining the existing road network whilst enhancing active travel links, as per the Vision, Ambitions and Priorities and the Mini Plan for Roads. It is likely that adverse effects on habitats, caused by new roads fragmenting them and isolating species, would generally be avoided. New road schemes can pose a risk to geodiversity due to the extensive groundworks that are required, and so avoiding new roads can be an effective means of preserving Wales' important geodiversity assets. There is an element of uncertainty here as it is unclear exactly under which circumstances the WTS would permit new road schemes.</p> <p>The transition towards low-emission modes of travel, including active travel, public transport, and electrification, as per the Vision, Ambitions, Priorities and the Mini Plans on Bus, Rail, and Active Travel, would help to avoid and minimise adverse effects on habitats that are sensitive to air quality, particularly where their critical loads are already being exceeded.</p> <p>The maintenance and management of existing transport infrastructure would likely present opportunities to incorporate GI elements that enhance their biodiversity value, such as by installing GI along road corridors. Where new walking and cycling paths are installed, these would present an opportunity to incorporate GI elements that are not only biodiverse but deliver wider ecosystem benefits including wildlife corridors, air quality improvements, water filtration, carbon sequestration and enhancements to landscapes and townscapes. The WTS appears to pursue walking and cycling links of this nature, although there is an element of uncertainty around the extent to which they would be delivered.</p> <p>Overall, it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by incorporating biodiversity GI elements into transport infrastructure) and indirectly (e.g. by reducing air pollution), on biodiversity. These minor positive effects should be seen in the context of Wales' Nature Recovery Action Plan, which highlights the urgent need to meet the objectives and ambitions of nature recovery in Wales. The WTS could potentially go further to help ensure that these objectives and ambitions are achieved.</p>	+

Cumulative effects	Overall effect score
<p>12. To ensure the sustainable use of natural resources</p> <p>The WTS encourages the use of more sustainable, low-carbon modes of transport, such as active and public transport, over private cars, as well as the electrification of transport, which would be likely have a positive effect on efforts to reduce the consumption of natural resources such as fossil fuels.</p> <p>Embedded throughout the WTS, as described in the Vision, is the pursuit of a sustainable transport system that encourages the use of recycled and sustainable materials in the development of transport infrastructure where possible. This could help to reduce the consumption of materials, and generation of waste, associated with the transport sector. The Ambitions, Priorities 1 and 2 and Mini Plan for Roads explicitly seeks a reduction in waste and a more sustainable supply chain.</p> <p>The WTS would potentially lead to fewer new road schemes, whilst encouraging the use of materials that increase service life, meaning less materials are necessary and enabling greater scope to use recycled materials, as per Priorities 1-5. However, the maintenance of existing transport infrastructure, and the delivery of enhanced public transport services and active travel links, would require the consumption of natural resources to some extent.</p> <p>The WTS would lead to fewer cars on the road. This would lead to a reduction in pollutants from exhaust or spills falling onto the tarmac; there is then less chance of surface water runoff carrying these pollutants into the soil, ground water and surface water, thereby potentially enhancing their quality. The wear of car tyres on roads can be a significant source of plastic pollution in the natural environment, including in the water environment, and it is likely that this would be reduced to some extent by proposals throughout the WTS due to the shift towards active travel and public transport.</p> <p>Overall, it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) effects, including directly (e.g. by reducing the consumption of natural resources for new road schemes) and indirectly (e.g. by reducing tyre wear on new roads and thereby protecting water quality), on natural resources.</p>	+
<p>13. To enable the protection of tranquil areas and prevention of noise and light pollution</p> <p>The WTS would increase uptake of public and active transport modes, particularly due to the Ambitions, Priorities 1, 2 and 3 and the Mini Plans on Bus, Rail and Active Travel, thereby decreasing car use; this would be likely to lead to positive effects on the protection of tranquil areas due to a decrease in noise and visual disturbances.</p> <p>Through its support of electric vehicles, as per Priorities 3, 4 and 5 and the Mini Plan for Roads, which are significantly quieter than petrol and diesel vehicles, the WTS would likely help reduce noise disturbances associated with transport.</p> <p>Overall, it is considered to be likely, with a medium level of certainty, that the proposals in the WTS would cumulatively result in long-term minor positive (not significant) direct effects on tranquillity.</p>	+

3.4 Avoiding, reducing or mitigating negative effects and maximising positive effects

3.4.1 A summary of recommendations made for the October 2020 draft WTS are presented in Table 3.5.

Table 3.5: ISA recommendations for the WTS (October 2020 draft)

Section of the WTS	Recommendations
Vision	<ul style="list-style-type: none"> The definition of the transport system could potentially demonstrate the hierarchy of preference, with low-carbon modes at the top. Over half the GHG emissions from transport in Wales are caused by cars; low carbon vehicle infrastructure could be referred to.
Ambition: Good for the Environment	<ul style="list-style-type: none"> This Ambition could specifically refer to Wales' carbon budgets when referring to 'significant' reductions in GHG emissions.
Priority 1: Planning for Better Connectivity	<ul style="list-style-type: none"> The WTS could usefully reference the Social Model of Disability, when focussing on improving public transport. In addition to public sector developments, there is potential scope to require/encourage/recommend that cultural spaces and places in Wales are accessible via active travel and public transport Greater focus could be given to non-English communities (other than Welsh communities), who might have their own challenges in accessing public transport. Showing leadership could potentially include efforts to limit parking provision at public sector developments, and to include high-quality and secure cycle storage. Potential commitment to provide financial, or other, support to community cycling groups. These can be particularly active organisations and there are examples of instances where significant efforts are being made to change people's behaviour around cycling. The WTS could potentially commit to subsidising purchases of electric vehicles. This could be particularly effective for those who have limited access to public transport or active travel links, or where reliance on the private car may be greater, such as in rural areas. Energy efficiency within public transport infrastructure is not mentioned but could provide further traction towards zero energy sources/zero carbon. More detail should be given on incorporating GI into the transport network and providing ecosystem resilience and helping to reduce climate vulnerability. There is scope for the WTS to focus on reducing car use on areas where air quality is particularly bad, such as at and near AQMAs. More work could be included on walking and cycling links – ideally, these would be safe and attractive routes that encourage people to walk or cycle. They would be of high biodiversity value that link with the wider GI network, which provide natural benefits to all spheres of sustainability including enhancing the public realm (social and economic benefits); health benefits; biodiversity and visual amenity value; flood defence; air quality; soil enrichment; wildlife corridors.
Priority 2: Public transport services that people can use, want to use and do use	<ul style="list-style-type: none"> The section could refer to the heightened need for cleanliness and space in light of the global pandemic. The people first, user centred approach would help to ensure that the diverse needs of different groups could be met. However, it could be made clearer when and how these views would be collated. The priority should refer to the Model of Social Disability and specifically set out how disabled users will be equally treated in terms of public transport provision. The 'better' public transport element of the priority could mention that associated buildings and street furniture should also be 'better'.
Priority 3: Safe, accessible, well-maintained transport infrastructure	<ul style="list-style-type: none"> The safety issues on public transport (crime) are different to the road safety issues or perceptions of cycling. This could be addressed as different points. Affordability could be mentioned in the bulleted text, for greater emphasis, as it is only mentioned in the text in italics. The priority could usefully include the word 'inclusive' alongside 'accessibility'. The Priority could specify the need to improve biodiversity as part of future proofing the current transport network. This could include measures to improve green infrastructure, such as improving and maintaining roadside verges and biodiversity pathways alongside and within transport routes and incorporating habitat bridges into future designs.

Section of the WTS	Recommendations
	<ul style="list-style-type: none"> The Priority could usefully set out that the WTS will not encourage or support the development of new road infrastructure, particularly where this is the dominant mode of transport.
Priority 4: Behaviour Change	<ul style="list-style-type: none"> People have lost confidence in public transport recently due to health concerns around COVID-19. People are likely to be reluctant to use public transport unless absolutely necessary over the coming months and years, and the WTS needs to address this. Public perception of safety on public transport is extremely important, and by widely advertising what transport providers are doing to help combat the virus will help restore people's confidence in travelling by public transport again. As well as workplace travel schemes, schemes could be considered to provide bikes and cycling equipment to residents in deprived areas who cannot afford to buy their own. This would help reduce health inequality by giving everyone equal access to exercise opportunities they may otherwise not have. The WTS should ensure that access to electric vehicles is more equitable through affordability and electric vehicle charging infrastructure. This is of particular importance in rural and isolated areas, where public transport use is not an option. Some transport users may not have internet access, or mobile data, or other access to technologies which would allow them to receive transport data. The issue of digital inclusion should be addressed here, highlighting the "other means" that would be used to share information so as not to exclude certain users.
Priority 5: Adopt innovations that deliver more sustainable transport choices	<ul style="list-style-type: none"> Although bike sharing is mentioned, this is the only inclusion of active travel, which is beneficial to people's mental and physical health. The "new open data store for Wales providing up to date and accurate information" may include details of walking and cycling links, maps, topography etc., but this should be highlighted in the WTS. Further details could be given about how the issues surrounding data inclusion, in particular regarding the elderly and those in rural areas, are going to be addressed. Any innovations, such as the development of apps, should be provided bilingually – this could be stated to enable improved deliverability. Data infrastructure could be used to make a system that is more responsive to extreme events, such as flooding. Data could be collected automatically and therefore immediately on events that have occurred affecting the public transport system or road network, which could then be used to inform the decision as to how it can be dealt with or resolved. Real-time updates could give the public detailed information regarding the event and advice on how to travel in light of it. This would help reduce inequalities around access to transport during extreme weather events As well as focussing on more sustainable transport, technological innovations could include transport that will cope better in extreme weather conditions in rural areas, such as snowfall, than current transport modes can. The challenges we face from the climate are changing, and new transport technologies need to reflect that. The idea of technologies to develop modes of transport specifically with low-carbon emissions could be more clearly spelt out, particularly with regards to aviation. Text around the development of new materials technologies could include mention of the use of recycled materials. Specifically mention the use of sustainable materials in new transport technologies and any new infrastructure. Technological innovation could also consider technologies that reduce or mitigate noise and light pollution.
Mini Plan: Active Travel	<ul style="list-style-type: none"> The mini plan mentions encouraging young people to cycle but not improving the walking and cycling environment for older people or those with mobility issues – this should be included. The mini plan does not acknowledge health inequalities, and how people living in deprived areas might be affected / how improved potential for active travel could help work towards reducing inequalities – this should be included. Access by sustainable travel modes such as walking and cycling to existing health and social care services should be included. The mini plan includes mention that access to national parks and national cycle networks will have been improved but does not include a delivery plan to specifically address this. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network. Inequalities between active travel in rural and urban areas is not addressed, but could be. More detail could be provided around what the barriers to walking and cycling are and how inequalities will be addressed – for example, how gender inequalities in cycling may be overcome. The mini plan does not address inequality by virtue of age or availability of active travel (for example there may be variations between urban and rural areas).

Section of the WTS	Recommendations
	<ul style="list-style-type: none"> • A further area for inclusion relates to how walking and cycling can be made more accessible for those with mobility issue or how routes themselves can be made more accessible. • The mini plan makes reference to new developments, but emphasis should also be placed on improving and extending existing routes to reduce severance and improve take-up of walking and cycling. • ‘Closing roads for vehicle traffic’ as a way of encouraging active travel should not be at the detriment to those that rely on the car to travel, particularly those living in rural areas, elderly populations or those who have mobility problems. • There is a growing body of evidence for how active travel can contribute to economic performance, including by reducing congestion, supporting local businesses and high streets, improving business efficiency and through direct job creation (for example the Active Travel Toolbox and Sustrans). Specific reference could be made to these benefits to the economy. • The mini plan includes mention that access to national parks and national cycle networks will have been improved but does not include a delivery plan to specifically address this. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network and green infrastructure network as part of a holistic approach. • Include measures on how the Welsh language can thrive, which may include bi-lingual signage on active travel routes could be promoted in order to promote and protect the Welsh language as equal to the use of English. • Possibility of supporting improved access by active travel to Welsh-medium education facilities as part of regional transport plans. • Should mention how the Wales Coastal Path may have to adapt/be maintained due to coastal erosion and coastal flooding. • Walking and cycling links can be designed in such a way that makes a positive contribution towards local character, for example greening or public realm. This could be added to the aims (by 2040 we will have: improved landscape and townscapes through a national active travel network that is combined with a green infrastructure network) • The mini plan includes mention that access to national parks and national cycle networks will have been improved but does not include a delivery plan to specifically address this. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network and green infrastructure network as part of a holistic approach. • Could include improvements in opportunities for people to access wildlife and open green spaces using active travel. Reference also to the health benefits associated with accessing open space and nature (particularly in relation to mental health and well-being). • Active travel routes have the potential to be of biodiversity value and linking with the wider green infrastructure network, thus providing natural benefits to all spheres of sustainability. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network and green infrastructure network as part of a holistic approach. • Under environmental impact, could mention the reduction in noise and light pollution due to an uptake in active travel. There are associated health benefits in reductions in noise pollution, particularly for more vulnerable populations such as children, the elderly and people with pre-existing health conditions.
Mini Plan: Bus	<ul style="list-style-type: none"> • Specific reference should be made to the different health and safety challenges faced by vulnerable populations on buses. Examples include groups which experience greater levels of anxiety around crime on public transport and improving the safety and perceived safety of travelling on the bus, particularly after dark. • The future impacts of COVID-19 will affect the future of the transport system e.g. more spread out seating, hand sanitiser stations, mask wearing. Whilst private vehicle travel is perceived as safer from a personal health perspective, steps can be taken to ensure the safety of travellers on public transport. • Ensuring that buses are perceived as safe will play a major part in this mini plan. Patronage on public transport is lower compared to before the COVID-19 pandemic – DfT statistics for transport use since 1st March 2020 show that during lockdown, for bus use excluding London, patronage was between 10-15% of an equivalent day/week pre-pandemic. • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of bus staff to make services accessible for all. • Various studies (for example Ahern et al, 2016; Mouratidis, 2020; Lucas et al, 2008) have shown there is a direct link between areas of deprivation and lack of access to public transport. Reference should be made to improved access to bus and the regeneration of deprived areas.

Section of the WTS	Recommendations
	<ul style="list-style-type: none"> • Be explicit and state that battery technology and use of hydrogen fuels will not only develop local skills but will also create jobs, benefitting the economy. • Include “workplaces” under priority to “ensure new housing estates... are easily accessible by bus”. • Mention the development of park and ride sites to encourage bus use and remove congestion from city/town centres. • This mini plan seeks to enhance the attractiveness of bus services. An important barrier for many people, particularly vulnerable populations such as people in low-income households and the elderly, relates to cost. How feasible will it be to ensure truly affordable prices that encourage high uptake of bus services? • Buses could help to manage travel in tourist areas during peak periods or additional services to serve events. Again, Park and Ride could help with this. • Buses could improve access to cultural sites of interest – there could be concessionary fares or discounted entry at heritage sites for example to encourage people to travel sustainably. • Include encouraging bus service providers to meet Welsh language standards. • The lack of Welsh medium provision and services could be seen as a barrier to access. The WTS could note that the ambition is to ensure that the Welsh and English language should be treated on an equal basis. • The WTS could include supporting improved access by bus to Welsh-medium education facilities. • The WTS could encourage a more rapid improvement in emissions from public transport, given the climate emergency. • Include resilience to future climate related and pandemic related emergencies. • Add adaption of bus services to climatic events, including flooding as well as major planned events. • The mini plan could set out that existing and new public transport infrastructure should be as sustainable as possible and contribute to a wide green infrastructure network. This might include the planting of verges, and the greening of bus stops, for example, with green roofs. This will help with multiple aspects, such as landscape, townscape, flood risk management, air quality, and biodiversity. • The mini plan could set out that existing and new public transport infrastructure should be as sustainable as possible and contribute to a wide green infrastructure network. This might include the planting of verges, and the greening of bus stops, for example, with green roofs. This will help with multiple aspects, such as landscape, townscape, flood risk management, air quality, and biodiversity.
Mini Plan: Rail	<ul style="list-style-type: none"> • The section could refer to the heightened need for cleanliness and space in light of the global pandemic. Future potential impacts of COVID-19 will affect the transport system e.g. more spread out seating, hand sanitiser stations, mask wearing by users. Whilst private vehicle travel can be perceived as being safer, steps can be taken to ensure the safety of travellers on public transport. • Patronage of public transport is low compared to before the COVID-19 pandemic – National Rail statistics for transport use since 1st March 2020 show that during lockdown, train patronage was between 4-7% of an equivalent day/week pre-pandemic. COVID-19 has made public transport services less attractive and the rail mini plan needs to clearly acknowledge this. • The mini plan appears to focus mainly on economic benefits and getting people where they need to for employment purposes. Other journey purposes could also be mentioned, for example improved access to health and social care facilities, education, and leisure trips. • Specific reference should be made to the different safety challenges perceived by various population groups using trains – particularly reducing the gendered fear of public transport and improving the perceived safety of travelling by train and accessing train services, particularly after dark. • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of rail staff to make services accessible for all. • The mini plan mentions challenges associated with rail due to the rural nature of much of Wales but does not identify opportunities for how people living in rural areas may have improved access to rail services. • The focus appears to be on the Metro System and congestion on the M4, both of which will benefit South Wales and urban areas disproportionately. The North Wales Metro will benefit north east Wales, however there is little suggestion of improvements in Mid Wales or rural areas. • The issue around people working locally should be considered further, including the impact this may have on economic benefits if fewer people need to use the train for commuting purposes. • Increased train use will correlate with a stronger economy as more people are travelling and spending. This is an area that could be referred to within the mini plan.

Section of the WTS	Recommendations
	<ul style="list-style-type: none"> • The mini plan seeks to enhance the attractiveness of rail services. An important barrier for many people relates to affordability. How feasible will it be to ensure truly affordable prices that encourage high uptake of rail services? • The mini plan should refer to the fact that rail services will need to adapt in order to cater for major events, for example the provision of extra carriages to transport people or amended timetables. • Rail could improve access to cultural sites of interest – there could be concessionary fares or discounted entry at heritage sites, for example, to encourage people to travel sustainably. • TfW and rail service providers could be further encouraged to meet Welsh language standards, including training staff and ensuring provision of Welsh language in stations. • The WTS could note that the ambition is to ensure that the Welsh and English language are treated on an equal basis. • Include resilience to future climate related and other types of emergency. • Add adaption of rail services to climatic events, including flooding as well as major planned events. • Green infrastructure elements could be used to promote rail facilities by making travel routes more appealing and providing reduced climate vulnerability e.g. green walls on station buildings. • Rail could improve access to heritage sites and assets – for example there could be concessionary fares or discounted entry at heritage sites to encourage people to travel sustainably. • The mini plan could set out that existing and new public transport infrastructure should be as sustainable as possible and contribute to a wide green infrastructure network. This might include the planting of verges, and the greening of bus stops, for example, with green roofs. This will help with multiple aspects, such as landscape, townscape, flood risk management, air quality, and biodiversity.
Mini Plan: Roads, Streets and Parking	<ul style="list-style-type: none"> • The WTS could usefully acknowledge health inequalities, for example, in deprived areas. • Shutting streets by schools at certain times of the day may help further reduce age related accidents. This could be considered for inclusion. • The WTS should seek to explore the issues potential issues above, to ensure that measures are equitable. • The WTS could consider the inclusions of fiscal measures, such as Workplace Parking Levies or increasing the cost of parking to reduce congestion and car use. • The WTS could mention Clean Air Zones or Congestion Charging as potential measures to reduce car use, although it is recognised that these measures have a disproportionate impact on the poor or those who rely on the car, for example, people living in more rural areas. • The WTS mentions new technology but could mention the jobs that this would create also, further benefiting the economy. • To effectively manage road use and congestion, public transport should be promoted and encouraged as a viable alternative to the motor vehicle. This could be through parking prices or providing compulsory park and ride facilities for those who need to travel by car. • Promoting share cars, car clubs and carpools can reduce emissions and private car use without relying on the introduction of a new technology. This should be mentioned in the mini plan. • AQMAs are not mentioned; the management of these areas should be addressed in this mini plan. • The mini plan should mention coastal adaption for roads and how coastal erosion will be mitigated or managed for the highway network. • To effectively reduce air pollution, public transport should be promoted and encouraged as a viable alternative to the motor vehicle. This could be through parking prices or providing compulsory park and ride facilities for those who need to travel by car. • To effectively improve access to National Parks and AONBs and reduce the impact of cars, public transport should be promoted and encouraged as a viable alternative to the motor vehicle. This could be through parking prices or providing compulsory park and ride facilities for those who need to travel by car. • Improve and maintain roadside verges and biodiversity pathways alongside and within transport routes, and incorporate habitat bridges into future designs. • Should include reducing embodied carbon in the road network and using sustainable materials in the development of the road network, in maintenance or construction. • Include the mitigation of noise from construction/maintenance and the reason noise will be reduced on the network, for example, through the uptake in electric vehicles or because of less vehicles on the road. • Should include the mitigation and management of Noise Action Planning Priority Areas (NAPPA), which are prominent along much of the Strategic Road Network (SRN) and M4 – the mini plan should set out how these will be managed effectively.

Section of the WTS	Recommendations
Mini Plan: Community and not-for-profit transport sectors	<ul style="list-style-type: none"> • The mini plan should go further to explain the reliance on community transport of isolated areas or for certain groups, for example the elderly or people with pre-existing health conditions / disabilities. Providing community transport does help to reduce health inequalities by improving access to services for these and other groups, which should be mentioned specifically. • Community transport makes a significant contribution towards sustaining the health and well-being of service users, by maintaining independence, improving quality of life and increasing physical activity and promoting mental well-being. More detail should be given on the positive impacts that community transport can provide as part of the case for continued and increased investment in the sector. • The mini plan could usefully outline the groups for which inequalities will be reduced, for example, those with disabilities, the elderly, children and those who live in rural or semi-rural communities. • The use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of community transport staff to make services accessible for all. • The mini plan could go further to explain the economic benefits of community transport, for example, research shows that loneliness and isolation costs the UK approximately £2.1 billion each year (Why Community Transport Matters, ECT Charity) therefore providing community transport can bring huge economic savings. • Mention more transport services for Welsh-speaking communities, as well as faith and cultural groups. • The mini plan could mention that community transport can mitigate the adverse impact of road traffic and parking on Wales' landscape, particularly if provided to access AONBs or National Parks. • The mini plan could state that as more people are travelling together, there will be a reduction in noise pollution due to fewer vehicles on the road.
Mini Plan: Taxis and Private Hire Vehicles	<ul style="list-style-type: none"> • The mini plan should include improving access to health and social care services. • Could include heightened hygiene standards post Covid-19 so that passengers feel safe using taxis and Private Hire Vehicles (PHVs). • The mini plan should acknowledge that not all people can afford to use taxis or PHVs despite these vehicles being the only available transport available, depending on location (rural or semi-rural areas) or the time of day. The mini plan could suggest concessions in rural areas or ensure that all taxis must use a meter, to have fair pricing. Ceredigion County Council, for example, introduced fixed taxi fares which licensed taxi operators are bound by, so that customers do not get overcharged. This could be rolled out nationwide. • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of taxi drivers to make services accessible for all. • Taxis play a key role in the night-time economy in particular, and the mini plan should refer to this. • Technological advances, including smartphone apps, should be referred to, together with the jobs this may create. • Outline the important role of taxis and PHVs for accessing cultural events or spaces and recreational spaces. • The mini plan could encourage taxi companies to employ Welsh speakers, so that service users have the option to communicate in Welsh and promote the language further. • The mini plan should go further than just introduce zero emissions vehicles and as is done in London, offer grants for 'plug-in vehicles' and changing the licensing requirements in order to reduce emissions from the taxi fleet. The mini plan does state that incentive schemes will be introduced but the plan could go further, to ensure uptake. • There should be a target set, similar to the bus emissions target, for all taxis and private hire vehicles to be zero emissions. Until this happens, this mini plan will not be fully compatible with ISA Objective 6. • Taxis and PHVs could reduce the adverse impacts of road traffic and parking on Wales' valued landscapes and townscapes – this should be mentioned within the mini plan. • There should be a target set, similar to the bus emissions target, for all taxis and private hire vehicles to be zero emissions.
Mini Plan: Freight and Logistics	<ul style="list-style-type: none"> • The WTS could include mention of jobs created in the freight and logistics industry, benefiting the economy. • The WTS could include investing in Enterprise Zones and the manufacturing/technology industries in Wales, to reduce freight miles. • There is no mention of the potential impacts of Brexit on the freight industry and how this may be mitigated. Welsh Government acknowledge that HGVs travelling from Ireland may be subject to

Section of the WTS	Recommendations
	<p>extra checks in the event of a 'no deal' Brexit situation, however these delays are not mentioned, and mitigation is not suggested. This should be included</p> <ul style="list-style-type: none"> • By encouraging inward investment and investing in manufacturing industries in Wales, freight miles may be reduced, thereby reducing greenhouse gas emissions from transport. • The mini plan should explain how freight and logistics networks will adapt to changing climate, including flood risk and coastal erosion along key routes. • Consideration also needs to be given to adaption post-Brexit. • Improve and maintain roadside verges and biodiversity pathways alongside key freight routes, and incorporate habitat bridges into future designs. • Hydrogen power can be accommodated into freight and bus services, reducing the use of natural resources
Mini Plan: Ports and Maritime Transport	<ul style="list-style-type: none"> • According to the Wales Index of Multiple Deprivation (WIMD), Holyhead Town Lower Super Output Area (LSOA), which includes the Port of Holyhead, is amongst the 10-20% most deprived in Wales for health. The mini plan does not go far enough to improve health inequalities in areas close to ports. More emphasis needs to be placed on ways to improve the physical and mental health of residents in these areas. • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of port staff to make services accessible for all. • According to the WIMD, Holyhead Town LSOA is amongst the 10-% most deprived overall. There is similar evidence for Pembroke Dock Central and Pembroke Dock Llanion 1 LSOAs, both of which are amongst the 10% most deprived LSOAs in Wales. The mini plan does not go far enough to describe ways to improve these inequalities. • There is no mention of the impact that Brexit will have on ports, in particular Holyhead Port which provides key links to Ireland. Welsh Government acknowledge that there may be disruption to travel to and from Holyhead in the early days of a potential 'no deal' Brexit situation and the impact no deal may have on HGVs travelling from Ireland. This could be considered in the mini plan. • The WTS could encourage the employment of Welsh speakers at ports and harbours in order to promote the language further. • The mini plan should consider how ports and harbours will adapt to climate change, including the management of coastal flooding and the protection of floodplains and coastal adaption due to coastal erosion. • Port and harbour developments must be sustainable to mitigate the effects of climate change. • Promote underwater heritage to encourage visitors and thereby economic growth. • The mini plan, should align more closely with Objectives 10 and 11 of the Welsh National Marine Plan document: • 'Protect, conserve, restore and enhance marine biodiversity to halt and reverse its decline including supporting the development and functioning of a well-managed and ecologically coherent network of Marine Protected Areas (MPAs) and resilient populations of representative, rare and vulnerable species.' • 'Maintain and enhance the resilience of marine ecosystems and the benefits they provide in order to meet the needs of present and future generations.' • The mini plan could go into further detail on renewable energy and include, for example the potential that exists to grow algae offshore in sufficient volumes to meet the economies of scale to supply biomass to generate renewable energy.
Mini Plan: Aviation	<ul style="list-style-type: none"> • Consideration must be given to improved safety and heightened hygiene and cleaning regimes post Covid-19 to make air travel safer for all. • The mini plan acknowledges that the aviation sector is suffering due to Covid-19. Whilst the plan aims to recover passengers to near 1.6 million, this may not be possible due to reduced airlines flying from Cardiff or due to the market in general. The mini plan should acknowledge this and attempt to mitigate the impacts this may have and plan for recovery post Covid-19. • The mini plan could promote Welsh culture further at Cardiff Airport and invest in international promotion and advertisement. • Work with airlines to provide additional aviation services when major cultural or sporting events occur to improve access for national and international visitors. • Increase the use of the Welsh language within the services and customer contact within Cardiff Airport. • Promotion of the Welsh language within Cardiff Airport itself. • The WTS could install "pods" similar to Heathrow in order to move passengers from car parks to the terminal building. In 2008, Heathrow introduced 21 driverless, battery-powered, zero-emission

Section of the WTS	Recommendations
	<p>shuttles. The pods have ferried more than 1.5 million passengers from carpark to terminal since opening, avoiding 70,000 bus journeys and saving the equivalent of 100 tonnes of CO₂ a year</p> <ul style="list-style-type: none"> • The mini plan could promote heritage assets further at Cardiff Airport and invest in international promotion and advertisement. • In order to reduce contamination, Heathrow Airport treat water that is contaminated with glycol by filtering it through reed beds, which removes seven tonnes of organic pollution every year. Cardiff could adopt similar mitigation. • In order to safeguard populations of birds, Frankfurt Airport keep grass long, so predatory birds struggle to see prey in the grass and, therefore, circle less above the airport. • Include within the mini plan the installation of a solar farm on the Airport site, as contained in the Environmental Flight Path • The mini plan could include noise mitigation, such as assessing flight paths so that the majority of flights depart and arrive over sea from the south, so as to mitigate noise. • Some airports work with airlines to change the way they approach the runway. Instead of including sections of level flight in a descent, planes descend in a straight path, typically from 6,000 feet. Continuous descents can noticeably reduce noise and can save up to 400kg of fuel. • Cardiff Airport could implement restrictions on the number of flights or type of aircraft landing or taking off at night, charge penalty fees for older, noisier aircraft, levy fines for noise transgressions.

3.5 Monitoring – Significant effects (Task B.6 and Stage E)

- 3.5.1 The ISA has identified the likely effects of the WTS on ISA Objectives. An indication of the certainty and timescales of these effects has also been predicted. However, there is a risk that the sustainability effects of the WTS, including the effects of specific policies or the cumulative effects of policies in-combination, are different to those anticipated due to unforeseen circumstances. It is therefore an essential component of delivering sustainable development to monitor the effects of the WTS, in relation to the predicted effects. Regular monitoring then enables the relevant authorities to alter plans as necessary should unexpected negative effects arise or expected positive effects not arise.
- 3.5.2 It is anticipated that the Welsh Government will be monitoring the implementation and effects of the WTS post-adoption to feed into future plan review and revision. Table 3.6 proposes a Draft Monitoring Framework to keep track of the sustainability effects of the WTS, for which it would be appropriate to integrate with WTS monitoring. This is a draft and will be subject to discussion and refining with Welsh Government. In addition to monitoring the extent to which the WTS results in the effects identified in the ISA, the Monitoring Framework provides an indication of the effects of the WTS on the environmental baseline in Wales and this can be compared with future trends as set out in Table 2.1.
- 3.5.3 Over the lifetime of the WTS, new information, which will help inform the review of the WTS, will be added to the WTS Monitoring Framework. Some indicators currently used by the Welsh Government may be amended or replaced by new indicators. Other indicators are likely to remain constant, where they can inform the long term outcomes for the WTS over the 25 year strategy period.

Table 3.6: Proposed Draft Monitoring Framework

ISA Objectives	Proposed draft monitoring indicators
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"> • Percentage of people satisfied with their ability to access the health and social care services they need • Percentage of people satisfied with their ability to access open space • Percentage of journeys by active modes • Households exposed to air pollutants and/or environmental noise from transport • Percentage of transport users satisfied with their journey • Percentage of people who feel safe when travelling

ISA Objectives	Proposed draft monitoring indicators
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	<ul style="list-style-type: none"> • Percentage of people satisfied with their ability to access the services they need • Percentage of people satisfied with their ability to access arts, sport, or natural and cultural heritage • Percentage of transport users satisfied with their journey • Percentage of people who feel safe when travelling • Percentage of journeys by public transport • Percentage of journeys by active modes • Households exposed to air pollutants and/or environmental noise from transport
3. To support sustainable economic development and diversity	<ul style="list-style-type: none"> • Percentage of people satisfied with their ability to access the education and employment services they need • Percentage businesses satisfied with their ability to move goods on the transport network • Transport infrastructure and service vehicles in good condition • Growth in rural vs urban economies • Average delay per kilometre travelled • Percentage of journeys by public transport • Percentage of freight moved by low/zero carbon modes • Percentage of employees working from home on a regular basis
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	<ul style="list-style-type: none"> • Percentage of people satisfied with their ability to access arts, sport, or natural and cultural heritage • Cultural and heritage assets and recreational spaces exposed to air pollutants and/or environmental noise from transport • Percentage of heritage assets in good condition on the transport estate • Average delay per kilometre travelled during major events and in tourist destinations at peak times
5. To encourage the protection and promotion of the Welsh Language	<ul style="list-style-type: none"> • Percentage of Welsh speakers satisfied with their ability to access transport networks through the medium of Welsh • Percentage of transport services and infrastructure that include the Welsh language • Percentage of people satisfied with their ability to access Welsh-Medium services
6. To reduce greenhouse gas emissions from transport	<ul style="list-style-type: none"> • Greenhouse gas emissions from the transport sector • Numbers of registered electric vehicles and charging points available • Volume of road traffic • Percentage of journeys by public transport • Percentage of journeys by active modes • Percentage of freight moved by low/zero carbon modes • Households exposed to air pollutants from transport
7. To enable climate change resilience	<ul style="list-style-type: none"> • Transport infrastructure and service vehicles able to withstand heavy rain/flooding/snow • Instances of cancellations and disruptions to transport services due to extreme weather events, particularly in urban vs rural areas • Hectares of healthy ecosystems that form part of the transport network • Greenhouse gas emissions from the transport sector
8. To protect and improve air quality	<ul style="list-style-type: none"> • Greenhouse gas emissions from the transport sector • Households exposed to air pollutants from transport • Number of and area covered by AQMAs • Percentage of journeys by public transport • Percentage of journeys by active modes • Percentage of freight moved by low/zero carbon modes
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	<ul style="list-style-type: none"> • Hectares of healthy ecosystems that form part of the transport network • Volume of road traffic in town centres and through valued landscapes
10. To promote the conservation and enhancement of heritage assets	<ul style="list-style-type: none"> • Percentage of heritage assets in good condition on the transport estate • Heritage assets and historic landscapes exposed to air pollutants and/or environmental noise from transport
11. To promote the conservation and enhancement of	<ul style="list-style-type: none"> • Hectares of healthy ecosystems that form part of the transport network • Populations of designated and non-designated species • Percentage of people satisfied with their ability to access wildlife and open spaces

ISA Objectives	Proposed draft monitoring indicators
biodiversity, geodiversity and ecosystems	
12. To ensure the sustainable use of natural resources	<ul style="list-style-type: none"> • Surface water quality near areas with large amounts of transport infrastructure • Levels of soil pollution near areas with large amounts of transport infrastructure • Waste generated by the transport sector • Transport infrastructure and service vehicles in good condition • Percentage of journeys by public transport • Percentage of journeys by active modes • Percentage of freight moved by low/zero carbon modes
13. To enable the protection of tranquil areas and prevention of noise and light pollution	<ul style="list-style-type: none"> • Households exposed to air pollutants and/or environmental noise from transport • Numbers of registered electric vehicles and charging points available

4 CONCLUSION

- 4.1.1 This document comprises the ISA of the Draft WTS (October 2020). It satisfies the requirements of an Environmental Report as per the SEA Directive. The WTS, at each iteration thus far, has been appraised for its likely significant effects against each of the ISA Objectives.
- 4.1.2 The ISA is a process that has been highly integrated with the development of the WTS, involving a close working relationship between the ISA experts and Welsh Government. During this process, the ISA has enabled Welsh Government to embed the principles of sustainability and wider considerations into the WTS outcomes, strategy and policies from the outset. The ISA has provided a structured way of considering the benefits, costs and risks of a wide range of options.
- 4.1.3 The ISA provides a consultation tool, providing the general public and statutory bodies with an analysis of how the WTS has been developed in a way that will ensure that it can contribute to more sustainable development. The consultation process has given stakeholders the opportunity to provide feedback and suggestions towards enhancing the overall sustainability of the WTS.
- 4.1.4 The ISA fundamentally provides a summary of the effects of the WTS, for consideration by Welsh Government, when considering the adoption of the WTS. Should it be adopted, it would be with the Welsh Government's awareness and acceptance of the effects predicted and described in the ISA.

