Integrated Sustainability Appraisal of the National Transport Delivery Plan

ISA Report

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Acronym	Meaning
BEIS	Business, Energy and Industrial Strategy
CCRA	Climate Change Risk Assessment
CIAL	Cardiff International Airport Limited
CO_2	Carbon Dioxide
CRIA	Children's Rights Impact Assessment
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
EqIA	Equalities Impact Assessment
HIA	Health Impact Assessment
HRA	Habitats Regulations Assessment
ISA	Integrated Sustainability Appraisal
NO_2	Nitrogen Dioxide
NRP	Natural Resource Policy
NRW	Natural Resources Wales
NTDP	National Transport Delivery Plan
NWTC	North Wales Transport Commission
PM_{10}	Particulate Matter
SA	Sustainability Assessment
SAC	Special area of Conservation
SCI	Site of Community Importance
SEA	Strategic Environmental Assessment
SMNR	Sustainable Management of Natural Resources
SoFA	Statement of Funds Available
SoNaRR	State of Natural Resources Report
SPA	Special Protection Area
SRN	Strategic Road Network
TAN11	Technical Advice Note 11
TfW	Travel for Wales
UK	United Kingdom
UNCRC	United Nations Convention on the Rights of the Child
WBFG	Well-being of Future Generations
WelTAG	Welsh Transport Appraisal Guidance
WG	Welsh Government
WLIA	Welsh Language Impact Assessment
WTS	Welsh Transport Strategy

Non- Technical Summary

Purpose of the Non-Technical Summary

N.1.   This Non-Technical Summary provides a summary in non-technical language of the Integrated Sustainability Appraisal (ISA) of the Welsh Government's National Transport Delivery Plan (NTDP).

What is the National Transport Delivery Plan?

N.2.   The NTDP, which is being prepared by the Welsh Government, makes a positive contribution towards Wales's seven national well-being goals[1], whilst also embedding the principles of sustainable development at all stages of the NTDP-making process. The NTDP sets out the specific transport interventions financed by the Welsh Government. The plan identifies expenditure, based on the priorities in Llwybr Newydd: the Wales Transport Strategy 2021 (WTS)[2], including the delivery of projects that are already underway. The NTDP supports the implementation of Future Wales – the National Plan 2040[3] and is aligned with the Wales Infrastructure Investment Plan and the emerging Wales Infrastructure Investment Strategy. The NTDP is set to be reviewed every five years.

What is the Integrated Sustainability Appraisal?

N.3.   ISA is a process of appraising the contents of the NTDP, as it is written, against a series of sustainability objectives to help promote sustainable development and test the NTDP before it is adopted. The ISA process is iterative and has been undertaken throughout the preparation of the NTDP, setting out recommendations that could improve the sustainable development performance of the plan. The ISA is high-level and considers both the positive and negative predicted effects of the NTDP. The purpose of this is to identify effects early on, to shape the proposals and help to ensure that future land-uses in Wales over the plan period are sustainable.

N.4.   One of the 'ways of working', that form part of the Welsh Government sustainable development principle, is the need to take an integrated approach. The ISA, therefore, includes several other statutory and non-statutory assessments. This allows a more rounded view of the sustainability implications and opportunities arising from the NTDP to be taken. The ISA incorporates statutory and Welsh Government required assessments and it meets the legal requirements of the Strategic Environmental Assessment (SEA) Regulations. The integrated statutory assessments are: 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 NTDP processes so far

N.5.   The NTDP preparation commenced with a process of evidence gathering and stakeholder engagement in late 2021. Consultation on the draft ISA Scoping Report was undertaken between 17th December 2021 and 4th February 2022. The ISA Scoping Report was issued to statutory stakeholders for comment, as well as other relevant or interested stakeholders. The Scoping Report was updated following responses received during the consultation period, which are listed within the ISA Scoping Report.

N.6.   In March 2022, the draft NTDP was assessed through the ISA, as presented in the Interim ISA Report. The results have been shared and discussed with the plan-making team, to shape the decision-making process and to ensure that environmental and sustainability considerations are integrated into future iterations.

