Integrated Sustainability Appraisal of Llwybr Newydd: the Wales Transport Strategy

March 2021

Incorporating

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VERSION CONTROL

Version	Date	Author	Checker	Changes
0.1	October 2020	JE	ST/AP	First draft for WG review
0.2	October 2020	JE	ST	Approved version for translation
0.3	February 2021	CW	ST	Update following consultation
0.4	March 2021	CW	ST/AP	Final draft for WG review

CONTENTS

APPENDICES

ABBREVIATIONS

AA	Appropriate Assessment
AONB	Area of Outstanding Natural Beauty
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

N.1.   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' (WTS). Further details can be found in the ISA Report.

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

N.2.   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; it addresses all transport modes, including walking, cycling, public transport, electric vehicles and the private car.

N.3.   The Welsh Government is seeking to develop the new WTS in order to provide a long term vision for transport over the next 20 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?

N.4.   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 Strategic Environmental Assessment (SEA) Regulations. 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.

N.5.   One of the 'ways of working' that form part of the Welsh Government sustainable development principle is the need to take an integrated approach. The ISA, therefore, includes a number of other statutory and non-statutory assessments. This allows a more rounded view of the sustainability implications and opportunities arising from the WTS to be taken. 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. 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 WTS processes so far

N.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.

N.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 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.

N.8.   In October 2020, a revised draft of the WTS was prepared and was appraised in the Interim ISA Report. The version of the WTS assessed in the Interim ISA Report was an earlier version to that published as part of the public consultation. The WTS and the Interim ISA Report were published for consultation between November 2020 and January 2021.

N.9.   This ISA Report (March 2021) contains the findings of an updated assessment of the Consultation Draft WTS. Further amendments were then made to the WTS following the consultation period, resulting in the final version of the WTS. This ISA Report therefore also includes an assessment of the final WTS, as well as incorporating comments made on the ISA itself during the consultation.

How the ISA has been undertaken

N.10.   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 20 years after adoption. This timescale has been reflected in the ISA. The intention of the ISA has been to enable the principles of sustainable development to be embedded into the WTS from the outset.

ISA Framework

N.11.   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. These are listed in Table NTS-1. The performance of the WTS has been tested by appraising each element of the WTS for its likely effects on each ISA Objective.

N.12.   The ISA Framework allows for an integrated approach to assessing the effects of the WTS by bringing together the various impact assessments listed in paragraph N.5 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

No.	ISA Objective
13	To enable the protection of tranquil areas and prevention of noise and light pollution

Appraisal of the WTS

N.13.   The WTS (March 2021) is structured in the following way:

- 1. Vision
  - o *Sets out what the WTS is, how it fits with wider Welsh Government policy and the structure of the Welsh planning system.*
- 2. Our Priorities
  - o *Priority 1: Bring services to people in order to reduce the need to travel*
  - o *Priority 2: Allow people and goods to move easily from door to door by sustainable transport*
  - o *Priority 3: Encourage people to make the change to more sustainable transport*
- 3. Our Long Term Ambitions for Transport in Wales
  - o *Good for people and communities*
  - o *Good for the environment*
  - o *Good for the economy and places in Wales*
  - o *Good for culture and the Welsh language*
- 4. What We Will Measure
- 5. How We Will Deliver
- 6. The Five Ways of Working
- 7. Mini Plans: Transport Modes and Sectors
  - o *Mini Plan for Active Travel*
  - o *Mini Plan for Bus*
  - o *Mini Plan for Rail*
  - o *Mini Plan for Roads, Streets and Parking*
  - o *Mini Plan for Third Sector*
  - o *Mini Plan for Taxis and Private Hire Vehicles*
  - o *Mini Plan for Freight and Logistics*
  - o *Mini Plan for Ports and Maritime Transport*
  - o *Mini Plan for Aviation*

N.14.   The appraisal in the ISA has focused on Chapters 1 (Vision), 2 (Priorities), 3 (Well-being Ambitions), and 7 (Mini Plans). Mobility in Wales has been prepared as a background report for the WTS. This document has been reviewed and provides supporting information used in the appraisal of the WTS.

Assessment results

N.15.   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 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
The WTS would help to make public transport more accessible for a wider range of people, particularly as a result of the Ambitions, Priorities and 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. The WTS seeks to ensure that new developments are increasingly accessible by ensuring that transport infrastructure is situated in proximity to homes and that 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 the Third Sector. 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. 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 are not only the most sustainable forms of travel but provide 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 older people, those who do not have access to a car, and children travelling to and from school. 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 (see Priority 1). This would enable more efficient and quicker journey times for people, thereby providing them with more free time outside of 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 year[1]. 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. With improvements to digital technology, more people are working from home on a regular basis. The COVID-19 pandemic and associated lockdowns have significantly increased the number of people working from home and, for many people, this may represent the 'new normal'. 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.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved
The Ambitions and Priorities of the WTS, as well as the Mini Plans on Active Travel, Bus, Rail and the Third Sector, would help to combat social and economic inequalities through developing a system that is accessible for, and utilised by, all members of society and aims to take into consideration that users will be of different backgrounds, genders, age, and disability. In doing so it would improve equality of opportunity in terms of access to services, employment, leisure and education facilities.

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[1] Public Health Wales. Estimating the mortality burden of air pollution in Wales. Available at: http://www.wales.nhs.uk/sitesplus/888/opendoc/317890 [Accessed: 12/02/21]

Summary of effects for each ISA Objective
The WTS also references the 'equality pathway', which seeks to ensure that *"equality is integrated into transport planning at the highest level rather than seen as a separate issue"*. This will help embed the issue of equality into the development of future transport plans and policies. 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. The WTS recognises the barrier that language can present, particularly for those who do not speak English (see the Ambition for 'Good for Welsh Culture and Language'), 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 also references the 'rural pathway', which aims to *"monitor progress on the rural commitments in Llwybr Newydd"* to help ensure rural communities also benefit from transport improvements. 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 and the Mini Plans on Bus, Rail and the Third Sector 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 Priority 1 and the Mini Plans on Active Travel, Bus, Rail, Roads, the Third Sector and Taxis and Private Hire Vehicles (PHVs). 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. 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, Rail and the Third Sector), would further help to stimulate the economy. The WTS could have a positive impact on the Welsh economy through encouraging the development of new 'multi-modal hubs' to move goods more sustainably across Wales. More efficient journey times, via more welcoming and safer routes, as per Priorities 2 and 3 and the Mini Plans on Bus, Rail and the Third Sector, 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, providing a well maintained road network, safer routes, and by taking advantage of technological innovations in the freight and logistics sector as per 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 and 3 as well as the Mini Plans in-combination) would be of significant benefit to the tourism sector, with people now able to move safely and efficiently across 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.

Summary of effects for each ISA Objective
Over the course of the 20-year WTS period, climate change will have an impact on the economy. As per Priority 2 and the Mini Plan on Roads, 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, resilient and equitable access for all people to cultural and recreational spaces, particularly due to the combined effect of the Ambitions, Priority 3 and the Mini Plans for Bus, Rail and the Third Sector. 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. The WTS recognises the strain that large scale cultural and tourist events, such as major sporting events, can place on the transport system. Through the Ambition 'Good for culture and the Welsh language' and the Mini Plan for Bus, the WTS seeks to ensure that these events can continue to take place and thereby continue to have 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". Ensuring all forms of transport provide information in the Welsh language would help to promote the use of the Welsh language and help to ensure Welsh speakers feel comfortable using the transport services. 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. 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.
6. To reduce greenhouse gas emissions from transport
Proposals in the WTS in-combination would be likely to lead to reductions in the greenhouse gas (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, the Priorities 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 reduce 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 powered 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 the Priorities and the Mini Plans for Bus, Rail and Taxis and PHVs. 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 number of people living in more rural Wales for whom active travel or public transport opportunities are unlikely to significantly improve.

Summary of effects for each ISA Objective

The WTS is committed to maintaining a healthy aviation sector in Wales for its significant economic benefits. The Mini Plan for Aviation seeks to ensure that, for example, Cardiff Airport puts in place a robust decarbonisation strategy. However, the measures described in the WTS and the Mini Plan for Aviation 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, but it would be likely to prevent, or at least make more difficult, an overall significant reduction in GHG emissions.

Just over a third of Wales' population live in rural areas 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 to make the most of low-emission vehicles 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 net zero carbon emissions by the year 2050. The WTS will be in place for 20 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 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 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. Mini Plans for Bus, Rail and the Third Sector 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. The WTS does seek to protect biodiversity and ecosystems which can be key features in enabling climate change resilience, such as storing carbon, helping prevent flood risk and reducing soil erosion.

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 isolated, rural 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, 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.

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 Priorities 2 and 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.

Summary of effects for each ISA Objective

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 the Welsh 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.

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. The WTS promotes the enhancement of green infrastructure, with benefits including 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.
As per the Ambitions 'Good for culture and the Welsh language' 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 , and in particular the Ambition 'Good for culture and the Welsh language', recognises 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.
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 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 heritage assets and areas for future generations to enjoy.