5 NEXT STAGES

Stages C and E: ISA Report and Monitoring

- 5.1.1 This ISA Report is published (Stage C) in order to accompany the Draft WTS.
- 5.1.2 It is expected that the WTS and its accompanying documents will be published for consultation with relevant stakeholders, including the general public, later in 2020. Responses received will be taken into consideration during subsequent iterations of the WTS and ISA.
- 5.1.3 Further information about stages of the ISA process can be found in Section 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
UNESCO (1971) The Ramsar Convention on Wetlands (1971)
UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural Heritage
UNESCO (1973) Convention on International Trade in Endangered Species of Wild Fauna and Flora
UNESCO (1979) Geneva Convention on Long Range Transboundary Air Pollution
United Nations (1989) UN convention on the Rights of the Child 1989
United Nations (1989) Basel Convention
United Nations (1992) The Rio Convention on Biodiversity
United Nations (1992) The Rio Declaration on Environment and Development
United Nations (1994) The United Nations Framework Convention on Climate Change
United Nations (1997) Kyoto Protocol to the UN Framework Convention on Climate Change
United Nations (2002) The World Summit on Sustainable Development
United Nations (2006) Convention on the Rights of Persons with Disabilities
United Nations (2009) The Copenhagen Accord
United Nations (2010) Cancun Adaptation Framework
United Nations (2015) Sustainable Development Goals
Universal Declaration of Human Rights (1948)
United Nations (2016) Paris Agreement
United Nations (2016) Committee on the Rights of the Child Recommendations report
United Nations (2019) The PEP Partnerships
United Nations, World Health Organisation and United Nations Economic Commission for Europe (2017) Cycling and Green Jobs
United Nations Economic Commission for Europe (1998) The Aarhus Convention World Health Organization (1999) Guidelines for Community Noise 1999
World Health Organisation (2014) Developing National Action Plans on Transport, Health and Environment
World Health Organisation (2018) Making the (Transport, Health and Environment) Link
World Health Organisation (2004) Children's Environment and Health Action Plan for Europe
European Plans and Programmes
Council of Europe (1981) Convention on the Conservation of European Wildlife and Natural Habitats - The Bern Convention
Council of Europe (1992) European Convention on the Protection of the Archaeological Heritage
Council of Europe (2000) European Landscape Convention
European Council (2013) Seventh EU Environmental Action Plan (EAP) (2013-2020)
European Commission (2006) Groundwater Directive 2006/118/EC
European Commission (1992) EU Directive on the Conservation of Natural Habitats and Wild Fauna and Flora - The Habitats Directive 92/43/EEC
European Commission (1999) European Spatial Development Perspective (ESDP) (97/150/EC)
European Commission (2001) National Emissions Ceiling Directive 2001/81/EC
European Commission (2002) Environmental Noise Directive (END) 2002/49/EC
European Commission (2003) Public Sector Information Directive (PSI) 2003/98/EC
European Commission (2004) Environmental Liability Directive 2004/35/EC
European Commission (2005) EU Thematic Strategy on Air Quality
European Commission (2006) Sustainable Development Strategy
European Commission (2006) Action Plan on Biodiversity
European Commission (2007) Together for Health - A Strategic Approach for the EU 2008-2013
European Commission (2007) The Integrated Climate and Energy Package
European Commission (2007) Green Paper: Towards A New Culture for Urban Mobility
European Commission (2007) The Floods Directive 2007/60/EC
European Commission (2008) Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC and Air Quality Framework Fourth Daughter Directive 2004/107/EC

European Commission (2008) Environmental Quality Standards Directive 2008/105/EC
 European Commission (2009) Review of the EU Sustainable Development Strategy European Commission (2009)
 European Commission (2009) The Birds Directive 2009/147/EC
 European Commission (2009) Renewable Energy Directive 2009/8/EC
 European Commission (2009) Promotion of Clean and Energy – Efficient Road Transport Vehicles Directive 2009/33/EC
 European Commission (2009) Action Plan on Urban Mobility
 European Commission (2009) White Paper: A Sustainable Future for Transport
 European Commission (2010) Industrial Emissions Directive (integrated pollution prevention and control) 2010/75/EU
 European Commission (2010) Europe 2020: A strategy for smart, sustainable and inclusive growth
 European Commission (2010) Energy 2020 - A Strategy for Competitive, Sustainable and Secure Energy
 European Commission (2011) A Roadmap for Moving to a Competitive Low Carbon Economy in 2050
 European Commission (2011) 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		
		<p>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).</p>	<p>Nitrogen Dioxide (NO₂) 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 NO₂ in</p>	<p>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)</p>	<p>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</p>	<p>such as transport, housing, economic development and improvements to the natural environment and ecosystems services.</p>		

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		
<p>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.</p>	1,2,3,5 and 7	<p>The Rio Convention on Biodiversity; Rio Declaration on Environment and Development; Environmental; 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</p>	<p>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</p>	<p>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)</p>	<p>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</p>	<p>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.</p>	<p>Biodiversity, Flora and Fauna</p>	<p>6, 7, 8, 9 and 11</p>

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 to0 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		
					journeys to and within Wales • 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.			

APPENDIX B

Baseline Data and Key Issues and Opportunities

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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

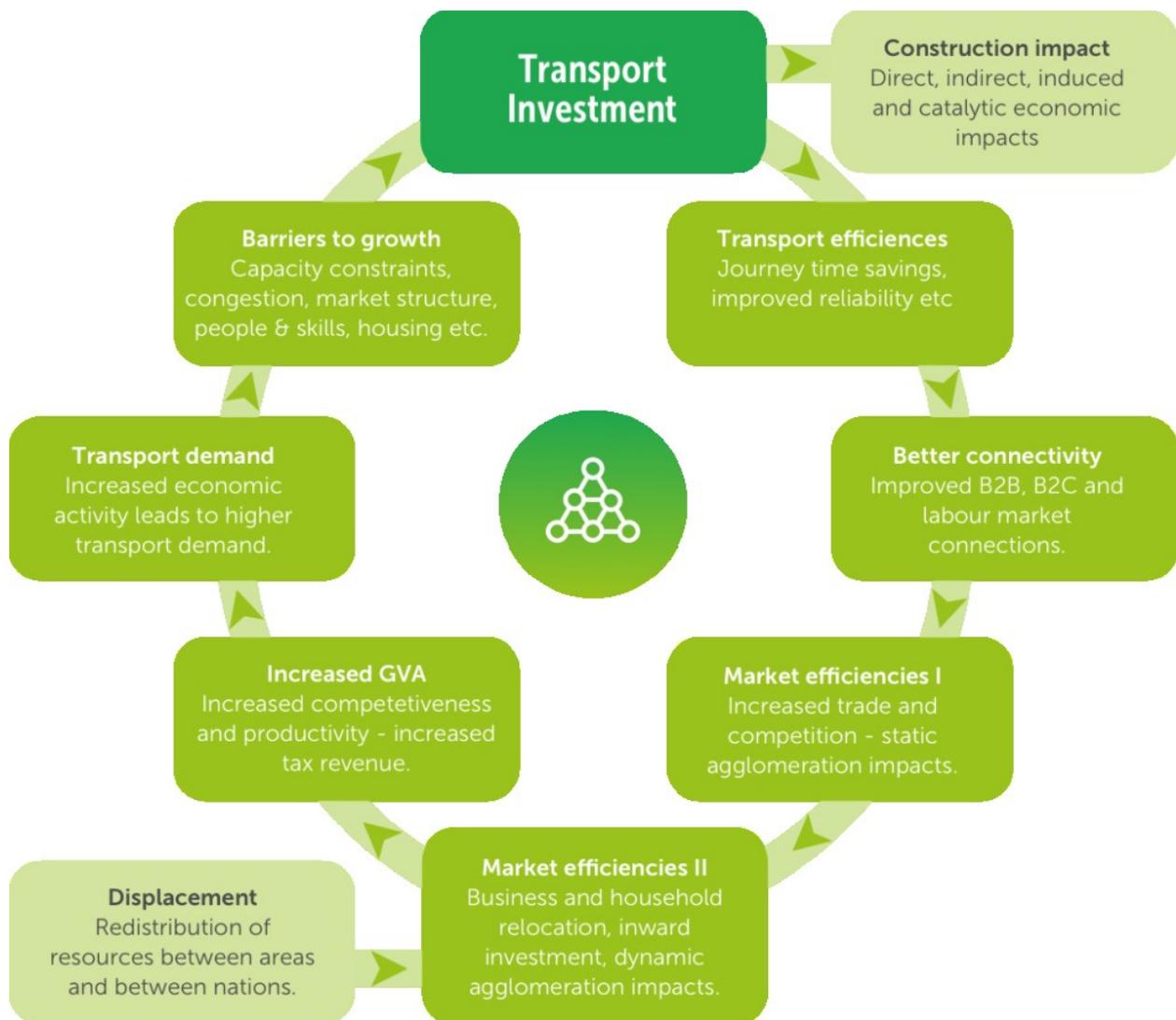
Figure 2-1 highlights how direct impacts from investment could create market efficiencies leading to investment and relocation decisions which in-turn can lead to changes in productivity and economic growth. The mechanisms for delivering economic impacts include:

- 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>

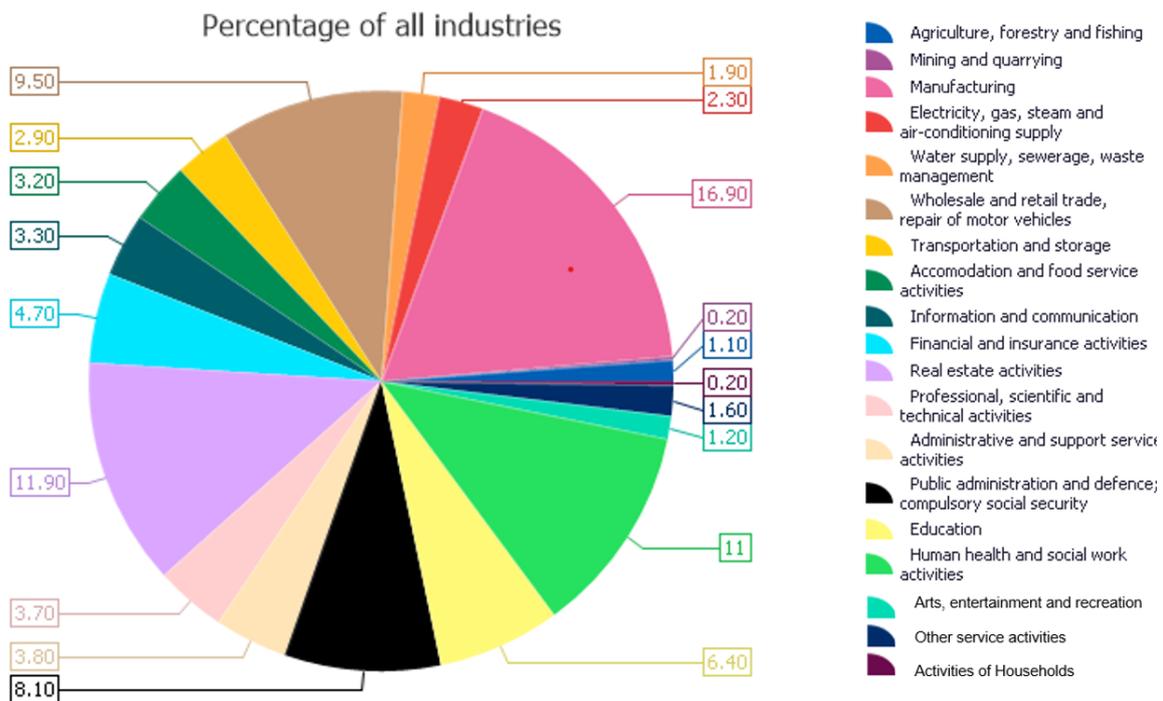
³ Welsh Government (2018) <https://gov.wales/regional-gross-domestic-product-and-gross-value-added-1998-2018>

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.

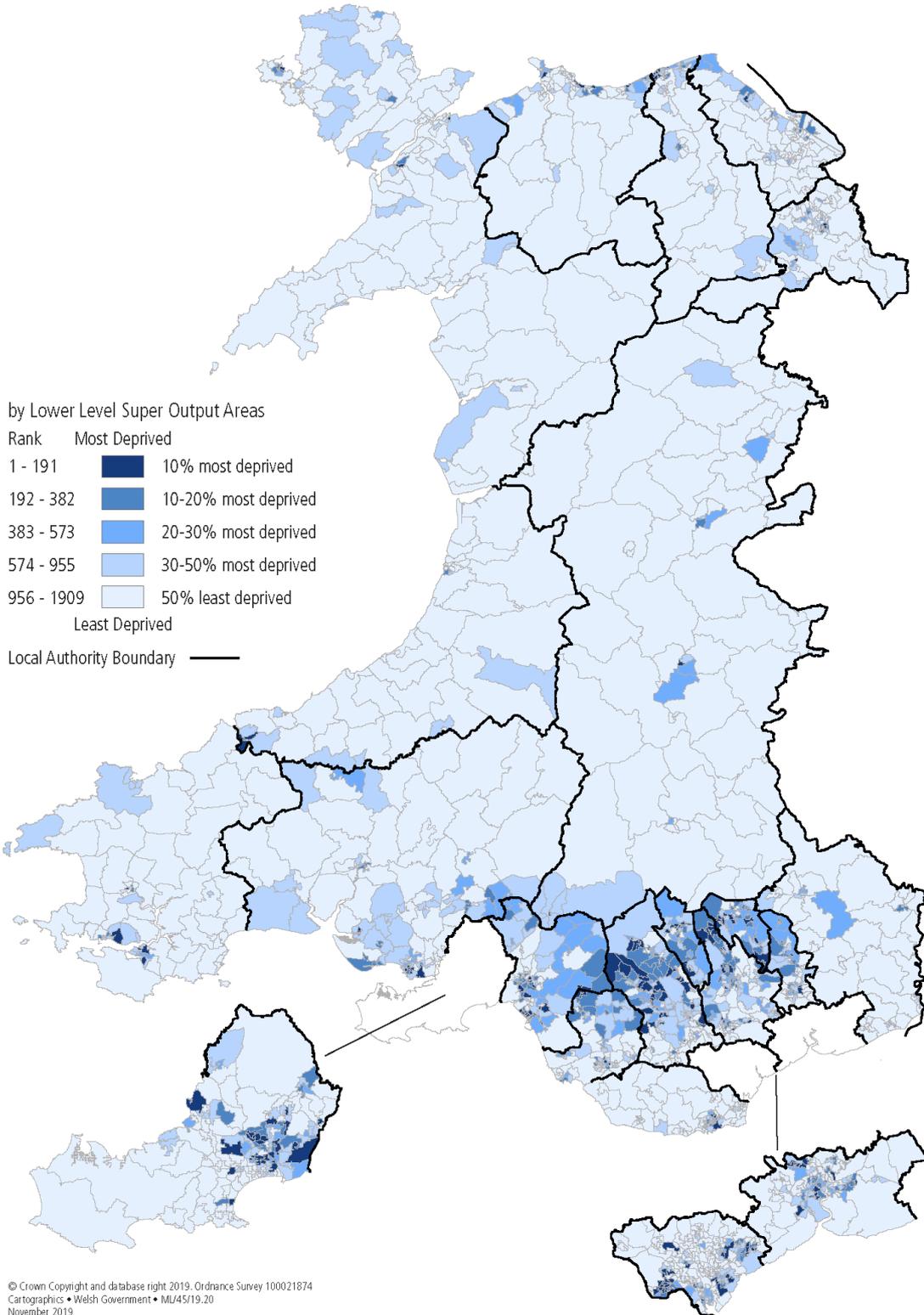
According to the Welsh Index of Multiple Deprivation (WIMD)¹⁰ 2019 employment domain (see Figure 2-3), the highest levels of employment deprivation were in the South Wales valleys and in some North Wales coastal towns. In terms of local authorities, Blaenau Gwent Merthyr Tydfil recorded the highest proportion 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 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

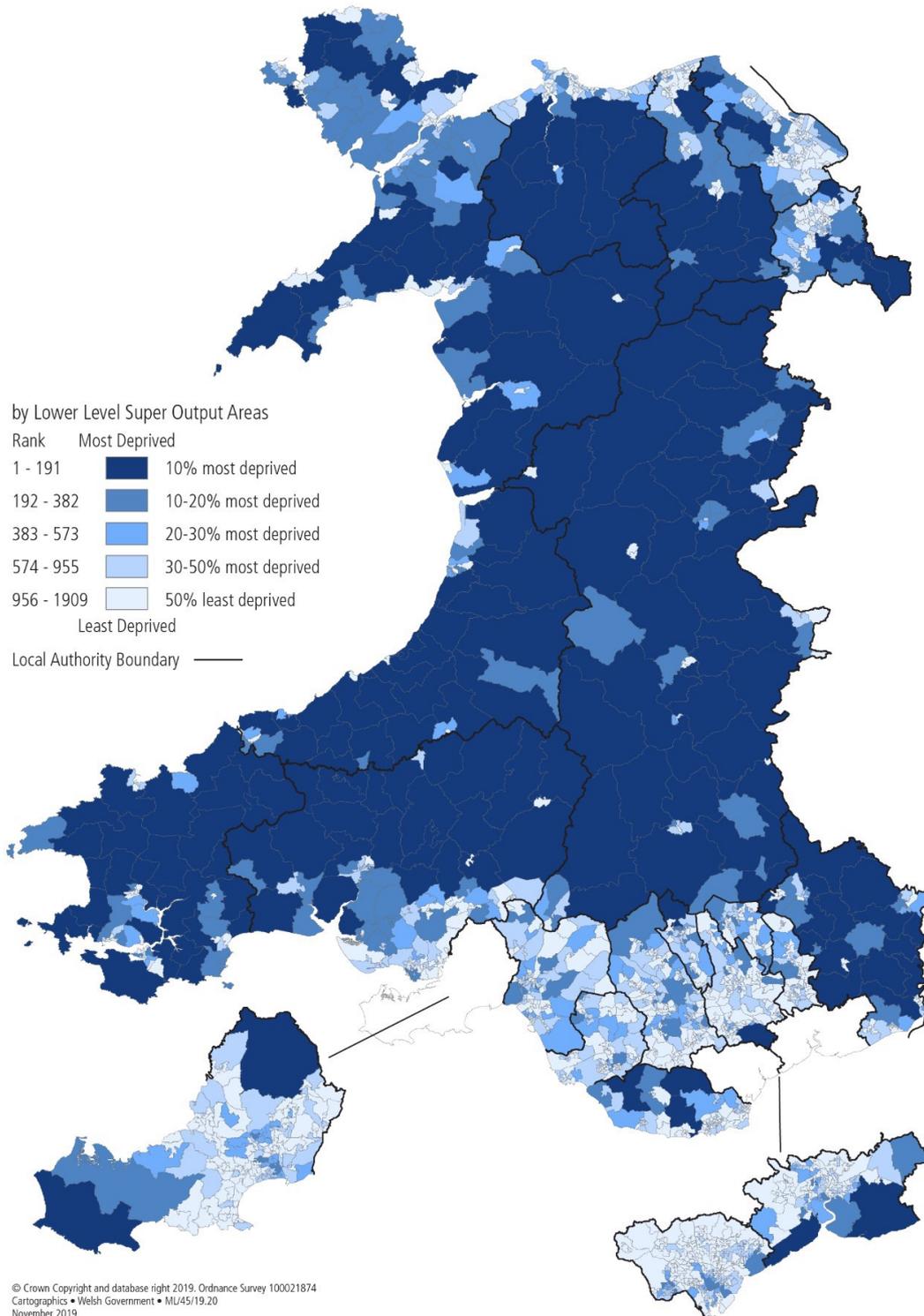
¹⁴ Ofcom (2018) Connected Nations 2018 - https://www.ofcom.org.uk/__data/assets/pdf_file/0020/130736/Connected-Nations-2018-main-report.pdf

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

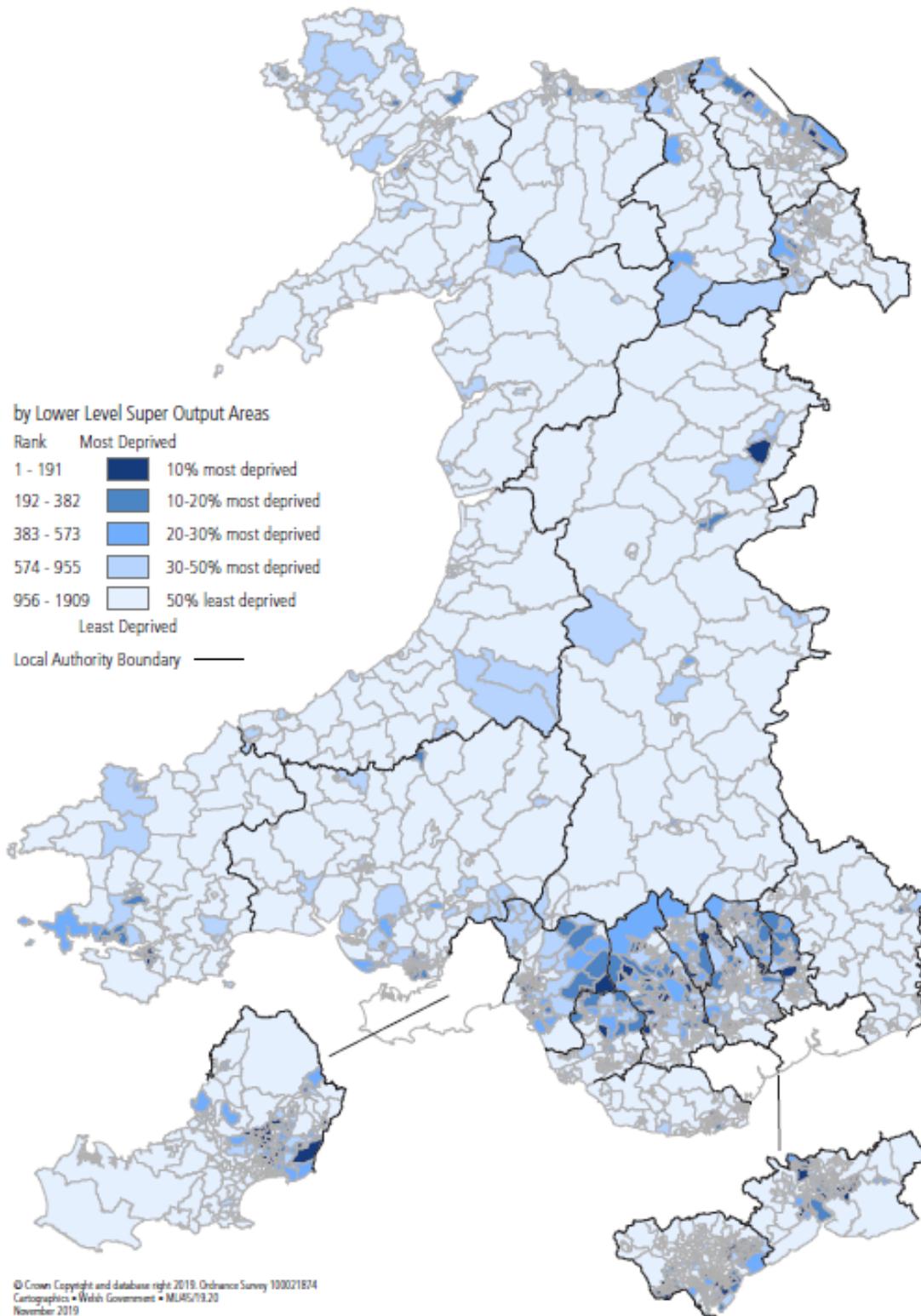
Area	No qualifications	Qualified to below level 2	Qualified to NQF level 2 or above	Qualified to NQF level 3 or above	Qualified to NQF level 4 or above
Wales	8.4%	12.7%	78.9%	59.1%	37.8%
North Wales	7.0%	12.9%	80.1%	59.0%	36.3%
Mid Wales	6.4%	12.2%	81.4%	63.8%	38.8%
South West Wales	9.2%	12.0%	78.8%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



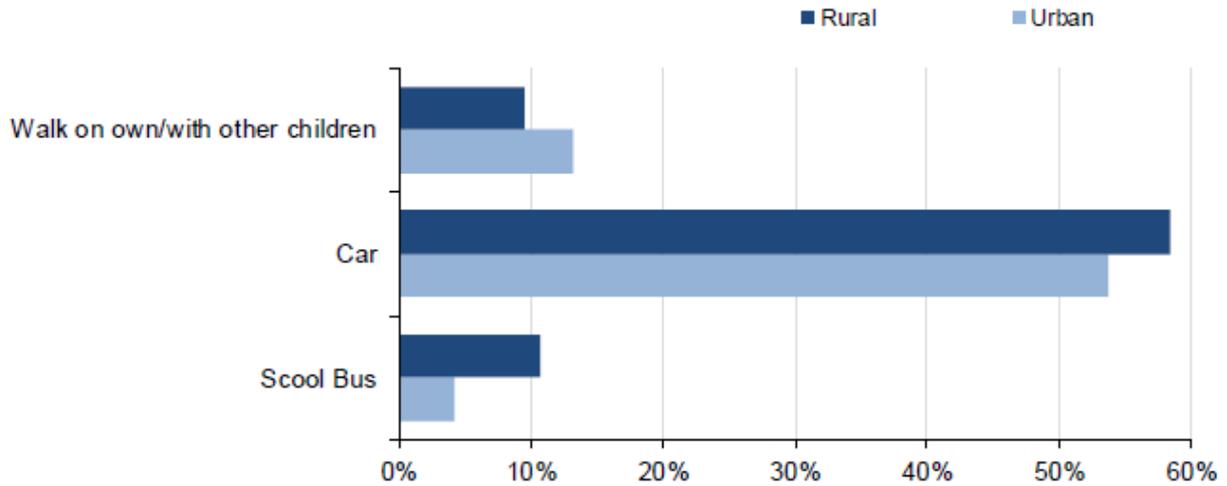
Source: Welsh Index of Multiple Deprivation 2014

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.

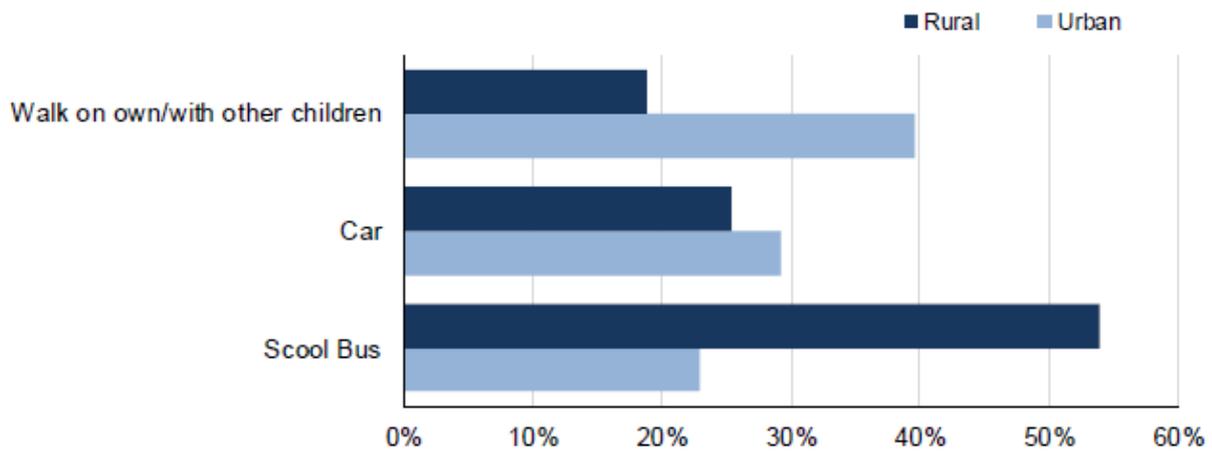
Figures 2-6 and 2-7 illustrate the mode of travel to/from school by urban/rural classification.

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>

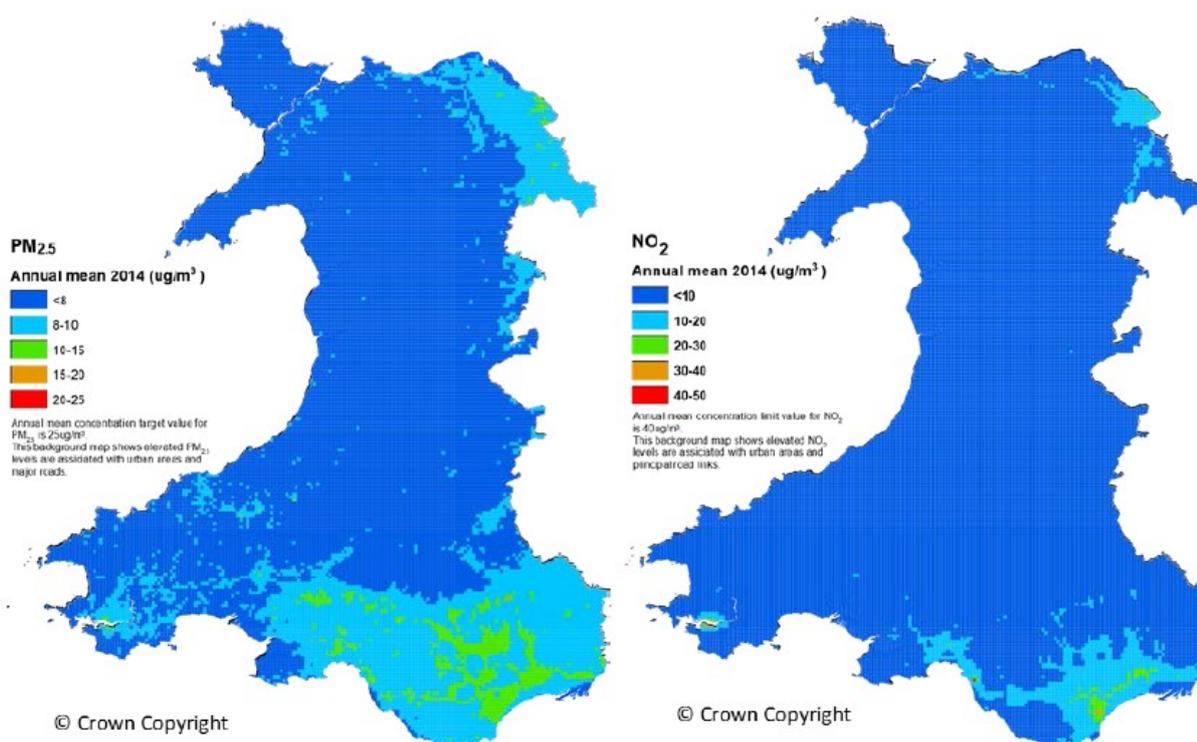
¹⁹ Defra in partnership with the Scottish Executive, Welsh Assembly Government and the Department of the Environment Northern Ireland (2007) the Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Volume 1.

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).

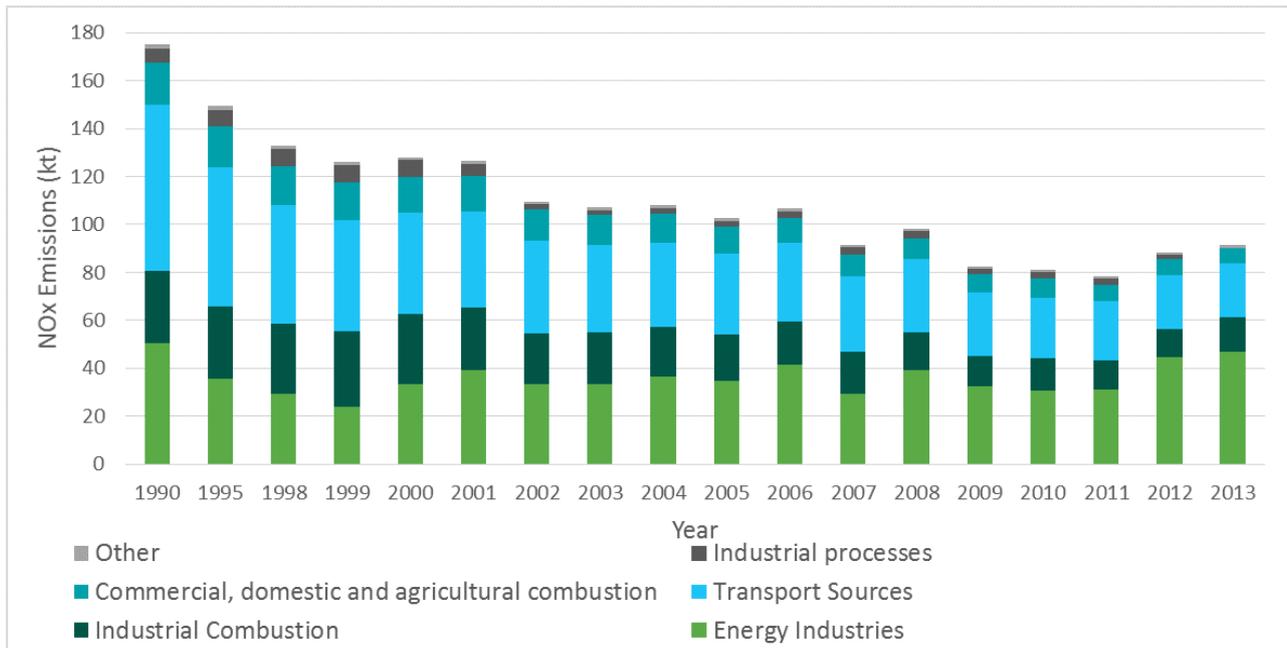
There are currently 38 designated Air Quality Management Areas (AQMAs) in Wales all of which are found in the south particularly centred around urban centres such as Cardiff, Newport and Swansea and relate to vehicle emissions. However, one area of elevated air pollution from an industrial source also 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).

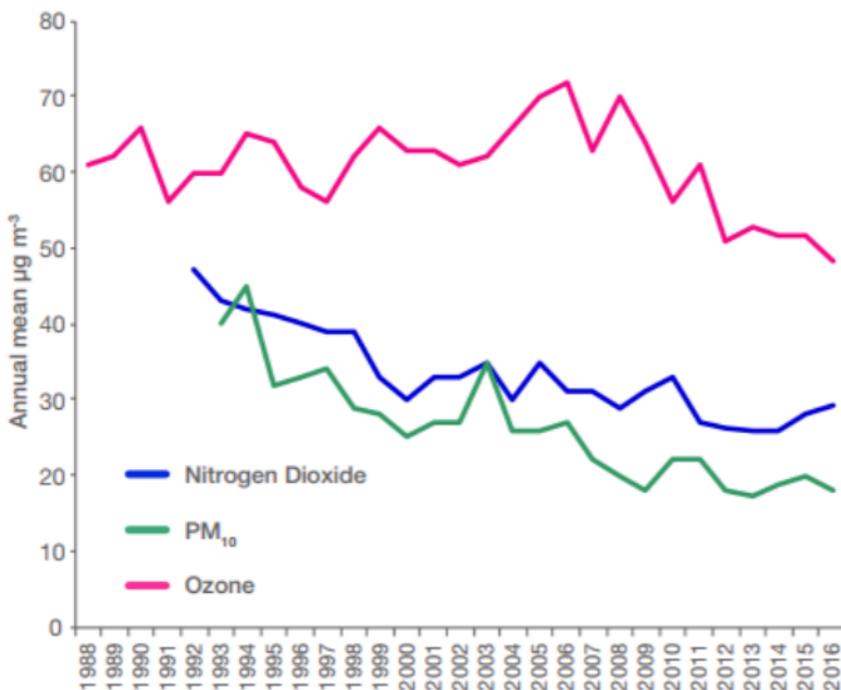
Wales has some of the worst air quality in the UK, which is surprising given its low population density and relatively small cities. A report in 2018 found that Cardiff and Port Talbot both have higher PM₁₀ levels than either Birmingham or Manchester. Hafod-yr-ynys, a road in Caerphilly, is the most 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

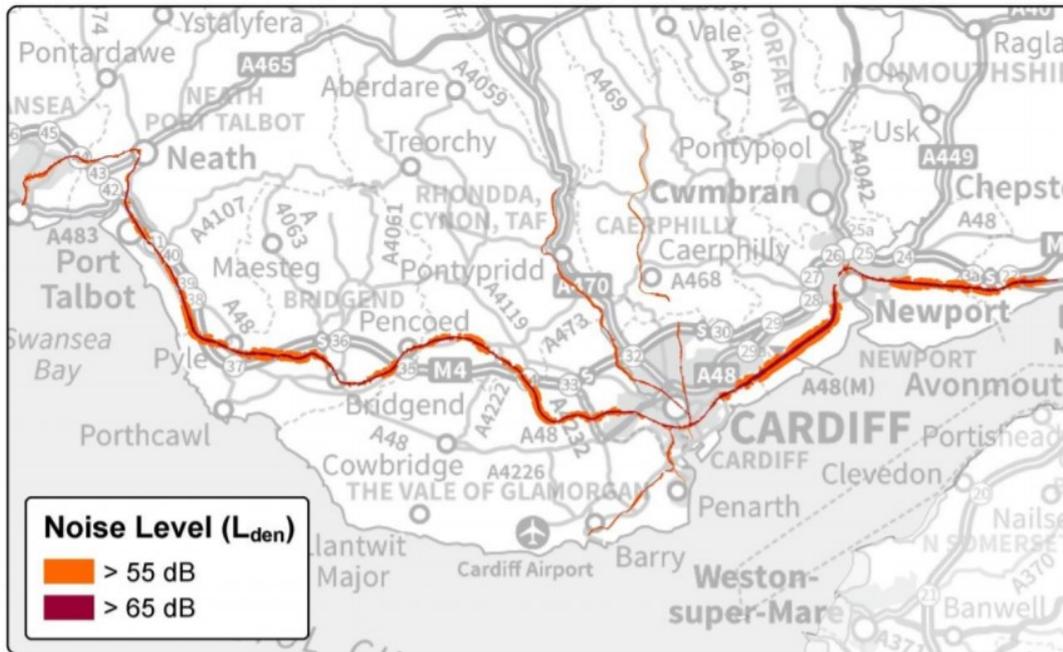
Relevance to the WTS

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.