How the ISA has been undertaken

N.7.   The geographical scope of the ISA has been driven by the geographical scope of the NTDP, i.e., covering the whole of Wales. The NTDP is intended to apply for 5 years after adoption (2022-2027). 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 NTDP from the outset.

ISA Framework

N.8.   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 N-1. The performance of the NTDP has been tested by appraising each element of the NTDP for its likely effects on each ISA Objective.

N.9.   The ISA Framework allows for an integrated approach to assessing the effects of the NTDP by bringing together the various impact assessments listed above into a single appraisal framework.

Table N-1: ISA Objectives in the ISA Framework, against which the NTDP is appraised

Number	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

Number	ISA Objective
4	To protect and promote Welsh culture and improve access to cultural and recreational spaces
5	To encourage the protection and promotion of the Welsh language
6	To reduce greenhouse gas emissions from transport
7	To enable climate change resilience
8	To protect and improve air quality
9	To protect and enhance the local distinctiveness of our landscapes and townscapes
10	To promote the conservation and enhancement of heritage assets
11	To promote the conservation and enhancement of biodiversity and geodiversity
12	To ensure the sustainable use of natural resources
13	To enable the protection of tranquil areas and prevention of noise and light pollution

Appraisal of the NTDP

N.10. The structure of the NTDP is as follows:

1. Strategic Context
2. The NTDP: Turning Strategy into Action
3. What we will deliver – Key Priorities
   - Priority 1: bring services to people in order to reduce the need for people to use their cars on a daily basis
   - Priority 2: accessible, sustainable and efficient transport services and infrastructure
   - Priority 3: behaviour change
4. What we will deliver – Transport Modes and Sectors
   - Active Travel
   - Bus
   - Rail
   - Roads, Streets and Parking
   - Third Sector
   - Taxis and Private Hire Vehicles
   - Freight and Logistics
   - Ports and Maritime
   - Aviation
A. Useful Terms
B. Programmes, projects and interventions
   - National Transport Delivery Plan Management
   - Integrated Journey Planning and Ticketing
   - Behavioural Change

- Active Travel
- Bus
- Rail
    - Access for All
    - Cardiff Central Enhancement Projects
    - Programme of ongoing targeted improvements to stations across the Wales and Borders Network
    - Introduction of additional rail services
    - Introduction of new Rolling Stock
    - Community Rail, British Transport Police and Modal Shift
- South Wales Mainline
    - South Wales Mainline Strategic Development
    - Additional Stations (5) between Cardiff and Severn Tunnel Junction
    - Cardiff to Swansea including New Stations package
    - Swansea to Severn Tunnel Junction capacity improvements
    - Cardiff to Swansea Electrification
    - Penarth/ Vale of Glamorgan Electrification
- North Wales Metro
    - Strategic Development including studies and analysis to inform future schemes
    - Active Travel Local Connectivity: Stations and Transforming Towns
    - Interchange Hubs
    - Borderlands
    - North Wales Mainline Phases 1/2/3
    - Deeside
    - Shotton Interchange
    - North and West Wales Rail Innovation
- Swansea Bay and West Wales Metro
    - St Clears Station Reopening
    - West Wales Rail Interchange and Hub Improvements
    - Swansea Bay Area Metro Phase 1 & 2
    - Swansea Bay Hydrogen Fuel Cell Bus Project
    - Pembrokeshire Hydrogen Fuel Cell Bus Project
    - Traws Cymru T5 Hydrogen Fuel Cell Bus Project
    - Traws Cymru T6 Hydrogen Fuel Cell Bus Project
    - Active Travel to Stations
    - Swansea to Aberystwyth Transport Link
- South West Metro
    - Strategic development including studies and analysis to inform future schemes and extensions
    - CVL Enhancements Package
    - CVL Extensions Package