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

Embedded within the WTS is an understanding of the need to conserve and enhance biodiversity, geodiversity and ecosystems, and the WTS 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 exceed the critical loads of sensitive habitats. Noise and light disturbances from the transport sector can also prove to be highly detrimental to certain species.
The WTS focuses on maintaining the existing road network whilst enhancing active travel links, as per the 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

Summary of effects for each ISA Objective
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 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 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 2 and 3 and Mini Plan for Roads explicitly seek a reduction in waste and a more sustainable supply chain. 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. The maintenance of existing transport infrastructure could help to reduce the quantity of new infrastructure needed, and thereby reduce waste generation. However, the delivery of enhanced public transport services would be likely to 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 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 which are significantly quieter than petrol and diesel vehicles, the WTS would likely help reduce noise disturbances associated with transport. In relation to light pollution, it is expected that a reduction in the number of cars on the road would be the only aspect of the WTS which would result in benefits, as other aims of the WTS, such as making transport safer (including bus stops and pedestrian/ cycle routes) would result in increased lighting to help reduce the fear of crime.

How the ISA has influenced the WTS

N.16.   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 Welsh Government 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 to be considered 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

N.17.   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 WTS 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 number of recommendations have been made in the ISA and are presented in full in the main ISA Report.

Findings of HRA and how these have fed into the assessment

N.18.   A separate Habitat Regulations Assessment (HRA) process accompanies and informs 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 have been made in accordance with the outcomes of the separate HRA process.

Monitoring significant effects

N.19.   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 is also provided. However, there is a risk that the sustainability impacts of the WTS are different to those anticipated, for example 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 enables the relevant authorities to alter plans as necessary should unexpected negative effects arise or expected positive effects not arise.

N.20.   A monitoring framework is presented in the ISA Report which sets out a range of indicators to be monitored relevant to the likely significant 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.

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; it 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 has developed the new WTS, to provide a long term vision for transport over the next 20 years, recognising a number of these recent changes and looking to address future opportunities and challenges. The Strategy provides the strategic framework within which future decisions on investment options will need to be made. It does 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, making it 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 Regulations[3]. 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.

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 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

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[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. Available at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32001L0042 [Accessed: 22.02.21]
[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). Available at: https://www.legislation.gov.uk/wsi/2004/1656/contents/made [Accessed: 22.02.21]

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   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 2004[4] as amended by Planning (Wales) Act 2015[5], 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 2011[9];
- Equalities Impact Assessment (EqIA), as required by the Equalities Act (2010)[10];
- Well-being of Future Generations (WBFG) 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].

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

1.2.6   Integral to the principles of sustainable development is the need to adopt an integrated approach. The integration of 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 way. Overall, the ISA will facilitate a more rounded view of the sustainability implications and opportunities arising from the WTS.

1.2.7   The requirements of the Habitats Directive are transposed into English and Welsh law by means of the Conservation of Habitats and Species (Amendment) Regulations 2017[13]. The overarching process is referred to as Habitats Regulations Assessment (HRA). Following consultation with Natural Resources Wales (NRW), the WTS has been subject to HRA Screening. The outcome of this process will be published alongside the WTS and the ISA Report.

[4] Planning and Compulsory Purchase Act 2004. Available at: https://www.legislation.gov.uk/ukpga/2004/5/contents [Accessed 22.02.21]
[5] Planning (Wales) Act 2015. Available at: http://www.legislation.gov.uk/anaw/2015/4/contents/enacted [Accessed 22.02.21]
[6] Welsh Government (2018) Planning Policy Wales. Available at: https://gov.wales/sites/default/files/publications/2019-02/planning-policy-wales-edition-10.pdf [Accessed 22.02.21]
[7] 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. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32001L0042 [Accessed 22.02.21]
[8] The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004. Available at: http://www.legislation.gov.uk/wsi/2004/1656/contents/made [Accessed 22.02.21]
[9] Rights of Children and Young Persons (Wales) Measure 2011. Available at: http://www.legislation.gov.uk/mwa/2011/2/contents [Accessed 22.02.21]
[10] Equality Act 2010. Available at: https://www.legislation.gov.uk/ukpga/2010/15/contents [Accessed 22.02.21]
[11] Well-being of Future Generations (Wales) Act 2015. Available at: http://www.legislation.gov.uk/anaw/2015/2/contents/enacted [Accessed 22.02.21]
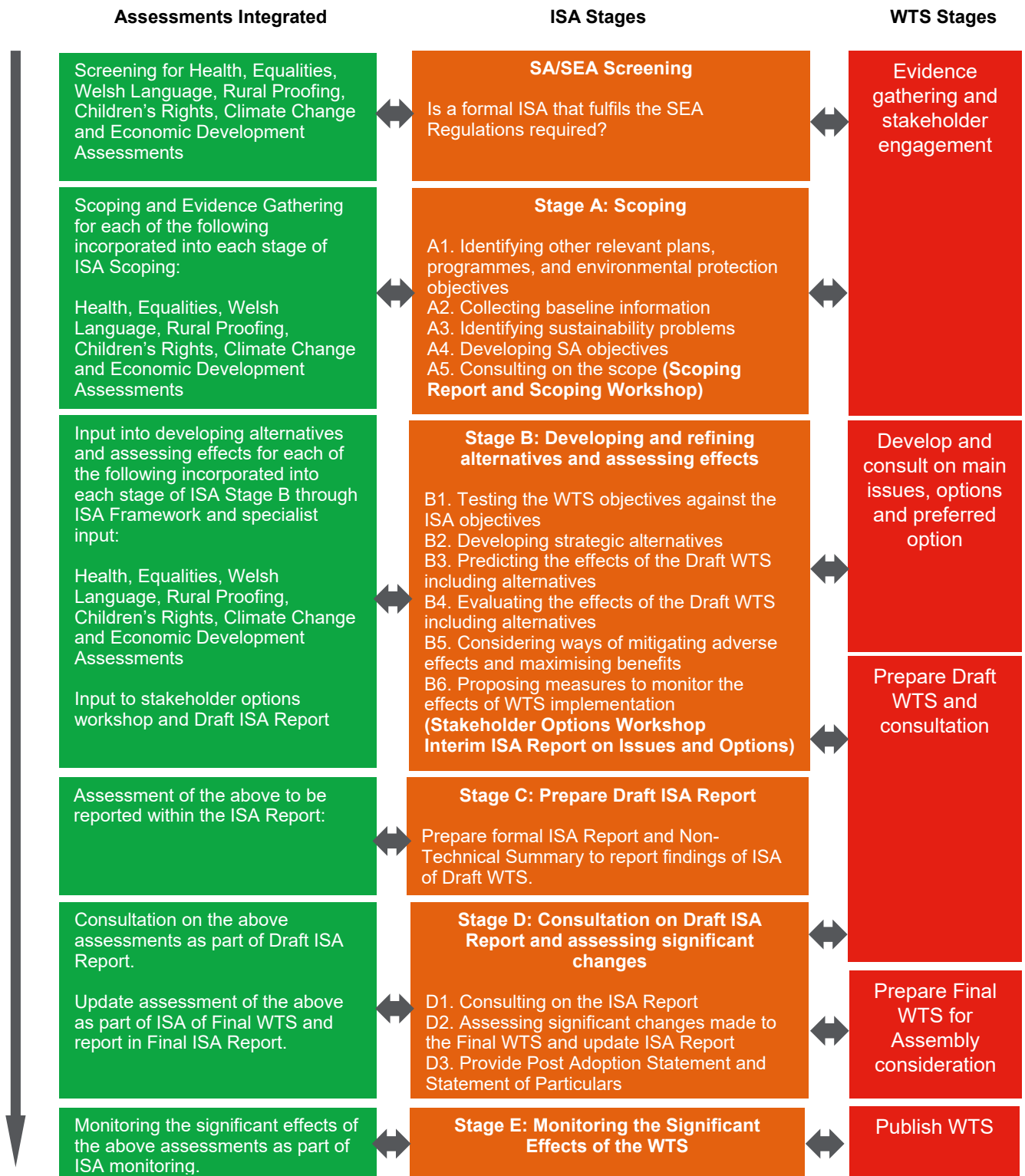[12] Environment (Wales) Act 2016. Available at: http://www.legislation.gov.uk/anaw/2016/3/pdfs/anaw_20160003_en.pdf [Accessed 22.02.21]
[13] Policy Paper: Changes to the Habitats Regulations 2017. Available at: https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017 [Accessed: 22.02.21]

1.3   Purpose of this ISA Report

1.3.1   This ISA Report represents Stage D of the ISA process (see Figure 1-1). The purpose of the 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 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 third 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.