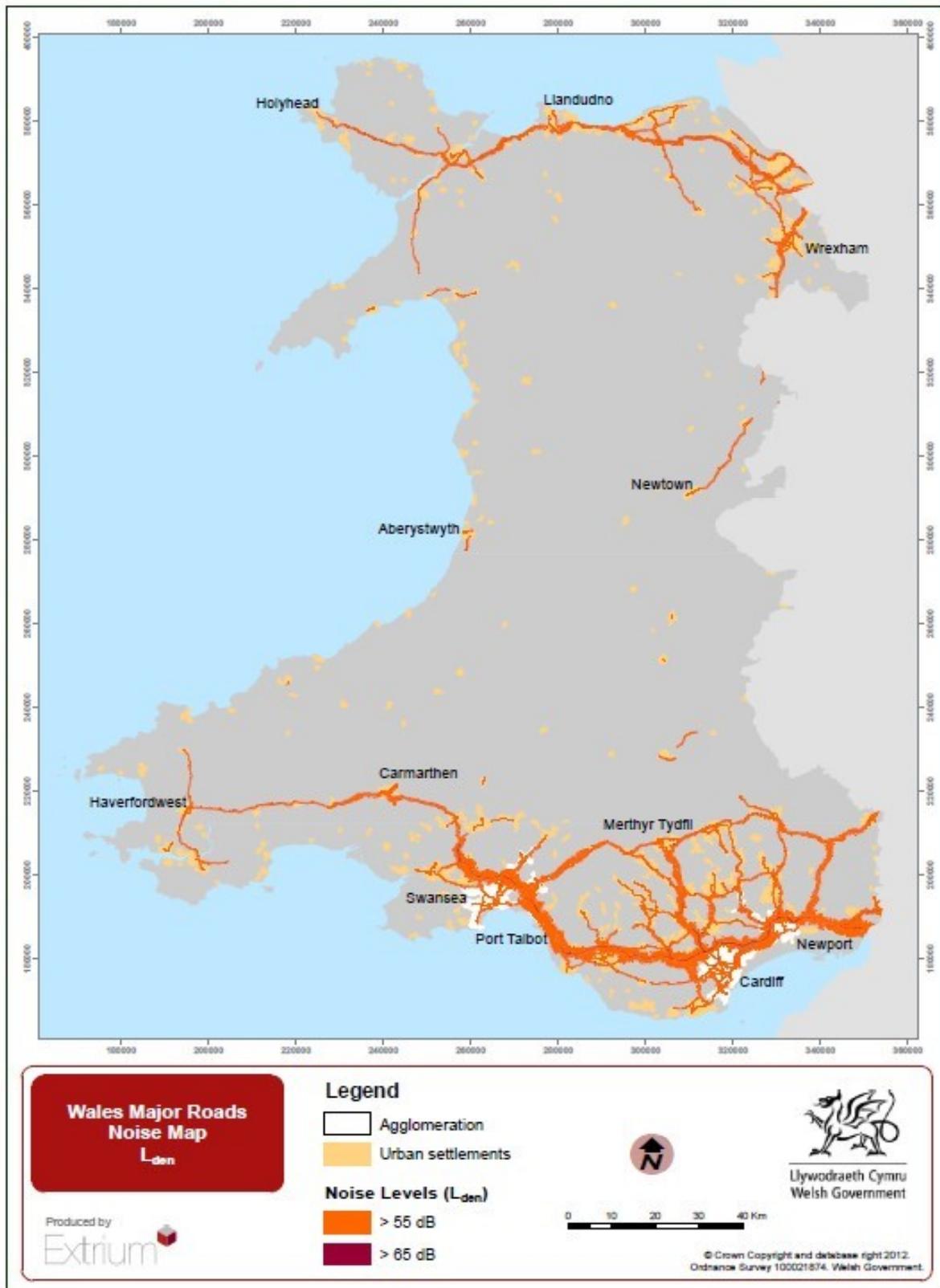
Figure 3-4 Noise of major railways in Wales (2012/2017)



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

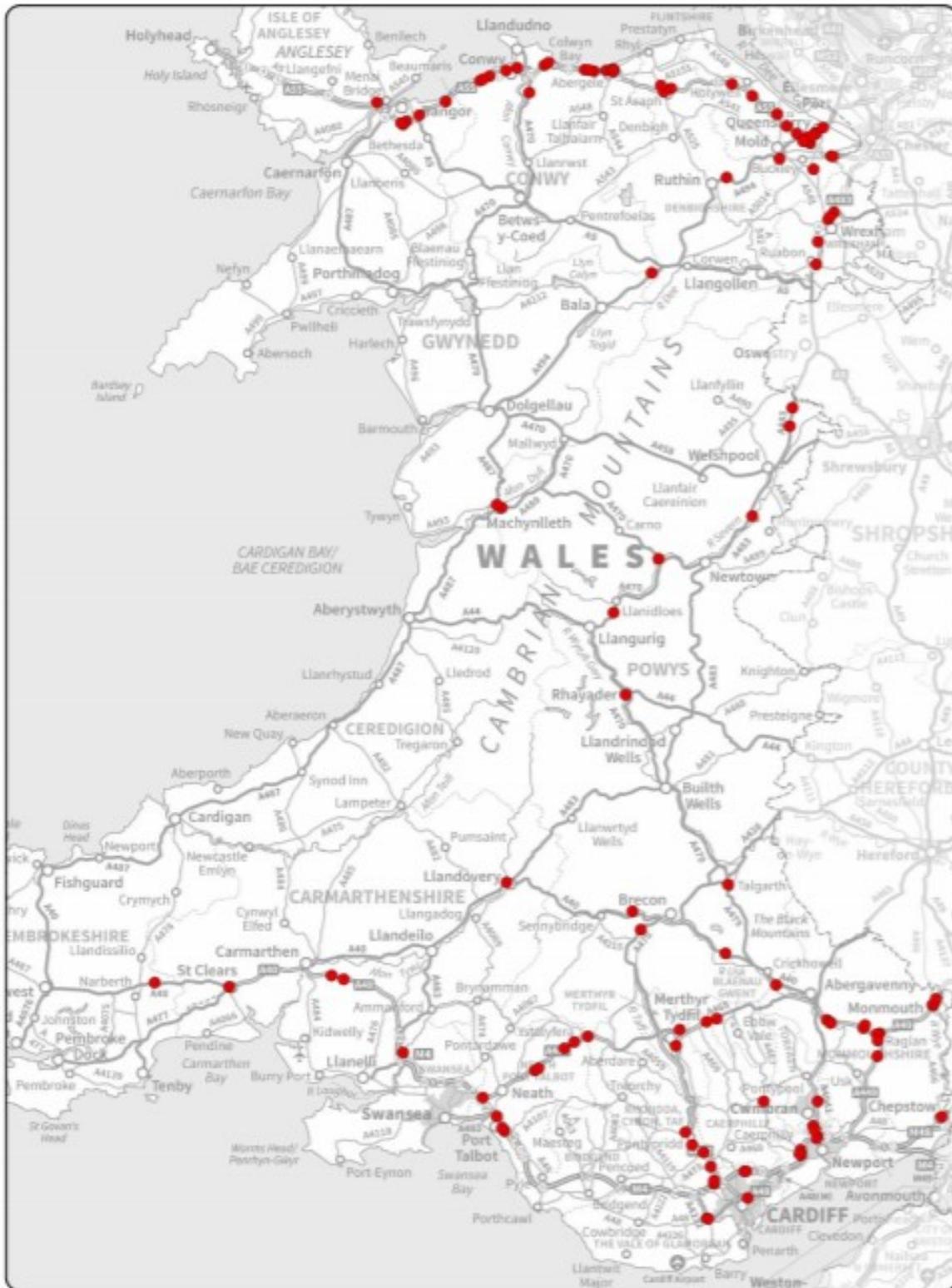


Source: Welsh Government (2013) Data Flow 4 and 8 Supplementary Report Major Roads in Wales.²²

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

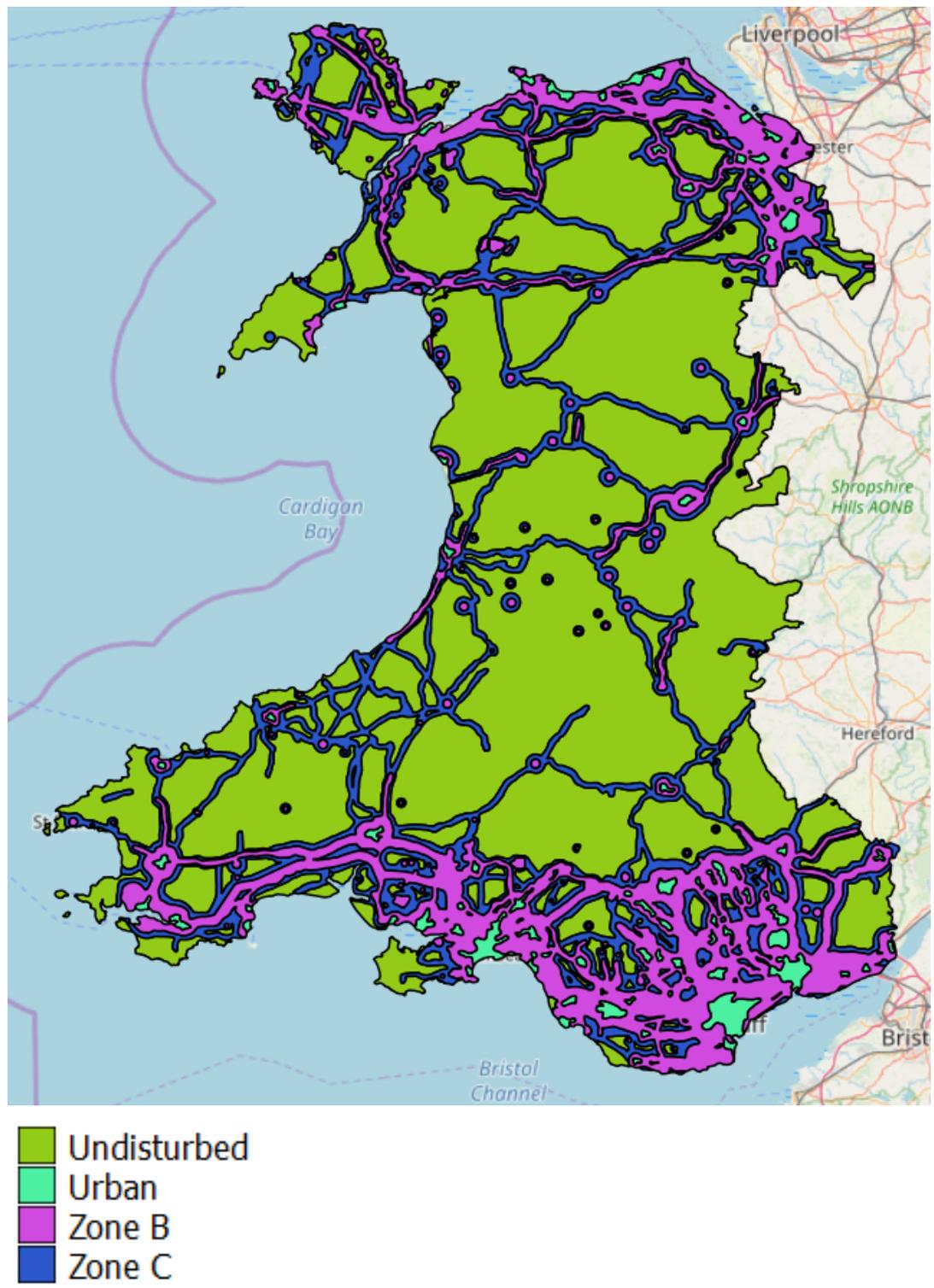


Source: Welsh Government, 2018.

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://ww2.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.

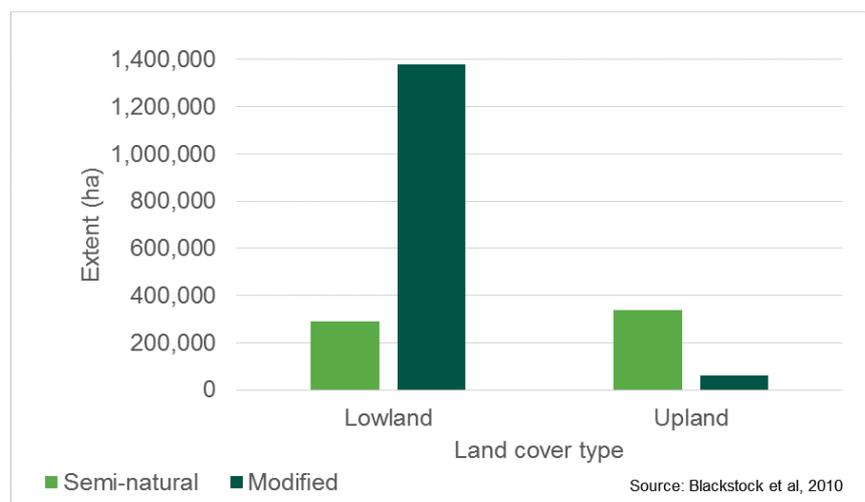
Climate change impacts such as acidification, sea temperature rises and extreme weather events have the potential to affect marine species through a number of factors including prey population dynamics, reproduction and distribution.

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.

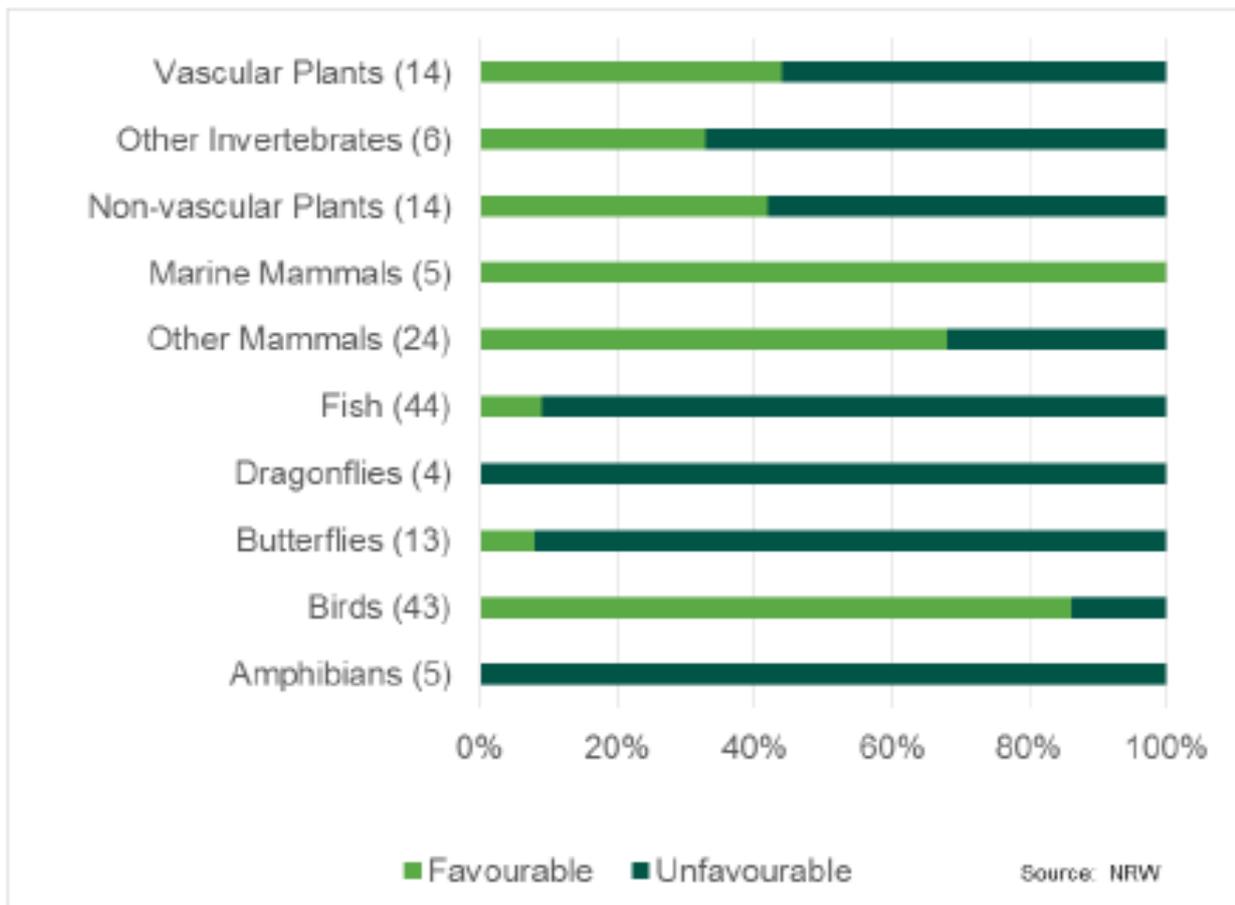
Special Protection Areas (SPA)

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.



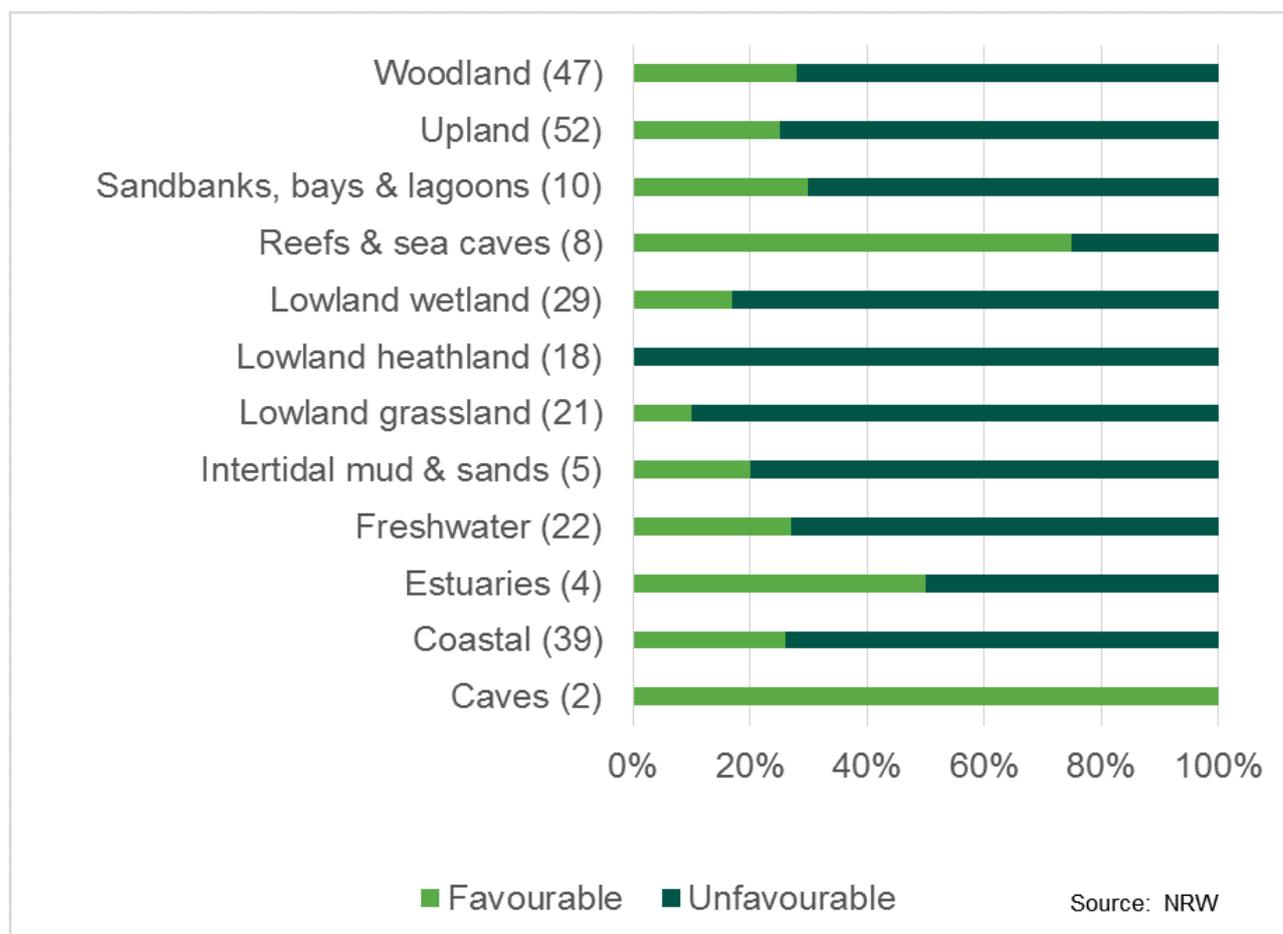
Special Areas of Conservation (SAC)

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.



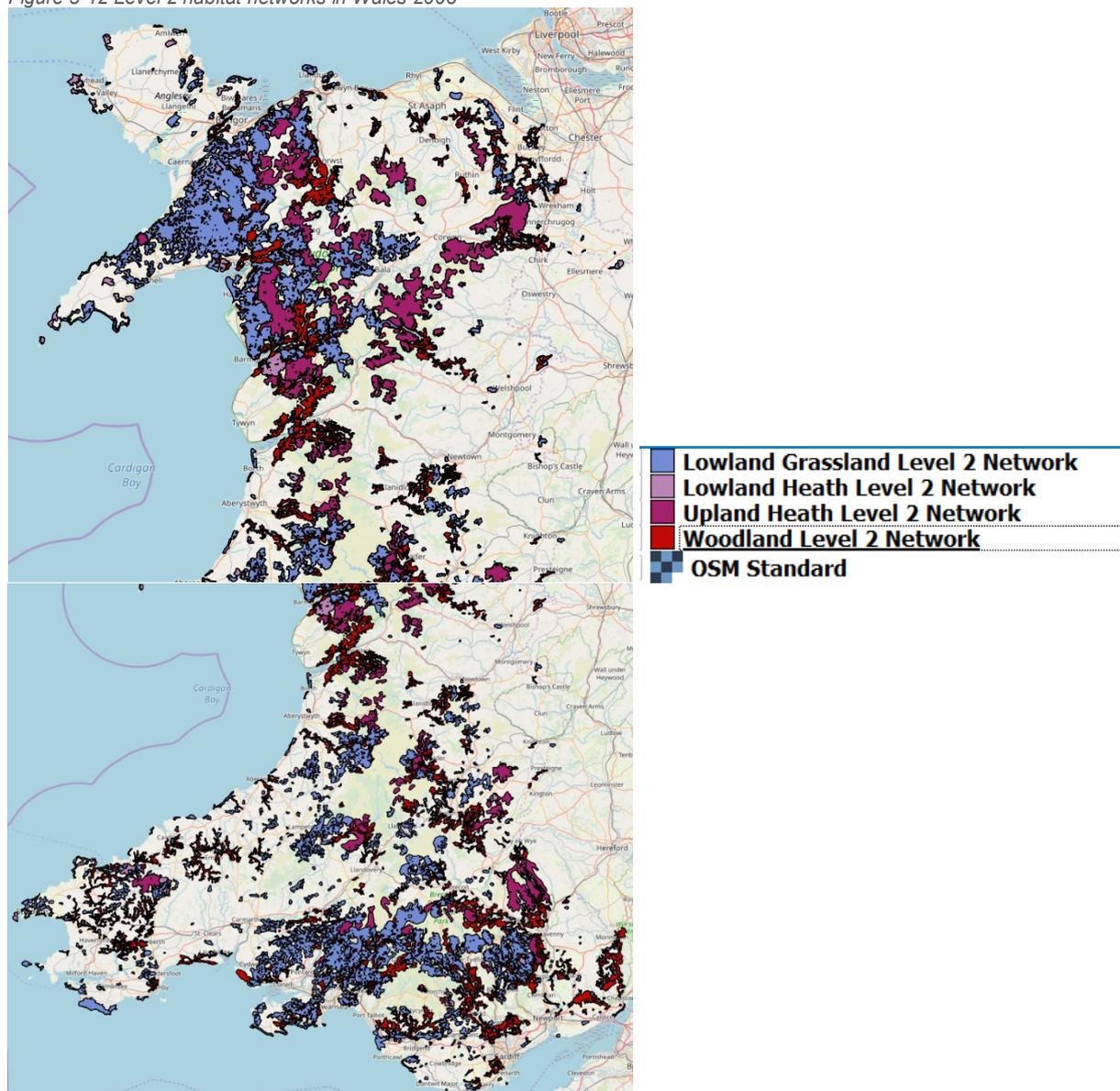
The Environmental and Rural Affairs Monitoring & Modelling Programme (ERAMMP) has accumulated and carried out many surveys of the habitats of Wales that is used to inform SoNaRR reports, they include both areas where the habitats excel and areas that need improvement, these areas that need improvement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

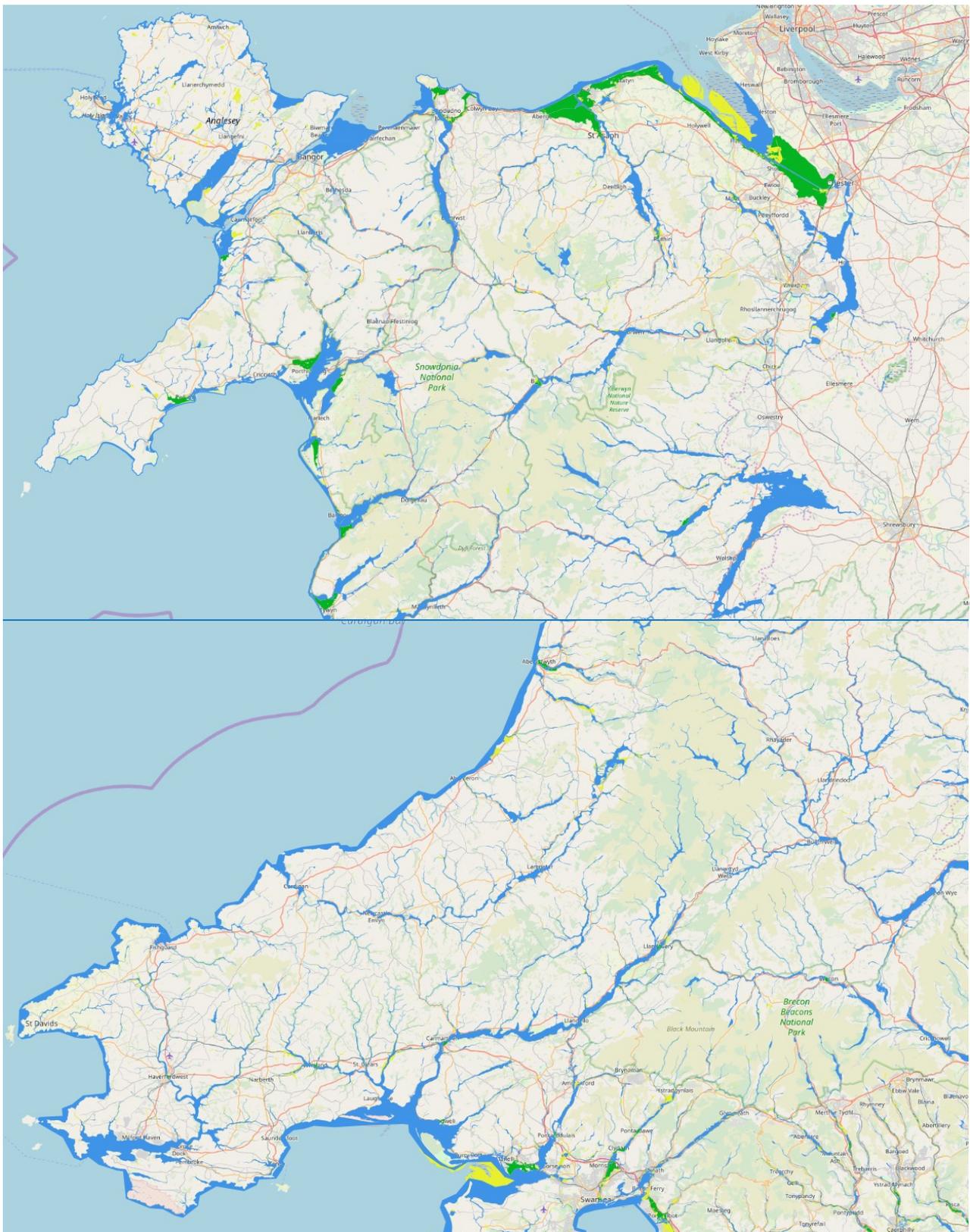
- SMP 19 Anchor Head to Lavernock Point (Severn Estuary);
- SMP 20 Lavernock Point to St Ann's Head (South Wales);
- SMP 21 St Ann's Head to Great Ormes Head (West of Wales); and
- SMP 22 Great Ormes Head to Scotland (North West England and North Wales).

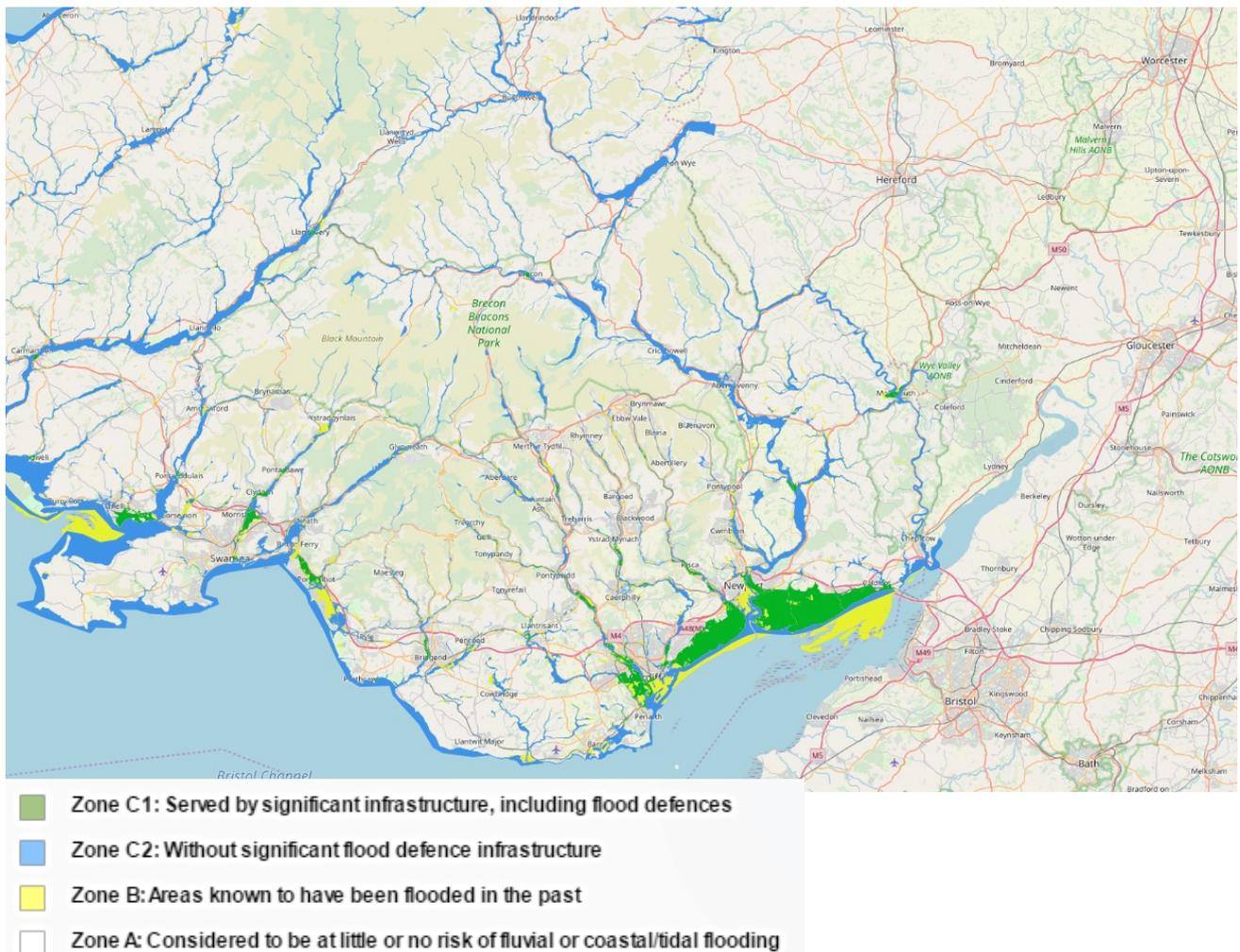
Overall, it has been assessed by the National assembly in Wales in 2017 that:

- 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

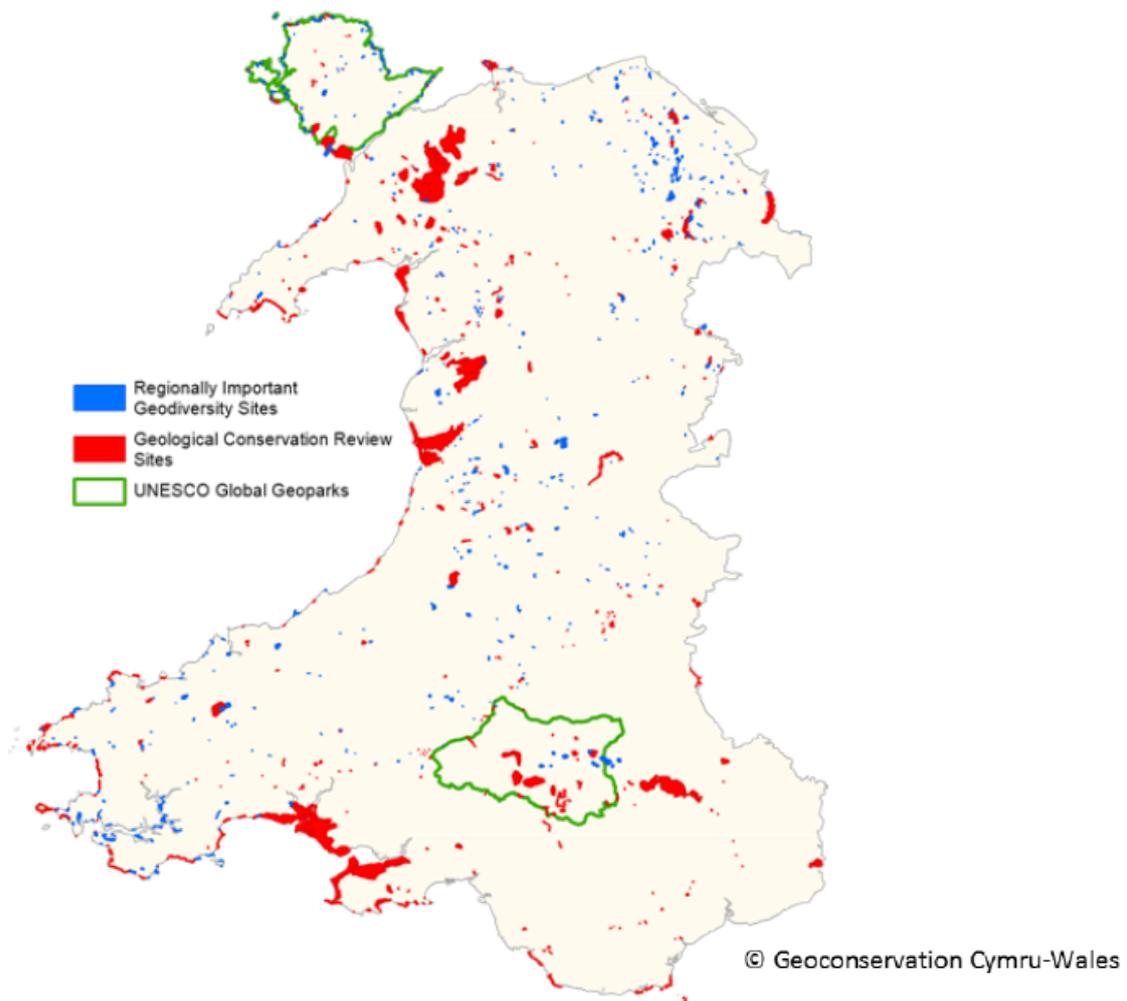
Relevance to the WTS

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).



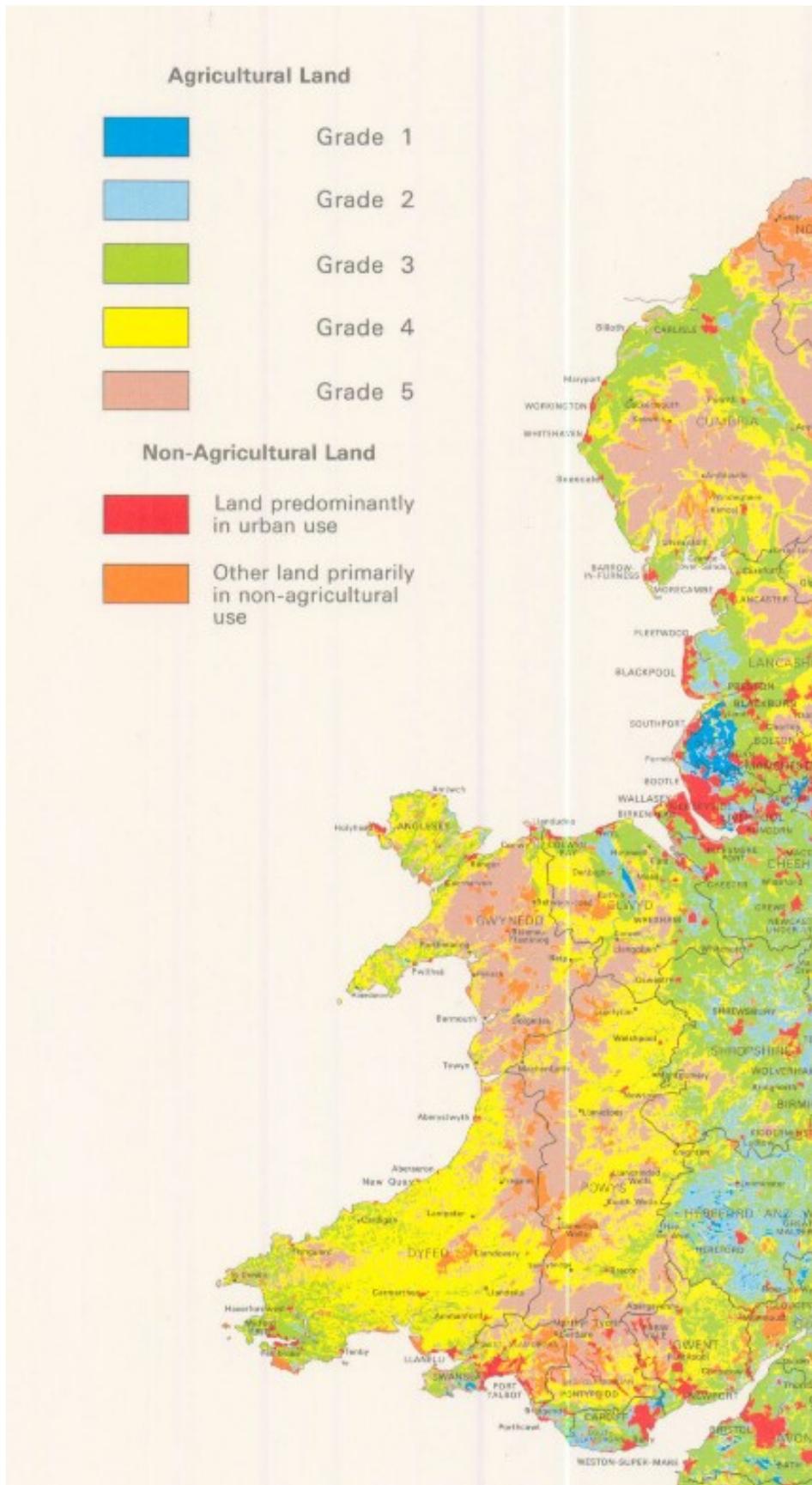
Source: SoNaRR, 2016.

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).