- o Valley Line Enhancement and Extensions (non-CVL) Package
- o Local Station/ Interchange Enhancements Packages
- o Active Travel Package
- o Bus and Bus Rapid Transit Package
- o Metro Enhancement Framework Corridor Studies
  - Strategic Road Network
    - o Annual Programme of Capital Maintenance and Renewal
    - o Schemes Under Construction
    - o Cross Border Schemes
    - o Trunk Road Active Travel Programme
    - o Trunk Road Modal Shift Programme
    - o Trunk Road Safety and Resilience Programme
  - EV Charging
  - Freight and Logistics
  - Streets and Parking
  - Air Quality
  - Aviation
  - Third Sector
  - Taxis and Private Hire Vehicles
  - Ports and Maritime
- C. Delivery Pathways

N.11. The ISA has focused on the appraisal of the key priorities, modes and sectors, and programmes.

Appraisal Results

N.12. The ISA Report and its appendices present the full and detailed assessment results for the NTDP. A summary of the ISA results is presented in Table N-2.

Table N-2: Summary of the effects identified during the ISA of the NTDP

ISA Objective	Score	Duration Certainty	Cumulative effects
1. To contribute to an improvement in physical, mental and social health and well-being for all, including contributing towards a reduction in health inequalities across Wales	++	Long term High	The NTDP seeks to ensure that public transport is more accessible to a wider range of people. 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. The introduction of integrated ticketing and journey planning would help to make journeys via public transport easier, quicker and less stressful for users. Public transport also helps to combat the risk of social isolation by providing a means for informal community interactions. 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 NTDP seeks to facilitate significantly higher rates of walking and cycling for people in Wales. Walking and cycling are not only the most sustainable forms of travel but also provide significant health benefits, for example, encouraging physical exercise, mental wellbeing benefits from spending time outdoors, and increased opportunities for community interactions. Encouraging physical exercise could help to reduce health inequalities, reduce the proportion of the population with obesity, and other 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. One of the NTDP initiatives supports the change to the default speed limit on Restricted Roads from 30mph to 20mph. Reducing speed limits would be expected to help to improve safety, in particular for children, by reducing road collisions, as well as providing more opportunities to walk and cycle and improving health and wellbeing by reducing air pollution. The NTDP would ensure that the strategic road network is maintained, in conformity with Welsh Government 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. 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
			Air pollution is hugely detrimental to people's health, with particulate matter (PM_{10}) and nitrogen dioxide (NO_2) pollution thought to be associated with around 2,700 deaths in Wales each year (calculated from 2011 – 2013 statistics)[4]. The transport sector is a key contributor for these forms of pollution. The NTDP seeks to encourage and facilitate higher rates of active travel and public transport use and support the uptake of electric vehicles, which would be likely to reduce the number of high-polluting vehicles on Wales's roads, 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 positive 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.
			Improvements in digital technology and the COVID-19 pandemic have led to an increase in the number of people working from home. The commute to and from work is a key opportunity for exercising via walking and cycling and, with people commuting less, 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, which is supported by the NTDP. The NTDP seeks to support employment opportunities being located near homes, which would be likely to increase the use of active travel for commuting shorter distances to work. 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 and initiatives set out in the NTDP 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	++	Long term High	The implementation of the NTDP would help to combat social and economic inequalities through developing a transport system that is accessible for, and utilised by, all members of society irrespective of background, gender, age, and disability. In doing so, the NTDP would improve equality of opportunity in terms of access to services, employment, leisure and education facilities. The introduction of integrated ticketing and journey planning and ensuring that the views of the transport system users are taken into consideration, would help to ensure that the diverse needs of Wales's 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 NTDP seeks to introduce Welsh language standards for public transport services to help break down existing barriers in terms of language and ensure that Welsh speaking users 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 in Wales. 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 NTDP recognises that, for rural communities, the use of private cars 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. However, the NTDP also considers ways public transport options could be improved in these areas, and have initiated trials, such as the fflecsi scheme, to provide more demand-responsive public transport services to rural communities and help to reduce reliance on personal car use where possible. Overall, it is considered to be likely, with a high level of certainty, that the proposals and initiatives set out in the NTDP 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 that benefits all people in Wales), on social cohesion and equality.
3. To support sustainable economic	++	Long term High	The NTDP 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. The promotion of working at or near