Figure 1-1: Stages in the ISA Process (adapted from ODPM 2005[14]) and WTS Development Stages

Assessments Integrated	ISA Stages	WTS Stages
Screening for Health, Equalities, Welsh Language, Rural Proofing, Children's Rights, Climate Change and Economic Development Assessments	**SA/SEA Screening** Is a formal ISA that fulfils the SEA Regulations required?	Evidence gathering and stakeholder engagement
Scoping and Evidence Gathering for each of the following incorporated into each stage of ISA Scoping: Health, Equalities, Welsh Language, Rural Proofing, Children's Rights, Climate Change and Economic Development Assessments	**Stage A: Scoping** A1. Identifying other relevant plans, programmes, and environmental protection objectives A2. Collecting baseline information A3. Identifying sustainability problems A4. Developing SA objectives A5. Consulting on the scope **(Scoping Report and Scoping Workshop)**	
Input into developing alternatives and assessing effects for each of the following incorporated into each stage of ISA Stage B through ISA Framework and specialist input: Health, Equalities, Welsh Language, Rural Proofing, Children's Rights, Climate Change and Economic Development Assessments Input to stakeholder options workshop and Draft ISA Report	**Stage B: Developing and refining alternatives and assessing effects** B1. Testing the WTS objectives against the ISA objectives B2. Developing strategic alternatives B3. Predicting the effects of the Draft WTS including alternatives B4. Evaluating the effects of the Draft WTS including alternatives B5. Considering ways of mitigating adverse effects and maximising benefits B6. Proposing measures to monitor the effects of WTS implementation **(Stakeholder Options Workshop Interim ISA Report on Issues and Options)**	Develop and consult on main issues, options and preferred option Prepare Draft WTS and consultation
Assessment of the above to be reported within the ISA Report:	**Stage C: Prepare Draft ISA Report** Prepare formal ISA Report and Non-Technical Summary to report findings of ISA of Draft WTS.	
Consultation on the above assessments as part of Draft ISA Report. Update assessment of the above as part of ISA of Final WTS and report in Final ISA Report.	**Stage D: Consultation on Draft ISA Report and assessing significant changes** D1. Consulting on the ISA Report D2. Assessing significant changes made to the Final WTS and update ISA Report D3. Provide Post Adoption Statement and Statement of Particulars	Prepare Final WTS for Assembly consideration
Monitoring the significant effects of the above assessments as part of ISA monitoring.	**Stage E: Monitoring the Significant Effects of the WTS**	Publish WTS

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[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". Available at; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf [Accessed: 22.02.21]

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
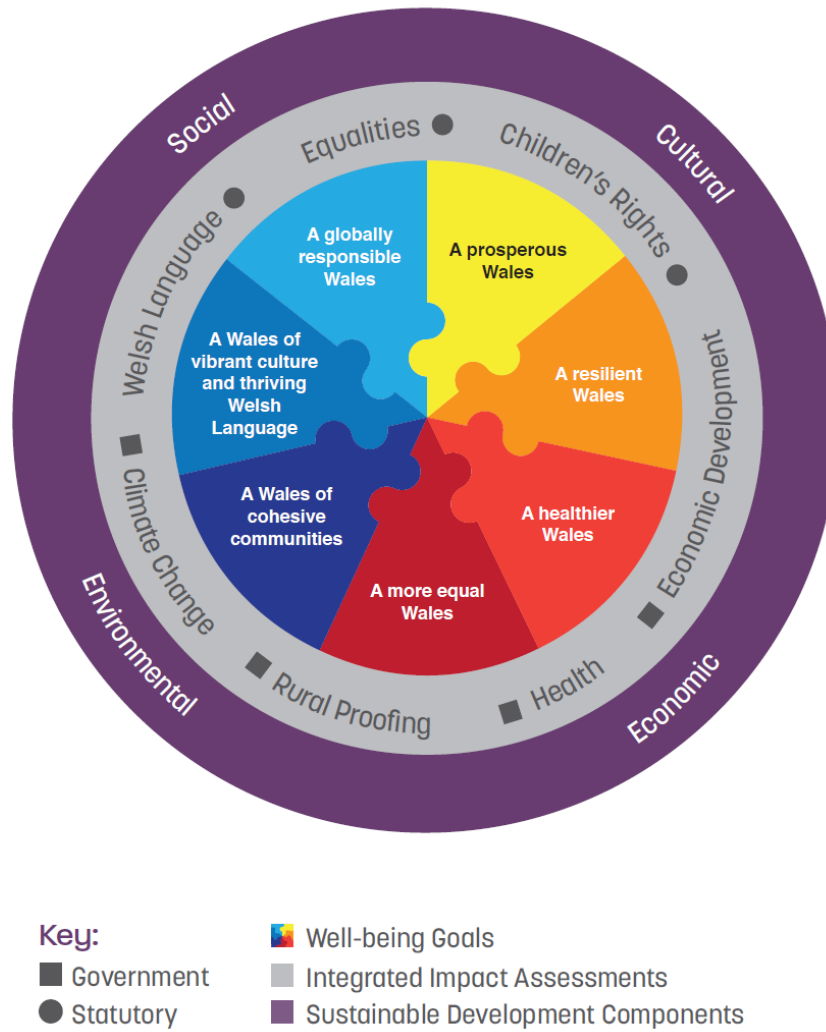
OGL © Crown Copyright 2017   WG31847

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:

"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 20-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 WBFG 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 20-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 assessed its ability to deliver the long term objectives. The options that were developed and tested through the ISA 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 shape the ISA Framework.

Taking an integrated approach	
Development of WTS	The WTS will provide a national strategy covering economic, social, environmental and cultural transport issues. The WTS will be consistent with and support the delivery of Welsh Government policies including the National Strategy: Prosperity for All, the Economic Action Plan and the National Development Framework. The WTS will provide the strategic framework within which future decisions on investment options will need to be made. It will not identify or present specific

	projects, schemes, initiatives or interventions; these will be set out in the 5-year detailed National Transport Delivery Plan and Joint Local Transport Plans. Its policies will be integrated, maximising the contribution to the well-being goals, and developed through a detailed, evidenced assessment process. The ISA will be the tool through which we test this integration and ensure the contribution to meeting the well-being goals is maximised.
Role of ISA	The ISA is the integrated approach to the development of the WTS and the assessment of its emerging policies. It ensures a holistic approach is undertaken, sharing knowledge and recognising links between the different topic areas and therefore the goals. The ISA process incorporates a review of relevant plans, programmes and environmental objectives at national to international scale. This has 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 been undertaken to ensure any conflicts are highlighted, resolved or managed as necessary. The consultation and supporting ISA workshop with key stakeholders ensured that a range of views were gathered on the draft ISA Scoping Report including the draft Framework and proposed integrated approach. This also ensured the identification of synergies and conflicts at an early stage and a robust approach to the assessment. A cross government approach has been used 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 supported the ISA process throughout the development of the WTS. It is intended that a collaborative approach will evolve to fill data gaps, undertake monitoring and increase engagement with groups such as Public Service Boards.
Involving people	
Development of WTS	We have involved key stakeholders in the development of the WTS. Engagement on the draft strategy has included: • 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. The objectives of the engagement were: 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	The ISA has 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. 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 incorporates the promotion and protection of the Welsh language.
Collaborating with others	
Development of WTS	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. The role of the WTS is to identify what it can do both directly and in collaboration with others. There is the opportunity for the WTS to

	facilitate actions by others and to maximise the opportunities to support the delivery of common goals, maximise positive outcomes and help achieve the well-being goals.
	Importantly, the WTS supports delivery at all levels through the planning system. As well as major and one-off projects, the WTS looks to facilitate the delivery of multiple smaller projects, which can help collectively deliver change over the long term.
	The WTS has a role co-ordinating the delivery of investment and strategies across Government, working with regional and local plan-makers, businesses, stakeholders, and a broad range of other interests.
Role of ISA	The ISA, through the review of plans, programmes and environmental objectives and baseline evidence has helped 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 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.
Prevention	
Development of WTS	The transport strategy is one of the government's levers in identifying future outcomes and measures to monitor success. The WTS sets 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 gives 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 provides for the safety and protection of disadvantaged and minority groups within Wales.
	The WTS is evidence based. It will be subject to a programme of monitoring and review, to establish progress towards meeting its outcomes.
Role of ISA	The ISA is evidence based which feeds through the Scoping Report and shapes the ISA Framework. The review of this evidence identified key issues and opportunities for the WTS to address and ensured the WTS reduces negative outcomes and enhances positive outcomes where possible (Table 2.2). The identification of these issues and trends at an early stage has helped the development of the WTS through shaping the ISA Framework objectives and questions. The ISA process has ensured that the WTS will be monitored to ensure it is successfully implemented and delivers its objectives. Any issues highlighted will feed into the review of the WTS.

1.6   Legislative Impact Assessments

Strategic Environmental Assessment

1.6.1   SEA, as required by 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 Regulations. Table 1.3 sets out where these various requirements have been satisfied in the ISA.

Table 1.3: Requirements for a SEA Environmental Report and where these have been completed

Question	Yes/No/Where
The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004. Schedule 2, Information for Environmental Reports, Regulation 12(3)	
1. An outline of the contents and main objectives of the plan or programme, and of its relationship (if any) with other relevant plans and programmes.	ISA Scoping Report, Sections 1.1, 2.1 and Appendix A in this report
2.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
3.The environmental characteristics of areas likely to be significantly affected.	ISA Scoping Report and Table 2.2 and Appendix B of this report
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds and the Habitats Directive.	ISA Scoping Report and Appendix B of this report
5. The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	ISA Scoping Report and Appendix A of this report
6. The likely significant effects on the environment, including short, medium and long term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects on issues including - biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the issues referred to in sub-paragraphs (a) to (l)	Chapter 3 and Appendix D of this report
7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Chapter 3 and Appendix D of this report and Table 3.5
8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties encountered in compiling the required information.	Section 2.4 in this report
9. A description of the measures envisaged concerning monitoring in accordance with regulation 17.	Table 3.6 in this report
10. A non-technical summary of the information provided under the paragraphs 1-9.	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 informed the development of the WTS. These have a focus on Welsh natural resources, with SoNaRR[15] 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

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[15] Natural Resource Wales. State of Natural Resources Report (SoNaRR) for Wales 2020. Available at: https://naturalresources.wales/evidence-and-data/research-and-reports/state-of-natural-resources-report-sonarr-for-wales-2020/?lang=en [Accessed 22.02.21]

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 ensures that opportunities to promote the Welsh language, facilitate its use, safeguard its future and see the language thrive, are considered and identified where possible. 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) has been incorporated into the ISA to ensure these duties are fulfilled. The WLIA considers how the WTS will impact on all members of society in learning and using the Welsh language, including children and young people.