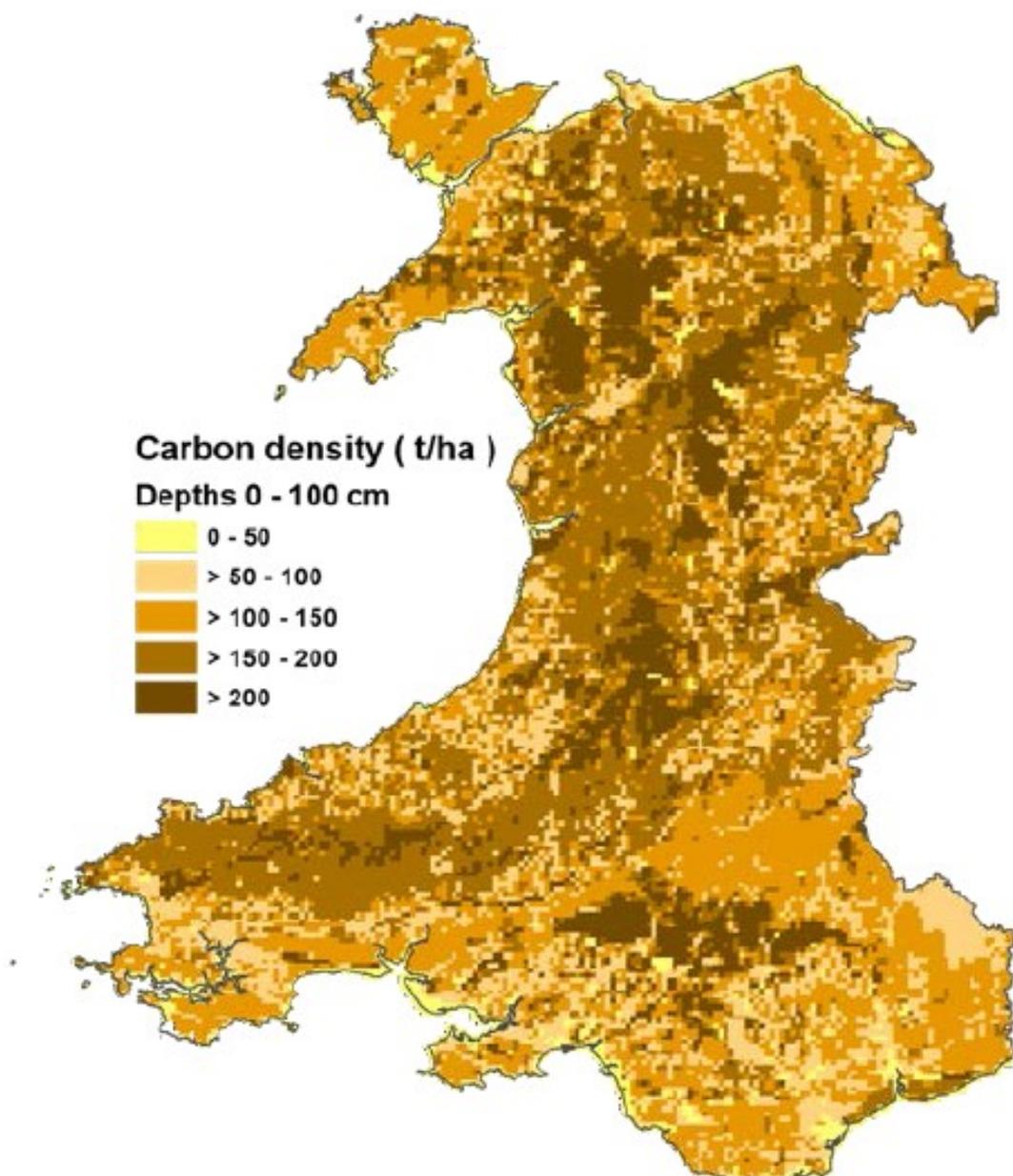
Source: Natural England

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).

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)).

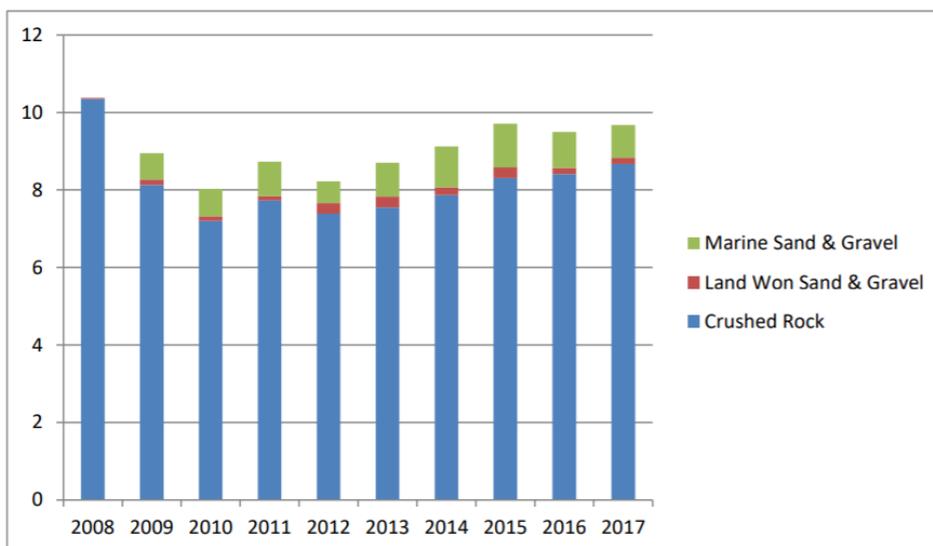
Table 3-1 Mineral Production in Wales for 2014 (SoNaRR, 2016)

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.

Windfunneling 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

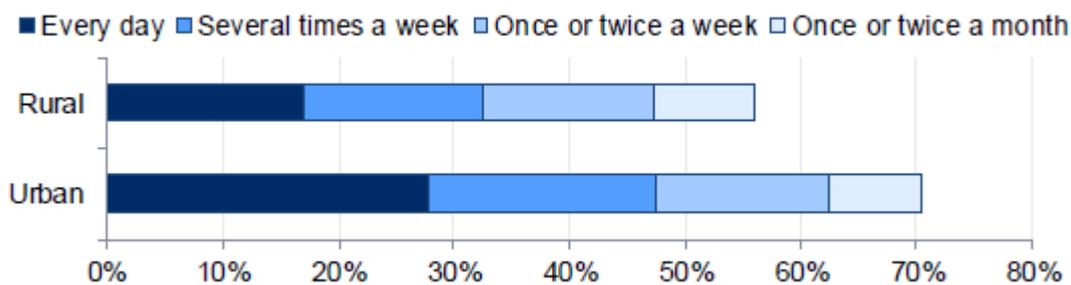
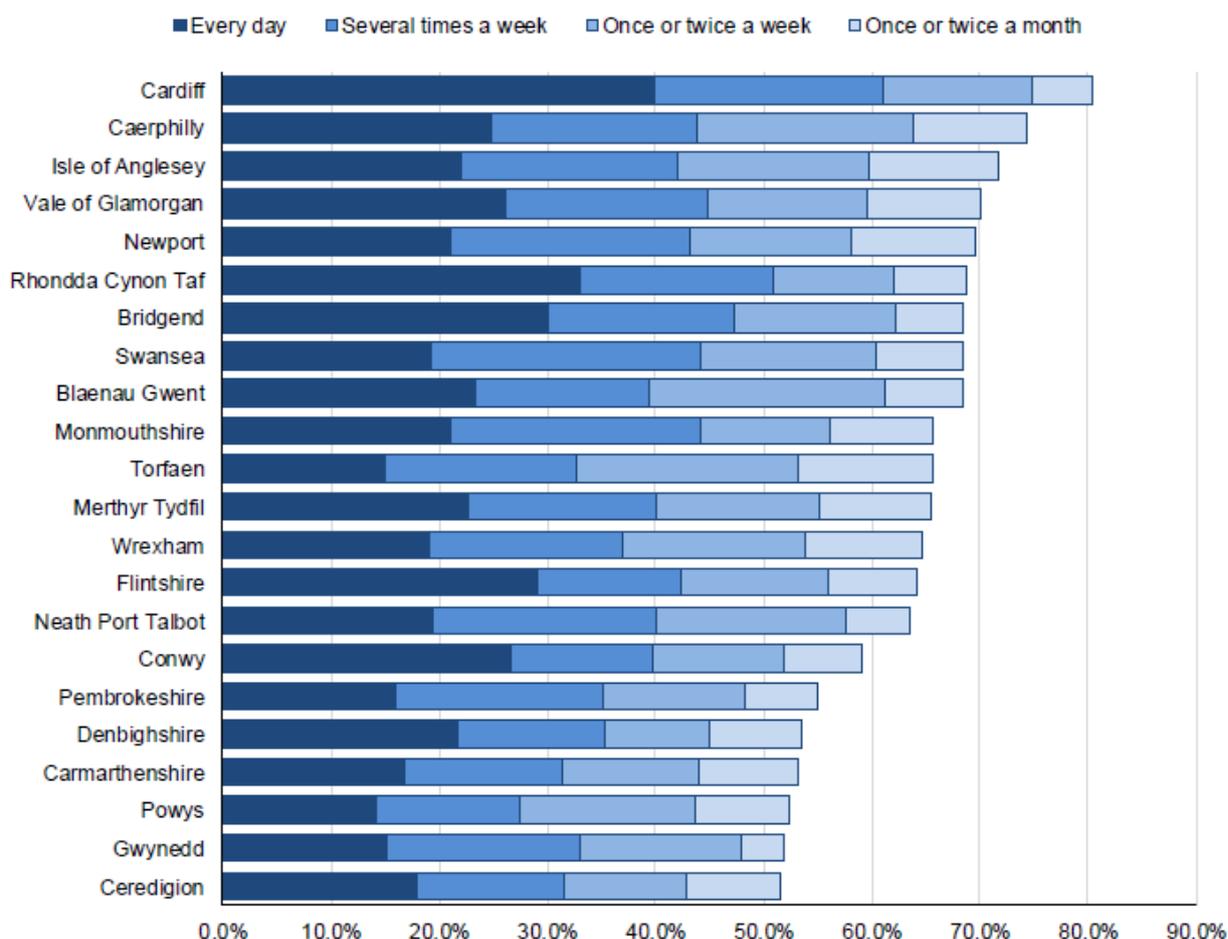


Figure 4-2 Active travel by walking, by local authority

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.

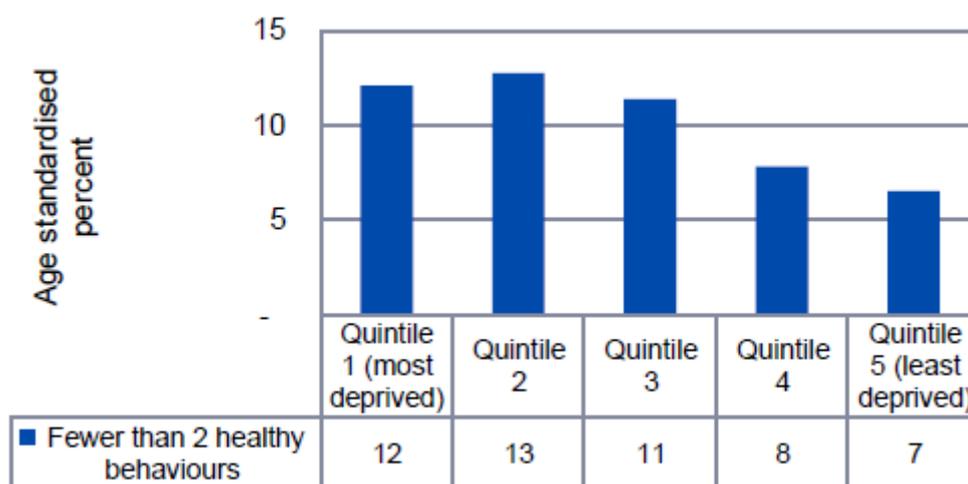
Around 10% of adults reported following less than 2 healthy lifestyle behaviours, 64% of adults reported either 2 or 3 healthy lifestyle behaviours

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>

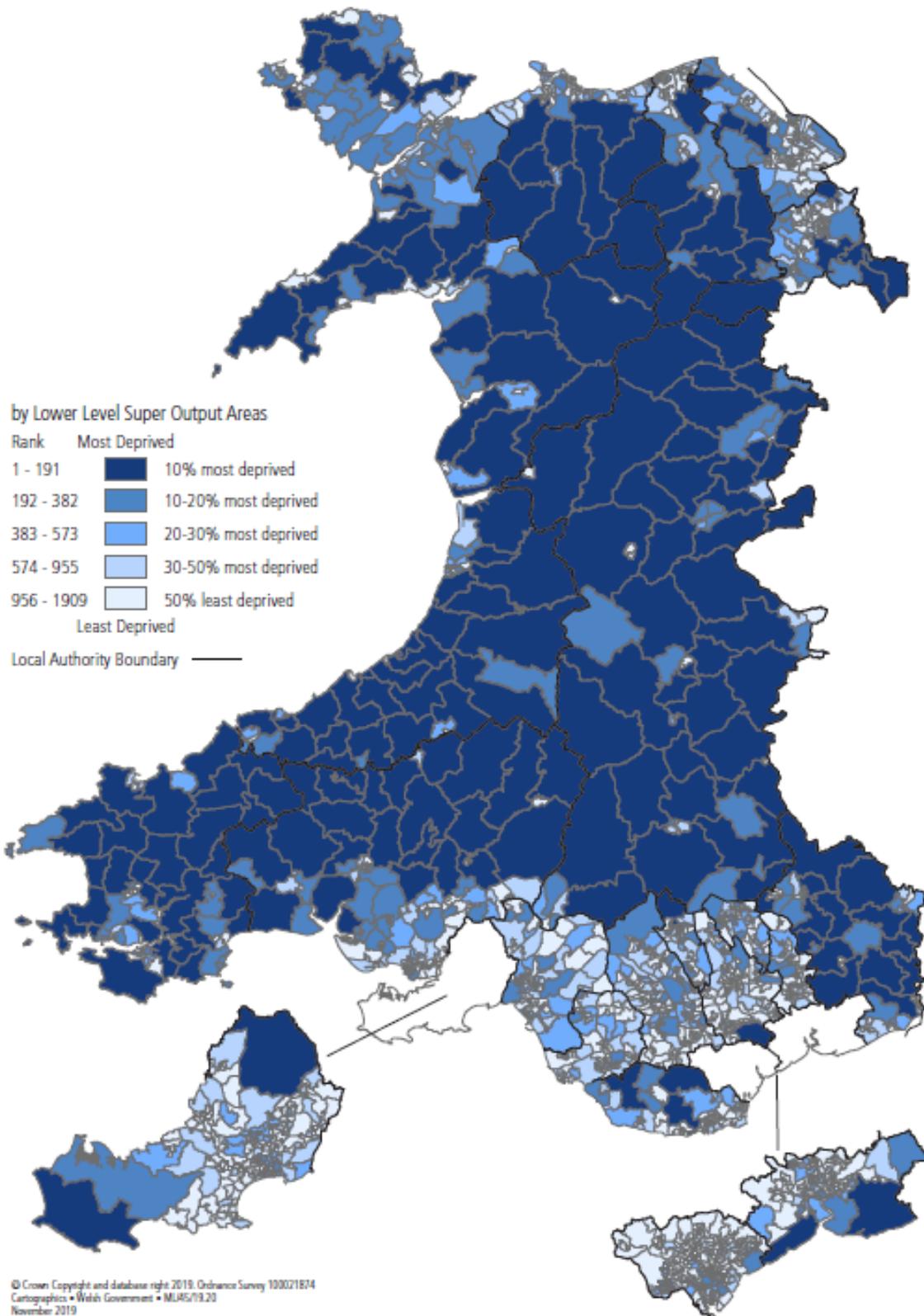
³³ Welsh Index of Multiple Deprivation, 2019 <https://gov.wales/welsh-index-multiple-deprivation-full-index-update-ranks-2019>

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

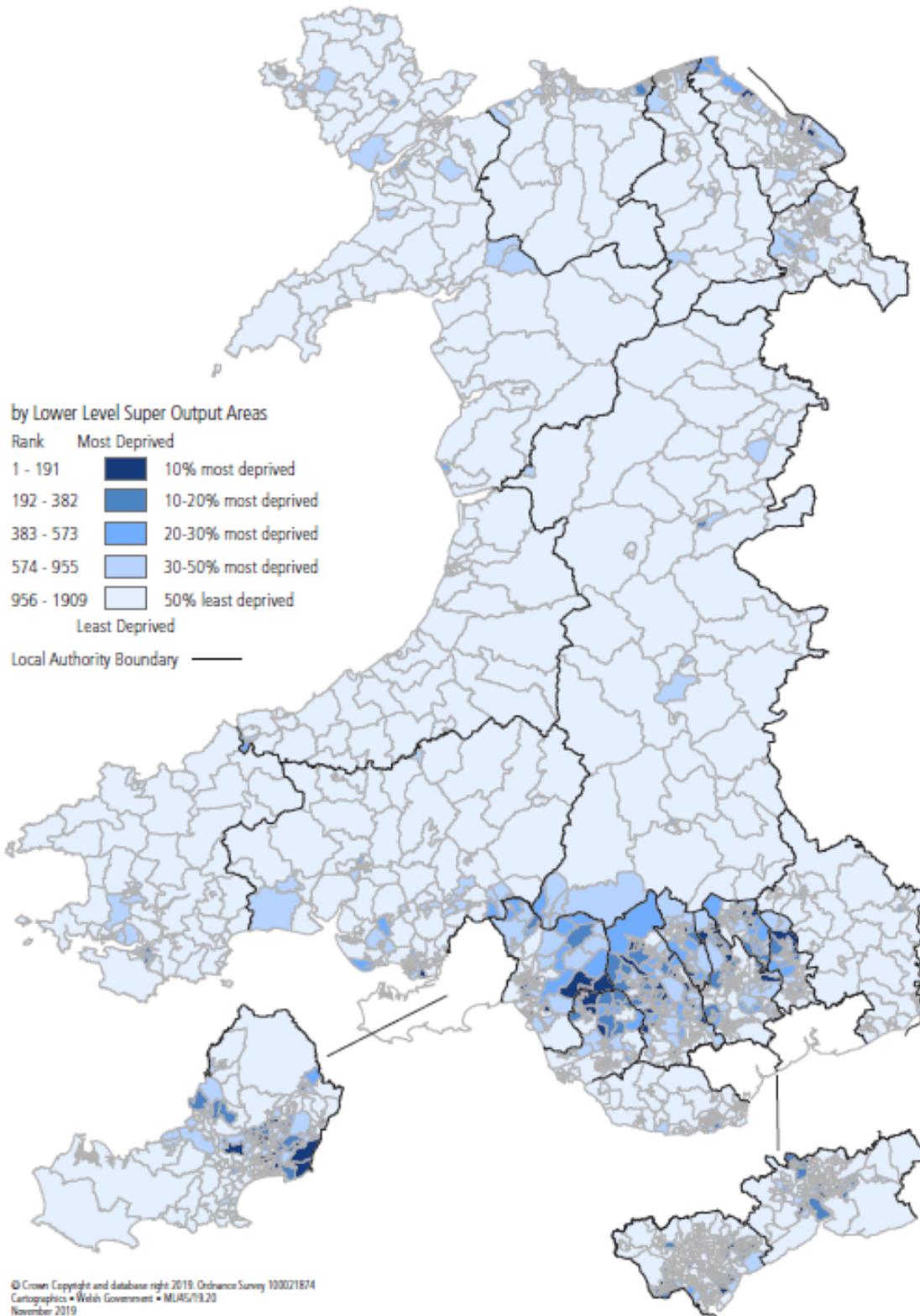
In 2018, 70% of people in Wales reported their general health as either 'Very good' or 'Good'. The gap between local health board reporting the highest (Powys: 76%) and lowest (Cwm Taf: 67 per cent) percentages of 'Very good' and 'Good' general health was 9%. The concentration of low percentages of 'Good' 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

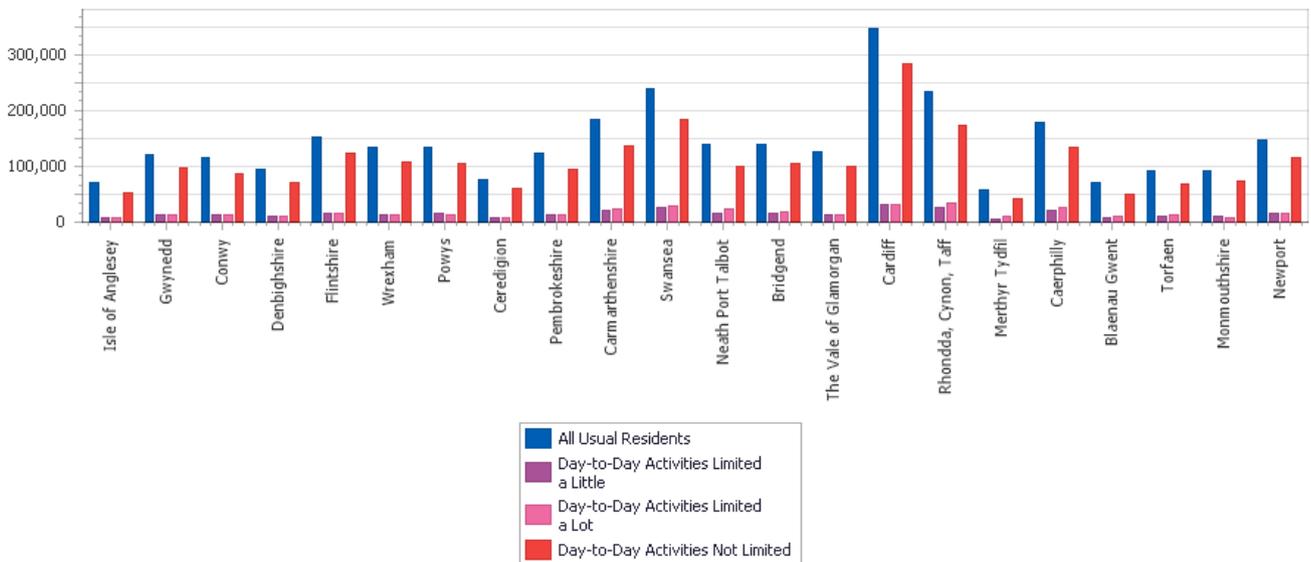
Source: 2011 Census – Nomis

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



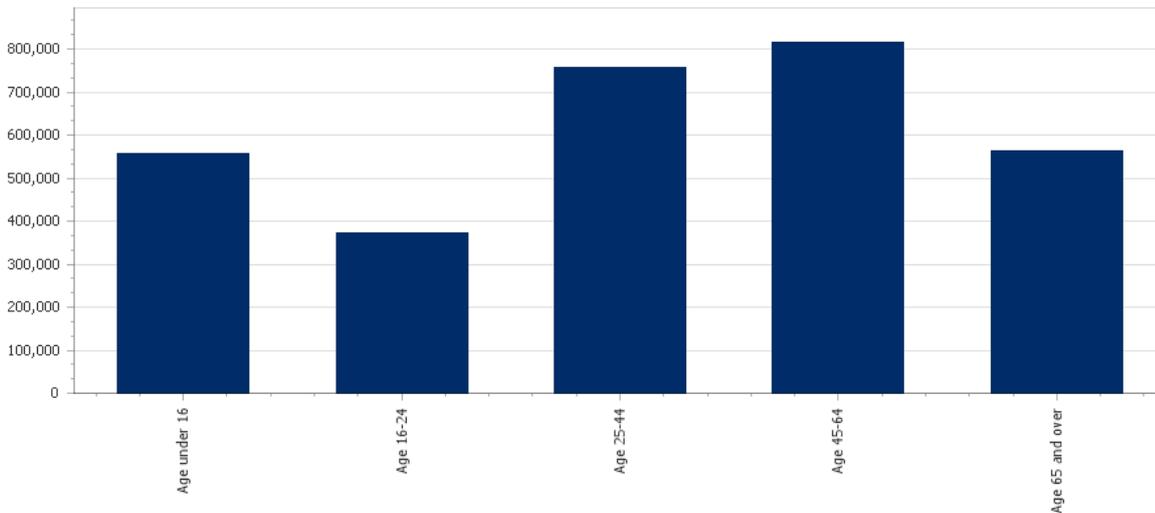
Source: StatsWales (2011)

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

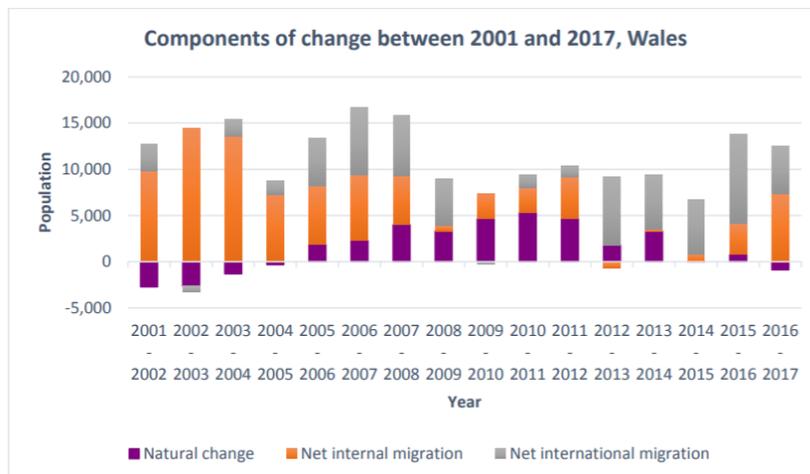


(Source: statswales.wales.gov.uk)

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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">Construction</p> <p>Increased disruption, altered traffic movements and perception that routes have become unsafe can reduce active travel.</p>	<p style="text-align: center;">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 style="text-align: center;">Operation</p> <p>Transport schemes can enhance walking and cycling through new and more accessible, attractive and improved walking and cycling routes.</p>	<p style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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> <hr/> <p style="text-align: center;">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>	<p style="text-align: center;">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>

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 align="center">Noise pollution and vibration</p> <p>Motorised forms of transport are a common source of noise pollution.</p>	<p align="center">Construction</p> <p>Construction activities can lead to an increase in localised noise and vibration.</p> <hr/> <p align="center">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 align="center">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 align="center">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 align="center">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 align="center">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 align="center">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 align="center">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 align="center">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
		<p>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>
	<p style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">Climate Change</p> <p>Greenhouse gases (GHGs) from transport contribute to climate change.</p>	<p style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">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 style="text-align: center;">Operation</p> <p>In addition to the above, a reduction in GHG emissions could have positive implications for public health.</p>
<p style="text-align: center;">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 style="text-align: center;">Construction</p> <p>New employment opportunities can be generated by construction activities.</p>	<p style="text-align: center;">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 style="text-align: center;">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 n 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

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

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-](https://stats.wales.gov.wales/Catalogue/Welsh-Language/Annual-Population-Survey-Welsh-Language/annualpopulationsurveyestimatesofpersonsaged3andoverwhosaytheycanspeakwelsh-by-localauthority-measure)

[Language/annualpopulationsurveyestimatesofpersonsaged3andoverwhosaytheycanspeakwelsh-by-localauthority-measure](https://stats.wales.gov.wales/Catalogue/Welsh-Language/Annual-Population-Survey-Welsh-Language/annualpopulationsurveyestimatesofpersonsaged3andoverwhosaytheycanspeakwelsh-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

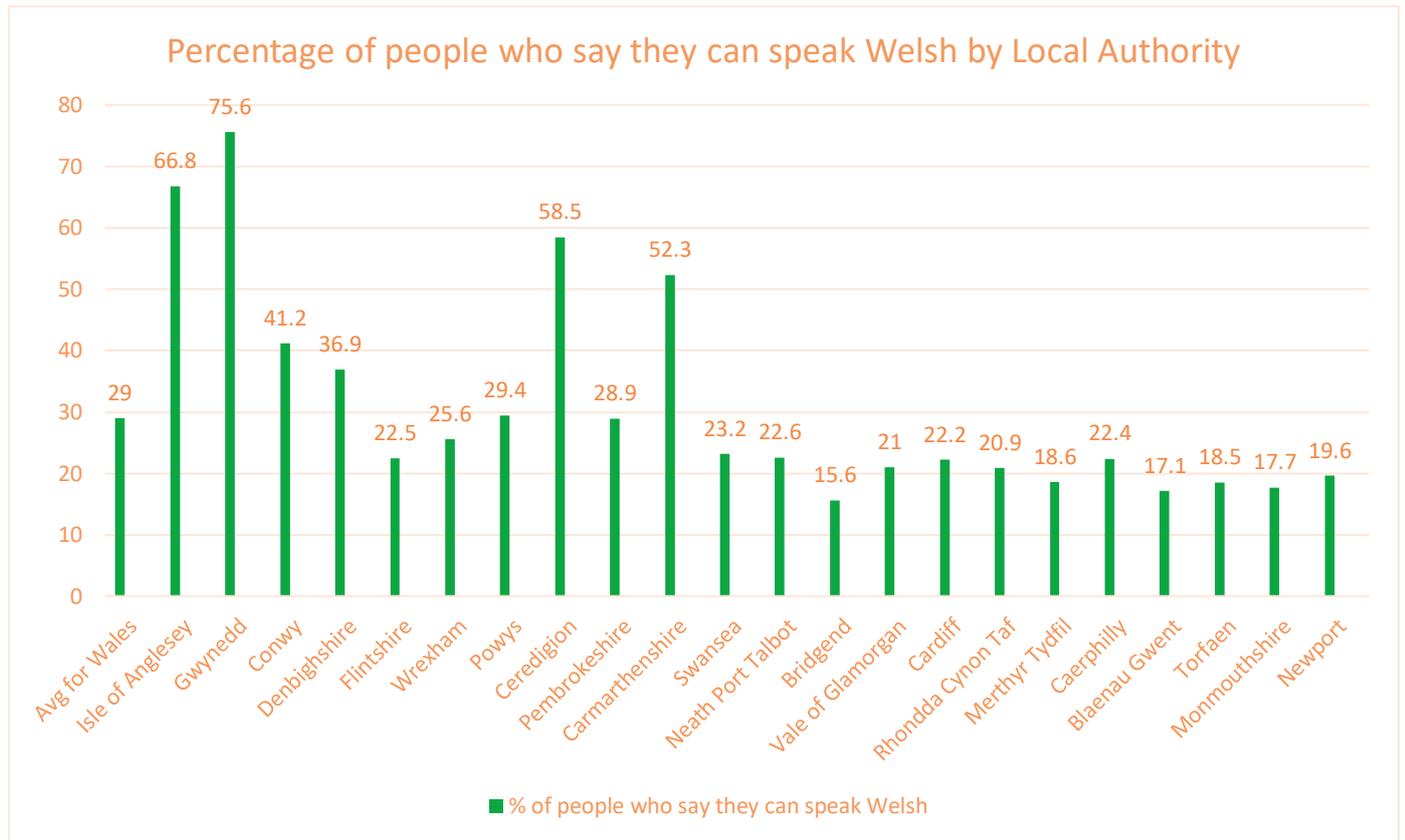
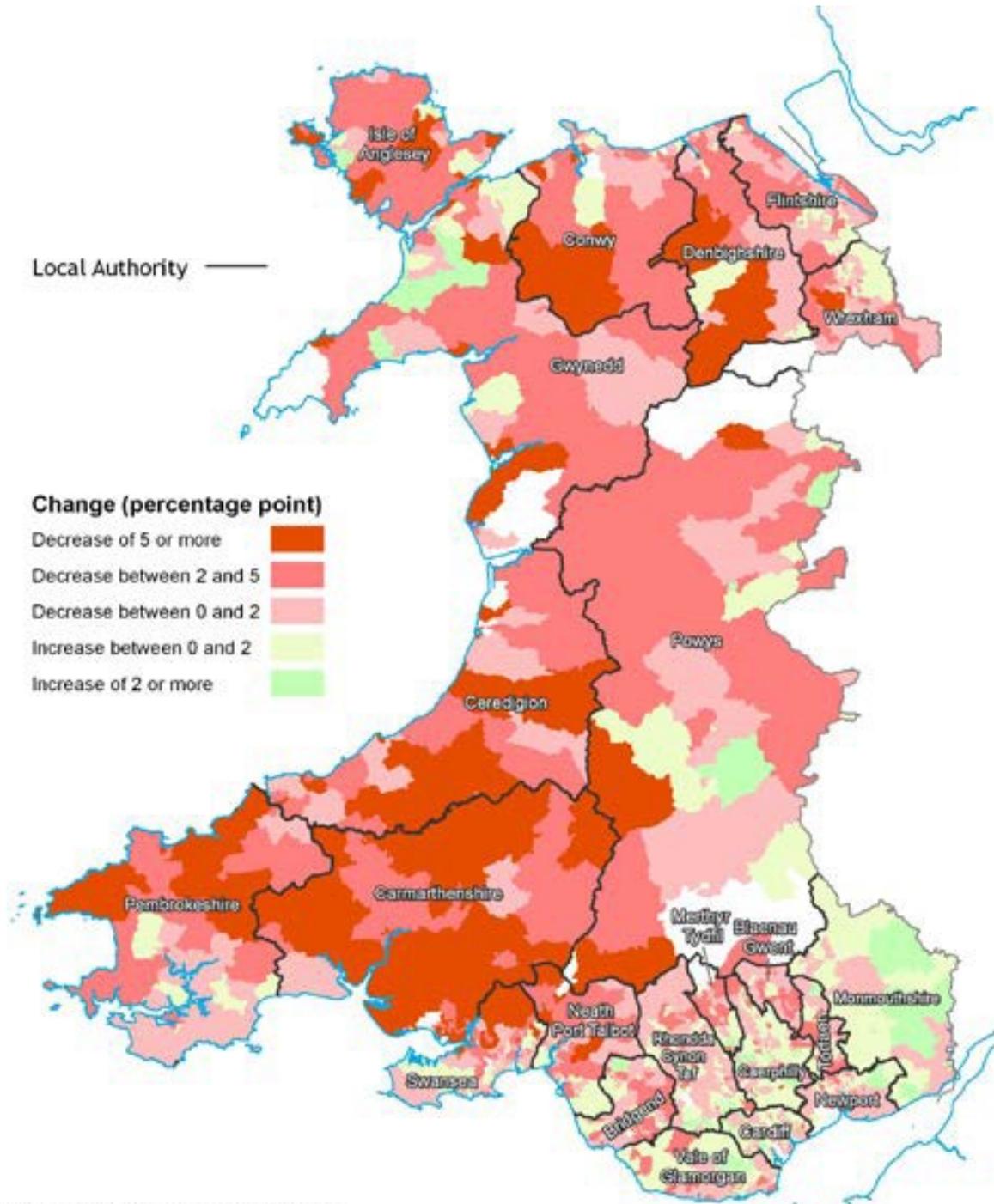


Figure 6-2 Change in proportion of people able to speak Welsh by LSOA, 2001 to 2011



Source: 2001 Census 2011 Census

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

193.12-13

Geography & Technology

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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

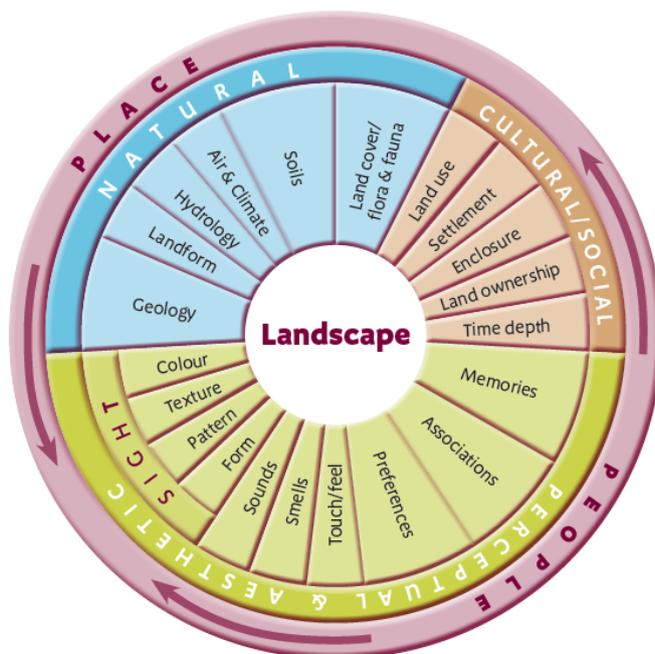
Welsh landscapes reflect the extent and condition of a range of natural resources and ecosystems against the complexity of human influences and land-use decisions. Townscapes and urban character also reflect a long history of human development. Similarly, seascape information complements the landscape/townscape 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, Llandoverly, 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, 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..