ISA Objective	Score	Duration Certainty	Cumulative effects
development and diversity			home, as well as the increase in active travel and public transport use, would increase opportunities to access employment and services for many people, including with protected characteristics and socio-economically disadvantaged. 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 modes of transport are improved. This would provide businesses with access to a wider pool of potential employees. 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, by encouraging public transport use, the NTDP could contribute 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. More efficient journey times, via integrating ticketing and journey planning as well as more efficient vehicles and timetabling, 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. The NTDP seeks to promote the use of rail and water freight movements rather than road, which would be likely to be able to carry more product per vehicle and more quickly than road freight, and therefore benefiting the local economy. Improvements to the active travel infrastructure in Wales could also enhance the attractiveness of the active tourism sector, such as hiking or mountain biking. Overall, it is considered to be likely, with a high level of certainty, that the proposals and initiatives set out in the NTDP 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long term Medium	The NTDP promotes more sustainable, resilient, and equitable access for all people to cultural and recreational spaces. 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. The NTDP recognises the strain that large scale cultural and tourist events, such as major sporting events, can place on the transport system. The NTDP seeks to ensure that these events can continue to take place and thereby continue to have a significantly benefit Wales's economy, society, and culture. Overall, it is likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP 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), on Welsh culture, which could lead to a positive cumulative effect over time against this objective.
5. To encourage the protection and promotion of the Welsh language	+	Long term Medium	The NTDP seeks to ensure that the transport system encourages the regular use of the Welsh language as part of a transport system that seeks to improve customer experiences through 'improving accessibility, facilities and signage'. 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 transport services. Welsh language training programmes for 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. 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 and initiatives set out in the NTDP 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	+	Long term Medium	Proposals and initiatives set out in the NTDP in-combination would be likely to lead to reductions in the greenhouse gas emissions associated with Wales's transport sector in the long term. This would primarily be achieved as a result of encouraging and facilitating higher rates of walking,

ISA Objective	Score	Duration Certainty	Cumulative effects
			cycling and public transport usage, which is likely to happen over time as people become more familiar with a new way to travel, with subsequent reductions in the number of cars on the road.
			Ensuring that services and facilities are in proximity to where people live, along with an increased number of people working from home, would reduce the need for people to travel and would 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's freight sector.
			The NTDP would make owning an electric or cleaner vehicle a more viable option over a petrol- or diesel-powered vehicle through supporting the distribution of electric vehicle (EV) charging points which would contribute to lowering emissions. The NTDP also promotes schemes for the electrification of public transport and is trialling the use of hydrogen as a fuel for buses in Swansea.
			However, whilst the initiatives of the NTDP would be likely to facilitate significant reductions in greenhouse gas emissions associated with movements on the road network, there is a risk of this being undermined to some extent by the aviation industry.
			The NTDP, in line with the WTS, is committed to maintaining a healthy aviation sector in Wales as it has significant economic benefits. The Aviation chapter of the NTDP seeks to ensure that, for example, Cardiff Airport prepares a robust decarbonisation strategy. However, the measures described in the NTDP would be unlikely to truly offset the emissions associated with aviation. Cars and HGVs are a much greater source of greenhouse gas 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.
			Just over a third of Wales's 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 NTDP seeks to improve accessibility for those within rural communities through initiatives such as the fflecsi scheme. However, whilst there is greater support for electric vehicles, and enhancements to community transport services, which 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.
			Overall, it is considered that, with a medium level of certainty, the NTDP would result in long term minor positive (not significant) effects on greenhouse gas emissions.