1.6.13   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 (CRIA) 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 – 1, 3, 4, 6, 12, 13, 15, 22, 23, 24, 26, 27, 28, 30, 31, 34 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 CRIA has been integrated into the ISA. 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.

1.6.18   The ISA considers children's rights in many ways throughout the appraisal, including potential vulnerabilities of the transport system to children, the potential reliance on public transport for those who cannot drive, but also the importance of transport in enabling all children to access education, where children and young people can learn about the benefits of active travel and using public transport, as well as learn the skills to become promoters of these transport alternatives in the future.

1.6.19   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

1.6.20   Under Article 6 of the Habitats Directive (and Regulation 102 of the Habitats Regulations), an assessment is required where a land use plan may give rise to significant effects upon a site which is part of the National Site Network, previously known as a 'European site' in the UK or a 'Natura 2000 site' in Europe. As this change was issued by the UK government in January 2021 following the completion of this report and associated mapping, within this document sites are still referred to as 'European' sites. These designated sites form part of the National Site Network, which is a network of areas designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the European Community. This includes Special Areas of Conservation (SACs), designated under the Habitats Directive for their habitats and/or species of European importance, and Special Protection Areas (SPAs), classified under Directive 2009/147/EC on the Conservation of Wild Birds (the codified version of Directive 79/409/EEC as amended) for rare, vulnerable and regularly occurring migratory bird species and internationally important wetlands.

1.6.21   In addition, it is a matter of law that candidate SACs (cSACs) and Sites of Community Importance (SCI) are considered in this process; furthermore, it is Government policy that sites designated under the 1971 Ramsar Convention for their internationally important wetlands (Ramsar sites) and potential SPAs (pSPAs) are also considered.

1.6.22   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 are informed by outcomes of the HRA process. The HRA Screening Report has concluded that *'none of the policies or associated Mini Plans were considered to have a likely significant effect on any European/Ramsar sites alone, or in-combination. If any further details, including spatial detail are confirmed regarding the Mini Plans then each plan will be required to undergo a separate HRA screening. This will also apply to the next level plans (National Transport Plan).'*

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 is set out in Figure 1-1. This report represents Stage D of this process, the 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 (and set out in the boxes below):

- 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.

Task A1: Identifying other relevant policies, plans and programmes and SA Objectives
SEA Regulations (Schedule 2(1)) states:
"(1) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes; … (5) the environmental protection objectives, established at international (European) community or national level, which are relevant to the plan or programme…and the way those objectives and any environmental considerations have been taken into account during its preparation"

Tasks A2 and A3: Collecting baseline information and identifying sustainability issues and opportunities
SEA Regulations (Schedule 2) states:
"(2) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme; (3) the environmental characteristics of areas likely to be significantly affected; (4) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC… and the Habitats Directive."

Task A4: Developing the ISA Framework
Based on the baseline data and key issues and opportunities for the Plan area, an ISA Framework should be prepared comprised of Objectives that are fundamentally linked to the baseline data and issues and opportunities. It is important that the ISA Objectives that are to be used are up-to-date and relevant for the plan area. The ISA Framework enables the Welsh Government to consider the impacts and alternatives of plans, programmes and policies.
The ISA Framework that emerged from the ISA Scoping Report considers the existing sustainability baseline in Wales and the key sustainability issues. Every proposal in the WTS will be assessed against every objective of this Framework to identify their likely impacts on sustainability in relation to the likely evolution of the baseline in the absence of the plan.

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 guidance[17] 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 Act[18], 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 need to be considered.

Temporal Scope of the ISA

1.9.2   The WTS is intended to set a longer term 20-year vision following publication in March 2021. 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 Regulations do 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 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

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[16] Arcadis (2020) Integrated Sustainability Appraisal of the Wales Transport Strategy. Available at: https://gov.wales/wales-transport-strategy-scoping-report [Accessed 12.02.21]

[17] 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". Available at; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf [Accessed: 22.02.21]

[18] The Marine and Coast Access Act 2009 (the Marine Act). Available at: http://www.legislation.gov.uk/ukpga/2009/23/contents [Accessed: 12.02.21]

form the basis of the assessment. The ISA Framework also incorporates the requirements of the other integrated assessments.

1.9.4   Schedule 2 of the SEA Regulations lists the following twelve topics that require consideration in any SEA, as well as the interrelationship between these topics.

SEA Regulations (Schedule 2) Requirements for environmental problems and topics to be considered during SEA
Information to be provided in SEA includes: *"4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds(8) and the Habitats Directive.; …*   *6. The likely significant effects on the environment, including short, medium and long term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues including biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;…"*

1.9.5   The topics listed in Schedule 2(6) 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 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 Schedule 2(6) 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 Regulations but which 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 has included the following steps (refer to Figure 1-1 and boxes below):

- 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.

Task B1: Testing the plan objectives against the ISA Objectives
The Objectives of the WTS should be tested for the compatibility with, and likely effects on, each ISA Objective and identifying other options or opportunities to refine options.

Task B2: Developing the options
Task B2 involves identifying and considering various options that would help to contribute towards the ISA Objectives. This can be seen as being the identification and consideration of preferred options, and alternatives to these options, in the Plan. In light of the likely effects of each option, as identified and described through the iterative ISA process, the Welsh Government is equipped to refine and select options for the Plan so as to achieve sustainable development.

Task B3&4: Predicting and evaluating the effects of the Plan
Tasks B3 and B4 of the ISA process involve helping to develop the Plan by predicting and evaluating its effects on the economic, environmental and social sustainability of the Plan-area. Government guidance states that the potential effects should be quantified, or a judgement made where this is not possible.
Sustainability effects are predicated, with a focus on their likelihood, scale, duration, timing and whether they are positive or adverse. These predictions are then evaluated using professional judgement in order to identify cumulative, synergistic and secondary effects, as well as conflicts and limitations of Plan policies.

Task B5: Considering ways of mitigating negative effects and maximising beneficial effects
Mitigation involves putting in place measures to prevent, reduce or offset any identified adverse sustainability effects. Mitigation measures may also include recommendations for enhancing positive effects. The first priority should, however, be avoidance of adverse effects. Only when all alternatives that might avoid an adverse effect have been exhausted, should mitigation be sought to reduce the harmful effect.

Task B6: Proposing measures to monitor the significant effects of the Plan
A monitoring system should be prepared and proposed that, if adopted and followed, would enable the Welsh Government to ensure that the WTS is resulting in the predicted effects and that avoidance, mitigation or compensation measures that were adopted are working as planned. This provides the opportunity to alter measures to make them more effective.

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 ISA

	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

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 (May 2020)[19] 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; and
- 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:

- Future Wales: The National Plan 2040[20];
- 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 11;
- Welsh Government (2020): Advancing Gender Equality in Wales Plan[21];
- The Natural Resources Policy for Wales, incorporating Sustainable Management of Natural Resources (SMNR) principles;
- Nature Recovery Action Plan; and
- The Welsh National Marine Plan[22].

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 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.

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[19] Arcadis (2020) Integrated Sustainability Appraisal of the Wales Transport Strategy. Available at: https://gov.wales/wales-transport-strategy-scoping-report [Accessed 12.02.21]

[20] Welsh Government (2021) Future Wales: The National Plan 2040. Available at: https://gov.wales/future-wales-national-plan-2040 Accessed: 26.02.21]

[21] Welsh Government (2020) Advancing Gender Equality in Wales Plan. Available at: https://gov.wales/sites/default/files/publications/2020-03/advancing-gender-equality-plan.pdf [Accessed: 12.02.21]

[22] Welsh Government (2021) Marine Planning. Available at: https://gov.wales/marine-planning [Accessed: 12.02.21]

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	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.

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.

- 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 Aichi[23] biodiversity targets in Wales. The Nature Recovery Action Plan identifies actions that can be delivered in the short term and sets a course to deliver longer term commitments beyond 2020. These commitments and actions are pertinent to the ISA of the WTS and have informed the ISA Framework Objectives. |

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[23] Wales Biodiversity Partnership. Nature Recovery Action Plan. https://www.biodiversitywales.org.uk/Nature-Recovery-Action-Plan [Accessed: 12.02.21]

2.2 Baseline Conditions and Key Sustainability Issues and Opportunities

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 Wales[24], 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. 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.

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[24] Welsh Government (2019) Well-being of Wales: national indicators. Available at: https://gov.wales/well-being-wales-national-indicators#:~:text=not%20present%20%20%20%20%20Goals,%20%20%20%2026%20more%20rows [Accessed: 12.02.21]

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	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, 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. 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. 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	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 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.