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

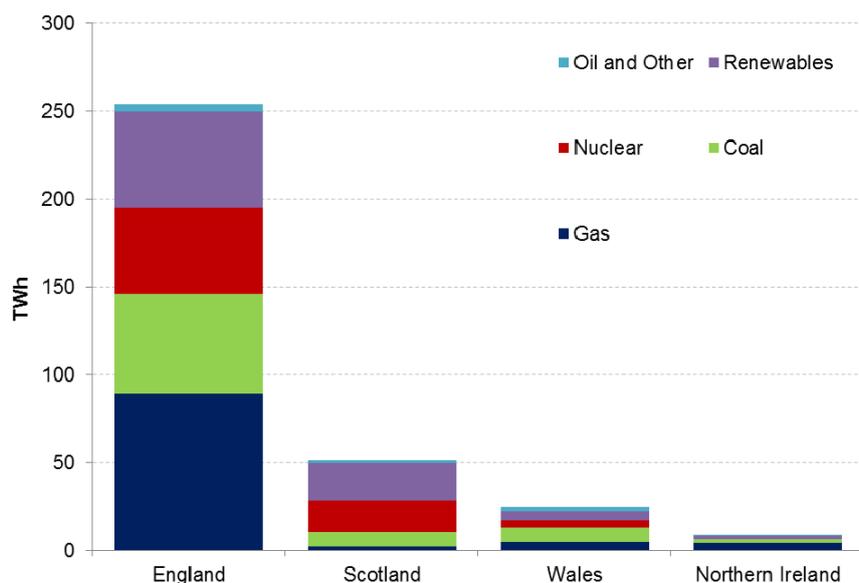
Wales is a globally responsible nation and the WTS has an important role in helping to guide planning and transport in a way that contributes positively to this. In particular energy consumption and greenhouse emissions are two things that occur locally through homes, businesses and transport but contribute 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

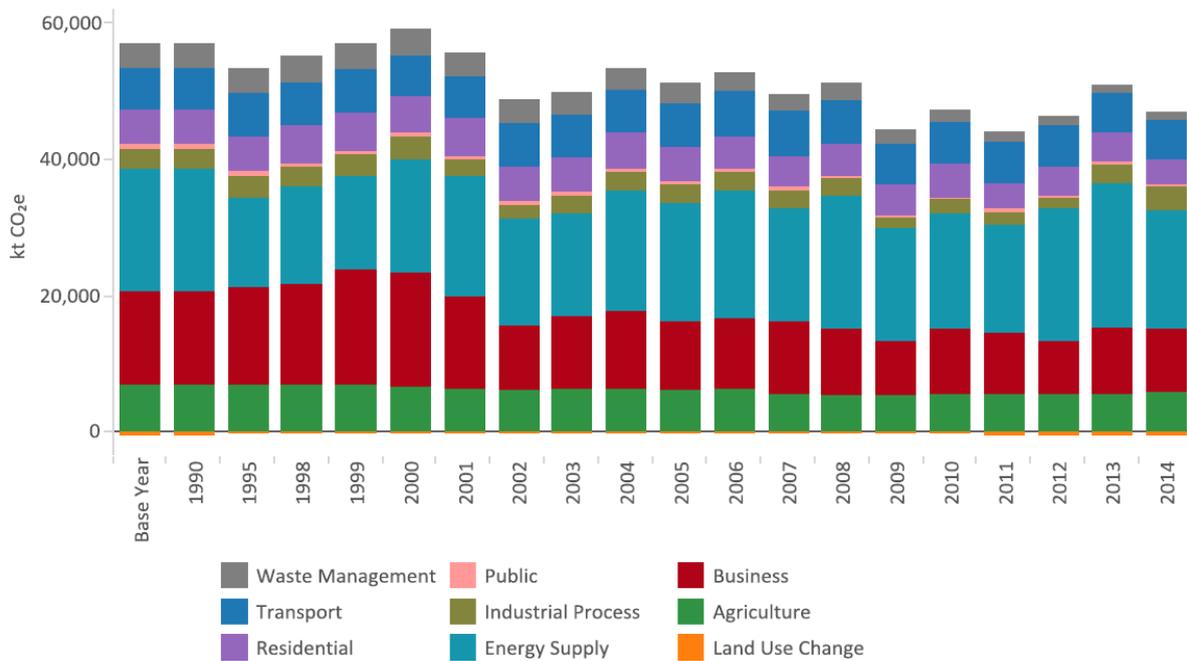
⁷⁹ data.gov.uk

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)

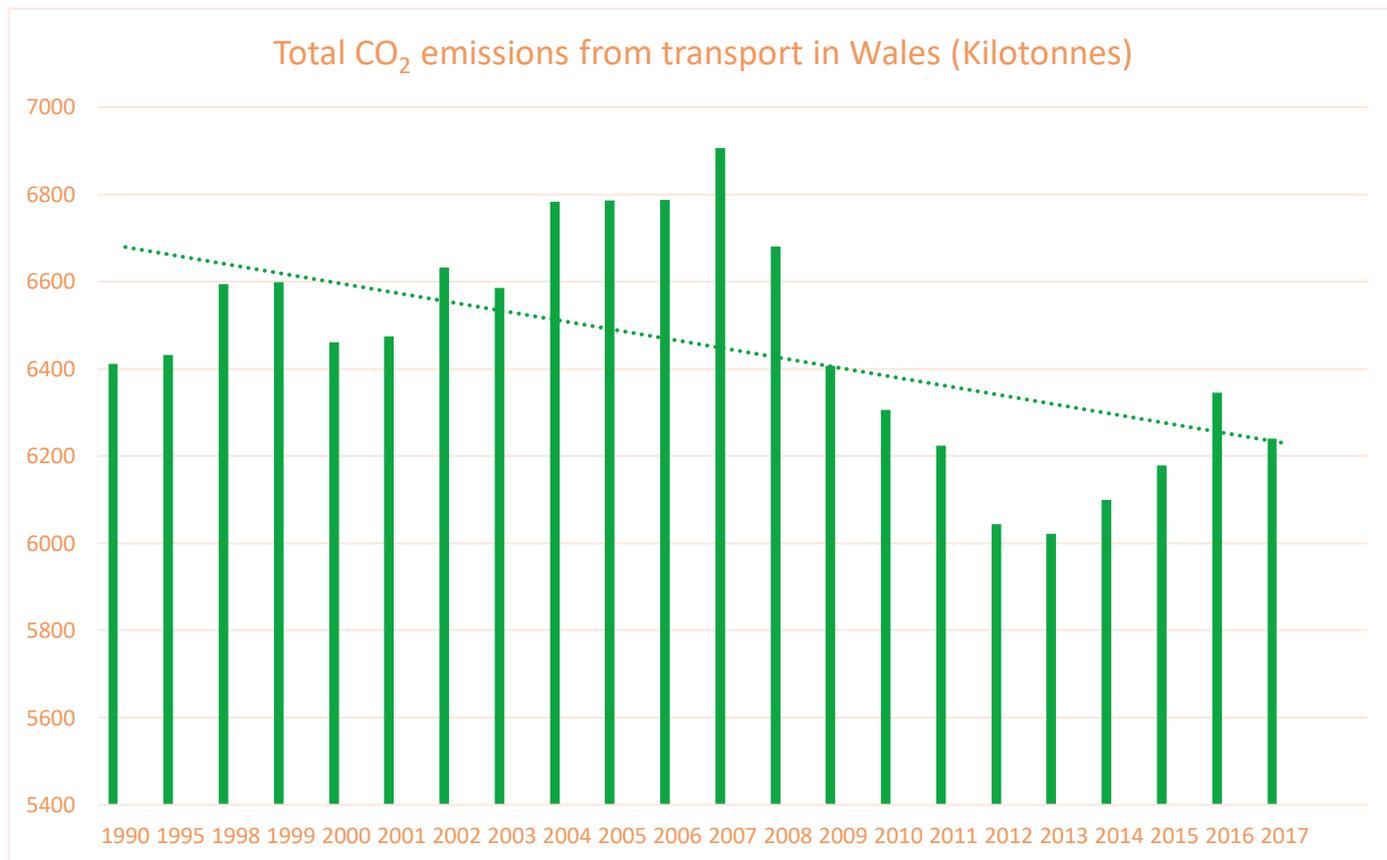


Change in greenhouse gas emissions from the transport sector

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.

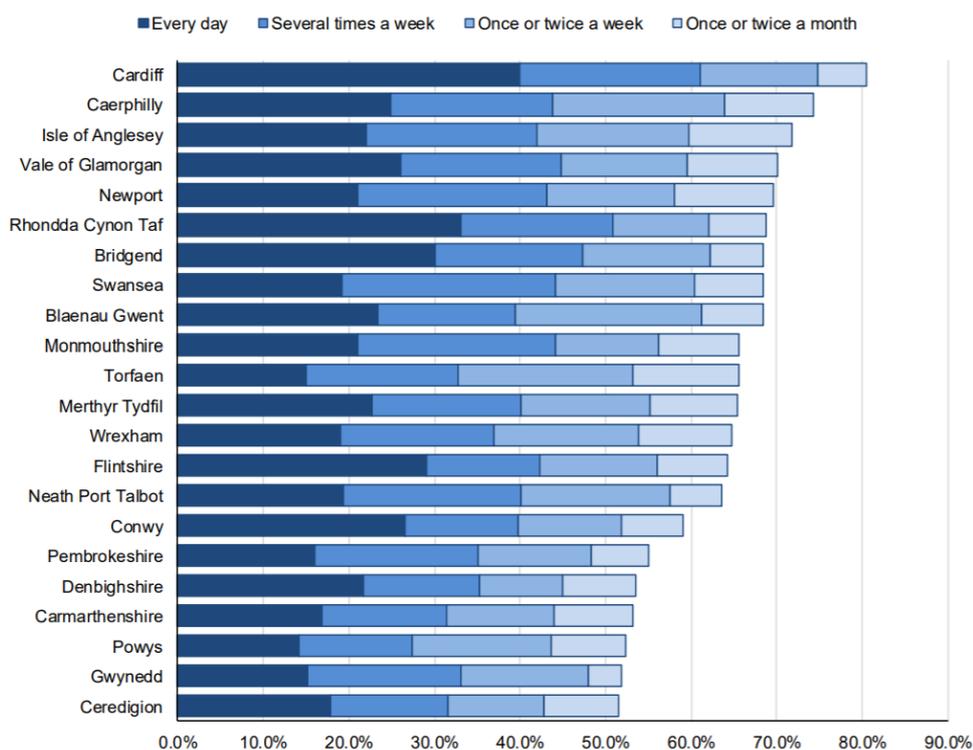
99.9 million passenger journeys were undertaken on local buses in Wales in 2017-18. These services covered a total 99.1 million vehicle kilometres.⁸⁵

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

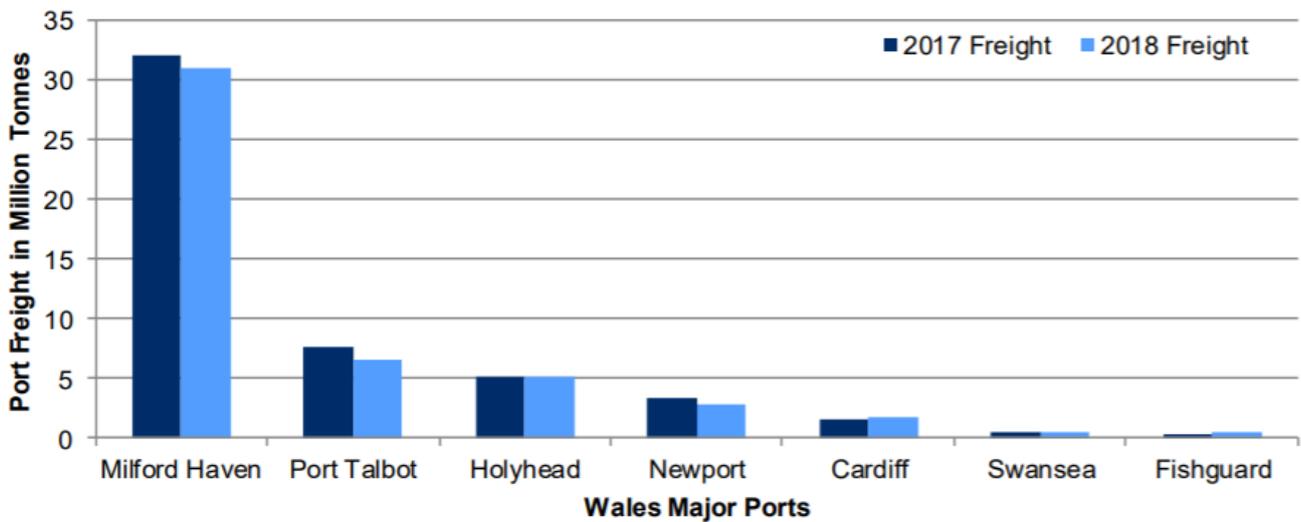
Hectares of healthy ecosystems that form part of the transport network

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

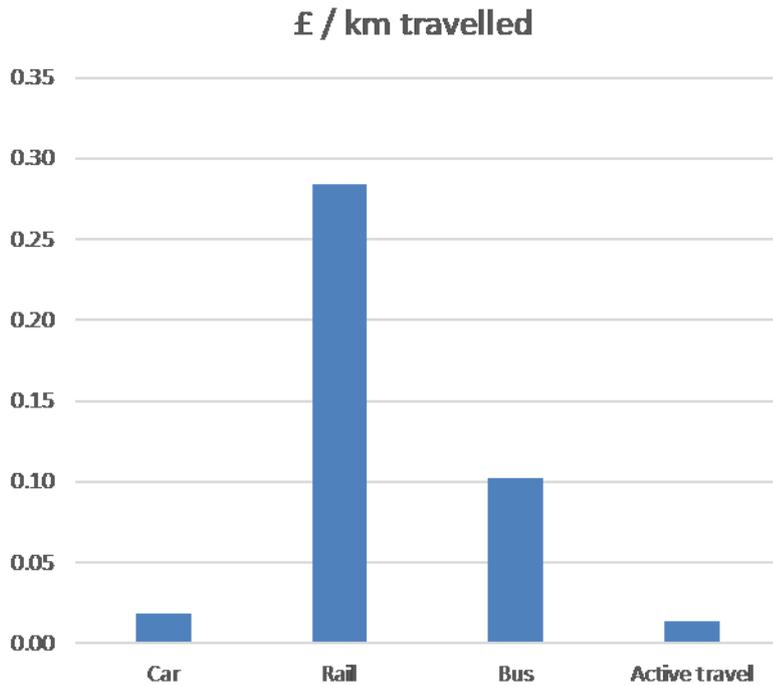


Figure 7-9 Money spent across different transport modes in Wales

	£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

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? Or are the people who wrote it unable to express themselves in plain language? 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. Valued and Resilient and National Park Management Plans</p>

Integrated Sustainability Appraisal Response Log	Arcadis Response
<p>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</p>	<p>now included in the Scoping Report</p>
<p>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</p>	<p>The Scoping Report is not intended to outline plans for transport delivery at this stage.</p>
<p>There is no reference to bus service provision with particular regard to rural areas</p>	<p>Bus services are an important element of the baseline data, including for rural areas to avoid and minimise the risk of isolation.</p>
<p>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.</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>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).</p>	<p>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</p>
<p>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</p> <ul style="list-style-type: none"> · Prosperity for All: A Low Carbon Wales · Prosperity for All: A Climate Conscious Wales 	<p>Public Health Wales’ Long Term Strategy and Strategic Plan added. Review Contains Clean Air Action Plan and Connected Communities.</p>

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. 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 trafndiaeth 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 and 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

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<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>

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<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, townscapes 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>

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<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Key Stages in ISA Process</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Key Stages in WTS Process</div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #e67e22; color: white; padding: 10px; width: 200px; text-align: center;">ISA Scoping</div> <div style="font-size: 2em; color: gray;">↔</div> <div style="background-color: #27ae60; color: white; padding: 10px; width: 200px; text-align: center;">Evidence gathering and stakeholder engagement</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #e67e22; color: white; padding: 10px; width: 200px; text-align: center;">ISA of WTS Options</div> <div style="font-size: 2em; color: gray;">↔</div> <div style="background-color: #27ae60; color: white; padding: 10px; width: 200px; text-align: center;">Develop and consult on main issues, options and preferred option</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #e67e22; color: white; padding: 10px; width: 200px; text-align: center;">ISA of Draft and Final WTS</div> <div style="font-size: 2em; color: gray;">↔</div> <div style="background-color: #27ae60; color: white; padding: 10px; width: 200px; text-align: center;">Prepare Draft WTS and consultation</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #e67e22; color: white; padding: 10px; width: 200px; text-align: center;">Monitor Significant Effects</div> <div style="font-size: 2em; color: gray;">↔</div> <div style="background-color: #27ae60; color: white; padding: 10px; width: 200px; text-align: center;">Prepare Final WTS for Assembly consideration</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #e67e22; color: white; padding: 10px; width: 200px; text-align: center;">Monitor Significant Effects</div> <div style="font-size: 2em; color: gray;">↔</div> <div style="background-color: #27ae60; color: white; padding: 10px; width: 200px; text-align: center;">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 a 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>

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<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>

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<p>Well-being goal 3: A healthier Wales and a more equal Wales</p> <p>We are not clear why Well-being goals 3 & 4 have been merged for the purpose of this scoping report. This seems counter-intuitive; the seven well-being goals are central to Welsh government policy, and goals 3 & 4 are quite distinct.</p> <p>In terms of the 'key issues' column:</p> <ul style="list-style-type: none"> · There needs to be a clear acknowledgement that 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. · All of the above impacts fall disproportionately on people from lower income or other disadvantaged groups, i.e. they all contribute to the issue of health inequalities. At present, air pollution, noise and "road accidents" are mentioned in the third bullet-point, noise reappears in the 11th and 15th bullet-points, while the 10th bullet-point acknowledges that road injuries disproportionately affect young people (though it fails to identify other groups who are also disproportionately affected). Physical inactivity and the isolation effects of road traffic danger are not mentioned at all, and there is a failure to recognise the health inequalities aspects of any of these impacts. <p>The 'opportunities' column then needs to highlight:</p> <ul style="list-style-type: none"> · The role of policies to boost active travel in addressing all of these issues, boosting physical activity, reducing pollution, noise, road injuries and the isolation impacts of road danger. · The opportunities to tackle inequalities by focusing active travel measures in areas of deprivation, thereby tackling ill-health, pollution, road danger and noise in areas where they are particularly acute, while boosting access to employment, education or training, recreational and social opportunities, and local services (including healthcare) in areas where they are most needed. <p>Well-being goal 4: A Wales of cohesive communities</p> <p>As noted under the previous well-being goal, fear of road danger limits people's freedom of movement, particularly among more vulnerable groups such as older people or people with movement, sensory or indeed learning disabilities. However it also limits quality of life more generally. Studies conducted in the USA, by Appleyard and Lintel (1969), and replicated in Bristol by Hart and Parkhurst (2011), have shown</p>	<p>Comment noted.</p> <p>Agree, comment noted</p> <p>Added impacts of road transport</p> <p>Comment noted</p> <p>Opportunities added</p> <p>Agree, comment noted</p>

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<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>

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<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>	<p>Support noted</p>
<p>Yes, the key sustainability issues have been identified</p>	<p>Support noted</p>
<p>We welcome the comprehensive summary of the key issues and opportunities that the ISA should consider</p>	<p>Support noted</p>
<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. The current pandemic now also needs consideration in regard the wider "sustainability" context</p>	<p>Support and comment noted</p>
<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>Support and comment noted</p> <p>Nature Recovery action plan added</p> <p>Comment noted</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>	

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<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>

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<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</p> <ul style="list-style-type: none"> • 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>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>

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<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 The consultation document acknowledges the opportunities to promote the Welsh language in the proposed Transport Strategy. Recommendation 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>
<p>Q3 Are there any particular topics or geographical areas of specific concern to you or your organisation?</p>	
<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>

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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.

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<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. The statement “extraction can be very damaging to the natural and human environment” has been removed by the author</p>

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<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>

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<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>

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<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>

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<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>

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<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>

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<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>

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<p>Welsh version Mae angen gwella gwasanaethau trafniadaeth mewn ardaloedd gwledig sydd â dwysedd uchel o siaradwyr Cymraeg. Byddai cysylltiadau trafniadaeth 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 trafniadaeth yng Nghymru hybu mynediad rhwydd at ganolfannau addysg, gwasanaethau, gweithleoedd a gweithgareddau cymdeithasol yn y Gymraeg ar draws Cymru</p> <p>English translated version 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. 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. <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>

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<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 focused 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. 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>

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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

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<p>'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</p>	<p>Agree, language amended to more pro-active words</p>
<p>Yes, the issue of minerals, mineral products and minerals safeguarding should be appropriately considered in the development of objectives, as outlined above</p>	<p>Comment noted</p>
<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>

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<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>

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<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>

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<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>

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<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>

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<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>

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<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</p> <p>This is a key objective and we are glad it is first on this list. In terms of the questions, we believe that the first question should be broadened out to recognise that the WTS should contribute towards an improvement in access to health and social care services for all who face barriers to accessing transport, including for those living in isolated/rural areas. The aim here should be for services to consider transport links early in the planning process and engage operators to ensure individuals can travel to services without reliance on the private car. Solutions might include community or voluntary car schemes which allow demand-responsive travel.</p> <p>Objective 2. To create the conditions within which an improvement in social cohesion and equality can be achieved</p> <p>Whilst background and circumstances are detailed in the questions provided, we would like to see location listed also given the high proportion of rural and semi-rural communities poorly supported by the transport network. Rural may be considered as ‘circumstances’ but we would like to see it explicitly referenced to ensure absolute clarity.</p> <p>It is also worth pointing out that community transport is already creating conditions for social cohesion and equality to be achieved and so a good way to support this would be to create some stability for the sector which would allow operators to focus on the future and identify opportunities for growth.</p> <p>Objective 3. To support sustainable economic growth and diversity</p> <p>Question - Support and encourage third sector activities? Reference to the third sector is welcome and indeed a critical part of the transport strategy. It is unclear from the document what this means though and so impossible to tell if we support it or if it is included in the best place. Our instinct would be to say that to include support for third sector exclusively under the objective ‘to support sustainable economic growth and diversity’ is to misunderstand the role of the third sector in the overall transport sector. Further work needs to be done to understand the third sector’s role in delivering the Wales Transport Strategy and ensuring this is clear in all supporting documents.</p> <p>In terms of economic benefits of the sector, we know that investment in community transport delivers outstanding value for money as well as savings for the public sector through a reduction in missed appointments and support for people living independently which removes pressure for social services. We further believe that there are opportunities for not-for-profit transport solutions and would like to see this further emphasized in the strategy.</p>	<p>Agree, community transport and rural/urban inequalities added.</p> <p>Agree, further detail on the Third Sector and community transport added.</p>

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<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>

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<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 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>

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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

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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

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<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>

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<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

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<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 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>

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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>

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<p>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.</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>
<p>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</p>	<p>Comment noted</p>
<p>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</p>	<p>Comment noted</p>
<p>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</p>	<p>Comment noted</p>
<p>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.</p>	<p>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>
<p>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</p>	<p>Comment noted</p>

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	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: 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>

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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

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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>

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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

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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.

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<p>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?</p>	<p>This is a comment for the WTS itself, not the ISA specifically.</p>
<p>Demographics. The WTS should be forward looking, we need to plan for the future</p>	<p>This is a comment for the WTS itself, not the ISA specifically.</p>
<p>As Q4 and Q8, above.</p> <p>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</p>	<p>Comment noted</p>
<p>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</p>	<p>This is not within the scope of the ISA.</p>
<p>Please see comments above in relation to the inclusion of National Parks and their contribution toward national health and well-being.</p> <p>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</p>	<p>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>
<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>Comment noted</p>

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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>

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<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>

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<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>

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<ul style="list-style-type: none"> • Table 4.1: Wellbeing Goal 2 A Resilient Wales: In the 'Climate and Flood Risk Opportunities' section, local authorities (especially lead local flood authorities) should be identified in addition to NRW as it is likely surface water and localised flood risks could be reduced by working collaboratively. <p>Coastal Erosion</p> <ul style="list-style-type: none"> • Table 4.1: Coastal erosion is a risk to transport infrastructure which can cause lengthy disruption but isn't specifically mentioned. <p>Landscape/Townscape Character</p> <ul style="list-style-type: none"> • Table 4.1 Key Sustainability Issues and Opportunities: We recommend the addition to page 31, 'Landscapes and Townscapes Character'. <p>National Parks and Areas of Outstanding Natural Beauty</p> <ul style="list-style-type: none"> • National Parks and Areas of Outstanding Natural Beauty (AONB) are internationally recognised Designated Landscapes and cover 25% of Wales. In these areas Natural Beauty must be conserved and enhanced, and their special qualities protected. The settings of these areas is also important as a consideration in this WTS. Tranquillity is a special quality of many Designated Landscapes and is important for wellbeing in the wider landscape. The ISA should consider how it can reduce the negative impacts of transport on tranquillity in its objectives. <p>Material Assets</p> <ul style="list-style-type: none"> • We note that Material Assets are divided throughout the ISA by wellbeing goals. Nationally significant access routes such as our three National Trails and Wales Coast Path are important wellbeing assets, impacts upon which should be considered in the ISA. <p>Ecosystem Resilience</p> <ul style="list-style-type: none"> • NRW's recently published CuRve atlas includes a number of datasets useful for the consideration of ecosystem resilience more generally and combines these to give a relative assessment of ecosystem attributes (diversity, extent, condition and connectivity) across terrestrial Wales (available for download via Lle). Further information is available on request. Consideration of the atlas as part of appendix B would be welcomed. 	<p>Agree, local authorities added</p> <p>Agree, coastal erosion added</p> <p>Agree, National Parks added to Landscape/Townscape</p>
<p>Welsh version: Rydych yn cyfeirio at y ffynonellau data a ddefnyddiwyd yn Atodiad B. At hynny, argymhellwn eich bod yn cyfeirio at yr adroddiadau perthnasol canlynol:</p> <p>Adroddiad y Grŵp Gorchwyl a Gorffen ar yr Iaith Gymraeg a Datblygu Economaidd i Weinidog yr Economi, Gwyddoniaeth a Thrafnidiaeth</p>	<p>These documents have been included in Appendix B as appropriate.</p>

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<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.comisiynyddygyymraeg.cymru/Cymraeg/Rhestr%20Cyhoeddiadau/20191115%20LL%20C%20Ymateb%20i%20ymgyngoriad%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.comisiynyddygyymraeg.cymru/English/Publications%20List/20191115%20LL%20S%20Ymateb%20i%20ymgyngoriad%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>

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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.

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<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. 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>

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<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>

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<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>	

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<p>John Mather, Secretary, ICE North Wales Branch Institution of Civil Engineers (ICE) 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. 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 as well as</p>	<p>Comment noted</p>

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<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. 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. 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>

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<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>

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	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 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. Table 3.2 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. Section 4.3.1 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>

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<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 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>

APPENDIX D

Detailed Assessment Results

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1 Summary of the B1 Compatibility Tests

The WTS Vision and Ambitions have been tested for their compatibility with each ISA Objective, as per the following key:

Compatible	
Incompatible	
Neutral	
Uncertain	

Table 1-1: Compatibility scores recorded during the B1 Compatibility Tests

WTS	1. Health	2. Cohesion & equality	3. Economic development	4. Welsh culture	5. Welsh language	6. GHG emissions	7. Climate change resilience	8. Air quality	9. Landscape & townscapes	10. Heritage	11. Ecosystems	12. Natural Resources	13. Tranquility
Vision													
Ambitions													
1. Good for People and Communities													
2. Good for the Environment													
3. Good for the Economy and Places in Wales													
4. Good for Welsh Language and Culture													

2 WTS Vision – B1 Compatibility Test

The WTS presents the following Vision:

“Our vision is for

An accessible and sustainable transport system.

What does this mean?

- *‘Accessible’ – means a transport system that is accessible to all because transport providers are taking action to address the barriers that can prevent people using transport including physical, financial and attitudinal barriers.*
- *‘Sustainable’ – means a transport system that is good for people and communities, good for the environment, good for the economy and places and good for Welsh language and culture and meets the wider national well-being goals.*

‘Transport system’ – means transport infrastructure (such as footpaths, cycle paths, roads and rail) as well as transport services (such as aviation, public transport, and logistics). The wider system encompasses transport providers (the organisations involved in delivering transport services) as well as transport governance (the system of legislation, regulation, and governance) that supports these.”

This Vision has been tested for its compatibility with each ISA Objective using the following key:

Compatible	
Incompatible	
Neutral	
Uncertain	

ISA Objective	Score	Compatibility Test – WTS Vision
<p>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</p>		<p>Compatible – a transport system which is good for people and the environment would help to improve well-being and is compatible with the Objective.</p> <p>In making public transport accessible for all, more people would be able to use public transport for accessing the services they need, which includes health and social care facilities, exercise/leisure opportunities and outdoor semi-natural habitats. This could help to combat health inequalities, as residents in more deprived areas and the elderly are generally more likely to be relying on public transport for accessing services. An increase in public transport options and a greater uptake in use could contribute towards combatting the causes of social isolation, as public transport generally allows for more social cohesion and community interactions than other forms of transport.</p> <p>A transport system that is good for the environment would include more lower-emission options, which would help to combat adverse effects of air pollution on human health. It would also lead to more and enhanced active travel opportunities that enable an increase in rates of walking and cycling (for both leisure and commuting purposes, including for children travelling to school and back), thereby providing benefits to both physical and mental health for all people.</p> <p>A sustainable system that is good for people and communities would need to reduce danger from road traffic as well as driver stress, such as by reducing traffic flow through town centres and residential areas.</p>
<p>2. To create the conditions within which an improvement in social cohesion and equality can be achieved</p>		<p>Compatible – a transport system that is good for communities would aim to improve social cohesion and so it clearly demonstrates compatibility with the Objective.</p> <p>A system which is accessible for, and utilised by, a diverse range of people across society irrespective of background, gender, age, and disability would help to eradicate inequalities of access and to improve social cohesion. Travel options that are more affordable are likely to be particularly beneficial for residents in more deprived areas of Wales who rely on public transport more. Breaking down attitudinal barriers could also encourage an increase in public transport use by more affluent residents. Combined, this could lead to greater social cohesion and improved equality of opportunity and access, such as more equal access to education opportunities.</p>
<p>3. To support sustainable economic development and diversity</p>		<p>Compatible – compatibility with this ISA Objective is clearly demonstrated through a transport system that is good for the economy and is accessible for all, improving diversity.</p> <p>In making public transport accessible for all, more people could have improved access to a broader range of employment, education and training opportunities. This would help to facilitate more equitable access across society and reduced economic inequalities.</p>
<p>4. To protect and promote Welsh culture and improve access to cultural and recreational spaces</p>		<p>Compatible – compatibility with the Objective is clearly demonstrated through the inclusion of a transport system which is good for Welsh language and culture.</p> <p>A better-connected transport system would be likely to enhance the accessibility of recreational spaces and cultural and heritage assets, and the Vision aims to do this in a sustainable way for people of all communities. This could lead to increased numbers of residents and tourists visiting cultural and recreational places, thereby leading to increased income and new investment that helps to enhance their economic viability going forwards.</p>
<p>5. To encourage the protection and promotion of the Welsh Language</p>		<p>Compatible – the Vision seeks to ensure that there is a transport system that is good for Welsh language and culture, which clearly is compatible with the Objective.</p> <p>A system that is accessible for all must account for accessibility for Welsh-speaking people, such as through the inclusion of the Welsh language in all station announcements, road signs, and signs within bus and rail stations. Not only would this help to ensure that Welsh speakers have equal access to the transport system, but it could also help to promote the language and to encourage its regular use. An enhanced public transport system could also improve the accessibility of educational facilities, including Welsh-Medium education facilities.</p>

ISA Objective	Score	Compatibility Test – WTS Vision
6. To reduce greenhouse gas emissions from transport	?	<p>Uncertain – the Vision is largely compatible with this Objective due to the focus on enhanced infrastructure for low-emission modes of travel, such as public and active transport, as part of a transport system which is good for people and the environment. However, there is a risk of this being undermined by a continued commitment to aviation.</p> <p>Increases in the rate of walking, cycling and public transport would help to reduce carbon emissions associated with the transport sector in Wales. It is likely that this would be particularly effective in urban areas where opportunities for walking, cycling, or using public transport are generally greater than they are in more rural areas. In rural areas, local people often need to travel longer distances to access certain key services and amenities and typically have very limited walking, cycling or public transport options for doing so.</p> <p>Freight logistics are essential to the operation of Wales' economy. However, freight vehicles can be particularly large sources of GHG emissions. Improvements to the efficiency of freight movements could help to reduce these emissions.</p> <p>Aviation is an important part of Wales' transport sector and economy but is a significant source of GHG emissions. The Vision includes a reference to aviation and could potentially help to encourage more frequent use of airports and flight. There is uncertainty around the extent to which this may take place. Should people in Wales want or need to fly they may opt to travel to an airport in England should the services not be available in Wales, which would be less sustainable than them flying out of Wales. However, reducing GHG emissions from the aviation sector is going to be essential in order to successfully meet carbon budgets and so any increase in the scale of the aviation industry in Wales would conflict with this ISA Objective. Given the uncertainty around this, the overall compatibility with this ISA Objective is considered to be Uncertain.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The definition of the transport system could potentially demonstrate the hierarchy of preference, with low-carbon modes at the top. • Over half the GHG emissions from transport in Wales are caused by cars; low carbon vehicle infrastructure could be referred to.
7. To enable climate change resilience	✓	<p>Compatible – the Vision is compatible with this ISA Objective due to the inclusion of enhanced infrastructure for greener modes of travel, such as public and active transport, as part of a transport system which is good for people and the environment.</p> <p>Transport infrastructure with GI elements could help to more sustainably manage surface run off and reduce flood risk.</p> <p>The Vision encourages the use of greener modes of transports, such cycling, walking and public transport, instead of private cars. Subsequent reductions in GHG emissions could help to limit the effects of climate change on Wales.</p> <p>A system which is accessible for all is likely to recognise the inequalities experienced in relation to access to transport in extreme weather events, such as during heavy snowfall, and would help to tackle this.</p>
8. To protect and improve air quality	?	<p>Compatible – the Vision is broadly compatible with this Objective due to the inclusion of enhanced infrastructure for low-emission modes of travel, such as public and active transport, as part of a transport system which is good for people and the environment.</p> <p>Increase in the uptake of walking, cycling, and public transport could help to reduce air pollution associated with Wales' transport sector. The only potential conflict, as with ISA Objective 6, relates to the continued commitment to aviation, which is a significant source of air pollution. Achieving air quality improvement targets could therefore be made more difficult as a result of this.</p>
9. To protect and enhance the local distinctiveness of	✓	<p>Compatible – a transport system that is good for the environment and the Welsh culture is likely to be largely compatible with the Objective to protect and enhance local landscapes and townscapes.</p>

ISA Objective	Score	Compatibility Test – WTS Vision
our landscapes and townscapes		A transport system that is good for communities and for the Welsh culture would be designed in such a way as to preserve local townscape character. Furthermore, an increase in active transport and public transport (alongside better-connected systems) would help to reduce car use and subsequently reduce the effects of large volumes of road traffic (e.g. noise and visual intrusion), particularly in valued, remote landscapes, such as National Parks.
10. To promote the conservation and enhancement of heritage assets	✓	<p>Compatible – compatibility with the Objective is demonstrated through the inclusion of a transport system which is good for Welsh culture, which would aim to preserve historic assets.</p> <p>Some heritage assets may be transport assets themselves, such as historic bridges or railway stations; upgrading these in a historically sensitive way would simultaneously improve transport links whilst enhancing the heritage asset.</p> <p>New investment in existing transport infrastructure would be likely to provide opportunities for ensuring that transport infrastructure makes a positive contribution towards the setting of nearby heritage assets or historic areas.</p>
11. To promote the conservation and enhancement of biodiversity, geodiversity, and ecosystems	✓	<p>Compatible – although there is limited cross-over in this section, the Vision is compatible with this Objective through the inclusion of a sustainable transport system that is good for the environment.</p> <p>In aiming to be good for the environment, the Vision is likely to promote a design of transport infrastructure that would secure biodiversity benefits and conserve designated nature conservation sites. An increase in active travel and public transport, i.e. low-emission modes of travel, would improve air quality which may benefit biodiversity and ecosystems, and reduce habitat disturbance caused by cars. However whilst the Vision would help to reduce the existing adverse effects of the transport system on biodiversity, it is unlikely it would lead to net gains.</p>
12. To ensure the sustainable use of natural resources	✓	<p>Compatible – although there is limited cross-over in this section, the Vision is compatible with this Objective through the inclusion of a sustainable transport system that is good for the environment.</p> <p>Enhancements to active travel and public transport would be likely to have a positive impact on reducing natural resource usage in private cars. A sustainable system should encourage the use of recycled and sustainable materials in the development of transport infrastructure where possible.</p>
13. To enable the protection of tranquil areas and prevention of noise and light pollution	✓	<p>Compatible – in being good for the environment, people and communities, the Vision must aim for a transport system that protects tranquil areas and is therefore compatible with this ISA Objective.</p> <p>For the benefit of people and communities, there would need to be a reduction in, or mitigation of, noise and visual disturbances. Fewer private cars in use due to the increase in rates of active travel and public transport would be likely to lead to some positive effects on the protection of tranquil areas due to decreased disturbances.</p>

3 WTS Ambitions – B1 Compatibility Tests

The Ambitions in the WTS have been tested for their compatibility with each ISA Objective using the following key:

Compatible	
Incompatible	
Neutral	
Uncertain	

Chapter 2: Good for People and Communities

ISA Objective	Score	Compatibility Test – Chapter 2: Good for People and Communities
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		Compatible – this Ambition seeks to improve the uptake of walking and cycling rates. Cycling to work is effective at delivering positive health incomes; various studies and datasets show it to be significantly better for health compared to walking and it can significantly reduce obesity/heart disease/premature death arising from sedentary lifestyles. Only around 6% of people in Wales cycle at least once a week for active travel and so this Ambition could help to deliver positive outcomes for people across Wales. This Ambition also recognizes the need to improve the safety of transport infrastructure. The recent pandemic and lockdowns have reduced people’s confidence in using public transport. Making public transport safer and more welcoming would help to combat this.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved		Compatible – this Ambition seeks to contribute towards a more equal Wales. It would do so by enhancing the safety of public transport and making it more welcoming. It would also achieve this by helping to combat attitudinal, digital, financial, and physical barriers to public transport and active travel links, which would help to combat isolation and inequalities of access. It is somewhat uncertain the extent to which this would be achievable in some of the most isolated rural areas where existing public transport opportunities are severely limited.
3. To support sustainable economic development and diversity		Compatible – more equal access to transport would mean more people, and a more diverse range of people, are able to access employment opportunities and economic areas, having a positive impact on development and the economy. Improved transport infrastructure would also be likely to provide a boost to Wales’ tourism industry.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces		Compatible – more equal access to active travel routes and public transport would improve the accessibility of cultural and recreational spaces.

ISA Objective	Score	Compatibility Test – Chapter 2: Good for People and Communities
5. To encourage the protection and promotion of the Welsh Language		Compatible – the focus is on giving all groups access to public transport and making them feel welcome; this includes Welsh speakers so could bring about a wider use of the Welsh language within the transport sector. It is assumed that 'Welsh language', where it is a barrier to people's access (e.g. Welsh speakers not being comfortable using public transport due to communication being in English), falls within 'physical, economic, social and attitudinal barriers' and so combatting these would help to enhance the accessibility of more sustainable travel modes for Welsh speakers.
6. To reduce greenhouse gas emissions from transport		Compatible –an increase in walking and cycling, coupled with an increase in the usage of public transport, would lead to a decrease in GHG emissions associated with the transport sector.
7. To enable climate change resilience		Neutral
8. To protect and improve air quality		Compatible – an increase in walking and cycling, coupled with an increase in the usage of public transport, would lead to a decrease in air pollution associated with the transport sector.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes		Neutral
10.To promote the conservation and enhancement of heritage assets		Neutral
11.To promote the conservation and enhancement of biodiversity and geodiversity		Neutral
12.To ensure the sustainable use of natural resources		Neutral
13.To enable the protection of tranquil areas and prevention of noise and light pollution		Neutral

Chapter 2: Good for the Environment

ISA Objective	Score	Compatibility Test – Chapter 2: Good for the Environment
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		Compatible – improvements to the natural environment are likely to be of benefit to people's physical and mental well-being. This could be as a result of improved air quality, enhanced access to open space and semi-natural habitats, and health benefits associated with higher rates of walking/cycling.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved		Neutral
3. To support sustainable economic development and diversity		Compatible – reduced wastage and sustainable use of current transport infrastructure will likely reduce government spend in the transport infrastructure. Enhancements to the natural environment would benefit Wales' tourism industry.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces		Compatible – the conservation and enhancement of the natural environment could potentially benefit recreational and cultural spaces, particularly those outdoors.
5. To encourage the protection and promotion of the Welsh Language		Neutral
6. To reduce greenhouse gas emissions from transport		Compatible – this Ambition seeks to ensure that there is a significant reduction in GHG emissions associated with Wales' transport sector. Recommendation: This Ambition could specifically refer to Wales' carbon budgets when referring to 'significant' reductions in GHG emissions.
7. To enable climate change resilience		Compatible – by improving sustainable land management and future-proofing existing infrastructure, the Welsh transport system will help to make itself more resilient to the effects of climate change. In aiming for a shift towards zero- and low-carbon transport options, the impacts of climate change may also be reduced.
8. To protect and improve air quality		Compatible – transport is clearly outlined as a significant contributor to air quality issues, along with options to improve them such as active travel and electric vehicle use which will reduce emissions.