ISA Objective	Score	Duration Certainty	Cumulative effects
7. To enable climate change resilience	+	Long term Low	New and improved walking and cycling links, as promoted through the NTDP, could result in an increase in the green infrastructure cover along these routes that could help to manage surface run off and to alleviate flood risk, depending on specific design. The NTDP seeks to protect biodiversity and ecosystems which can be key features in enabling climate change resilience, such as storing carbon, filtering air pollutants, helping prevent flood risk and reducing soil erosion. The extent of which the NTDP would lead to increased green infrastructure to help alleviate flood risk is highly uncertain. Overall, it is considered to be likely, with a low level of certainty, that the proposals and initiatives in the NTDP 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), on climate change resilience.
8. To protect and improve air quality	+	Long term Medium	The transport sector, and particularly car, HGV, aviation, and port related transport, are significant sources of both greenhouse gas emissions and air pollution. The NTDP seeks to make a significant reduction in people's reliance on private cars for travel. It would do so by promoting active travel where appropriate through new and enhanced walking and cycling routes and promoting the use of public transport for longer journeys through more attractive and efficient transport networks. 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 NTDP 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 reduce the emissions generated by vehicles that are in use, including private cars and buses. Improved maintenance and management of the existing road network would also be likely to allow for more efficient journeys, including less congestion and idling, that would result in less pollution. It is likely that such management and maintenance would present opportunities for enhancing the green infrastructure coverage along road corridors, which help to filter out and sequester air pollutants. Overall, it is considered to be likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP would cumulatively result in long term minor positive (not significant) effects, including directly (e.g., by reducing air pollution associated with car use) and

ISA Objective	Score	Duration Certainty	Cumulative effects
			indirectly (e.g. incorporating air pollution sequestering green infrastructure into transport corridors), on air pollution.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long term Low	The likely reduction in the number of cars on the roads through the NTDP 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 NTDP promotes the enhancement of green infrastructure, with benefits including the high visual amenity value of green infrastructure and semi-natural habitats, as well as its role in screening areas from the visual impacts of new development. However, it is uncertain the extent to which the enhancement of the green infrastructure network would be implemented as a result of the NTDP. Overall, it is considered to be likely, with a low level of certainty, that the proposals and initiatives set out in the NTDP 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	+	Long term Medium	Throughout Wales, there are historic railroads, tunnels, and paths which are of significant heritage value. As with landscape and townscape character, the reduction in the number of cars on the road promoted through the NTDP, and the subsequent avoidance and minimisation of noise, air, light, and other visual disturbances, could 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 promoted through the NTDP, which could potentially benefit the setting of heritage assets and historic areas due to the high visual amenity value of green infrastructure and semi-natural habitats, as well as its role in screening areas from the visual impacts of new development. However, it is uncertain the extent to which the enhancement of the green infrastructure network would be implemented as a result of the NTDP.

ISA Objective	Score	Duration Certainty	Cumulative effects
			Improving the connectivity of public transport and active travel options 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 and initiatives set out in the NTDP 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), on heritage assets. |
| 11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems | + | Long term

Medium | The NTDP 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.

It is likely that the NTDP would avoid adverse effects on ecosystems caused by new roads fragmenting habitats and isolating species as new road building is currently on hold subject to the Wales Roads Review. The effects on ecosystems from new roads associated with new developments, such as housing, would be addressed through the planning system and the site-specific impact assessment undertaken as part of this process.

The transition towards low-emission modes of travel, including active travel, public transport, and electrification of vehicles would help to avoid and minimise adverse effects on habitats that are sensitive to air quality, particularly where pollutant critical loads are already being exceeded.

The maintenance and management of existing transport infrastructure could potentially present opportunities to incorporate green infrastructure elements that enhance their biodiversity value, such as by installing green infrastructure along road corridors. Where new walking and cycling paths are installed, these would present an opportunity to incorporate green infrastructure elements that are not only biodiverse but deliver wider ecosystem benefits including wildlife |