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	in rural Wales. It should be noted that, as per Appendix B, there are data gaps with regards to detailed information on school access.	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.
2. A resilient Wales	**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. 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 NO_2 emissions in the UK and transport is the biggest source of air pollution in the UK (National Assembly for Wales, 2018). **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. (data from 2018). **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. • 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	**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 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 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
	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, 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. **Geology and Soils** • 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. **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 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	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 Sustainable Drainage Systems (SuDS) to reduce the impact of new schemes on flood risk. **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 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 should also be cognisant of the potential limitations of water supply and should promote measures to reduce water use in developments. **Minerals and Waste**

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	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** • 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. **COVID-19** • 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.	• 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. **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.
3. A healthier Wales and a more equal Wales	• 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.	• 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
	• 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.	semi-natural and natural habitats, as well as providing space for outdoor exercise and community engagement, is fundamental to physical and mental well-being. • 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 may schedule multiple stops or activities on a 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
	• 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, Asian and Minority Ethnic 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.	measures should be focused in areas of deprivation to reduce inequalities. • 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.
4. A Wales of cohesive communities	• 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 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

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	• 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.	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.
5. A Wales of vibrant culture and thriving Welsh language	**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, for example 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 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. • Motor traffic, parking and associated impacts can blight the character of landscapes and townscape. **Historic Environment, Cultural Heritage and Assets**	**Welsh Language** • 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. **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

Well-being Goals	Summary of Key Issues	Opportunities for the WTS to Address
	• 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.	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. **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, 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 identify 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	• 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.
	
	Carbon emissions
	
	• 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.
		• The WTS has a focus on significantly reducing greenhouse gas emissions from transport, through the promotion of more sustainable transport methods such as public transport and active travel.
		
		• The WTS has an opportunity to help promote low carbon transport modes and improved standards of energy efficiency in transport infrastructure.
		
		• The WTS should aim to reduce the growth of motor traffic.
		
		• The WTS must promote sustainable transport modes (including active travel and Ultra Low Emission Vehicles (ULEVs) as an alternative to petrol/diesel).
		
		• The WTS presents an opportunity to reduce the need to travel unsustainably:
		
		   o To widen and promote more sustainable travel choices, and
		
		   o 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) was established. The WTS was appraised against each ISA Objective individually and holistically. Topic areas were grouped based on professional judgement for clarity, but in practice the assessment encompassed 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 was collated (see Appendix B), as this provided 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; and
- Amendments made in light of the responses received during the May – July 2020 consultation on the ISA Scoping Report.

2.3.5   The decision aiding questions that were used to guide the assessment against each objective are based on ISA expert experience and best practice. Not all of the guide questions were used as part of the assessment at each stage; this was dependent on what was 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 was 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	• 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?	A prosperous Wales A healthier Wales A more equal Wales A Wales of cohesive communities
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	• 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?	A Wales of cohesive communities A prosperous Wales A healthier Wales
3. To support sustainable economic	• 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?	A prosperous Wales A more equal Wales

ISA Framework for the assessment of the WTS		
ISA Objectives	**Decision aiding questions** **Will the WTS….?**	**Well-being goal**
development and diversity	• 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?	A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	• Promote sustainable and resilient access to Wales' cultural and heritage assets and activities? • Encourage the enhancement of cultural heritage assets, recreational spaces and their setting? • Contribute towards the efficient management of the transport system during major events, including sporting, leisure and recreational activities and cultural events? • Contribute to the efficient management of travel in tourist areas during peak periods?	A Wales of vibrant culture and thriving Welsh language
5. To encourage the protection and promotion of the Welsh language	• 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?	A prosperous Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
6. To reduce greenhouse gas emissions from transport	• Encourage a reduction in greenhouse gas emissions from existing transport infrastructure? • Contribute to a reduction in CO_2 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?	A prosperous Wales A resilient Wales A healthier Wales A more equal Wales A Wales of cohesive communities A globally responsible Wales

ISA Framework for the assessment of the WTS		
ISA Objectives	**Decision aiding questions** **Will the WTS….?**	**Well-being goal**
7. To enable climate change resilience	• Contribute to the reduction and management of flood risk? • Encourage all new transport development to be climate change resilient? • Reduce the inequalities experienced in relation to access to transport during flooding events? • Reduce the increased risk of flooding and/or coastal flooding and promote protection of floodplains or areas of managed flood risk? • Maximise opportunities for improving ecosystem resilience and functions that help reduce climate vulnerability? • Contribute to the implementation of coastal adaptation due to coastal erosion?	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
8. To protect and improve air quality	• 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?	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	• Encourage the protection and enhancement of areas of landscape character, distinctiveness, diversity and quality? • Encourage the protection and enhancement of townscape character and quality? • Promote sensitive design in transport infrastructure development? • Reduce the adverse impacts of road traffic and parking (e.g. visual intrusion and noise) on Wales' valued landscapes and townscapes?	A prosperous Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
10. To promote the conservation and enhancement of heritage assets	• Encourage the conservation and enhancement of heritage assets and their settings, which may include some transport assets themselves? • Encourage upgrading existing heritage assets, such as historic bridges, to meet updated operational standards? • Encourage the conservation and enhancement of the historic landscape?	A prosperous Wales A more equal Wales A Wales of cohesive communities A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
11. To promote the conservation	• Promote the establishment of more coherent and resilient ecological networks on land that safeguard ecosystem services for the benefit of wildlife and people?	A prosperous Wales A resilient Wales

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	• 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?	A healthier Wales A Wales of cohesive communities A globally responsible Wales
12. To ensure the sustainable use of natural resources	• 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?	A prosperous Wales A resilient Wales A healthier Wales A Wales of cohesive communities A globally responsible Wales
13. To enable the protection of tranquil areas and prevention of noise and light pollution	• 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?	A more resilient Wales A healthier Wales A Wales of cohesive communities

2.3.7 Table 2.4 sets out where each of the environmental topics listed in Schedule 2(6) of the SEA Regulations, 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 SEA Regulations 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)

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 Regulations 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, 'alternatives' to the approaches in the plan were not considered to be reasonable, particularly as there are no spatial elements to be considered. As the preparation of the WTS is an iterative process and the ISA has appraised three separate iterations of the WTS, alternatives of each aspect of the WTS have essentially been considered as the document has evolved, following suggestions from the ISA and consultations.

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 to 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. 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'.

2.4.6 The Mini-Plans were written as part of the plan as a separate modal process, grouped to avoid repetition.

2.5 Iterations of the ISA

2.5.1 An initial and early draft of the WTS was provided to Arcadis in 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. This was a crucial element in the development of the WTS and helped with the production of the October 2020 draft that was published for consultation.

2.5.2 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.

2.5.3 In October 2020, a revised draft of the WTS was prepared and was appraised, as presented in the Interim ISA Report. The WTS was published for consultation between November 2020 and January 2021, accompanied by the Interim ISA Report[25]. The October 2020 assessment included in the Interim ISA Report is based on an iteration of the WTS that was then superseded by the consultation version of the WTS.

2.5.4 Comments received during the consultation, and responses to these, can be found in Appendix C. During this consultation period, a workshop with department heads within Welsh Government was also held. The results of this process are reflected in the assessment of the consultation version iteration of the assessment. The appraisal of the Consultation Draft WTS can be found in Appendix D of this ISA Report. This was undertaken following the publication of the Interim ISA Report.

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[25] Arcadis (2020) Integrated Sustainability Appraisal of Llwybr Newydd – A New Wales Transport Strategy – Consultation Draft. Available at: https://gov.wales/sites/default/files/consultations/2020-11/integrated-sustainability-appraisal-isa-of-llwybr-newydd-a-new-wales-transport-strategy-consultation-draft_0.pdf [Accessed 15.02.21]

2.5.5   In February 2021, following the receipt of the consultation comments, the WTS was further amended and the final version formed. This ISA Report appraises the final WTS (presented in Appendix E) and presents the findings and recommendations.

2.6   Comparison between the findings of the assessment of the Consultation version of the WTS (October 2020) and the Final WTS (March 2021)

2.6.1   When comparing the ISA results of the Consultation Draft WTS (Appendix D) to the final WTS (Appendix E), a number of scores have changed.

2.6.2   The Vision has been updated to include 'efficient' transport systems. In relation to the Vision, the score for ISA Objective 4 has changed from compatible to uncertain, and for ISA Objectives 7, 9, 10, 11, 12 and 13 has changed from compatible to neutral. This is primarily because some detail has been removed from the Vision. For example, the Consultation Draft Vision stated the transport system would be *"good for people and communities, good for the environment, good for the economy and places and good for culture and the Welsh language"*; this was amended to state *"meets the needs of future generations whilst protecting the ability of future generations to meet their own needs"*.

2.6.3   The chapter on the Priorities has been moved forward in the document and changed from five priorities to three priorities. Overall, the predicted sustainability effects are considered to be less significant, due to a reduction in specifics with regard to potential implementation of measures.

2.6.4   In relation to the Ambitions, it is considered that the amendments to the WTS have strengthened their compatibility with the ISA Objectives.

2.6.5   The Mini Plans have been amended slightly in response to the consultation comments and the ISA recommendations. The Mini Plan on Active Travel has been amended from minor positive to significant positive in the ISA. This is because the ISA recommended that the WTS provided more specifics on how it would target reducing particular health inequalities.

2.6.6   For the Active Travel Mini Plan, the score identified in relation to ISA Objective 5 has changed from minor positive to neutral as the Mini Plan does not specifically refer to the Welsh language. The score for ISA Objective 11 has remained the same, but the ISA notes that the previous recommendation to reference the maintenance of active travel routes in the Mini Plan has been actioned.