ISA Objective	Score	Compatibility Test – Chapter 2: Good for the Environment
9. To protect and enhance the local distinctiveness of our landscapes and townscapes		Compatible – improvements to and preservation of the environment could help to protect and enhance natural landscapes.
10. To promote the conservation and enhancement of heritage assets		Compatible – the conservation and enhancement of the natural environment could potentially benefit sensitive heritage assets and historic areas, such as by enhancing their setting or screening them from the visual impacts of new development. It would also be likely to help benefit historic landscapes.
11. To promote the conservation and enhancement of biodiversity and geodiversity		Compatible – through more sustainable land management strategies and incorporating ecosystem resilience into transport operations there will likely be a positive effect on biodiversity and habitat protection. This Ambition specifically seeks to ensure that transport operations protect and enhance biodiversity and soils.
12. To ensure the sustainable use of natural resources		Compatible – natural resources can be used more sustainably through increasing renewable energy opportunities. This Ambition would be likely to help to reduce the consumption of natural resources by reducing waste and increasing the uptake of more efficient forms of transport.
13. To enable the protection of tranquil areas and prevention of noise and light pollution		Compatible – more sustainable land management strategies are likely to have a positive impact on tranquil areas. A reduction in car travel and the electrification of vehicles will likely reduce noise and visual disturbances and pollution associated with transport.

Chapter 2: Good for the Economy and Places in Wales

ISA Objective	Score	Compatibility Test – Chapter 2: Good for places and the economy
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		Compatible – through increasing access to leisure and services, such as health and social care facilities, there would be an improvement in health and well-being. Access to work and training is also proven to be beneficial to people’s health and well-being.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved		Compatible – increasing access to work, leisure, education, and services for all communities would increase social cohesion and help to combat inequality.
3. To support sustainable economic development and diversity		Compatible – through a more sustainable supply chain, increased access to work and education, and supporting innovations in the transport sector, the Welsh economy will likely be stimulated and able to grow and diversify.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces		Compatible – increased access to leisure will conclude better access to cultural and recreational spaces, particularly in rural areas.
5. To encourage the protection and promotion of the Welsh Language		Neutral
6. To reduce greenhouse gas emissions from transport		Compatible – by supporting people and businesses to choose more sustainable transport options, including the development of technological and digital innovations which allow people to work remotely, there will likely be less use of private cars, decreasing GHG emissions.
7. To enable climate change resilience		Neutral
8. To protect and improve air quality		Compatible – tackling congestion will improve local air quality, and an increase in sustainable transport modes will reduce emissions.
9. To protect and enhance the local distinctiveness of		Neutral

ISA Objective	Score	Compatibility Test – Chapter 2: Good for places and the economy
our landscapes and townscapes		
10. To promote the conservation and enhancement of heritage assets	<input type="radio"/>	Neutral
11. To promote the conservation and enhancement of biodiversity and geodiversity	<input type="radio"/>	Neutral
12. To ensure the sustainable use of natural resources	<input checked="" type="checkbox"/>	Compatible – by supporting the use of a more sustainable Welsh supply chain, there will likely be less wastage and an increase in sustainable options that do not deplete natural resources.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	<input type="radio"/>	Neutral

Chapter 2: Good for Welsh Culture and Language

ISA Objective	Score	Compatibility Test – Chapter 2: Good for Welsh Culture and Language
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		Compatible - cultural spaces and events can be highly beneficial to people's mental health and well-being. This Ambition seeks to ensure that such spaces are accessible and protected.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved		Compatible – this Ambition seeks to enhance cohesion for Welsh-speaking communities and to provide access to sporting and cultural events for a wide range of people, thereby improving the equality of opportunity for all.
3. To support sustainable economic development and diversity		Compatible – through improving ease of access to cultural events and historic environment assets, footfall and subsequently spending would likely increase in these nearby centres and high streets. Large cultural events are also an important part of Wales' economy.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces		Compatible – there are clear steps being sought to promote the Welsh culture and improve access to a range of events and recreational areas and activities.
5. To encourage the protection and promotion of the Welsh Language		Compatible – by providing bilingual services and encouraging transport providers to meet Welsh language standards, the transport sector would help to protect and promote the Welsh language.
6. To reduce greenhouse gas emissions from transport		Neutral
7. To enable climate change resilience		Neutral
8. To protect and improve air quality		Neutral
9. To protect and enhance the local distinctiveness of our landscapes and townscapes		Compatible – through the preservation and enhancement of the historic environment and cultural heritage, the traditional townscapes of Wales are more likely to be protected and promoted.

ISA Objective	Score	Compatibility Test – Chapter 2: Good for Welsh Culture and Language
10. To promote the conservation and enhancement of heritage assets	✓	Compatible – in contributing to a Wales of vibrant culture, heritage assets, including Wales' transport heritage, heritage assets and historic areas would be likely to be protected and enhanced.
11. To promote the conservation and enhancement of biodiversity and geodiversity	<input type="radio"/>	Neutral
12. To ensure the sustainable use of natural resources	<input type="radio"/>	Neutral
13. To enable the protection of tranquil areas and prevention of noise and light pollution	<input type="radio"/>	Neutral

4 WTS Priorities – Detailed Appraisals

Priority 1: Planning for better connectivity

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
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	+	Long-term Low	<p>This priority is highly compatible with ISA Objective 1 and the successful achievement of this priority would make a significant positive contribution towards this ISA Objective. However, there is uncertainty around the extent to which it would be achievable using the measures set out in the WTS and, overall, only a minor reduction in the need for car-use is likely.</p> <p>Reducing the need to travel by private car would be likely to help deliver improvements to air quality and noise from traffic, with subsequent benefits to people’s physical and mental health and well-being. It would be likely to lead to higher rates of walking and cycling, which would be of significant benefit to people’s health and well-being. This is set out in the priority, seeking to plan for transport that can reduce sedentary lifestyles. Although not specified, changing the pattern of demand, could lead to a reduction in road building, and therefore, a reduction in the potential for severance from new road building, as well as reducing traffic levels on existing roads, that may form barriers to community interaction.</p> <p>More efficient transport networks with better integrated active travel and public transport links could help to reduce the time it takes to reach places people need to go. This would allow people to better spend their time doing what they want to do, rather than commuting for example, with likely benefits to their mental well-being.</p> <p>The priority provides future proofing measures, and seeks to align with Future Wales, which could support the integration of new developments into the transport system and provisioning them near to essential services, so that active travel can be promoted and community transport needs are met.</p> <p>Ensuring that people are situated in proximity to the services they need would help to ensure that they have good access to necessary health services including hospitals and GP services, including Welsh medium services, for people who cannot rely on private car use e.g. children and elderly people, which could help to improve the equality of access to health services.</p> <p>The priority accepts that people in rural areas are less able to travel via modes other than the private car. This is the case for many trips including for work, personal, business and leisure trips. However instances of walking and cycling for leisure purposes may be more prevalent. It is probable that through planning better physical and digital connectivity, people in rural areas will have increased options of access routes to health and social facilities.</p> <p>By designing policies based around reducing the amount of vehicles on the road and promoting working from home, it is considerable that there would be a reduction in driver stress and road traffic accidents, because the frequency of vehicles on the road will be lessened, however there is a high degree of uncertainty surrounding this. This would also</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
			<p>have no distinction as to the type of groups who the risk would be lowered for, it would be an overall reduction in the risk due to statistics.</p> <p>The encouragement for people to work from home would help to reduce car-use, but there is uncertainty around the potential health impacts of this. For many people, walking or cycling to and from work is a key opportunity for exercise. Working alone at home could also lead to some detrimental effects on people's mental well-being, as a result of isolation.</p> <p>The future impacts of COVID-19 and potential other future pandemics will affect the future of the transport system e.g. more spread out seating, hand sanitiser stations, mask wearing etc. And whilst private vehicle travel is much safer, steps can be taken to ensure the safety of travellers on public transport.</p> <p>By improving active travel, the priority could encourage more people to access the open spaces they have available to them e.g. public parks, accessing these spaces and community areas will help to build stronger communities, helping to reduce the risk of loneliness and isolation. If improvements are brought to more rural transport services then these would also extend to the access of the countryside and open spaces for people who live in city and town centres, however there is a high degree of uncertainty around this.</p>
<p>2. To create the conditions within which an improvement in social cohesion and equality can be achieved</p>	+	<p>Long-term Low</p>	<p>This priority is highly compatible with ISA Objective 2 and the successful achievement of this priority would make a significant positive contribution towards this ISA Objective. However, there is uncertainty around the extent to which it would be achievable using the measures set out in the WTS and, overall, only a minor reduction in the need for car-use is likely. However, as a supportive document to 'Future Wales', in combination, significant benefits could be achieved, particularly in relation to new public sector developments.</p> <p>Improvements to public transport could help to address inequalities in access to bus and rail and ensure that public transport is equitable.</p> <p>By improving access between and within communities the priority may lead to an increase in the rates of satisfaction of the people within those communities, as there may be more options for essential and recreational services. This increase in accessibility could help to create equality of access for all people to health care facilities, employment opportunities and education services, helping to reduce inequalities in all aspects. However there is a high degree of uncertainty surrounding this.</p> <p>It appears unlikely that this priority would address the limited access to public transport for people in rural locations, and they will be required to continue relying on car use. However, it is probable that through planning better physical and digital connectivity, people in rural areas will have increased options of access routes to community facilities.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The WTS could usefully reference the Social Model of Disability, when focussing on improving public transport.
<p>3. To support sustainable economic</p>	++	<p>Medium to Long-term</p>	<p>This priority is compatible with ISA Objective 3, due to the focus on accessibility. Maximising the potential of existing transport infrastructure, such as ports and railway stations, as sites for investment and growth, could lead to positive effects against this objective. Further, encouraging the development of new 'work hubs' through initiatives, such as</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
development and diversity		Medium	<p>Transforming Towns, as well as supporting the initiatives in Future Wales, could lead to significant positive cumulative effects, in the longer term.</p> <p>Further benefits could be achieved through reducing congestion and a national digitisation strategy.</p> <p>This could lead to increased access to jobs, helping to reduce unemployment in Wales, by increasing access within and to different communities and areas, it will increase the amount of employment opportunities accessible to people of different communities and likely help to reduce employment inequality within Wales.</p> <p>There is also plenty of scope for development with this integrated approach – “Make sure that new developments have access to public transport, integrate provision for walking and cycling and take account of transport innovations such as charging and electrification”, and the promotion of economic flexibility “encourage employers to facilitate homeworking for as many workers as possible and invest in new work hubs through initiatives such as Transforming Towns”.</p> <p>The priority seeks to ensure that land is set aside for future transport hubs (e.g. around stations), but it is uncertain how this would be implemented, as development land in these areas is at a premium.</p> <p>The priority encourages the reduction in need to travel for work by helping to promote working from home through improved digital connectivity and encouraging employer benefits. This will also help to diversify the employee market as location will have less of a bearing on job opportunities; meaning that it may create an employment opportunity equality between rural and urban areas, however there is a high degree of uncertainty surrounding this.</p> <p>Through the increased access and increased equity of access, it is likely that underperforming areas will see growth, due to more employment opportunities for those living in these areas, there is also a level of encouragement towards inward investment and future proofing of the transport system and facilities, however there is a high degree of uncertainty surrounding this.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Employers should be encouraged to offer working from home as an option but maintain flexibility for people wishing to continue in a more formal work environment. • Employers should be encouraged to provide cycle-to-work schemes. particularly where places of work are highly accessible via walking and cycling as well as public transport. Car-parking spaces at places of work, where they are highly accessible via active travel and public transport, could be discouraged due to the availability of other means. • Promoting sustainable travel options such as active travel will likely extend to the tourist industry, this would mean appropriate signage would be required to direct active travel route users towards tourist attractions. • The resilience and growth of the current rail and freight network provisioned by this priority will mean the protection of the internal movement of goods, however provision should be made for international travel via ports and airports. • Detail with regards to setting aside land for future transport hub should be included, or a cross-reference added to how this may be implemented.

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
			<ul style="list-style-type: none"> There is not any specific indication of any support given to the enhancements of the rural economy or diversification.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 4 as it states “Ensure that all future public sector developments are accessible by public transport and active travel”, but there is no mention specifically of promoting access to cultural spaces, even though it may be implied and included in “public sector developments”.</p> <p>A potential knock-on effect of reduced vehicles on the road is that the setting of many cultural heritage sites and assets will be improved due to less noise and air pollution from that source, however there is a high degree of uncertainty surrounding this.</p> <p>During peak times, better public transport links and services will likely put less stress on tourist and the travel network as there will be a higher frequency of links and an improved quality of facilities leading to an all-round better experience. Better active travel routes will also help to alleviate the stress on the transport network due to tourists allowing for easier management in tourist areas.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> In addition to public sector developments, there is potential scope to require/encourage/recommend that cultural spaces and places in Wales are accessible via active travel and public transport
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	<p>The increase in sustainable travel access to all facilities, could include Welsh language education facilities, however this is not specified. As the priority seeks to support the implementation of the measures in Future Wales, some indirect positive effects on the Welsh Language may result.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Greater focus could be given to non-English communities (other than Welsh communities), who might have their own challenges in accessing public transport.
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 6, as it states; “<i>We need to drive the behaviour change that reduces car use and greenhouse gas emissions</i>” – by reducing the need for private car and vehicle travel, there will be less greenhouse gas and CO₂ emissions from the transport sector.</p> <p>Under priority 1, cleaner technology for transport is promoted including the use of electric vehicles for public transport and setting aside land for future transport hubs.</p> <p>Promoting working from home will reduce the need for travelling and reduce congestion during peak times. Supporting the implementation of Future Wales, with regards to the development of sustainable places, could also lead to positive effects. However, effects are considered to be minor, due to the lack of specific implementable measures on a national scale, which could have wide ranging effects.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
			<p>Recommendations:</p> <ul style="list-style-type: none"> • Showing leadership could potentially include efforts to limit parking provision at public sector developments, and to include high-quality and secure cycle storage. • More detail could be included on walking and cycling links – ideally, these would be safe and attractive routes that encourage people to walk or cycle. They would be of high biodiversity value that link with the wider GI network, which provide natural benefits to all spheres of sustainability including enhancing the public realm (social and economic benefits); health benefits; biodiversity and visual amenity value; flood defence; air quality; soil enrichment; wildlife corridors. • Potential commitment to provide financial, or other, support to community cycling groups. These can be particularly active organisations and there are examples of instances where significant efforts are being made to change people's behaviour around cycling. • The WTS could potentially commit to subsidising purchases of electric vehicles. This could be particularly effective for those who have limited access to public transport or active travel links, or where reliance on the private car may be greater, such as in rural areas. • Energy efficiency within public transport infrastructure is not mentioned but could provide further traction towards zero energy sources/zero carbon.
7. To enable climate change resilience	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 7, as it states; “Make sure that new developments have access to public transport, integrate provision for walking and cycling and take account of transport innovations such as charging and electrification”, by investing in more sustainable forms of transport and technology, it will help to future proof the Welsh transport system.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • More detail should be given on incorporating GI into the transport network and providing ecosystem resilience and helping to reduce climate vulnerability.
8. To protect and improve air quality	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 8, as reduced use of private cars and a reduction of vehicles on the road in general will reduce emissions and therefore increase the air quality of Wales. Limiting car use will help to reduce GHG emissions, but also other forms of pollution e.g. atmospheric nitrogen deposition.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • There is scope for the WTS to focus on reducing car use on areas where air quality is particularly bad, such as at and near AQMAs.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 9, as less access by cars and the importance of urban areas being made more pedestrian friendly will provide a more distinctive townscape. Reduced investment in road development may also imply that more landscapes will be protected.</p> <p>There will also likely be knock-on on effects of reduced noise and air pollution from traffic, creating a more pleasant setting for landscape and townscape features, as well as tranquil areas.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
			Through setting aside land around stations for development and planning for logistic hubs and shared solutions, it is likely that this will reduce the spread of infrastructure throughout a city or town, meaning there will likely be less chance for impact upon the townscape.
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	<p>This could be considered compatible in a very minor way as the reduction of road traffic will likely lead to improvements to air quality and a reduction to noise disturbance, meaning that the setting of these conservation and heritage assets will be improved, however there is a high degree of uncertainty associated with this.</p> <p>Increasing access by active travel and public transport links could also lead to an increase of visitors to conservation and heritage areas, leading to increased investment, however there is an even higher degree of uncertainty associated with this.</p>
11. To promote the conservation and enhancement of biodiversity and geodiversity	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 11, as more efficient development and fewer cars encouraged on the road will lead to less habitat disturbance by roadways, however this is not stated directly.</p> <p>There will likely be indirect positive effects from fewer vehicles on the roads, less air pollution and less noise pollution will lead to less habitat disturbance and cause less stress to flora and fauna providing a better environment for an increase in biodiversity.</p> <p>Fewer developments of roadways and transport infrastructure could possibly mean less development in general and therefore fewer instances of intrusive groundworks, helping to contribute to the protection of geodiversity. However there is a high degree of uncertainty around this.</p> <p>Improving active travel routes and public transport links will likely grant easier access to wildlife areas and open green spaces, making them more accessible for all people and not only those who have access to a private car.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • More work could be included on walking and cycling links – ideally, these would be safe and attractive routes that encourage people to walk or cycle. They would be of high biodiversity value that link with the wider GI network, which provide natural benefits to all spheres of sustainability including enhancing the public realm (social and economic benefits); health benefits; biodiversity and visual amenity value; flood defence; air quality; soil enrichment; wildlife corridors.
12. To ensure the sustainable use of natural resources	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 12, as it states; “Make sure that new developments have access to public transport, integrate provision for walking and cycling and take account of transport innovations such as charging and electrification” by adapting to more sustainable technologies there will be less reliance on natural (non-renewable) resources.</p> <p>Fewer vehicles on the road means fewer pollutants from exhaust or spills falling onto the tarmac, there is then less chance of surface water run off carrying these pollutants into the soil, groundwater and surface water, therefore enhancing their quality. However there is a high degree of uncertainty surrounding this.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 1: Planning for better connectivity
			Potentially fewer road network developments means fewer materials necessary and more scope to use recycled materials as there will be reduced usage of them, fewer developments will also likely lead to less waste. However there is a high degree of uncertainty surrounding this.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Low	This priority is generally compatible with ISA Objective 13, as a reduction in the use of private cars and vehicle travel will reduce noise from roads and therefore reduce noise pollution, however this is not stated directly. Fewer vehicles on the road will likely lead to less noise and light pollution from traffic and put less stress on tranquil areas.

Priority 2: Public transport services that people can use, want to use and do use

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 2: Public transport services that people can use, want to use and do use.
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	+	Long-term Medium	<p>This priority is compatible with ISA Objective 1, as it states; “<i>if all of us make greater use of public transport, we help to sustain services for those that have no other option.</i>” Having cleaner more reliable transport options will help to contribute to better, physical, mental and social health, through walking, as well as increased community interaction, and improved access to services and facilities. Through continuing to support socially necessary public transport, this will help to reduce inequalities, especially with regards to health.</p> <p>By shaping the public transport services by user feedback it will help ensure that services are able to provide to those who need it e.g. rural communities, by improving connections via different modes of transport e.g. rail and cycle lanes, it will increase the connectivity and ease of access across Wales for all including to health and welfare facilities, employment and education opportunities, and recreational activities, helping to make access equitable for all.</p> <p>By making public transport cleaner and safer it will be more appealing to at risk groups who may need to use public transport to access health services e.g. children and the elderly, this will likely help reduce health inequality, equally by promoting active travel by improving active travel routes, it will help promote a healthy lifestyle, through this exercise.</p> <p>By improving transport connectivity and integrating different modes of transport into journeys there will likely be increased connectivity between communities and there will be more options for travel and infrastructure implementation so the risk of community severance will be reduced.</p> <p>It is likely that with more attractive public transport options, people will be more inclined to use public transport and less likely to use private cars. This could lead to fewer cars on the road, improving road safety, and lessening air pollution and noise pollution from transport, leading to fewer stressors on human health.</p> <p>Improved public transport options will make the act of taking public transport more appealing. This is usually a less isolating experience than private car use, this could lead to less loneliness and isolation in Welsh people as more chances for human interaction would be available to them. However there is a high degree of uncertainty associated with this.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The section could refer to the heightened need for cleanliness and space in light of the global pandemic.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	++	Long-term High	<p>This priority is compatible with ISA Objective 2, as it states; “One of our core principles is a ‘people first – user centred’ approach to transport.” and ‘Continue to support socially necessary public transport services’ this will help to improve social cohesion and equality, having cleaner more reliable transport options will likely also help to harbour a sense of pride in the community, leading to a greater sense of social cohesion.</p> <p>By creating a better sense of community and social cohesion through cleaner and safer public transport there would likely be a reduced number of cases of crime on public transport services, however there is a high degree of uncertainty around</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 2: Public transport services that people can use, want to use and do use.
			<p>this as if public transport is promoted and more people use it, there will be safety in the large number of people using the transport, but there could also be a statistically higher rate of crime due to there just being more people using it.</p> <p>Through supporting community transport options and necessary transport services through funding it will help to improve equal access without the barrier of income or location.</p> <p>By increasing the safety and cleanliness of public transport it will promote their use, the more people who use them will also possibly increase the safety of the users as well, especially the safety of women, BAME and LGBTQ+ people. By connecting active travel routes and integrating them into other transport options it will make active travel more accessible for people who may struggle to walk long distances e.g. children, disabled people or the elderly.</p> <p>By improving the connectivity of public transport overall, it will make access easier for all people and therefore increase the equitable availability of it. Increasing the access of public transport will also likely increase user satisfaction with their own neighbourhood and local environment as they are no longer limited to only accessing the facilities within their local surroundings, this will also help to improve equality as people are not limited to the employment opportunities or educational facilities within their own communities, but can access any. Through increased journey connectivity, it will even improve the access of rural communities to the same opportunities, to some degree.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The people first, user centred approach would help to ensure that the diverse needs of different groups could be met. However, it could be made more clear when and how these views would be collated. • The priority should refer to the Model of Social Disability and specifically set out how disabled users will be equally treated in terms of public transport provision.
3. To support sustainable economic development and diversity	++	Long-term Medium	<p>This priority is compatible with ISA Objective 3, as it states that journeys on public transport “<i>are better for the economy because they reduce congestion in urban areas</i>”. Public transport use is correlated with a stronger economy, due to spending on the transport service itself and ancillary services such as food and drink outlets in the vicinity of train stations. Further, public transport connectivity means that employers are able to garner a larger employment base, which could mean a more diverse economy and inward investment. All of these factors lead to a more stimulated economy. More attractive public transport options will make people more likely to use these services to access urban centres and shops to spend money, meaning there will likely be an indirect increase to the diversity and development of the economy, it could also provide a boost to underperforming or difficult to access economic areas.</p> <p>Through increased access and connectivity of different communities there will likely be increased access to employment opportunities, this will also make these opportunities more equitable as the transport barrier is reduced.</p> <p>This increased connectivity and integration of different travel modes into journeys could lead to increased access to many facilities including tourist attractions and the countryside, this countryside connectivity could also help rural communities to access more job opportunities. However this is not stated directly in the text so there is a high degree of uncertainty surrounding this.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 2: Public transport services that people can use, want to use and do use.
			Under this priority, inward investment is encouraged through the improvement of transport infrastructure and investment in low carbon technology for transport infrastructure, this will help to future proof the industry and could lead onto improvements in freight transport and international travel, however there is a high degree of uncertainty surrounding this.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Low	<p>Through improving the safety, access and connectivity of the public transport system/active travel options and making them a more appealing option it will likely lead to more people choosing public transport options and less people choosing private vehicles, this will lead to fewer vehicles on the roads. This will have a knock-on effect of reduced air pollution and noise pollution, improving the setting of many cultural and recreational spaces. However there is a high degree of uncertainty surrounding this.</p> <p>Increasing access and connectivity by integrating different transport modes into journey routes, it will help to increase access for everyone, including to recreational and cultural spaces.</p>
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 5, although it is not stated directly, by incorporating user feedback into the development of the public transport services there will likely be more Welsh language being spoken on transport providing more accessibility to Welsh speakers and promoting the culture.</p> <p>Increasing access and connectivity by integrating different transport modes into journey routes, it will help to increase access for everyone, including to Welsh language educational facilities. By making these options safer and cleaner it also means people will be more likely to use them to access these services. However there is a high degree of uncertainty surrounding this.</p>
6. To reduce greenhouse gas emissions from transport	++	Long-term Medium	<p>This priority is compatible with ISA Objective 6, as it states; “<i>Journeys on public transport are better for the environment as they involve lower carbon emissions per person than cars</i>”, whilst this is not a necessary focus of this priority, if people are more likely to use public transport then they are less likely to use private cars as transport, this will then likely lead to reduced emissions from the transport sector. Further, the promotion of ‘better’ public transport, including low carbon services, could lead to significant improvements against this objective.</p> <p>By promoting the safety and cleanliness of active travel routes and incorporating these routes into journeys, it will help to promote zero emission travel options and lead to further reductions in CO₂ and greenhouse gas emissions. The use of active travel over public transport will also have a knock-on effect of energy savings from public transport, however there is a high degree of uncertainty surrounding this.</p>
7. To enable climate change resilience	+	Long-term Medium	<p>This priority will help to provide climate resilience through the improvement of public transport with regards to flood risk adaptation and emergency procedures to protect from flooding in unexpected circumstances. These adaptations will also help to improve equality of climate emergency safety as the public transport system will likely be more accessible to all.</p> <p>Public transport will also be improved through being more adaptable to other kinds of emergencies, both climate related and pandemic related.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 2: Public transport services that people can use, want to use and do use.
8. To protect and improve air quality	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 8, as it states; “<i>Journeys on public transport are better for the environment as they involve lower carbon emissions per person than cars</i>”, whilst this is not a necessary focus of this priority, if people are more likely to use public transport and active travel options then they are less likely to use private cars as transport, this will then likely lead to reduced emissions from the transport sector and therefore help to improve air quality in Wales.</p> <p>By making improvements to public transport by investing in low carbon or low emission technology there will likely be a further reduction in air pollution from the transport sector</p>
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 9 as lower traffic levels and ‘better’ public transport, may create a more attractive townscape and less disturbance of natural landscapes, however there is a high degree of uncertainty associated with this.</p> <p>Through the improvement in cleanliness and safety of public transport and active travel routes, it will likely lead to a cleaner and safer townscape, if this includes the street furniture associated with public transport (such as bus stops).</p> <p>Through improving the safety, access and connectivity of the public transport system/active travel options and making them a more appealing option it will likely lead to more people choosing public transport options and less people choosing private vehicles, this will lead to fewer vehicles on the roads. This will have a knock-on effect of reduced air pollution and noise pollution, improving the setting of the towns and landscapes. However there is a high degree of uncertainty surrounding this.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The ‘better’ public transport element of the priority could mention that associated buildings and street furniture should also be ‘better’.
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	<p>Through improving the safety, access and connectivity of the public transport system/active travel options and making them a more appealing option it will likely lead to more people choosing public transport options and less people choosing private vehicles, this will lead to fewer vehicles on the roads. This could have a knock-on effect of reduced air pollution and noise pollution, improving the setting of many heritage assets. However there is a high degree of uncertainty surrounding this.</p> <p>Increasing access and connectivity by integrating different transport modes into journey routes, it will help to increase access for everyone, including to heritage assets.</p>
11. To promote the conservation and enhancement of	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 11, as it states; “<i>Journeys on public transport are better for the environment as they involve lower carbon emissions per person than cars</i>”, which could have knock on effects of</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 2: Public transport services that people can use, want to use and do use.
biodiversity and geodiversity			<p>improving habitat quality due to reduced emissions in the local area and therefore increasing biodiversity of flora and fauna.</p> <p>With more investment in active travel and public transport there may be less investment in existing road networks, although a reduction in new road building is likely to have greater benefits. However there is a high degree of uncertainty associated with this. Less road developments may also mean less need for geological resources for construction, helping to preserve geodiversity.</p>
12. To ensure the sustainable use of natural resources	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 12, as it states; “<i>Journeys on public transport are better for the environment as they involve lower carbon emissions per person than cars</i>”, due to less private car use and more public transport use. The priority also seeks to make public transport ‘better’ including using low carbon solutions, which may include electric vehicles. There may be a neutral effect overall due to the resources used in creating more public transport infrastructure.</p> <p>Through improving the safety, access and connectivity of the public transport system/active travel options and making them a more appealing option it will likely lead to more people choosing public transport options and less people choosing private vehicles. Fewer vehicles on the road means fewer pollutants from exhaust or spills falling onto the tarmac, there is then less chance of surface water run off carrying these pollutants into the soil, groundwater and surface water, therefore enhancing their quality. However there is a high degree of uncertainty surrounding this.</p> <p>Potentially fewer road network developments means fewer materials necessary and more scope to use recycled materials as there will be reduced usage of them, fewer developments will also likely lead to less waste. However there is a high degree of uncertainty surrounding this.</p>
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 13 “<i>Journeys on public transport are better for the environment as they involve lower carbon emissions per person than cars</i>”, due to a reduced number of private cars on the road from promoting and improving the active travel and public transport networks. This could mean less disturbance of noise and light from traffic.</p>

Priority 3: Safe, accessible, well-maintained transport infrastructure

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 3: Safe, well maintained transport infrastructure
<p>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</p>	+	<p>Long-term Medium</p>	<p>This priority is generally compatible with ISA Objective 1, and it seeks to improve the accessibility of transport infrastructure.</p> <p>Through continuing to meet highway authority standards on the road network and improving the management and maintenance of the public transport system, it would help to provision access to health facilities and services for all people, of all backgrounds and even extend to improving access from rural locations due to faster commutes and less congestion. This improved access would help to improve the equality of access for all people. Safe, well-maintained and future proofed public transport would be particularly beneficial to children, elderly people and people from disadvantaged groups in terms of their access to health facilities.</p> <p>Improving and maintaining cycle paths and active travel routes would help to promote healthy lifestyle choices in citizens and make active travel a more attractive and appropriate option for all people as it will be safer and cleaner e.g. reduced barriers for women or LGBTQ+ people.</p> <p>By improving accessibility, there would likely be increased connectivity between communities and there would be more options for travel and infrastructure implementation and so the risk of community severance would be reduced. This improved connectivity may also apply to green and open spaces, thereby allowing for more physical exercise options, especially for those who may not have access to private vehicles.</p> <p>This priority would be likely to lead to higher rates of public transport usage. Public transport is usually a less isolating experience than private car use as there are more chances for human interaction, and so there could be a reduction in loneliness and isolation associated with the transport sector. However, there is a high degree of uncertainty associated with this. This should also be seen in the context of the changing needs of people and improvements to digital infrastructure which, particularly during the pandemic in 2020, there is a reduced need to travel to and from places of work.</p>
<p>2. To create the conditions within which an improvement in social cohesion and equality can be achieved</p>	+	<p>Long-term High</p>	<p>This priority is generally compatible with ISA Objective 2, and it seeks to improve the accessibility and affordability of transport infrastructure.</p> <p>Better management of public and active transport options would be likely to lead to increased safety measures, protecting those most vulnerable in society (including children, women, LGBTQ+, BAME, and the elderly) from crime and reducing the frequency of unsafe or dangerous events within infrastructure and on public transport/active travel routes. This better management, affordability and maintenance of routes could help to improve the equality within the public transport system as more routes are accessible to people from any background and community. This increase in access would mean greater equality in many factors, as it means people would have more equal access to educational facilities, employment opportunities and health facilities. This increase in accessibility would also allow people a greater satisfaction with their</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 3: Safe, well maintained transport infrastructure
			<p>own neighborhood as they will not be limited to only local amenities and recreational facilities, in their local area. It will help to create conditions where many inequalities can be reduced.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> • The safety issues on public transport (crime) are different to the road safety issues or perceptions of cycling. This could be addressed as different points. • Affordability could be mentioned in the bulleted text, for greater emphasis, as it is only mentioned in the text in italics. • The priority could usefully include the word 'inclusive' alongside 'accessibility'.
<p>3. To support sustainable economic development and diversity</p>	<p>++</p>	<p>Long-term Medium</p>	<p>This priority is generally compatible with ISA Objective 3, as it sets out to, <i>inter alia</i>; “Future-proof current transport infrastructure to make safe and attractive active travel provision, tackle congestion, improve accessibility, embrace innovation and respond to climate change”. Future proofing is not only good for environmental sustainability but also economic sustainability. Embracing innovation may enable new markets and economies to develop.</p> <p>A better managed and maintained public transport system would be likely provide better access to education, training, jobs and employment opportunities to all residents. Further, public transport connectivity means that employers are able to garner a larger employment base, which could mean a more diverse economy and inward investment.</p> <p>With the inclusion of active travel routes it would also provide easier access to town and city centres, helping to stimulate the economy. This would then also likely extend to tourist attractions, rural areas and underperforming economic areas.</p> <p>Investing in data solutions would likely lead to a more efficient transport system, as well as the potential to create employment in this sector.</p> <p>Under this priority there is a lot of scope for inward investment through future proofing the transport system and investing in future technology’s such as electric vehicle charging points.</p>
<p>4. To protect and promote Welsh culture and improve access to cultural and recreational spaces</p>	<p>+</p>	<p>Long-term Low</p>	<p>Through improved management and maintenance of the public transport system/active travel options and making them a more appealing option it would be likely to lead to more people choosing public transport options and less people choosing private vehicles, which would lead to fewer vehicles on the roads. This would have a knock-on effect of reduced air pollution and noise pollution, improving the setting of many cultural and recreational spaces. However, there is a high degree of uncertainty surrounding this as it depends on the specific location of new investment in relation to cultural and recreational places.</p> <p>Increasing access and connectivity would also likely help to increase access for everyone, including to cultural and recreational spaces, reducing access inequality to these spaces.</p> <p>Improved management and reduction of congestion through promotion of active travel options would help with high peak transport management during major events (such as sporting events) and access to tourist attractions during high peak tourist season.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 3: Safe, well maintained transport infrastructure
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	Through improved management and maintenance of the public transport system it should make it easier for people to access Welsh language education facilities.
6. To reduce greenhouse gas emissions from transport	++	Long-term Medium	<p>This priority is generally compatible with ISA Objective 6. It sets out that the WTS will , <i>inter alia</i>, “Future-proof current transport infrastructure to make safe and attractive active travel provision, tackle congestion, improve accessibility, embrace innovation and respond to climate change”. Developing future proof infrastructure will have long term benefits for the environment, as it will lead to lower greenhouse gas emissions from vehicles.</p> <p>By improving the maintenance of active travel routes and incorporating these routes into journeys and the existing road network, it would help to promote zero emission travel options and lead to further reductions in CO₂ and greenhouse gas emissions.</p> <p>Implementing more electric vehicle charging points and making owning an electric vehicle a more realistic option over a standard private vehicle would also help to contribute to lowering emissions overall.</p> <p>Better management of roads, including working with the UK government on links with England, should ensure better management of the strategic road network, which could reduce emissions in the short or medium term.</p> <p>The investment in data solutions could further increase the significance of positive effects leading to cumulative benefits against this objective.</p>
7. To enable climate change resilience	+	Long-term Medium	This priority is generally compatible with ISA Objective 7. It sets out that the WTS will, <i>inter alia</i> , “Future-proof current transport infrastructure to make safe and attractive active travel provision, tackle congestion, improve accessibility, embrace innovation and respond to climate change”. Better management of climate emergencies and flood risk would help protect transport infrastructure and communities from the effects of climate change. However, how this will be implemented, is unclear.
8. To protect and improve air quality	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 8. Developing future proof infrastructure would have long term benefits for the environment, as it would lead to lower carbon emissions from private car use and therefore reducing the pollution of air quality from transport. Through improved management and maintenance of the existing transport infrastructure network, which may include increased vegetation, air quality improvements through the reduction in, and sequestration of, pollutants may occur.</p> <p>Implementing more electric vehicle charging points and making owning an electric vehicle a more realistic option over a standard private vehicle would also help to contribute to lowering emissions overall and reducing air pollution from transport.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 3: Safe, well maintained transport infrastructure
			Better maintained and safer active travel routes would also be likely to reduce the use of private cars and public transport as they will become more accessible options for all people, this will reduce the amount of vehicles on the road and lead to further reduced air pollution from transport.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>This priority is generally compatible with ISA Objective 9, as developing public transport and active travel solutions could lead to more attractive towns and communities. Improved management and maintenance of the existing transport infrastructure network could lead to benefits for landscapes and townscapes through the implementation of enhancement measures.</p> <p>Through improved management and maintenance of the public transport system/active travel options and making them a more appealing option it would be likely to lead to more people choosing public transport options and less people choosing private vehicles, which would lead to fewer vehicles on the roads. This would have a knock-on effect of reduced air pollution and noise pollution, thereby protecting and potentially enhancing the character of many townscapes and landscapes.</p>
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	<p>Through improved management and maintenance of the public transport system/active travel options, they could become a more appealing option, which could lead to more people choosing public transport options and less people choosing private vehicles, leading to fewer vehicles on the roads. This would have a knock-on effect of reduced air pollution and noise pollution, thereby conserving and potentially enhancing the setting of many heritage assets and historic areas.</p> <p>Increasing access and connectivity will also likely help to increase access for everyone, including to conservation and heritage assets, reducing access inequality to these spaces.</p>
11. To promote the conservation and enhancement of biodiversity and geodiversity	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 11. A reduction in air pollution associated with transport would help to reduce the adverse effects currently taking place at pollution sensitive habitats, such as those currently experiencing elevated rates of atmospheric nitrogen deposition.</p> <p>Improved management and maintenance of the existing transport infrastructure network could lead to benefits for biodiversity through the implementation of enhancement measures, such as where new green infrastructure elements are incorporated into the design of new or improved transport infrastructure.</p> <p>Increasing access and connectivity would also be likely help to increase access for everyone, including to conservation and wildlife areas, reducing access inequality to these spaces.</p> <p>A focus on improving the existing transport infrastructure, whilst reducing the number of vehicles on the roads, would help to avoid the risk of new roads being built that fragment habitats and isolating species.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The Priority could specify the need to improve biodiversity as part of future proofing the current transport network. This could include measures to improve green infrastructure, such as improving and maintaining