ISA Objective	Score	Duration Certainty	Cumulative effects
			corridors, air quality improvements, water filtration, carbon sequestration and enhancements to landscapes and townscapes. However, it is uncertain the extent to which the enhancement of the green infrastructure network would be implemented as a result of the NTDP. Overall, it is considered to be likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP would cumulatively result in long term minor positive (not significant) effects, including directly (e.g. by incorporating biodiversity 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's 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	+	Long term Medium	The NTDP 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. Furthermore, the NTDP seeks to reduce the need to travel, further reducing the quantity of natural resources used in the transport sector. The maintenance of existing transport infrastructure through the NTDP 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. Fundamental to the aims of the NTDP is a reduction of cars on Wales's roads. This would lead to a reduction in pollutants from exhaust or spills falling onto the tarmac, and therefore there would be less chance of surface water run off carrying these pollutants into the soil, ground water and surface water, leading to an improvement in water 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 would be likely that this would be reduced to some extent by proposals throughout the NTDP 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 and initiatives set out in the NTDP 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long term Medium	The NTDP would lead to an increased uptake of public and active transport modes, thereby decreasing personal 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 for electric vehicles, which are significantly quieter than petrol- and diesel-powered vehicles, the NTDP would likely help reduce noise disturbances associated with transport. It would be expected that a reduction in the number of cars on the road through the promotion of active travel and public transport options would help to reduce transport-associated light pollution. However, other initiatives of the NTDP, such as lighting on active travel routes and within Interchange Hubs could result in increased lighting to help improve safety and reduce the fear of crime, which may increase light pollution if these are installed in rural areas. Overall, it is considered to be likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP would cumulatively result in long term minor positive (not significant) direct effects on tranquillity, and the prevention of noise and light pollution.

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

N.13. The ISA of the draft NTDP suggested recommendations for consideration to be incorporated into the final NTDP. These recommendations sought to enhance the overall sustainability performance of NTDP proposals. Through the appraisals of the components of the draft NTDP, recommendations were made for each section against each ISA Objective where appropriate, in order to help avoid or mitigate negative effects and to help maximise positive effects. These recommendations were considered by the plan-makers. The recommendations and the Welsh Government's responses are set out in full within the ISA Report.

Monitoring significant effects

N.14. The ISA has identified the likely effects of the NTDP on ISA Objectives over 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 NTDP 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 NTDP 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.15. 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 NTDP. In addition to monitoring the extent to which the NTDP results in the impacts identified in the ISA, the monitoring framework provides an indication of the effects of the NTDP on the environmental, social, cultural and economic baseline in Wales.

1 Introduction

1.1 What is the National Transport Delivery Plan?

1.1.1 The 5-year National Transport Delivery Plan (NTDP), alongside Regional Transport Plans, seeks to implement the priorities set out in Llwybr Newydd: the Wales Transport Strategy 2021 (WTS)[5], through specific projects, schemes, initiatives, or interventions, financed by the Welsh Government. The NTDP identifies expenditure, including the delivery of projects that are already underway. The NTDP also supports the implementation of the WTS and Future Wales – the National Plan 2040[6], and is aligned with the Wales Infrastructure Investment Plan[7] and the Wales Infrastructure Investment Strategy,[8] and will be reviewed every five years. The NTDP will need to take into account both the movement of people and goods.

Statement of Funds Available

1.1.2 The Welsh Government funding for transport is set out in the draft budget published in December 2022, and are an update to the budget published in March 2022. The budget provides a guide to the levels of spending on transport services, maintenance and projects planned for over the coming years. However, due to the Welsh Government's annual budget settlement, these are not an absolute capital and revenue commitment for the term of the plan. There may be a need to adjust future plans due to financial headwinds including the fall-out from the September mini-budget, inflationary pressures, the cost of living crisis, Brexit and the conflict in Ukraine. The Welsh Government has set up a Transport Performance Board to review their overall progress on the WTS and will involve stakeholders, including users, the commercial and third sectors, local authorities and equality groups to support the Board's work. The Board will monitor the supporting plans including the NTDP. This will include the following:

- **Modal shift -** Modal shift is at the heart of the WTS. The Net Zero Wales Carbon Budget (2021-2025)[9] includes an ambition statement for the transport sector to reduce emissions from passenger transport by 22% by 2025, and by 98% by 2050[10]. Measures to be monitored include:
  - Electric vehicle use.
  - Working remotely: Wales has set a target of 30% of the workforce to work remotely on a regular basis. The Welsh Government priority on reducing demand will help achieve this.
  - Achieving a mode shift with more people using public transport, walking and cycling. Based on our current analysis, the Welsh Government has set a target of 45% of journeys to be made by public transport, walking and cycling – by 2040.