2.6.7   The Mini Plan for Bus has two ISA Objective scores which have changed. ISA Objectives 1 and 2 have both increased from minor positive to significant positive as the Mini Plan has been enhanced to state that *"training [will be] in place to help bus drivers to better understand the spectrum of disabilities which are not always physical, and keep that training up to date"* which could have direct benefits for health and equality.

2.6.8   For the Mini Plan on Rail, in relation to ISA Objective 1, the WTS took on the ISA's recommendations to reference changing people's current perceptions of rail travel (for example barriers relating to cost or accessibility), and therefore, the score has changed from minor positive to significant positive. The scores for ISA Objectives 2, 3 and 6 have also changed from minor positive to significant positive due to amendments made to the Mini Plan. The Mini Plan now states upgrades will be made to existing infrastructure to improve *"the resilience of rail infrastructure to flooding and extreme weather"* following the ISA recommendation. This has changed the score for ISA Objective 7 from uncertain to minor positive.

2.6.9 In relation to the Roads, Streets and Parking Mini Plan, the scores have changed for ISA Objectives 1 and 2 both to significant positive due to amendments to the Mini Plan which seeks to set speed limits and prevent pavement parking to make roads safer.

2.6.10 For the Third Sector Mini Plan, the score for ISA objective 13 has changed from neutral to minor positive as the Mini Plan promotes the greater use of alternative vehicle technologies and increased vehicle sharing, which may reduce noise and light pollution.

2.6.11 The Mini Plan on Aviation has been amended and now states *"we will involve users including people who share protected characteristics in the design and upgrading of facilities for passengers"*. Therefore the score for ISA Objective 2 has changed from minor negative to positive/ negative.

3 Assessment of the Final WTS (March 2021)

3.1 Summary of Final WTS Assessment Results

3.1.1 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.

3.1.2 The appraisal in the ISA has focused on Chapters 1 (Vision), 2 (Priorities), 3 (Well-being Ambitions), and 7 (Mini Plans). Mobility in Wales has been prepared as a background report for the WTS. This document has been reviewed and provides supporting information used in the appraisal of the WTS.

3.1.3 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.

3.1.4 The 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.

3.1.5 This assessment is presented in full in Appendix E.

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

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 in the Final WTS against each ISA Objective (March 2021)

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. Landscape & townscapes	10. Heritage	11. Ecosystems	12. Natural Resources	13. Tranquility
Priority 1: Bring services to people in order to reduce the need to travel	+	++	+	+	+	+	+	+	+	+	+	+	+
Priority 2: Allow people and goods to move easily from door to door by sustainable transport	++	++	++	+	+	+	+	+	+	+	+	+	+
Priority 3: Encourage people to make the change to more sustainable transport	+	++	+	+	+	+	O	+	+	+	+	+	+
Mini Plan: Active Travel	++	+	+	+	O	++	+	++	+	+	+	+	+
Mini Plan: Bus	++	++	+	+	+	+	?	+	+	+	+	+	+
Mini Plan: Rail	++	++	++	+	+	++	+	+	+	+	+	+	+
Mini Plan: Roads, Streets, and Parking	++	++	+	+	+	+	+	+	+	+	+	+	+
Mini Plan: Third Sector	++	++	+	+	+	+	O	+	O	+	+	+	+
Mini Plan: Taxis and Private Hire Vehicles	+	+/-	+	+	+	+	O	+	O	O	+	+	+
Mini Plan: Freight and Logistics	+	+	+	O	+	+	O	+	-	O	+	+	+
Mini Plan: Ports and Maritime Transport	+	+	++	++	+	+	-	+	O	+	+	+	O
Mini Plan: Aviation	-	+/-	++	+	+	--	O	--	-	O	-	+	--

Key:

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

3.2 Summary of Legislative Impact Assessments

Habitats Regulations Assessment

3.2.1 A consideration of the likelihood of significant effects (also known as HRA Screening) has been undertaken to determine if the WTS (either in isolation and/or in combination with other plans or projects) would have a likely significant effect on a Natura 2000 site in terms of its conservation objectives and qualifying interests. The results of the HRA have been integrated into the ISA where appropriate (within the assessment of ISA Objective 11), as part of an iterative process.

3.2.2 All chapters of the WTS have been screened out under Category A as they contain introductory text and general statements of policy / general aspirations which would not in themselves lead to any change or development, and therefore, cannot conceivably have any effects on Natura 2000/Ramsar sites.

3.2.3 If any further details, including spatial detail are confirmed regarding the Mini Plans then each plan will be required to undergo a separate HRA screening. This will also apply to the next level plans (National Transport Plan).

Equalities Impact Assessment

3.2.4 The Equalities Impact Assessment seeks to assess the WTS for its effect on the nine protected characteristics: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. The Mini Plan on Rail sets out that it will involve those *"who share protected characteristics in the design and delivery of services, through the Transport for Wales advisory panel, and also involve communities in developing new community rail schemes".*

3.2.5 The WTS would help to combat social and economic inequalities through developing a system that is accessible for, and utilised by, all members of society and aims to take into consideration that users will be of different backgrounds, genders, age, and disability. In doing so, it would improve equality of opportunity in terms of access to services, employment, leisure and education facilities.

3.2.6 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.

3.2.7 The WTS recognises the barrier that language can present, particularly for those who do not speak English (see the Ambition for 'Good for Welsh Culture and Language'), 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).

3.2.8 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 aims of the WTS seek to ensure that those who may previously have felt uncomfortable using some transport services due to fear of crime or harassment, feel confident to use the services available. Enhancement to the pedestrian and cycle networks would also seek to be appropriate and accessible for all users and take into consideration those using wheelchairs or with prams, as well as older people and families with young children.

Welsh Language Impact Assessment

3.2.9   The Welsh Language (Wales) Measure 2011 and Standards requires an impact assessment to consider: what effect the WTS would have on the opportunities for other persons to use the Welsh language; how the WTS could positively affect opportunities for people to use the Welsh 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 are minimised. This has been considered within the ISA.

3.2.10 The WTS seeks to ensure that the transport system encourages the regular use of the Welsh language as part of a system that is 'accessible for all'. The use of Welsh language on signage (which is a legal requirement) and spoken by operators of transport services would help promote the use of the Welsh language, as well as provide opportunities for those learning the language to practice in real-life situations.

3.2.11 Enhancing active travel and public transport links throughout Wales would be likely to lead to more equitable access to education opportunities for everyone. In so doing, this would facilitate more equitable access to Welsh language learning opportunities, for example as part of learning in schools. Improving access to rural areas could improve the vitality and viability of Welsh-speaking communities.

3.2.12 The ISA has not identified any potential negative effects of the WTS in relation to the Welsh language.

Children's Rights Impact Assessment

3.2.13 The UNCRC is a core human rights instrument and the most widely ratified of all international treaties. The CRIA is one of the general measures of implementation of the UNCRC. The aim of the CRIA is to identify if and how the WTS will impact on children up to the age of 18, either directly or indirectly.

3.2.14 The WTS seeks to ensure that transport services in Wales are accessible and safe for everyone, including children and young people. Many children walk to school, and therefore, safe pedestrian and cycle routes are essential. The Active Travel Mini Plan seeks to improve existing footpaths, and where appropriate, develop more footpath infrastructure. In addition, the safety of these footpaths would be improved to include lighting. This helps ensure children can safely travel between home and school, for instance.

3.2.15 Older children and young people generally have a greater reliance on public transport, in particular for accessing school and recreational facilities. Improved perceived safety of buses, as well as increased bus services would be beneficial for these groups. In addition, the WTS aims to enhance connectivity between different transport routes, allowing children to be more independent in their transport choices.

3.2.16 The WTS seeks to improve and maintain a range of different transport options, potentially resulting in increased connectivity between communities. This improved connectivity may also apply to green and open spaces, thereby allowing for more physical exercise options, especially for those families with young children who may not have access to private vehicles. This would be particularly important for young people, who benefit from access to sports centres, recreational spaces and opportunities to socialise. Younger people generally have a desire to help protect the environment and would thereby be more likely to be supportive of reducing emissions and increasing public transport use if the services were safe, well-maintained and accessible.

3.3   Summary of Non-Legislative Impact Assessment

Rural Proofing

3.3.1   Just over a third of Wales' population live in rural areas 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 alone. 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 or sustainably 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.

3.3.2   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, particularly for groups such as younger and older people.

3.3.3   On the other hand, the WTS could help diversify the employee market and reduce employment inequality between rural and urban areas through promoting working from home. With more people working from home during the COVID-19 pandemic, these practices are now more accepted and there are likely to be more opportunities for those living in rural communities to have access to a range of jobs.

3.3.4   Overall, the WTS would be likely to have some benefits to rural communities, but the WTS alone cannot help combat all of these issues.

Climate Change

3.3.5   The WTS 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.

3.3.6   Taking advantage of technological innovations and ensuring that services and facilities are in proximity to where people live 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 reduce 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 powered 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.

3.3.7   Nevertheless, 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 people living in rural areas 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 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 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; 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, however it could prevent, or at least make more difficult, an overall significant reduction in GHG emissions.