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 3: Safe, well maintained transport infrastructure
			<p>roadside verges and biodiversity pathways alongside and within transport routes and incorporating habitat bridges into future designs.</p> <ul style="list-style-type: none"> The Priority could usefully set out that the WTS will not encourage or support the development of new road infrastructure, particularly where this is the dominant mode of transport.
12. To ensure the sustainable use of natural resources	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 12. Improving the management and maintenance of the existing transport network could reduce the need for increased road building. It would also allow road users to travel more efficiently and subsequently consume less natural resources. Encouraging the use of electric vehicles could also enable a reduction in the reliance on fossil fuels.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Hydrogen Power could be included as part of the strategy, rather than a potential overreliance on electric vehicles as an alternative low carbon fuel. The priority could specify that the delivery of new infrastructure would need to meet strict sustainability requirements, and the development of new infrastructure for fossil fuel based vehicles will not be prioritised.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Medium	<p>This priority is generally compatible with ISA Objective 13. Developing future proof infrastructure would have long term benefits for the environment, with fewer vehicles on the road if more people are using public transport, resulting in less noise and light pollution coming from transport.</p> <p>Implementing electric vehicle charging points and promoting electric vehicles as a realistic option over standard private vehicles would lead to quieter vehicles on the road, leading to less noise pollution from transport.</p>

Priority 4: Behaviour Change

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 4: Behaviour change
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	+	Long-term Medium	<p>The priority demonstrates compatibility with Objective 1 by encouraging the use of active transport, which has numerous benefits on physical and mental health and well-being.</p> <p>The WTS supports a range of incentives such as workplace travel schemes, as well as investing in infrastructure to help integrate walking and cycling with other transport modes. This would encourage people to walk and cycle more, which would improve both physical and mental health through the exercise itself but also the increased time spent outdoors. In order to reduce health inequalities across Wales, it is important that these incentives are available to as broad a range of people as possible.</p> <p>By improving the reliability and punctuality of bus and train services, people would be likely to be less stressed by travelling and the prospect of travelling, in particular commutes or long journeys. Likewise a system that is integrated between modes will be easier to navigate, resulting in a more relaxing journey. The WTS aims to understand customers' experiences in order to make improvements, and these factors together will help transport have a positive impact on mental health. An improved experience when travelling could also encompass ways to bring people together, reducing loneliness and social isolation.</p> <p>A system that is reliable and punctual should also mean users have to spend less time travelling, leaving more time for exercise or leisure activities, improving mental and physical health.</p> <p>The priority addresses potential inequalities, recognising that there may be fewer options in rural areas. The priority includes that disincentives to car use should take into account equality issues.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • People have lost confidence in public transport recently due to health concerns around COVID-19. People are likely to be reluctant to use public transport unless absolutely necessary over the coming months and years, and the WTS needs to address this. Public perception of safety on public transport is extremely important, and by widely advertising what transport providers are doing to help combat the virus will help restore people's confidence in travelling by public transport again. • As well as workplace travel schemes, schemes could be considered to provide bikes and cycling equipment to residents in deprived areas who cannot afford to buy their own. This would help reduce health inequality by giving everyone equal access to exercise opportunities they may otherwise not have. • Ensure access to electric vehicles is more equitable. through affordability and electric vehicle charging infrastructure. This is of particular importance in rural and isolated areas, where public transport use is not an option.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term High	<p>The priority demonstrates compatibility with Objective 2 by addressing potential inequalities. The priority addresses potential inequalities, recognising that there may be fewer options in rural areas. The priority includes that disincentives to car use should take into account equality issues. How the WTS would make car use 'more equitable' is unclear.</p> <p>Investing in infrastructure that integrates walking and cycling with other transport modes would encourage more people to adopt active travel methods. Through an increase in informal community interactions as a result of more people being outside, social cohesion could be improved. Community cohesion could also be improved through an increase in people travelling together on public transport, rather than alone in private cars.</p> <p>In many areas, there is currently a negative general perception of public transport and those who have the choice will often chose not to use it, and these are often the more affluent members of society. Through successful marketing</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 4: Behaviour change
			<p>campaigns and an improved service for the customer, as well as effective deterrents on car use, these individuals may be more inclined to use public transport and integrate with other groups in society, which will have a hugely beneficial impact on social cohesion.</p> <p>Better integrated transport systems could make journeys for those who frequently trip-chain easier, more efficient, and more affordable.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Some transport users may not have internet access, or mobile data, or other access to technologies which would allow them to receive transport data. The issue of digital inclusion should be addressed here, highlighting the “<i>other means</i>” that would be used to share information so as not to exclude certain users.
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>Through improving bus and train reliability and punctuality, this Objective is compatible with the priority. Freight movement and business to business connections will be improved, helping to support sustainable economic development. Through improved connectivity, businesses will be able to operate in a wider market</p> <p>By improving bus and train reliability and punctuality and offering an improved customer service, individuals are more likely to arrive at work less stressed and will be more productive, having a positive impact on the economy. If journeys can be a more enjoyable experience, individuals may be more inclined to travel where necessary in order to further grow their businesses.</p>
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	○		Neutral
5. To encourage the protection and promotion of the Welsh Language	○		Neutral
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	<p>The priority is compatible with Objective 6 through encouraging an increase in public and active transport modes, and a decrease in private car use, particularly petrol and diesel.</p> <p>By supporting incentives to encourage people to walk, cycle or use public transport and exploring ways to disincentivise car use, use of private vehicles will decrease, subsequently reducing GHG emissions.</p> <p>Incentives to use cleaner vehicles, particularly in areas or for certain individuals where car use is the only viable option, could also help reduce greenhouse gas emissions from transport.</p>
7. To enable climate change resilience	○		Neutral

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 4: Behaviour change
8. To protect and improve air quality	+	Long-term Medium	The priority is compatible this Objective through encouraging an increase in public and active transport modes, and a decrease in private car use, particularly petrol and diesel. By supporting incentives to encourage people to walk, cycle or use public transport and exploring ways to disincentivise car use, use of private vehicles will decrease, subsequently reducing emissions and improving air quality. Incentives to use cleaner vehicles, particularly in areas or for certain individuals where car use is the only viable option, could also help to improve local air quality.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Medium	Although there is little overlap, the priority is compatible with Objective 9 in that it disincentivises car use, and cars tend to have negative impacts on townscape character. Road traffic and parking create noise disturbances and visual intrusions on traditional townscape character. By exploring measures that will deter car use, these negative impacts will be reduced.
10. To promote the conservation and enhancement of heritage assets	0		Neutral
11. To promote the conservation and enhancement of biodiversity and geodiversity	0		Neutral
12. To ensure the sustainable use of natural resources	+	Long-term Medium	Compatibility with this Objective is demonstrated through encouraging an increase in public and active transport modes, and a decrease in private car use, particularly petrol and diesel. By supporting incentives to encourage people to walk, cycle or use public transport and exploring ways to disincentivise car use, use of private vehicles will decrease, subsequently reducing fossil fuel use. Incentives to use cleaner vehicles, particularly in areas or for certain individuals where car use is the only viable option, could also help reduce use of fossil fuels.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Medium	The use of electric vehicles as part of “ <i>ultra low emissions vehicles</i> ” will reduce noise pollution from the transport sector, demonstrating compatibility with Objective 13.

Priority 5: Adopt innovations that deliver more sustainable transport choices

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 5: Adopt innovations that deliver more sustainable transport choices
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	+	Long-term Medium	<p>This priority is compatible with Objective 1, as many of the digital initiatives supported by the WTS surrounding data use in transport will be used to ensure a more convenient, efficient and stress-free journey for the passenger, thereby having a positive impact on their mental health. Real-time public transport information will allow passengers to better plan their journeys, and integrated ticketing across multiple transport modes will make complicated journeys easier with less to worry about. If road congestion can be reduced through smart technology, this will reduce driver stress.</p> <p>The aim of digital initiatives would in part be to produce a more efficient public transport system, which could encourage higher levels of public transport use. This in turn will reduce private car use which will lower emissions and improve air quality, having a cumulative positive impact on people's physical health.</p> <p>Additionally, if the data innovations succeed in producing a shorter journey time, this equates to less time spent on public transport or sat in private cars, and more time for exercise or leisure activities which could improve both physical and mental health.</p> <p>The priority mentions "<i>operational innovation that can help deliver on wider social ambitions</i>" and includes bike sharing, which could encourage active travel and improve physical health.</p> <p>The priority addresses the issue of digital inclusion in transport, which will, in theory, help reduce inequality, including health inequality, by enabling more people to access the same health and social care services in an easier way. However, the elderly tend to have a greater requirement to access health facilities and rely heavily on public transport, and they are a majority group who, in general, have poorer access to and capability in using mobile technology. By introducing transport systems which rely on digital technologies to plan journeys, the elderly could find themselves even more isolated from the system and in a worse position to access health and social care facilities – and even more isolated in general. However, the WTS includes the support of initiatives to address 'issues of digital inclusion in transport, for users who don't have access to mobile technology', which could mitigate this potential effect.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Although bike sharing is mentioned, this is the only inclusion of active travel, which is beneficial to people's mental and physical health. The "new open data store for Wales providing up to date and accurate information" may include details of walking and cycling links, maps, topography etc., but this should be highlighted in the WTS.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term Medium	<p>The priority is generally compatible with this Objective through "<i>addressing issues of digital inclusion in transport for user who don't have access to mobile technology</i>" which will help improve equality and social cohesion by enabling more people to access the same services in an easier way.</p> <p>However, the elderly are a particular group who tend to rely heavily on public transport, and they are a majority group who, in general, have poorer access to and capability in using mobile technology. By introducing transport systems which rely on digital technologies to plan journeys, the elderly could find themselves even more isolated from the system. In addressing the issues of digital inclusion in transport users, particular vulnerable groups such as the elderly need to be given special consideration so as not to increase age inequality in Wales. Additionally, there are inequalities in broadband and mobile data access between rural and urban areas in Wales, and a transport system that leans heavily on data usage could in fact further ostracise those living in rural areas unless this issue is resolved.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 5: Adopt innovations that deliver more sustainable transport choices
			<p>Innovations such as car and bike sharing and mobility as a service could encourage social cohesion and bring communities together, and innovations in community transport could support rural communities and reduce the inequalities between rural and urban areas, though what specifically this would involve is not clear.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Further details could be given about how the issues surrounding data inclusion, in particular regarding the elderly and those in rural areas, are going to be addressed.
3. To support sustainable economic development and diversity	++	Long-term Medium	<p>The priority is compatible with Objective 3 through its support of sharing solutions and innovations in the freight and logistics sector and how they will “<i>facilitate operational innovation that can help deliver on our wider... economic ambitions</i>”.</p> <p>Data-based solutions and sharing opportunities in the cargo, freight and logistics sectors will benefit businesses in the sector and subsequently the economy in general. More sustainable transport choices such as electrification could end up being giving companies an economic advantage. Technologies that will improve the service life, speed of construction and maintenance of the transport system will benefit freight and logistics companies who use this system heavily. Support for sustainable technological innovation will help these sectors grow, supporting sustainable economic development.</p> <p>Digital innovations that allow integrated transport systems across the country could enhance connectivity and allow business to expand and function in a wider market more easily and more economically. If journeys are easier and more efficient, people are more likely to be willing to travel further to grow their businesses.</p> <p>By supporting innovations in community transport, rural economies could be improved. Increased accessibility of the transport system, both through community transport and through addressing the issues of digital inclusion, could support equal access to employment, education and training opportunities.</p> <p>The priority addresses more sustainable aviation operations, which could promote international transport links both for business and leisure, potentially opening Wales up to international tourism in a sustainable way.</p> <p>An improved, efficient commute as brought about by the implementation of digital initiatives in the public transport system could mean employees arrive less stressed and able to work more productively, generally improving the economy.</p>
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>By improving ease of movement around the country through digital innovation, access to cultural events and recreational spaces would be enhanced, and as such the priority is generally compatible with this Objective.</p> <p>Currently, people may be put off visiting new or distant areas to access cultural or heritage assets due to the complexity of travel and the lack of knowledge regarding what the transport links will be like closer to the site. This is especially true considering many of these assets will be located in cities, which have large, complicated transport systems, or very rural, where there may be an apparent lack of or infrequent public transport that requires forward planning. With integrated, digitalised systems in place, people can access transport information from afar and easily plan their journeys, thereby promoting easy access to Wales’ cultural and heritage assets.</p> <p>Smart technology will be vital in the efficient management of the transport system during major events, such as sporting or cultural events. The system is put under heavy strain at these times, but with large amounts of data gathered and technologies allowing the system to be managed in real time, the transport system should be resilient to the numbers of users and continue to function efficiently.</p>

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 5: Adopt innovations that deliver more sustainable transport choices
			Similarly, travel in tourist areas during peak times can be monitored and the data used to decide on appropriate modes of travel to be implemented in these locations, with the aims both to improve access for visitors but also to safeguard the location if it is of particular environmental or cultural importance.
5. To encourage the protection and promotion of the Welsh Language	○		Neutral Recommendation: <ul style="list-style-type: none"> Any innovations, such as the development of apps, should be provided bilingually.
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	The priority is compatible with this Objective as it says that the WTS will support “ <i>sustainable transport choices</i> ”. By supporting technologies such as electrification and new fuels such as hydrogen in place of fossil fuels, carbon emissions from transport should hopefully be reduced. Aviation is clearly a big source of GHG emissions, and this could potentially be reduced through technologies that support more sustainable aviation, though there is little detail as to what this could entail. The aim of digital initiatives would in part be to produce a more efficient public transport system, which would hopefully encourage higher levels of public transport use. This in turn will reduce private car use which will lower levels of GHG emissions. Additionally, the idea of mobility as a service could also help decrease private car use. Recommendation: <ul style="list-style-type: none"> The idea of technologies to develop modes of transport specifically with low-carbon emissions could be more clearly spelt out, particularly with regards to aviation.
7. To enable climate change resilience	○		Neutral Recommendations: <ul style="list-style-type: none"> Data infrastructure could be used to make a system that is more responsive to extreme events, such as flooding. Data could be collected automatically and therefore immediately on events that have occurred affecting the public transport system or road network, which could then be use to inform the decision as to how it can be dealt with or resolved. Real-time updates could give the public detailed information regarding the event and advice on how to travel in light of it. This would help reduce inequalities around access to transport during extreme weather events As well as focussing on more sustainable transport, technological innovations could include transport that will cope better in extreme weather conditions in rural areas, such as snowfall, than current transport modes can. The challenges we face from the climate are changing, and new transport technologies need to reflect that.
8. To protect and improve air quality	+	Long-term Medium	The priority is compatible with Objective 8 as it says that the WTS will support “ <i>sustainable transport choices</i> ”. By supporting technologies such as electrification and new fuels such as hydrogen in place of fossil fuels, carbon emissions from transport should hopefully be reduced, improving air quality locally. Aviation is clearly a big source of emissions, and this could potentially be reduced through technologies that support more sustainable aviation, though there is little detail as to what this could entail. The aim of digital initiatives would in part be to produce a more efficient public transport system, which would hopefully encourage higher levels of public transport use. This and the idea of mobility as a service would also help decrease private car use, leading to a lower level of emissions and improved air quality.

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 5: Adopt innovations that deliver more sustainable transport choices
			<p>Recommendation:</p> <ul style="list-style-type: none"> The idea of technologies to develop modes of transport specifically with low-carbon emissions could be more clearly spelt out, particularly with regards to aviation.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	○		Neutral
10. To promote the conservation and enhancement of heritage assets	○		Neutral
11. To promote the conservation and enhancement of biodiversity and geodiversity	+	Long-term Medium	<p>By supporting technology that works towards sustainable transport and materials innovation to improve service life, the priority should help reduce environmental impacts, thereby conserving biodiversity and demonstrating compatibility with Objective 11.</p> <p>Through sustainable transport choices, GHG emissions will be reduced which will help decrease the negative impacts of the transport sector on the environment, which will have the knock-on effect of improving habitat quality and thereby increasing biodiversity in Wales.</p> <p>In supporting innovation in materials that will increase the service life of physical infrastructure, there is less depletion of natural resources and less waste, which is beneficial to the environment.</p>
12. To ensure the sustainable use of natural resources	+	Long-term Medium	<p>The priority is compatible with this Objective in that it supports materials innovation that will increase the service life and maintenance of infrastructure, reducing the need to deplete natural resources to re-build on a more regular basis. This will also reduce waste from old infrastructure.</p> <p>Electrification and the use of new fuels such as hydrogen in vehicles will reduce the requirement on fossil fuels, a natural resource.</p> <p>The aim of digital initiatives would in part be to produce a more efficient public transport system, which would hopefully encourage higher levels of public transport use. This and the idea of mobility as a service would also help decrease private car use, again decreasing fossil fuel use.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Text around the development of new materials technologies could include mention of the use of recycled materials. Specifically mention the use of sustainable materials in new transport technologies and any new infrastructure.
13. To enable the protection of tranquil areas and	+	Long-term Medium	<p>The use of electric vehicles will reduce noise pollution from the transport sector, demonstrating compatibility with Objective 13.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Technological innovation could also consider technologies that reduce or mitigate noise and light pollution.

ISA Objective	Initial Score	Duration Certainty	Review/appraisal – Priority 5: Adopt innovations that deliver more sustainable transport choices
prevention of noise and light pollution			

5 WTS Mini Plans – Detailed Appraisals

Mini Plan for Active Travel

ISA Objective	Score	Duration Certainty	Appraisal – Active Travel
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	+	Long-term Medium	<p>This mini plan is generally compatible with ISA Objective 1, as it states that barriers to walking and cycling will be addressed and therefore, more people will walk or cycle. By 2040, the mini plan states that everyone will feel safer when walking and cycling, through the introduction of 20mph default speed limits, designated cycle tracks and more space for walking and cycling. Improving safety for people may mean there could be less of a barrier for particular groups, including women, children and young people.</p> <p>The plan overall does promote healthy lifestyles; however, it is slightly generic and could be improved by being more specific on how it will target reducing particular health inequalities. The plan does mention that new developments, including new health facilities, will make provision for walking and cycling; the plan should also mention improving access to existing health facilities.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • The mini plan mentions encouraging young people to cycle but not improving the walking and cycling environment for older people or those with mobility issues • The mini plan does not acknowledge health inequalities, and how people living in deprived areas might be affected / how improved potential for active travel could help work towards reducing inequalities • Access by sustainable travel modes such as walking and cycling to existing health and social care services should be included. <p>The mini plan includes mention that access to national parks and national cycle networks will have been improved but does not include a delivery plan to specifically address this. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network.</p>
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term High	<p>The active travel mini plan is compatible with ISA Objective 2, as it aims to remove the barriers that stop people from cycling and walking, therefore potentially leading to more cohesive communities. It goes some way towards addressing inequality and mentions the need to understand uptake overall for particular groups, although it does not detail how inequalities may be addressed. The mini plan states that by 2040, everyone will feel safer when walking and cycling, making it highly compatible with Objective 2.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Inequalities between active travel in rural and urban areas is not addressed. • More detail could be provided around what the barriers to walking and cycling are and how inequalities will be addressed – for example, how gender inequalities in cycling may be overcome. • The mini plan does not address inequality by virtue of age or availability of active travel (for example there may be variations between urban and rural areas). • A further area for inclusion relates to how walking and cycling can be made more accessible for those with mobility issue or how routes themselves can be made more accessible. • The mini plan makes reference to new developments, but emphasis should also be placed on improving and extending existing routes to reduce severance and improve take-up of walking and cycling.

ISA Objective	Score	Duration Certainty	Appraisal – Active Travel
			<ul style="list-style-type: none"> 'Closing roads for vehicle traffic' as a way of encouraging active travel should not be at the detriment to those that rely on the car to travel, particularly those living in rural areas, elderly populations or those who have mobility problems.
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>The active travel mini plan is highly compatible with ISA Objective 3 as it states that by 2040, active travel will deliver benefits to the economy throughout Wales, with more people using active travel to get to work, through the uptake of schemes such as e-bikes, by supporting workplace schemes encouraging active travel to employment and by developing workplace travel plans. The mini plan states that by 2040, the economy of Wales will have benefited from growth in the active travel sector, although further detail into how this can be achieved could be provided.</p> <p>Recommendation</p> <ul style="list-style-type: none"> There is a growing body of evidence for how active travel can contribute to economic performance, including by reducing congestion, supporting local businesses and high streets, improving business efficiency and through direct job creation (for example the Active Travel Toolbox and Sustrans). Specific reference could be made to these benefits to the economy.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Low	<p>The mini plan is compatible with ISA Objective 4 as it seeks to repurpose redundant transport infrastructure to form active travel routes, thereby encouraging more people to walk and cycle. This can be particularly beneficial for routes which assist with accessing Wales' historic sites and monuments, national parks and landscapes and coastal areas. However, the priorities and measures do not mention this aspect further, so it is unclear how this will be delivered specifically.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> The mini plan includes mention that access to national parks and national cycle networks will have been improved but does not include a delivery plan to specifically address this. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network and green infrastructure network as part of a holistic approach.
5. To encourage the protection and promotion of the Welsh Language	?	Long-term Low	<p>The mini plan, under the heading 'Help Welsh language and culture thrive', focuses predominantly on culture and access to cultural sites rather than the protection and promotion the Welsh language.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Include measure on how the Welsh language can thrive, which may include bi-lingual signage on active travel routes could be promoted in order to promote and protect the Welsh language as equal to the use of English Possibility of supporting improved access by active travel to Welsh-medium education facilities as part of regional transport plans.
6. To reduce greenhouse gas emissions from transport	++	Long-term Medium	<p>The mini plan is highly compatible with ISA Objective 6. Active travel can help to reduce greenhouse gas emissions from transport, particularly for shorter journeys. By 2040, the mini plan states that there will be fewer greenhouse gas emissions and air quality will have improved because more people have replaced car journeys with active travel. Decarbonisation will be addressed by replacing car journeys with active travel.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Active Travel
7. To enable climate change resilience	+	Long-term Medium	The mini plan is compatible with ISA Objective 7 as it states that there is a 'lower risk of flooding due to surface water on active travel networks and ecosystems will be more resilient because active travel networks are managed better'. Recommendation: <ul style="list-style-type: none"> Should mention how the Wales Coastal Path may have to adapt/be maintained due to coastal erosion and coastal flooding.
8. To protect and improve air quality	++	Long-term Medium	The mini plan is highly compatible with ISA Objective 8, as active travel will help to reduce emissions from transport, particularly for shorter journeys. By 2040, the mini plan states that air quality will have improved because more people have replaced car journeys with active travel. The five ways of working also state that further problems will be prevented and decarbonisation will be addressed by replacing car journeys with active travel.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Medium	This mini plan is generally compatible with ISA Objective 9. Reducing car usage and making areas more attractive for walking and cycling can help protect and enhance our townscapes and landscapes. Reduced investment in road development may also imply that more landscapes will be protected. Recommendations: <ul style="list-style-type: none"> Walking and cycling links can be designed in such a way that makes a positive contribution towards local character, for example greening or public realm. This could be added to the aims (by 2040 we will have: improved landscape and townscapes through a national active travel network that is combined with a green infrastructure network)
10. To promote the conservation and enhancement of heritage assets	+	Long-term Medium	This mini plan is compatible with ISA Objective 10. Heritage assets including former railway lines can be used as active travel routes. The ability to access heritage assets by foot or cycle can help improve their setting. However, the priorities and measures do not mention this aspect further, so it is unclear how this will be delivered specifically. Recommendation: <ul style="list-style-type: none"> The mini plan includes mention that access to national parks and national cycle networks will have been improved but does not include a delivery plan to specifically address this. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network and green infrastructure network as part of a holistic approach.
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Medium	This mini plan is compatible with ISA Objective 11; the mini plan states that by 2040, biodiversity will be in better condition and ecosystems will be more resilient because our active travel networks are managed better. There is, however, no mention of ecosystems services, or net benefit for biodiversity in the development or maintenance of active travel routes. Recommendations: <ul style="list-style-type: none"> Could include improvements in opportunities for people to access wildlife and open green spaces using active travel. Reference also to the health benefits associated with accessing open space and nature (particularly in relation to mental health and well-being). Active travel routes have the potential to be of biodiversity value and linking with the wider green infrastructure network, thus providing natural benefits to all spheres of sustainability. This could usefully be included specifically, e.g. the WTS will invest in the national cycle network and green infrastructure network as part of a holistic approach.

ISA Objective	Score	Duration Certainty	Appraisal – Active Travel
12. To ensure the sustainable use of natural resources	+	Long-term Low	This mini plan is generally compatible with ISA Objective 12, as the encouragement of the development of active travel and investments decisions, which priorities this, may, in turn reduce the need for the development of new roads. However, this effect is uncertain.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Medium	<p>This mini plan is generally compatible with ISA Objective 13, as a reduction in the use of private cars and vehicle travel and an associated increase in active travel will reduce noise and light levels associated with vehicular traffic.</p> <p>Recommendation</p> <ul style="list-style-type: none"> • Under environmental impact, could mention the reduction in noise and light pollution due to an uptake in active travel. There are associated health benefits in reductions in noise pollution, particularly for more vulnerable populations such as children, the elderly and people with pre-existing health conditions.

Mini Plan for Bus

ISA Objective	Score	Duration Certainty	Appraisal – Bus
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	+	Long-term Medium	<p>This mini plan is compatible with ISA objective 1, particularly the priority to keep drivers and passengers safe, by ensuring access to contactless payment technology, provision of screens and other measures required to ensure public health is maintained. By making buses cleaner and safer, their use may be more appealing to more vulnerable population groups such as children, the elderly, and those who may need to use public transport to access health services. A reliable network of bus routes will reduce access inequalities to health or social care facilities.</p> <p>By integrating bus routes and services with active travel routes, more people may be encouraged to walk or cycle, with associated physical and mental health and well-being benefits.</p> <p>By improving transport connectivity and integrating different modes of transport into journeys, there will likely be increased connectivity between communities.</p> <p>Fear of crime on public transport can act as a barrier to certain groups of users, notably women, the elderly and also people in the LGBTQ+ community. A study by DfT in 2004 found that 59% of women felt unsafe walking from a bus stop or station after dark in London compared to 25% of men. Similarly, 40% of women surveyed felt unsafe travelling on a bus, compared to 18% of men (Loukaitou – Sideris, 2014). These gendered differences in perceptions of safety should be addressed by the WTS, in order to reduce inequality.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Specific reference should be made to the different health and safety challenges faced by vulnerable populations on buses. Examples include groups which experience greater levels of anxiety around crime on public transport and improving the safety and perceived safety of travelling on the bus, particularly after dark. • The future impacts of COVID-19 will affect the future of the transport system e.g. more spread out seating, hand sanitiser stations, mask wearing. Whilst private vehicle travel is perceived as safer from a personal health perspective, steps can be taken to ensure the safety of travellers on public transport. • Ensuring that buses are perceived as safe will play a major part in this mini plan. Patronage on public transport is lower compared to before the COVID-19 pandemic – DfT statistics for transport use since 1st March 2020 show that during lockdown, for bus use excluding London, patronage was between 10-15% of an equivalent day/week pre-pandemic.
2. To create the conditions within which an improvement in social cohesion and	+	Long-term High	<p>The bus mini plan is compatible with ISA Objective 2, as local communities will be better connected. Bus drivers may become more aware of a wider spectrum of disabilities, which are not always physical. By 2040, bus services and facilities will be fully accessible, attractive, and safe for everyone.</p> <p>Recommendations:</p>

ISA Objective	Score	Duration Certainty	Appraisal – Bus
equality can be achieved			<ul style="list-style-type: none"> • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of bus staff to make services accessible for all. • Public transport use has remained largely static in Wales for about a decade – do the measures described in this mini plan do much beyond what is already taking place to help achieve a discernible improvement in use of buses? • Various studies (for example Ahern et al, 2016; Mouratidis, 2020; Lucas et al, 2008) have shown there is a direct link between areas of deprivation and lack of access to public transport. Reference should be made to improved access to bus and the regeneration of deprived areas.
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>This mini plan is highly compatible with ISA Objective 3, as the mini plan supports the adoption of innovative technology and develops local skills. By addressing congestion hotspots and supporting reliable and punctual bus services, the economy will be supported, through enhanced connectivity and improved productivity.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Be explicit and state that battery technology and use of hydrogen fuels will not only develop local skills but will also create jobs, benefitting the economy. • Include “workplaces” under priority to “ensure new housing estates... are easily accessible by bus”. • Mention the development of park and ride sites to encourage bus use and remove congestion from city/town centres. • This mini plan seeks to enhance the attractiveness of bus services. An important barrier for many people, particularly vulnerable populations such as people in low-income households and the elderly, relates to cost. How feasible will it be to ensure truly affordable prices that encourage high uptake of bus services?
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 4. It states that by 2040, buses will be a good option for getting to and from major arts and sporting events, and for visiting Wales’ fantastic natural and cultural heritage including landscapes, coasts, and open spaces.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Buses could help to manage travel in tourist areas during peak periods or additional services to serve events. Again, Park and Ride could help with this. • Buses could improve access to cultural sites of interest – there could be concessionary fares or discounted entry at heritage sites for example to encourage people to travel sustainably.
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 5, stating that by 2040, Welsh speakers will be able to confidently use Welsh on the buses.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Include encouraging bus service providers to meet Welsh language standards.

ISA Objective	Score	Duration Certainty	Appraisal – Bus
			<ul style="list-style-type: none"> The lack of Welsh medium provision and services could be seen as a barrier to access. The WTS could note that the ambition is to ensure that the Welsh and English language should be treated on an equal basis. The WTS could include supporting improved access by bus to Welsh-medium education facilities.
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 6, as Welsh Government have already set a commitment that all buses in Wales will be zero tailpipe emissions by 2028. By 2040, Wales will have adopted innovative technology that helps to reduce emissions from buses and has developed local skills, for example in battery technology and the use of hydrogen fuels.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Could the WTS encourage a more rapid improvement in emissions from public transport, given the climate emergency?
7. To enable climate change resilience	?	Long-term Medium	<p>This mini plan will help to provide climate resilience through the improvement of bus services with regards to flood risk adaption and emergency procedures to protect from flooding in unexpected circumstances and major planned events. However, the mini plan does not explicitly state this. Following Covid-19, bus services could be made more adaptable to other kinds of emergencies, for example flooding. Again, this is not explicitly mentioned in the mini plan.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Include resilience to future climate related and pandemic related emergencies Add adaption of bus services to climatic events, including flooding as well as major planned events.
8. To protect and improve air quality	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 8, as Welsh Government has already set a commitment that all buses in Wales will be zero tailpipe emissions by 2028. By 2040, Wales will have adopted innovative technology that helps to reduce emissions from buses and has developed local skills, for example in battery technology and the use of hydrogen fuels.</p>
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>This mini plan is indirectly compatible with ISA Objective 9. New residential developments should be accessible by bus; this may result in an indirect improvement to landscape and townscape through fewer private vehicles on the road and a resultant reduction in pollution.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> The mini plan could set out that existing and new public transport infrastructure should be as sustainable as possible and contribute to a wide green infrastructure network. This might include the planting of verges, and the greening of bus stops, for example, with green roofs. This will help with multiple aspects, such as landscape, townscape, flood risk management, air quality, and biodiversity.
10. To promote the conservation and	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 10 as it states that by 2040, buses will be a great option for visiting Wales' fantastic natural and cultural heritage including landscapes, coasts and open spaces.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Bus
enhancement of heritage assets			
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 11, as improving the safety, access and connectivity of bus services and integrating them with other public transport services and active travel, more people may choose buses as a transport option, leading to less people choosing private vehicles and ultimately fewer vehicles on the roads. Reductions in air and other forms of pollution may have beneficial impacts on biodiversity and the natural environment.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> The mini plan could set out that existing and new public transport infrastructure should be as sustainable as possible and contribute to a wide green infrastructure network. This might include the planting of verges, and the greening of bus stops, for example, with green roofs. This will help with multiple aspects, such as landscape, townscape, flood risk management, air quality, and biodiversity.
12. To ensure the sustainable use of natural resources	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 12, as Wales will have adopted innovative technology that helps to reduce emissions from buses and has developed local skills, for example in battery technology and the use of hydrogen fuels. Hydrogen power can be accommodated into bus services, reducing the use of natural resources.</p>
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 13, as improving the safety, access and connectivity of bus services and integrating them with other public transport services and active travel, more people may choose buses as a transport option, leading to less people choosing private vehicles and ultimately fewer vehicles on the roads. This will reduce light pollution and noise pollution, however there is uncertainty surrounding this.</p>

Mini Plan for Rail

ISA Objective	Score	Duration Certainty	Appraisal – Rail
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	+	Long-term Medium	<p>The rail mini plan is compatible with ISA Objective 1, as it states that rail travel will be safe and secure for all users. The mini plan states that more rail services will be provided together with more stations, getting people to where they want to go. This will improve access to employment, community, and social infrastructure, all of which will have beneficial impacts on health and well-being. Changing people's current perceptions of rail travel (for example barriers relating to cost or accessibility) however, is not mentioned and consideration should be given to what rail travel may look like post-Covid. Fear of crime on public transport has been identified as an issue for vulnerable population groups such as the elderly and women. A study by DfT in 2004 found that 60% of women felt unsafe waiting on train platforms after dark in London, compared to 25% of men. Similarly, 51% of women surveyed felt unsafe travelling on a train compared to 20% of men (Loukaitou – Sideris, 2014). These gendered differences in perceptions of safety should be addressed by the WTS, to reduce inequality.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The section could refer to the heightened need for cleanliness and space in light of the global pandemic. Future potential impacts of COVID-19 will affect the transport system e.g. more spread out seating, hand sanitiser stations, mask wearing by users. Whilst private vehicle travel can be perceived as being safer, steps can be taken to ensure the safety of travellers on public transport. • Patronage of public transport is low compared to before the COVID-19 pandemic – National Rail statistics for transport use since 1st March 2020 show that during lockdown, train patronage was between 4-7% of an equivalent day/week pre-pandemic. COVID-19 has made public transport services less attractive and the rail mini plan needs to clearly acknowledge this. • The mini plan appears to focus mainly on economic benefits and getting people where they need to for employment purposes. Other journey purposes could also be mentioned, for example improved access to health and social care facilities, education, and leisure trips. • Specific reference should be made to the different safety challenges perceived by various population groups using trains – particularly reducing the gendered fear of public transport and improving the perceived safety of travelling by train and accessing train services, particularly after dark.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term High	<p>The rail mini plan is compatible with ISA Objective 2, as by 2040, there is anticipated to be a reduction in the barriers that currently prevent people from making best use of rail services. For example, physical accessibility to train services may be improved, affordability addressed, and training provided for staff to ensure that everyone feels welcome.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of rail staff to make services accessible for all. • The mini plan mentions challenges associated with rail due to the rural nature of much of Wales but does not identify opportunities for how people living in rural areas may have improved access to rail services. • The focus appears to be on the Metro System and congestion on the M4, both of which will benefit South Wales and urban areas disproportionately. The North Wales Metro will benefit north east Wales, however there is little suggestion of improvements in Mid Wales or rural areas.