- Well-being measures: the Welsh Government will also gather existing data and data from the new National Travel Survey and other sources including data on the impact of funding, to report against well-being ambitions:
  - Good for people and communities would include measures related to equality so we can better understand how different groups with protected characteristics experience travel and their satisfaction levels.
  - In relation to health, we will continue to measure air quality and environmental noise attributable to transport. For safety, the Welsh Government will consider monitoring how safe people feel using different types of public transport, and also walking and cycling.
  - Good for the environment: the Welsh Government will continue to assess CO_2 and other emissions from different modes of transport, as well as tonnes of carbon generated per person per kilometre travelled by different modes. The Welsh Government will need to also consider the impact of transport on biodiversity, ecosystem resilience and waste.
  - Good for the economy and places in Wales: This will include consideration of the extent to which people can access work, leisure, education, and services by sustainable transport modes, as well as issues such as affordability and the causes of congestion.
  - To understand how well we are managing and maintaining infrastructure, we need data on the condition of transport infrastructure including the number and severity of defects and the associated maintenance backlog. The average age and fuel efficiency of service vehicles including the bus fleet, taxi and private hire vehicle fleets and rolling stock is also relevant.
  - In future it would be useful to better understand the transport workforce in Wales, although this is difficult to define, given that it also could include logistics, and parts of the visitor economy.
  - Good for culture and the Welsh language: the Welsh Government will need data on the contribution of transport to culture and the Welsh language, and better information on the protection of heritage assets and their settings in asset management and transport interventions.

1.2 What is the Integrated Sustainability Appraisal?

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

1.2.2 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)[11] which was transposed directly into Welsh law through the SEA Regulations[12]. SEA is a systemic process for evaluating the environmental consequences of plans and programmes to ensure that environmental issues are integrated and assessed at the earliest opportunity in the decision-making process. Article 1 of the SEA Directive states that the aim is to:

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

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

1.2.4 It is best practice to integrate SA and SEA into one coherent process. The Welsh Government, in line with the work undertaken for the ISA of the WTS, has decided to integrate several other impact assessments with the SA to form an ISA, including:

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

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

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

- Biodiversity;
- Population;
- Human health;
- Fauna;
- Flora;
- Soil;
- Water;
- Air;

- Climatic factors;
- Material assets;
- Cultural heritage including architectural and archaeological heritage;
- Landscape; and
- The interrelationship between the above factors.

1.2.7 Figure 1-1 sets out how the process of the NTDP development aligns with the ISA process.

1.2.8 The Welsh Government has prepared an Integrated Impact Assessment guidance document which has been considered throughout the ISA process.

1.2.9 A Habitats Regulations Assessment (HRA) Screening of the NTDP has also been undertaken. This is separate to the ISA, although the results of the assessment have also been integrated into the ISA. HRA is a process of determining whether the NTDP could potentially lead to significant effects on the integrity of internationally designated sites of important biodiversity value.

1.2.10 Integral to the principles of sustainable development is the need to adopt an integrated approach. The integration of these other assessments ensures that a collaborative approach is undertaken on different issues, sharing knowledge and recognising links between topics in a consistent and transparent manner. This provides a robust and thorough mechanism for identifying issues and opportunities, assessing impacts including cumulative and indirect effects and undertaking monitoring in a holistic manner. Overall, the ISA facilitates a more rounded view of the sustainability implications and opportunities arising from the NTDP. Figure 1-2 provides an overview of the impact assessments integrated into this ISA.

1.3 Purpose of this ISA Report

1.3.1 The purpose of this ISA Report is to explain the iterative assessment process and how this has shaped the NTDP from inception to the most recent version. It presents the potential positive and negative effects of the NTDP, to inform the consultation process.