Health

3.3.8 The WTS would help to make public transport more accessible for a wider range of people. Improved access to higher quality public transport options that get people to where they need to go would have health benefits – for example by ensuring that more people are better able to access health and social care facilities; enabling access to exercise, leisure and recreational opportunities; and enabling access to open space and semi-natural habitats (beneficial for mental health and wellbeing). Public transport also helps to combat the risk of social isolation by providing a greater opportunity for informal community interactions with local neighbours. Roads, and particularly busy roads, can lead to severance for communities, with potentially adverse health effects.

3.3.9 The WTS seeks to ensure that new developments are increasingly accessible by ensuring that transport infrastructure is situated in proximity to homes and that developments are accessible via walking and cycling. It is likely that new community facilities, leisure and recreational spaces as well as new health facilities and open spaces, will increase efficient and sustainable access by local people.

3.3.10 The WTS seeks to encourage significantly higher rates of walking and cycling for people in Wales. Walking and cycling are not only the most sustainable form of travel, but also provide significant health benefits, for example promoting physical exercise and helping to reduce the risk of health issues such as cardiovascular disease.

3.3.11 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 year[26]. 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.

Economic Development

3.3.12 The WTS would be likely to have a positive effect on economic 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.

3.3.13 Travel improvements could result in an increase in footfall at particular locations (for example within town or village centres), thereby providing a boost to the local economy. This would be particularly the case where active travel links are enhanced as there may be greater take-up of walking and cycling. As well as potentially bringing additional customers, businesses may also be provided with access to a wider pool of potential employees.

3.3.14 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, would further help to stimulate the economy.

3.3.15 More efficient journey times, via more welcoming and safer routes would improve the customer experience when travelling and, for those commuting to and from work, would mean that they arrive

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[26] Public Health Wales. Estimating the mortality burden of air pollution in Wales. Available at: http://www.wales.nhs.uk/sitesplus/888/opendoc/317890 [Accessed: 12.02.21]

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.

3.3.16   A more connected Wales with more efficient, attractive and safer routes, would be of significant benefit to the tourism sector, with people now able to more 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.

3.4   Cumulative Effects Assessment

3.4.1   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	O	*Strong negative (significant)*	--
Range of positive and negative outcomes	+/-		

Table 3.4: Cumulative effects assessment for the WTS

Cumulative effects	Overall effect score
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	++

The WTS would help to make public transport more accessible for a wider range of people, particularly as a result of the Ambitions, Priorities, and 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 to ensure that more people have better access to 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 private cars for most of their journeys. Roads, and particularly busy roads, can also lead to severance for communities.

The WTS seeks to ensure that new developments are increasingly accessible by ensuring that transport infrastructure is situated in proximity to homes and that 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 the Third Sector. 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.

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. Encouraging physical exercise could help to reduce health inequalities, reduce the proportion of the population with obesity, and other weight-related health issues. Improvements to active travel links may prove to be particularly beneficial for certain groups of society, including older people, those who do not have access to a car, and children travelling to and from school.

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 (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 year[27]. 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.

With improvements to digital technology, more people are working from home on a regular basis. The COVID-19 pandemic and associated lockdowns have significantly increased the number of people working from home and, for many people, this may represent the 'new normal'. 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.

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.

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[27] Public Health Wales. Estimating the mortality burden of air pollution in Wales. Available at: http://www.wales.nhs.uk/sitesplus/888/opendoc/317890 [Accessed: 12.02.21]

Cumulative effects	Overall effect score
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	++

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.

The WTS also references the 'equality pathway', which seeks to ensure that *"equality is integrated into transport planning at the highest level rather than seen as a separate issue"*. This will help embed the issue of equality into the development of future transport plans and policies.

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.

The WTS recognises the barrier that language can present, particularly for those who do not speak English (see the Ambition for 'Good for Welsh Culture and Language'), 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, the use of private car is 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 also references the 'rural pathway', which aims to *"monitor progress on the rural commitments in Llwybr Newydd"* to help ensure rural communities also benefit from transport improvements.

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, and the Mini Plans on Bus, Rail and the Third Sector 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.

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.

3. To support sustainable economic development and diversity	++

The WTS would have a cumulative positive effect on economic 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 that there is more equitable access to education and employment opportunities, particularly due to Priority 1 and the Mini Plans on Active Travel, Bus, Rail, Roads, the Third Sector and Taxis and PHVs.

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, and where links between different forms of transport are improved. 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.

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, Rail and the Third Sector), would further help to stimulate the economy.

Cumulative effects	Overall effect score
The WTS could have a positive impact on the Welsh economy through encouraging the development of new 'multi-modal hubs' to move goods more sustainably across Wales. More efficient journey times, via more welcoming and safer routes, as per Priorities 2 and 3 and the Mini Plans on Bus, Rail and the Third Sector, 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, providing a well-maintained road network, safer routes, and by taking advantage of technological innovations in the freight and logistics sector as per 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 and 3, as well as the Mini Plans for Bus, Rail and the Third Sector in-combination) would be of significant benefit to the tourism sector, with people now able to move safely and efficiently across 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 20-year WTS period, climate change will have an impact on the economy. As per Priority 2 and the Mini Plan on Roads, 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. 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.	
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+
The WTS promotes, and seeks to deliver, more sustainable, resilient and equitable access for all people to cultural and recreational spaces, particularly due to the combined effect of the Ambitions, Priority 3, and the Mini Plans for Bus, Rail and the Third Sector. 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. The WTS recognises the strain that large scale cultural and tourist events, such as major sporting events, can place on the transport system. Through the Ambition 'Good for culture and the Welsh language' and the Mini Plan for Bus, the WTS seeks to ensure that these events can continue to take place and thereby continue to have 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. 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.	

Cumulative effects	Overall effect score
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". Ensuring all forms of transport provide information in the Welsh language would help to promote the use of the Welsh language and help to ensure Welsh speakers feel comfortable using the transport services.

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.

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.

6. To reduce greenhouse gas emissions from transport	**+/-**

Proposals in the WTS in-combination would be likely to lead to 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, the Priorities 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 powered 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 the Priorities and the Mini Plans for Bus, Rail and Taxis and PHVs.

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 number of people living in more rural Wales 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 seeks to ensure that, for example, Cardiff Airport puts in place a robust decarbonisation strategy. However, the measures described in the WTS and the Mini Plan for Aviation 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, but it would be likely to prevent, or at least make more difficult, an overall significant reduction in GHG emissions.

Just over a third of Wales' population live in rural areas and in order for them to access key services and facilities they typically need to travel longer distances than those living in urban areas. Although the WTS seeks to improve access and public transport opportunities for those in rural areas, it is unlikely that the WTS alone would be able to solve this issue. 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 to make the most of low-emission vehicles 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 commit to zero emissions by the year 2050. The WTS will be in place for 20 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.

Cumulative effects	Overall effect score
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 to meet the net zero target, 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 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. Mini Plans for Bus, Rail and the Third Sector, 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. The WTS does seek to protect biodiversity and ecosystems which can be key features in enabling climate change resilience, such as storing carbon, helping prevent flood risk and reducing soil erosion. 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 isolated, rural 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 reduce Wales' contribution to climate change. 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.	
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 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. 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 Priorities 2 and 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. 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 car 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.	

Cumulative effects	Overall effect score
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	**+**
The WTS Mini Plans on Active Travel and Bus recognise 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 have benefits in relation to improving landscapes and townscapes. As per the Ambition 'Good for culture and the Welsh language' 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. The WTS promotes the enhancement of green infrastructure, with benefits including 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. 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.	
10. To promote the conservation and enhancement of heritage assets	**+**
The WTS, and in particular the Ambition 'Good for culture and the Welsh language', recognises 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. 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, Bus and the Third Sector, 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. This may be the case in particular for historic bridges, which may be at risk of damage due to HGVs and large vehicles crossing them. 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 heritage assets and areas for future generations to enjoy. 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.	

Cumulative effects	Overall effect score
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	**+**

Embedded within the WTS is an understanding of the need to conserve and enhance biodiversity, geodiversity and ecosystems and the WTS 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 exceed the critical loads of sensitive habitats. Noise and light disturbances from the transport sector can also prove to be highly detrimental to certain species.

The WTS focuses on maintaining the existing road network whilst enhancing active travel links, as per the 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 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 improvement and maintenance of existing road schemes could help reduce the impact of transport on biodiversity and provide an opportunity to integrate ecosystems and GI into improvement projects. This could result in better ecosystem resilience. 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.

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.

12. To ensure the sustainable use of natural resources	**+**

The WTS encourages the use of more sustainable, low-carbon modes of transport, such as active travel 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. The WTS seeks to reduce the need to travel, further reducing the quantity of natural resources used in the sector.

Embedded throughout the WTS, 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 2 and 3 and Mini Plan for Roads explicitly seek a reduction in waste and a more sustainable supply chain.

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. The maintenance of existing transport infrastructure could help to reduce the quantity of new infrastructure needed, and thereby reduce waste generation. However, the delivery of enhanced public transport services would be likely to 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 run off carrying these pollutants into the soil, ground water and surface water, leading to an improvement in 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.

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.

Cumulative effects	Overall effect score
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 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 light pollution.
Through its support of electric vehicles, which are significantly quieter than petrol and diesel powered vehicles, the WTS would likely help reduce noise disturbances associated with transport.
In relation to light pollution, it is expected that a reduction in the number of cars on the road would be the only aspect of the WTS which would result in benefits, as other aims of the WTS, such as making transport safer (including bus stops and pedestrian/ cycle routes) would result in increased lighting to help reduce the fear of crime.
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.