ISA Objective	Score	Duration Certainty	Appraisal – Rail
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 3, as by 2040, passenger revenue will have increased, thereby encouraging inward investment. This is however somewhat contradicted by 'more people will work locally', suggesting there may not be as much need to use the train to commute (therefore impacting revenue). Railway hubs will be hubs for economic investment and growth and Wales' digital ambitions will be supported for integrated ticketing and improved information for passengers.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The issue around people working locally should be considered further, including the impact this may have on economic benefits if fewer people need to use the train for commuting purposes. • Increased train use will correlate with a stronger economy as more people are travelling and spending. This is an area that could be referred to within the mini plan. • The mini plan seeks to enhance the attractiveness of rail services. An important barrier for many people relates to affordability. How feasible will it be to ensure truly affordable prices that encourage high uptake of rail services?
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 4, as by 2040 people should be able to confidently use rail to get to and from major sporting and cultural events.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The mini plan should refer to the fact that rail services will need to adapt in order to cater for major events, for example the provision of extra carriages to transport people or amended timetables. • Rail could improve access to cultural sites of interest – there could be concessionary fares or discounted entry at heritage sites, for example, to encourage people to travel sustainably.
5. To encourage the protection and promotion of the Welsh Language	?	Long-term Low	<p>The mini plan could go further to ensure that it is compatible with ISA Objective 5. Approximately 30% of the population can speak Welsh. Recommendations below consider how the Welsh language can be better incorporated into the WTS.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • TfW and rail service providers could be further encouraged to meet Welsh language standards, including training staff and ensuring provision of Welsh language in stations. • The WTS could note that the ambition is to ensure that the Welsh and English language are treated on an equal basis.
6. To reduce greenhouse gas emissions from transport	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 6, as rail traction will have been decarbonized. It is hoped that more people will take the train instead of using their cars, reducing greenhouse gas emissions. Trains will make more use of renewable diesel locomotion by using renewable power sources for trains and the energy performance of stations and Core Valleys Lines (CVL) infrastructure will have been improved. More goods have been moved onto rail thereby avoiding environmentally sensitive lorry miles. However with capacity and timetabling constraints, there is uncertainty as to how feasible this is over the long-term.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Rail
7. To enable climate change resilience	?	Long-term Medium	<p>This mini plan will help to provide climate resilience through the improvement of rail services with regards to flood risk adaption and emergency procedures to protect from flooding in unexpected circumstances and major planned events. However, the mini plan does not explicitly state this and therefore there is uncertainty here. The mini plan also does not mention how coastal erosion or flood risk will be mitigated on the railway in Wales.</p> <p>Following Covid-19, rail services should be improved through being more adaptable to other kinds of emergencies, for example flood risk. Again, this is not explicitly mentioned in the mini plan and should be included.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Include resilience to future climate related and other types of emergency. • Add adaption of rail services to climatic events, including flooding as well as major planned events. • Green infrastructure elements could be used to promote rail facilities by making travel routes more appealing and providing reduced climate vulnerability e.g. green walls on station buildings.
8. To protect and improve air quality	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 6, as rail traction will have been decarbonized. It is hoped that more people will take the train instead of using their cars, reducing greenhouse gas emissions. Trains will make more use of renewable diesel locomotion by using renewable power sources for trains and the energy performance of stations and CVL infrastructure will have been improved. More goods have been moved onto rail and so avoiding environmentally sensitive lorry miles. However with capacity and timetabling constraints, there is uncertainty as to how feasible this is over the long-term.</p>
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 9. By improving the safety, access and connectivity of rail services and integrating them with other public transport services and active travel, more people may choose rail as a transport option, thereby encouraging less reliance on the private car. With fewer vehicles on the road there may be reduced air and noise pollution, improving the setting of both townscapes and landscapes.</p>
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	<p>The rail mini plan is compatible with ISA Objective 10, as historic environment assets will be protected and sustained in rail improvements and developments.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Rail could improve access to heritage sites and assets – for example there could be concessionary fares or discounted entry at heritage sites to encourage people to travel sustainably.
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Low	<p>The mini plan is compatible with ISA Objective 11, as by 2040, biodiversity and ecosystem resilience will have been protected and enhanced in the rail soft estate and in future rail improvements. Improving the safety, access and connectivity of rail services and integrating them with other public transport services and active travel, may encourage more people to use the train as a transport option ultimately leading to fewer vehicles on the roads. This will reduce air pollution and noise pollution, which could improve ecosystems and habitat settings. There is uncertainty surrounding this.</p> <p>Recommendation:</p>

ISA Objective	Score	Duration Certainty	Appraisal – Rail
			<ul style="list-style-type: none"> The mini plan could set out that existing and new public transport infrastructure should be as sustainable as possible and contribute to a wide green infrastructure network. This might include the planting of verges, and the greening of bus stops, for example, with green roofs. This will help with multiple aspects, such as landscape, townscape, flood risk management, air quality, and biodiversity.
12. To ensure the sustainable use of natural resources	+	Long-term Low	The mini plan is compatible as the energy performance of stations and CVL infrastructure will have been improved. Further, more goods will have been moved onto rail thereby avoiding environmentally sensitive lorry miles, which will ensure further sustainable use of natural resources.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Low	This mini plan is compatible with ISA Objective 13, as improving the safety, access and connectivity of rail services and integrating them with other public transport services and active travel, may encourage more people to use the train as a transport option ultimately leading to fewer vehicles on the roads. This will reduce noise and light pollution, which could improve ecosystems and habitat settings. There is uncertainty surrounding this.

Mini Plan for Roads, Streets and Parking

This mini plan does not mention new roads or road infrastructure – current projects include:

- M4 – Junction 35 to Junction 49 Improvements
- A55/A494/A548 Flintshire Corridor
- A470 and M4 Corridor Studies

There will inevitably be more in the future. The mini plan should discuss the sustainable construction of new roads and how negative environmental impacts may be mitigated.

ISA Objective	Score	Duration Certainty	Appraisal – Roads Streets and Parking
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	+	Long-term Medium	<p>This mini plan is highly compatible with ISA Objective 1, as lowering the default speed limit to 20mph will improve health outcomes, particularly for vulnerable groups such as children and young adults (with those living in poorer communities being more at risk) (Dorling, 2014). A default 20mph speed limit will lead to a reduction in road traffic casualties, with case study evidence showing a 22% reduction per year in casualties due to the 20mph limit (Greig et al, 2014). Although there may be health benefits for vulnerable groups as described, 20mph speed limits may increase driver stress due to increased journey times and congestion.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The WTS could usefully acknowledge health inequalities, for example, in deprived areas. • Shutting streets by schools at certain times of the day may help further reduce age related accidents. This could be considered for inclusion.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+/-	Long-term High	<p>This mini plan is compatible with ISA Objective 2, as it will improve the safety of walking and cycling by incorporating active travel into the road network through the provision of cycle lanes and footways. Default speed limits and action on pavement parking will also makes streets safer. However, if cars park unsafely elsewhere or reduced speed limits increase driver stress, a negative effect may result. Road charging is not equitable as it impacts those on lower incomes more, or those who are more reliant on the car due for example to living in rural areas or because of mobility issues.</p> <p>Recommendations: The WTS should seek to explore the issues potential issues above, to ensure that measures are equitable.</p>
3. To support sustainable economic development and diversity	+/-	Long-term Medium	<p>The mini plan is compatible with ISA Objective 3, as by 2040, efficient, uncongested roads will make it attractive for businesses to locate to Wales thus supporting the Welsh supply chain and thereby benefiting the economy. By preventing pavement parking, money spent on maintenance of cracked and broken footways may be reduced.</p> <p>However, lower speed limits could also lead to increased journey times, lower productivity and worsened congestion, which all have negative impacts on the economy. This is offset slightly by the reduction in accidents that may occur and subsequent cost savings. Jones and Brunt (2017) estimate that as a result of 20mph speed limits, 6–10 lives would be saved and 1200–2000 casualties avoided each year, at a value of prevention of £58M–£94M.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Roads Streets and Parking
			<p>Recommendations:</p> <ul style="list-style-type: none"> • The WTS could consider the inclusions of fiscal measures, such as Workplace Parking Levies or increasing the cost of parking to reduce congestion and car use. • The WTS could mention Clean Air Zones or Congestion Charging as potential measures to reduce car use, although it is recognised that these measures have a disproportionate impact on the poor or those who rely on the car, for example, people living in more rural areas. • The WTS mentions new technology but could mention the jobs that this would create also, further benefiting the economy.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 4, particularly as road use and congestion will be managed around major cultural and sporting events in Wales.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • To effectively manage road use and congestion, public transport should be promoted and encouraged as a viable alternative to the motor vehicle. This could be through parking prices or providing compulsory park and ride facilities for those who need to travel by car.
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 5, as road signage will be bilingual, however this is already a legal requirement. The mini plan does not go far enough to promote or protect the Welsh language and only meets statutory requirements.</p>
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 6, road charging will be implemented where there is poor air quality and/or congestion to reduce emissions from vehicles. This will be supported by the road network supporting charging for all classes of electric vehicles. There are however some contradictions and inconsistencies in evidence regarding the 20mph speed limit and air quality. For example, there is an impact on emissions from braking and tyre wear due to a 20mph speed limit. A study by North (2013) found there was a moderate increase in CO₂ and NO_x in petrol cars following a study concerning 20mph restrictions in Central London. The study did however find that particulate matter emissions reduced for both petrol and diesel cars and NO_x and CO₂ emissions reduced for diesel cars.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Promoting share cars, car clubs and car pools can reduce emissions and private car use without relying on the introduction of a new technology. This should be mentioned in the mini plan. • AQMAs are not mentioned; the management of these areas should be addressed in this mini plan.
7. To enable climate change resilience	+	Long-term Medium	<p>This mini plan is broadly compatible with ISA Objective 7 as it states that the road network will be “future proofed” by managing the impact of climate change on road infrastructure by improving surface water drainage, managing flood risks and ensuring that new residential developments do not create harmful surface water discharges.</p> <p>Recommendations:</p>

ISA Objective	Score	Duration Certainty	Appraisal – Roads Streets and Parking
			<ul style="list-style-type: none"> The mini plan should mention coastal adaption for roads and how coastal erosion will be mitigated or managed for the highway network.
8. To protect and improve air quality	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 8 as it recognises that the first priority is to reduce the number of car and vehicle journeys in order to reduce associated environmental and air quality effects, yet there is still a need to maintain and manage the existing network of roads and streets.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> To effectively reduce air pollution, public transport should be promoted and encouraged as a viable alternative to the motor vehicle. This could be through parking prices or providing compulsory park and ride facilities for those who need to travel by car. AQMAs are not mentioned; the management of these areas should be addressed in this mini plan.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 9 as it states that people can enjoy scenic landscapes of National Parks and AONBs because there will be a reduced impact of cars.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> To effectively improve access to National Parks and AONBs and reduce the impact of cars, public transport should be promoted and encouraged as a viable alternative to the motor vehicle. This could be through parking prices or providing compulsory park and ride facilities for those who need to travel by car.
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 10, as the historic environment will be protected in road projects and upgrades and in the management of the soft estate.</p>
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 11 as it states there will be better biodiversity and ecosystem resilience as part of the soft estate. This is a broad statement however and does little to explain how this will be managed. To simply say there will be “better biodiversity and ecosystem resilience” with little explanation or evidence as to how makes it difficult to assess how achievable this is.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Improve and maintain roadside verges and biodiversity pathways alongside and within transport routes, and incorporate habitat bridges into future designs.
12. To ensure the sustainable use of natural resources	+	Long-term Low	<p>This mini plan is broadly compatible with ISA Objective 12, as road operations and maintenance will consume less energy. The mini plan, however, does not mention the protection of ground and surface water quality or soil pollution.</p> <p>Recommendations:</p>

ISA Objective	Score	Duration Certainty	Appraisal – Roads Streets and Parking
			<ul style="list-style-type: none"> Should include reducing embodied carbon in the road network and using sustainable materials in the development of the road network, in maintenance or construction.
<p>13. To enable the protection of tranquil areas and prevention of noise and light pollution</p>	+	Long-term Low	<p>This mini plan is broadly compatible with ISA Objective 13, as by 2040, there will be less traffic noise on the road network. Again, the mini plan does not state how this will be achieved. If it is due to the uptake in electric vehicles, this should be mentioned. Also, maintenance of the SRN will increase noise levels at receptors nearby; this should be mentioned, together with how noise from construction and maintenance will be mitigated.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Include the mitigation of noise from construction/maintenance and the reason noise will be reduced on the network, for example, through the uptake in electric vehicles or because of less vehicles on the road. Should include the mitigation and management of Noise Action Planning Priority Areas (NAPPA), which are prominent along much of the Strategic Road Network (SRN) and M4 – the mini plan should set out how these will be managed effectively.

Mini Plan for Community and not-for-profit transport sectors

ISA Objective	Score	Duration Certainty	Appraisal – Community and Not-For-Profit Transport Sectors
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	++	Long-term Medium	<p>This mini plan is highly compatible with ISA Objective 1, for several reasons. Firstly, there will be better access to health services which will work towards reducing health inequalities. Other reasons include that more people will be able to access the countryside and areas for outdoor recreation, which has a resultant benefit on both physical and mental health.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan should go further to explain the reliance on community transport of isolated areas or for certain groups, for example the elderly or people with pre-existing health conditions / disabilities. Providing community transport does help to reduce health inequalities by improving access to services for these and other groups, which should be mentioned specifically. Community transport makes a significant contribution towards sustaining the health and well-being of service users, by maintaining independence, improving quality of life and increasing physical activity and promoting mental well-being. More detail should be given on the positive impacts that community transport can provide as part of the case for continued and increased investment in the sector.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	++	Long-term High	<p>The mini plan is highly compatible with ISA Objective 2, as by 2040, there will be a reduction in isolation and loneliness and there will be lifeline services for people who would not otherwise be able to access conventional public transport. The mini plan will reduce inequalities based on disability and access in addition to reducing inequalities between urban, rural and semi-rural communities.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan could usefully outline the groups for which inequalities will be reduced, for example, those with disabilities, the elderly, children and those who live in rural or semi-rural communities. The use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of community transport staff to make services accessible for all.
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 3, as a wider range of people can access employment as well as retail, services, education, work and leisure services. There will also be less fuel poverty in rural areas where the cost of running a car can be high.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan could go further to explain the economic benefits of community transport, for example, research shows that loneliness and isolation costs the UK approximately £2.1 billion each year (Why Community Transport Matters, ECT Charity) therefore providing community transport can bring huge economic savings.

ISA Objective	Score	Duration Certainty	Appraisal – Community and Not-For-Profit Transport Sectors
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	This mini plan is compatible with ISA Objective 4, as there will be more transport services for faith and cultural groups, and better access to sporting and cultural events.
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	This mini plan does not mention how the Welsh language will thrive or how Welsh-speaking communities will be supported through community transport initiatives. The mini plan focuses on access to Welsh culture as opposed to the protection of the Welsh language. Recommendations: <ul style="list-style-type: none"> • Mention more transport services for Welsh-speaking communities, as well as faith and cultural groups.
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	The mini plan is compatible with this ISA Objective, as there will be fewer carbon emissions as more people travel together. Further, community transport has made greater use of alternative vehicle technologies, therefore reducing greenhouse gas emissions.
7. To enable climate change resilience	○		Neutral
8. To protect and improve air quality	+	Long-term Medium	The mini plan is compatible with this ISA Objective, as there will be fewer polluting emissions as more people travel together. Further, community transport has made greater use of alternative vehicle technologies, reducing the potential emissions from the sector.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	○	Long-term Low	Neutral Recommendations: <ul style="list-style-type: none"> • The mini plan could mention that community transport can mitigate the adverse impact of road traffic and parking on Wales' landscape, particularly if provided to access AONBs or National Parks.
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	This mini plan is compatible with ISA Objective 10 as Welsh Government will work with Visit Wales and other partners to continue to promote historic rail experiences in Wales. Wales' rich transport heritage including historic rail infrastructure, canals and rolling stock, will be preserved for future generations.
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Medium	This mini plan is compatible with ISA Objective 11, as community transport will provide an improvement in opportunities for people to access wildlife and open green spaces. Promotion of conservation may be achieved by more people understanding and learning about these areas.

ISA Objective	Score	Duration Certainty	Appraisal – Community and Not-For-Profit Transport Sectors
12. To ensure the sustainable use of natural resources	+	Long-term Low	The mini plan is compatible with this ISA Objective, as there will be a lower reliance on fossil fuels, through the greater use of alternative vehicle technologies.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	○	Long-term Low	<p>Neutral</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The mini plan could state that as more people are travelling together, there will be a reduction in noise pollution due to fewer vehicles on the road.

Mini Plan for Taxis and Private Hire Vehicles

General Comments

This mini plan does not discuss technological innovations that may occur in the next 20 years. Ride hailing apps, such as Uber or Lyft are already dominant in the market and will only become more popular and accessible to more people in time. Therefore, this mini plan should outline how technological advances and apps will be supported and promoted by Welsh Government.

This mini plan also needs to be more ambitious in targets concerning zero emission vehicles.

ISA Objective	Score	Duration Certainty	Appraisal – Taxis and Private Hire Vehicles
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	+	Long-term Medium	<p>This mini plan is generally compatible with ISA Objective 1, as it states that regardless of where customers live in Wales, they experience a good level of taxi service with readily available, accessible, safe vehicles, and suitable drivers that provide good customer service. This could have a role to play in reducing health inequalities.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The mini plan should include improving access to health and social care services. • Could include heightened hygiene standards post Covid-19 so that passengers feel safe using taxis and Private Hire Vehicles (PHVs).
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term High	<p>The mini plan is compatible with ISA Objective 2 in that everyone, and especially people that share protected characteristics, feel welcome and safe when using taxi services, and have access to a service that meets their needs. Taxis, however, are not accessible for all due to high costs in particular areas or associated with distance (for example people living in rural areas may pay disproportionately). This means that access is not equitable for those on lower incomes, which may also include children, the elderly and disabled people.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The mini plan should acknowledge that not all people can afford to use taxis or PHVs despite these vehicles being the only available transport available, depending on location (rural or semi-rural areas) or the time of day. The mini plan could suggest concessions in rural areas or ensure that all taxis must use a meter, to have fair pricing. Ceredigion County Council, for example, introduced fixed taxi fares which licensed taxi operators are bound by, so that customers do not get overcharged. This could be rolled out nationwide. • Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of taxi drivers to make services accessible for all.
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 3, as taxis and PHVs enable will mean more people can access work, services, leisure and education by complementing public transport services.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Taxis play a key role in the night-time economy in particular, and the mini plan should refer to this. • Technological advances, including smartphone apps, should be referred to, together with the jobs this may create.

ISA Objective	Score	Duration Certainty	Appraisal – Taxis and Private Hire Vehicles
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>The mini plan is compatible with ISA Objective 4, as it states that taxi and PHV drivers act as important ambassadors for Wales with a key role in introducing visitors to the country.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Outline the important role of taxis and PHVs for accessing cultural events or spaces and recreational spaces.
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 5, as taxi and PHV drivers act as important ambassadors for Wales and can promote the Welsh language.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan could encourage taxi companies to employ Welsh speakers, so that service users have the option to communicate in Welsh and promote the language further.
6. To reduce greenhouse gas emissions from transport	+	Long-term Low	<p>This mini plan is somewhat compatible with ISA Objective 6, however it does not go far enough. Firstly, zero emissions vehicles are only introduced into taxi fleets. Whilst working with TfW to make sure the infrastructure in place is welcomed, this needs to be equitable for both rural and urban areas. The mini plan states that 'there is less need for private cars and greater use of public transport' yet the mini plan concerns taxis and private hire vehicles, as opposed to public transport. In order for the mini plan to be fully compatible with ISA Objective 6, all taxis and private hire vehicles would need to be zero emissions by 2040, otherwise an increase in the number of vehicles on the road would increase air pollution. Uncertainty here is high.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan should go further than just introduce zero emissions vehicles and as is done in London, offer grants for 'plug-in vehicles' and changing the licensing requirements in order to reduce emissions from the taxi fleet. The mini plan does state that incentive schemes will be introduced but the plan could go further, to ensure uptake. There should be a target set, similar to the bus emissions target, for all taxis and private hire vehicles to be zero emissions. Until this happens, this mini plan will not be fully compatible with ISA Objective 6.
7. To enable climate change resilience	0		Neutral
8. To protect and improve air quality	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 8, as mentioned above in greenhouse gas emissions. However, in order for this mini plan to be fully compatible with ISA Objective 6, all taxis and private hire vehicles would need to be zero emissions by 2040, otherwise an increase in the number of vehicle on the road would increase air pollution. Certainty is therefore low.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Taxis and Private Hire Vehicles
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long-term Low	<p>Neutral – there would be no impact on landscapes or townscapes. This mini plan could enhance the local distinctiveness of landscapes and townscapes by reducing the impacts of road traffic and parking on Wales’ valued landscapes.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Taxis and PHVs could reduce the adverse impacts of road traffic and parking on Wales’ valued landscapes and townscapes – this should be mentioned within the mini plan. • There should be a target set, similar to the bus emissions target, for all taxis and private hire vehicles to be zero emissions.
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	This mini plan is compatible with ISA Objective 10. However, in order for this mini plan to be fully compatible with this objective, all taxis and private hire vehicles would need to be zero emissions by 2040, otherwise an increase in the number of vehicles on the road due to increased patronage of taxis and private hire vehicles would have a negative impact on the conservation and enhancement of heritage asset. Certainty is therefore low.
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Low	This mini plan is compatible with ISA Objective 11. However, in order for this mini plan to be fully compatible, all taxis and private hire vehicles would need to be zero emissions by 2040, otherwise an increase in the number of vehicles on the road would negatively impact biodiversity and ecosystems. Certainty is therefore low.
12. To ensure the sustainable use of natural resources	+	Long-term Low	This mini plan is compatible with ISA Objective 12 as mentioned above in greenhouse gas emissions. However, in order for this mini plan to fully compatible with ISA Objective 6, all taxis and private hire vehicles would need to be zero emissions by 2040, otherwise an increase in the number of vehicles on the road network would lead to an increase in the use of natural resources. Certainty is therefore low.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Low	This mini plan is compatible with ISA Objective 13, as mentioned above in greenhouse gas emissions. However, in order for this mini plan to be fully compatible with ISA Objective 6, all taxis and private hire vehicles would need to be zero emissions by 2040, in order to lead to less disturbance of noise and light from traffic. Certainty is therefore low.

Mini Plan for Freight and Logistics

ISA Objective	Score	Duration Certainty	Appraisal – Freight and Logistics
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	+	Long-term Medium	<p>This mini plan is generally compatible with ISA Objective 1, as it states that an effective supply chain enables people to access services such as health care and food where and when they need to. The plan recognises that the sector shares infrastructure needs with the public for road, however, does not state how this will be managed in order to reduce driver stress or anxiety.</p> <p>Freight vehicles and the volume of Heavy Goods Vehicles (HGVs) on the road can negatively impact cyclist's and pedestrian's perceptions of safety and can increase the fear of collisions or casualties. Vulnerable groups may include those who are more reliant on walking and cycling such as children and young people, the elderly, and people in low-income households. These fears can be mitigated by providing safe, segregated footways and dedicated cycle lanes in appropriate locations.</p>
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term High	<p>The mini plan is compatible with ISA Objective 2 as it states that the networks which move both goods and people are safe and secure for both kinds of activity without disadvantaging connectivity or capability. This should be explored further to make sure that groups are not disadvantaged, relating to disabilities or gender, due to perceived anxieties around some routes due to high HGV traffic flows.</p>
3. To support sustainable economic development and diversity	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 3 as freight and logistics will be integrated into wider transport and land-use planning policy at local, regional and national levels. Wales will have the infrastructure, capability and capacity to support a more sustainable freight and logistics sector including innovative business models that encourage commercial growth alongside decarbonisation. This is important, because reducing the need/length of freight travel will benefit Wales greatly. By restructuring the supply chain, encouraging manufacturing and funding the Enterprise Zones in Wales, freight miles can be reduced whilst still providing people with the services and goods they need.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The WTS could include mention of jobs created in the freight and logistics industry, benefiting the economy. • The WTS could include investing in Enterprise Zones and the manufacturing/technology industries in Wales, to reduce freight miles. • There is no mention of the potential impacts of Brexit on the freight industry and how this may be mitigated. Welsh Government acknowledge that HGVs travelling from Ireland may be subject to extra checks in the event of a 'no deal' Brexit situation, however these delays are not mentioned, and mitigation is not suggested. This should be included
4. To protect and promote Welsh culture and improve access to cultural	0		<p>Neutral – the mini plan does not contribute to the promotion or protection of Welsh culture.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Freight and Logistics
and recreational spaces			
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	This mini plan is compatible with ISA Objective 5, as there will be a thriving home-grown supply-chain with a skilled and diverse workforce that helps sustain local communities, including Welsh speaking communities, across Wales.
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 6 as there will be fewer greenhouse gas emissions from freight and logistics. More goods will be moved by more sustainable forms of transport, including options such as multi-modal hubs. Innovations will be adopted that help create low carbon logistics networks, including demand-management measures to influence consumer behaviour. Freight will be integrated into the Decarbonisation Pathway to reduce emissions from the sector.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> By encouraging inward investment and investing in manufacturing industries in Wales, freight miles may be reduced, thereby reducing greenhouse gas emissions from transport.
7. To enable climate change resilience	+	Long-term Medium	<p>Neutral – does not mention how freight and logistics will adapt to climate change</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan should explain how freight and logistics networks will adapt to changing climate, including flood risk and coastal erosion along key routes. Consideration also needs to be given to adaption post-Brexit.
8. To protect and improve air quality	+	Long-term Medium	This mini plan is compatible with ISA Objective 9 as it states that there will be better air quality from freight and logistics with interventions supported that shift freight from road to rail and water-based transport, whilst supporting future innovations that will help make the sector more sustainable.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	-	Long-term High	<p>Incompatible.</p> <p>Freight transport can create adverse visual impact and can have adverse impacts on the distinctiveness of landscapes and townscapes. Key routes of the SRN go through areas of distinctive landscape, including Snowdonia and the Brecon Beacons National Parks, meaning these National Parks may be disrupted by transport of freight in these areas. The mini plan does not recognise this and, although states that road freight will be moved to rail and water-based, this does not go far enough to mitigate the negative impacts.</p>
10. To promote the conservation and enhancement of heritage assets	0		Neutral – does not contribute to the enhancement of heritage assets.

ISA Objective	Score	Duration Certainty	Appraisal – Freight and Logistics
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 11, as improved air quality due to fewer greenhouse gas emissions from freight will lead to higher quality habitats for biodiversity to inhabit.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Improve and maintain roadside verges and biodiversity pathways alongside key freight routes, and incorporate habitat bridges into future designs.
12. To ensure the sustainable use of natural resources	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 12, as it will reduce and mitigate the impacts to the environment of moving goods across Wales. The mini plan aims to develop a more sustainable supply chain for freight in Wales. There is conflict, however, if freight is shifted to water-based transport, as this would not protect or enhance water quality or promote the conservation of soil.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Hydrogen power can be accommodated into freight and bus services, reducing the use of natural resources.
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long-term Low	<p>This mini plan is compatible with ISA Objective 13, as it states there will be less environmental noise from freight and logistics. However the mini plan does not go far enough in stating <i>how</i>. Reference should be made to NAPPAs along the SRN and other key freight routes and how noise pollution will be lessened for receptors along these routes.</p>

Mini Plan for Ports and Maritime Transport

General Comments

This mini plan should give reference to and align more with the objectives in the Welsh National Marine Plan (12 November 2019).

ISA Objective	Score	Duration Certainty	Appraisal – Ports and Maritime Transport
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	+	Long-term Medium	<p>This mini plan is generally compatible with ISA Objective 1, as it states that ports and harbours increase levels of activity in Wales by supporting the leisure economy including sailing, rowing and sporting opportunities, which help to promote both physical health and mental well-being.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> According to the Wales Index of Multiple Deprivation (WIMD), Holyhead Town Lower Super Output Area (LSOA), which includes the Port of Holyhead, is amongst the 10-20% most deprived in Wales for health. The mini plan does not go far enough to improve health inequalities in areas close to ports. More emphasis needs to be placed on ways to improve the physical and mental health of residents in these areas.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	+	Long-term High	<p>The mini plan is compatible with ISA Objective 2 as it states that ports and harbours will play a vital role in supporting local communities, including rural communities.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Use of British Sign Language should be considered as a way to improve access for people who are deaf or have impaired hearing. This could be achieved through training of port staff to make services accessible for all. According to the WIMD, Holyhead Town LSOA is amongst the 10-% most deprived overall. There is similar evidence for Pembroke Dock Central and Pembroke Dock Llanion 1 LSOAs, both of which are amongst the 10% most deprived LSOAs in Wales. The mini plan does not go far enough to describe ways to improve these inequalities.
3. To support sustainable economic development and diversity	++	Long-term Medium	<p>This mini plan is highly compatible with ISA Objective 3, as ports act as hubs for economic activity and investment. It is recognised that Welsh ports will act as international gateways, increasing trade and inward investment opportunities in Wales. Ports and harbours are focal point for investment, delivering local jobs and services and benefits to the wider economy of Wales. Ports are vital sources of Welsh employment and wealth in the wider supply chain.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> There is no mention of the impact that Brexit will have on ports, in particular Holyhead Port which provides key links to Ireland. Welsh Government acknowledge that there may be disruption to travel to and from Holyhead in the early days of a potential 'no deal' Brexit situation and the impact no deal may have on HGVs travelling from Ireland. This could be considered in the mini plan.
4. To protect and promote Welsh culture and improve access to cultural	++	Long-term Medium	<p>The mini plan is compatible with ISA Objective 4, as historic environment assets, including Wales' rich maritime history, are protected and sustained in the operation and growth of ports and harbours in Wales.</p>

ISA Objective	Score	Duration Certainty	Appraisal – Ports and Maritime Transport
and recreational spaces			
5. To encourage the protection and promotion of the Welsh Language	+	Long-term Low	This mini plan is somewhat compatible with ISA Objective 5, however it states that visitor services associated with ports and harbours will meet Welsh language standards. This is a statutory obligation. Recommendations: <ul style="list-style-type: none"> The WTS could encourage the employment of Welsh speakers at ports and harbours in order to promote the language further.
6. To reduce greenhouse gas emissions from transport	+	Long-term Medium	The mini plan is generally compatible with ISA Objective 6, as ports and harbours will be more energy efficient and support low carbon logistics networks in Wales. The mini plan states that it will prevent and mitigate impacts on the environment that result from ports and maritime transport.
7. To enable climate change resilience	-	Long-term Medium	This mini plan is incompatible as it does not mention climate change resilience or adaption. Climate change, including increased sea levels and coastal erosion could have significant impacts on ports and harbours as well as the communities that live there. Recommendations: <ul style="list-style-type: none"> The mini plan should consider how ports and harbours will adapt to climate change, including the management of coastal flooding and the protection of floodplains and coastal adaption due to coastal erosion. Port and harbour developments must be sustainable to mitigate the effects of climate change.
8. To protect and improve air quality	+	Long-term Medium	The mini plan is generally compatible with ISA Objective 8, as ports and harbours will be more energy efficient and support low carbon logistics networks in Wales. The mini plan states that it will prevent and mitigate impacts on the environment that result from port usage and maritime transport.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	0		Neutral – This mini plan does not mention Wales’ coastal landscape or the value it has for society, particularly those sections designated as AONBs, National Parks or other designations. 42% of Wales’ coastline is defined as Heritage Coasts, meaning they are protected from unsustainable development. The management of these areas should be mentioned in the mini plan, especially if in close proximity to ports and harbours.
10. To promote the conservation and enhancement of heritage assets	+	Long-term Low	This mini plan is compatible with ISA Objective 10, as historic environment assets, including Wales’ rich maritime history, will be protected and sustained in the operation and growth of ports and harbours in Wales. Recommendations: <ul style="list-style-type: none"> Promote underwater heritage to encourage visitors and thereby economic growth.

ISA Objective	Score	Duration Certainty	Appraisal – Ports and Maritime Transport
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long-term Medium	<p>The mini plan is generally compatible with ISA Objective 11, as the operation and development of ports and harbours will support marine conservation and the marine environment.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> The mini plan, should align more closely with Objectives 10 and 11 of the Welsh National Marine Plan document: <i>'Protect, conserve, restore and enhance marine biodiversity to halt and reverse its decline including supporting the development and functioning of a well-managed and ecologically coherent network of Marine Protected Areas (MPAs) and resilient populations of representative, rare and vulnerable species.'</i> <p><i>'Maintain and enhance the resilience of marine ecosystems and the benefits they provide in order to meet the needs of present and future generations.'</i></p>
12. To ensure the sustainable use of natural resources	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 12, as ports and harbours will lead a green maritime recovery across Wales, including renewable energy projects and offshore renewables.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan could go into further detail on renewable energy and include, for example the potential that exists to grow algae offshore in sufficient volumes to meet the economies of scale to supply biomass to generate renewable energy.
13. To enable the protection of tranquil areas and prevention of noise and light pollution			<p>Neutral - This mini plan does not enable the protection of tranquil areas or the prevention of noise and light pollution and does not mention how both underwater noise and noise pollution will be mitigated. The Welsh National Marine Plan gives clear guidelines on noise (Policy ENV_05) and these should be referred to in the mini plan.</p>

Mini Plan for Aviation

General Comments

This mini plan should give reference to and align with the Cardiff Airport Environmental Flight Path

ISA Objective	Score	Duration Certainty	Appraisal – Aviation
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	-		<p>This mini plan does not contribute towards an improvement in access to health and social care services and does not promote healthy lifestyles. Although the plan states that communities across Wales will benefit from safer local and international connectivity, it is not clear how, as the focus is primarily on Cardiff Airport. A disproportionate benefit may be seen on communities in South Wales, rather than Wales as a whole.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Consideration must be given to improved safety and heightened hygiene and cleaning regimes post Covid-19 to make air travel safer for all.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	-		<p>This mini plan does not contribute towards ISA Objective 2 as the accessibility and availability of air travel is not equitable for Wales as a whole and is disproportionately beneficial to South Wales.</p>
3. To support sustainable economic development and diversity	++	Long-term High	<p>This mini plan is highly compatible with ISA Objective 3, as it recognises that, by 2040, Cardiff Airport is an international gateway connecting Wales to the world and a key driver within the Welsh economy, supporting businesses and jobs across Wales. Good connectivity will mean that businesses are confident about relocating to Wales and staying in Wales, supporting all aspects of Wales' economy, with Welsh businesses reaching new markets.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan acknowledges that the aviation sector is suffering due to Covid-19. Whilst the plan aims to recover passengers to near 1.6 million, this may not be possible due to reduced airlines flying from Cardiff or due to the market in general. The mini plan should acknowledge this and attempt to mitigate the impacts this may have and plan for recovery post Covid-19.
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long-term Medium	<p>This mini plan is compatible with ISA Objective 4, as visitors will be able to discover and enjoy Wales' cultural heritage.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The mini plan could promote Welsh culture further at Cardiff Airport and invest in international promotion and advertisement. Work with airlines to provide additional aviation services when major cultural or sporting events occur to improve access for national and international visitors.

ISA Objective	Score	Duration Certainty	Appraisal – Aviation
5. To encourage the protection and promotion of the Welsh Language			<p>Neutral – does not mention preserving or promoting Welsh language.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Increase the use of the Welsh language within the services and customer contact within Cardiff Airport. • Promotion of the Welsh language within Cardiff Airport itself.
6. To reduce greenhouse gas emissions from transport	--	Long-term Low	<p>This mini plan is incompatible with ISA Objective 6. Aviation is a big source of greenhouse gas emissions, and this could potentially be reduced through technologies that support more sustainable aviation, although certainty around this is low. The mini plan states that Cardiff Airport could become a centre for low carbon aviation by 2027, and by 2030 be the lowest carbon per passenger airport in Europe. These ambitious targets are welcomed, however there is little that states how the airport will achieve this.</p> <p>If Cardiff Airport does not offer competitive pricing or desirable destinations at convenient times, then people will travel elsewhere to get flights, for example Bristol for South Wales travellers. However, if Cardiff offers more destinations and flights, however, this will increase greenhouse gas emissions. Access to Cardiff Airport is a further issue. For residents of North Wales, there are much more accessible airports (for example Manchester and Liverpool). If reducing surface transport emissions is Cardiff Airport's answer to reducing overall emissions, then it simply does not go far enough.</p> <p>It is noted that a proposed new surface access corridor with fully segregated active travel and bus rapid transit facilities along with a new rail spur providing zero emission train services from the passenger terminal building directly to Swansea, Cardiff, Newport and Bristol has been suggested, which again disproportionately benefits those in South Wales.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The WTS could install "pods" similar to Heathrow in order to move passengers from car parks to the terminal building. In 2008, Heathrow introduced 21 driverless, battery-powered, zero-emission shuttles. The pods have ferried more than 1.5 million passengers from carpark to terminal since opening, avoiding 70,000 bus journeys and saving the equivalent of 100 tonnes of CO₂ a year.
7. To enable climate change resilience			<p>Neutral – although it is recognised that the mini plan states Welsh Government will prevent future problems by tackling decarbonisation now, by working with the industry and stakeholders.</p>
8. To protect and improve air quality	--	Long-term Medium	<p>This mini plan is incompatible with ISA Objective 6. Aviation is a big source of greenhouse gas emissions, and this could potentially be reduced through technologies that support more sustainable aviation, although certainty around this is low. The mini plan states that it wants Cardiff Airport to become a centre for low carbon aviation by 2027, and by 2030 be the lowest carbon per passenger airport in Europe. These ambitious targets are welcomed, however there is little that states how the airport will achieve this.</p> <p>If Cardiff Airport does not offer competitive pricing or desirable destinations at convenient times, then people will travel elsewhere to get flights, for example Bristol for South Wales travellers. However, if Cardiff offers more destinations and</p>

ISA Objective	Score	Duration Certainty	Appraisal – Aviation
			<p>flights, however, this will increase greenhouse gas emissions. Access to Cardiff Airport is a further issue. For residents of North Wales, there are much more accessible airports (for example Manchester and Liverpool). If reducing surface transport emissions is Cardiff Airport's answer to reducing overall emissions, then it simply does not go far enough.</p> <p>It is noted that a proposed new surface access corridor with fully segregated active travel and bus rapid transit facilities along with a new rail spur providing zero emission train services from the passenger terminal building directly to Swansea, Cardiff, Newport and Bristol has been suggested, which again disproportionately benefits those in South Wales.</p>
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	○		Neutral – The mini plan will have no impact on enhancing the local distinctiveness of landscapes and townscapes.
10. To promote the conservation and enhancement of heritage assets	○		<p>Neutral – The mini plan has no impact on the conservation or enhancement of heritage assets.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The mini plan could promote heritage assets further at Cardiff Airport and invest in international promotion and advertisement.
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	○		<p>Neutral – The mini plan does not contribute to the conservation and enhancement of biodiversity, geodiversity and ecosystems.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • In order to reduce contamination, Heathrow Airport treat water that is contaminated with glycol by filtering it through reed beds, which removes seven tonnes of organic pollution every year. Cardiff could adopt similar mitigation. • In order to safeguard populations of birds, Frankfurt Airport keep grass long, so predatory birds struggle to see prey in the grass and, therefore, circle less above the airport.
12. To ensure the sustainable use of natural resources	+	Long-term Low	<p>The mini plan is somewhat compatible with ISA Objective 12, as the priorities over the next five years include developing an energy strategy for Cardiff Airport, looking at options such as onsite generation, energy exporting, carbon-neutral buildings and prioritising low carbon businesses. By 2021, Cardiff Airport aims to commission and install a solar farm on the Airport site – however this is not mentioned in the mini plan.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • Include within the mini plan the installation of a solar farm on the Airport site, as contained in the Environmental Flight Path.

ISA Objective	Score	Duration Certainty	Appraisal – Aviation
13. To enable the protection of tranquil areas and prevention of noise and light pollution	--	Long-term Low	<p>The mini plan is not compatible with ISA Objective 13 and outlines no measures to prevent noise and light pollution from aviation. The Environmental Flight Path states that the impact of noise is reduced through Air Traffic Control using continuous descent operations for aircraft on approach. This should be mentioned in the mini plan and further noise prevention measures should be included.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The mini plan could include noise mitigation, such as assessing flight paths so that the majority of flights depart and arrive over sea from the south, so as to mitigate noise. • Some airports work with airlines to change the way they approach the runway. Instead of including sections of level flight in a descent, planes descend in a straight path, typically from 6,000 feet. Continuous descents can noticeably reduce noise and can save up to 400kg of fuel. • Cardiff Airport could implement restrictions on the number of flights or type of aircraft landing or taking off at night, charge penalty fees for older, noisier aircraft, levy fines for noise transgressions.

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