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

3.5.1 A summary of recommendations made for the Final WTS are presented in Table 3.5.

3.5.2 It is noted that the following recommendations (from the previous iteration of assessment (October 2020)) are now reflected (to some degree) in the Final WTS (March 2021):

Mini Plan: Active Travel

- The Mini Plan could include more detail 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.

- 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.

- 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 Mini Plan.

- Schemes could be considered to provide or loan bikes and cycling equipment to residents in deprived areas who cannot afford their own. This would help reduce health inequality by giving everyone equal access to exercise opportunities they may otherwise not have.

- 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.

Mini Plan: Bus

- Buses could help to manage travel in tourist areas during peak periods or provide additional services to serve events, which may include Park and Ride services. In addition, 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.

Mini Plan: Rail

- 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 Mini Plan could include more detail on how rail services and access to train stations in mid Wales will be improved.

- The Mini Plan should clearly set out measures to ensure rail services are affordable and a viable mode transport for users who are at a socio-economic disadvantage.

- 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 the impact of closed rail lines due to flooding.

Mini Plan: Roads, Streets and Parking

- The WTS could consider the inclusion of fiscal measures, such as Workplace Parking Levies or increasing the cost of parking to reduce congestion and car use.

- The WTS should ensure that access to electric vehicles is more equitable through accessible electric vehicle charging infrastructure. This is of particular importance in rural and isolated areas, where public transport use is not always a viable option.

Mini Plan: Freight and Logistics

- Details of the Mini Plan could be expanded 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.

Table 3.5: ISA recommendations for the Final WTS (March 2021)

Section of the WTS	Recommendations
Priority 2: Allow people and goods to move easily from door to door by sustainable transport	• The WTS describes a 'sustainable transport planning hierarchy'. It would be useful to set out the hierarchy in diagram form.
Priority 3: Encourage people to make the change to more sustainable transport	• Any innovations, such as the development of apps, should be provided in languages other than English and Welsh – this could be stated to enable improved accessibility. • Data infrastructure could be used to make a system that is more responsive to extreme events, such as flooding. Real-time updates could give the public detailed information regarding the event and advice on how to travel.
Ambition: Good for People and Communities	• The Mini Plan states it will address physical, economic and social barriers through the *"six Accessible and Inclusive Public Transport Objectives, through adopting best practice on inclusive design and through staff training and service standards"*. Further information could be provided on this.
Ambition Good for the environment	• Where the ambition states "*We will take into account the impact on biodiversity*", it is recommended that this is amended to ensure an overall biodiversity net gain.
Ambition: Good for the economy and places in Wales	• The ambition states "*We want Wales to be a centre for innovative technology such as hydrogen, electric and hybrid technology design and production that reduces carbon emissions from transport*". It is recommended this refers to 'emissions' rather than 'carbon emissions' as the emissions related to transport can include particulate matter and NO_2 for example. • As well as focusing 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. • Text around the development of new technologies could include mention of the use of recycled materials.
Mini Plan: Active Travel	• The Mini Plan could go further to encourage the enhancement and development of the national cycle network and include details on how access to historic sites could be improved as a consequence, helping to enhance the visitor economy. • The Mini Plan states that infrastructure will be upgraded to deal with the impact of climate change, but details of these measures could be included.
Mini Plan: Rail	• It is recommended that 'conservation' is used as opposed to 'protect and sustain' in the Mini Plan, as this allows flexibility and an ongoing use of the asset to reflect changing needs.
Mini Plan: Roads, Streets and Parking	• The Mini Plan could include measures to seek to reduce the impact of the road network in terms of noise and light pollution, which could include specific road building materials or the use of natural buffers, which could also contribute to improved biodiversity and air quality.
Mini Plan: 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 seek to make taxis and PHVs more affordable and could include measures to subsidise taxi fares for those for whom private hire is the only option. • It is recommended that the wording *"there is less need for private cars and greater use of public transport"* is removed from the Mini Plan.

Section of the WTS	Recommendations
Mini Plan: Freight and Logistics	• The Mini Plan could consider how the WTS will address road improvements needed for freight transport, for example, narrow roads in rural areas which limit freight transport and lead to long diversions or some areas of the community not being able to access certain services. • Reference could be made in the Mini Plan to NAPPAs along the SRN and other key freight routes and how noise pollution will be lessened for receptors along these routes.

Mini Plan: Ports and Maritime Transport	• 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.
	• The Mini Plan could further explore the use of public transport for access to ports and harbours.
	• The Mini Plan could set out measures on how port operators will promote the use of the Welsh language.
	• The Mini Plan should align more closely with Objectives 10 and 11 of the Welsh National Marine Plan document[28]:
	   ○ '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.'

Mini Plan: Aviation	• The Mini Plan could include potential noise and light pollution reduction measures and targets, as well as measures to reduce air quality, to improve certainty on its priority to reduce the 'environmental impacts of aviation' working with Cardiff Airport. • The Mini Plan could set out measures on how airport operators will promote the use of the Welsh language.

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[28] Welsh Government (2019) Welsh National Marine Plan. Available at: https://gov.wales/sites/default/files/publications/2019-11/welsh-national-marine-plan-document_0.pdf [Accessed: 01.02.21]

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

3.6.1   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 aspects or the cumulative effects of WTS 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.

3.6.2   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.

3.6.3   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 20-year strategy period.

Table 3.6: Proposed Draft Monitoring Framework

ISA Objectives	Cumulative Effect	Proposed monitoring indicators NI: national well-being 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	++	• 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. • Percentage of transport users satisfied with their journey. • NI25. Percentage of people feeling safe at home, walking in the local area, and when travelling. • NI3. Percentage of adults who have fewer than two healthy lifestyle behaviours. • NI4. Levels of nitrogen dioxide (NO_2) pollution in the air. • NI5. Percentage of children who have fewer than two healthy lifestyle behaviours. • NI38. Percentage of people participating in sporting activities three or more times a week.
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	++	• NI24. Percentage of people satisfied with their ability to get to / access the facilities and services they need. • NI25. Percentage of people feeling safe at home, walking in the local area, and when travelling. • 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 journeys by public transport. • Percentage of journeys by active modes.

ISA Objectives	Cumulative Effect	Proposed monitoring indicators NI: national well-being indicators
		• Households exposed to air pollutants and/or environmental noise from transport
3. To support sustainable economic development and diversity	++	• Percentage of people in employment. • M9 Percentage of people satisfied with their ability to access the services they need. • Percentage of 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	+	• 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	+	• Percentage of people who speak Welsh. • Percentage of people who speak Welsh daily and can speak more than just a few words of Welsh. • 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	+/-	• Greenhouse gas emissions from the transport sector. • NI41. Emissions of greenhouse gases within Wales. • NI42. Emissions of greenhouse gases attributed to the consumption of global goods and services in Wales. • 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	+	• 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.

ISA Objectives	Cumulative Effect	Proposed monitoring indicators NI: national well-being indicators
8. To protect and improve air quality	+	• Greenhouse gas emissions from the transport sector. • NI4. Levels of nitrogen dioxide (NO_2) pollution in the air. • NI41. Emissions of greenhouse gases within Wales. • NI42. Emissions of greenhouse gases attributed to the consumption of global goods and services in Wales. • 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	+	• 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	+	• 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 biodiversity, geodiversity and ecosystems	+	• 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.
12. To ensure the sustainable use of natural resources	+	• 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	+	• Households exposed to environmental noise from transport. • Households exposed to light pollution from transport. • Numbers of registered electric vehicles and charging points available.

4 CONCLUSION

4.1.1 This document comprises the ISA of the WTS (March 2021). It satisfies the requirements of an Environmental Report as per the SEA Regulations. The WTS, at each iteration thus far, has been appraised for its likely significant effects against each of the ISA Objectives. The post-adoption statement will include an account of how the ISA process has influenced the development of the final WTS.

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. This has played an important role in helping the plan-makers to take into consideration the sustainability performance of different options considered 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.

4.1.3 The appraisal of the WTS identified primarily positive effects in relation to the thirteen ISA Objectives. The WTS would be expected to promote active travel, with benefits to human health, as well as reducing the number of cars on the road. This is likely to have subsequent benefits including reducing greenhouse gas emissions, improving air quality, improving road safety, and having positive impacts on the local landscape and townscape.

4.1.4 Overall, the WTS would be expected to improve accessibility across Wales. This is through an increased number of public transport services, as well as improving the safety and attractiveness of the services. The WTS would be likely to ensure that the services provided are accessible for all, no matter their age or background, and promote the use of the Welsh language.

4.1.5 Improvements in digital technology would be implemented to enhance access to information in relation to transport, but without being a disadvantage for those who are not comfortable with using such technology.

4.1.6 There remains an issue in relation to transport for communities in rural Wales, who are often isolated from public transport services and for whom private car use is the only option. The WTS seeks to help combat these issues, but it is unlikely that the WTS alone can resolve this issue.

4.1.7 The ISA provides 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.

4.1.8 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 D) in order to accompany the March 2021 WTS. Further information about stages of the ISA process can be found in Section 1 of this report. The next stage of the ISA will be the Post-Publication Statement, which will be prepared following the publication of the WTS.