1.3.2 The scope of the assessment of the NTDP 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 NTDP and its purpose. The assessment has taken into account what the NTDP 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.

1.3.3 The ISA demonstrates the transparent and robust decision-making process that has been adopted during the development of the NTDP. The concurrent development of

the ISA and the NTDP has been iterative, with regular discussions between the ISA and NTDP teams. Recommendations have been made for improvements or alternatives through the appraisal of an early iteration of the NTDP. This Interim ISA Report represents the first stage of full assessment. The collaborative process of working has included meetings with a wide range of project sponsors, 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 the draft plan and programmes (including individually and cumulatively), which has played role in the Welsh Government's decision-making about what to include in the NTDP. 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 NTDP team, with various directions and possibilities being considered. The NTDP and associated ISA Report have considered all 'alternatives', which are the proposals and initiatives set out in the draft NTDP. The final NTDP sets out the preferred options, taking into consideration the appraisals within this ISA Report and responses received during the consultation. This is explained further in section 2.4 of this report.

Figure 1-1: Outline of ISA and NTDP Process
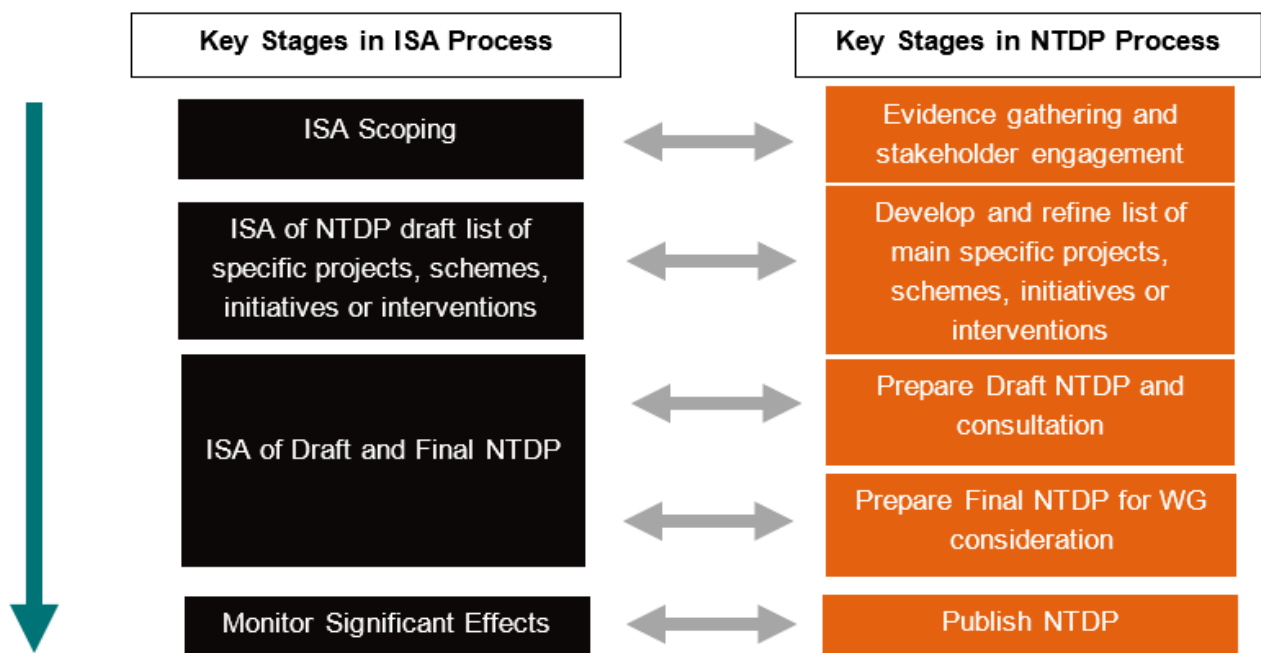
Figure 1-2: Impact assessments to be integrated alongside SA/SEA
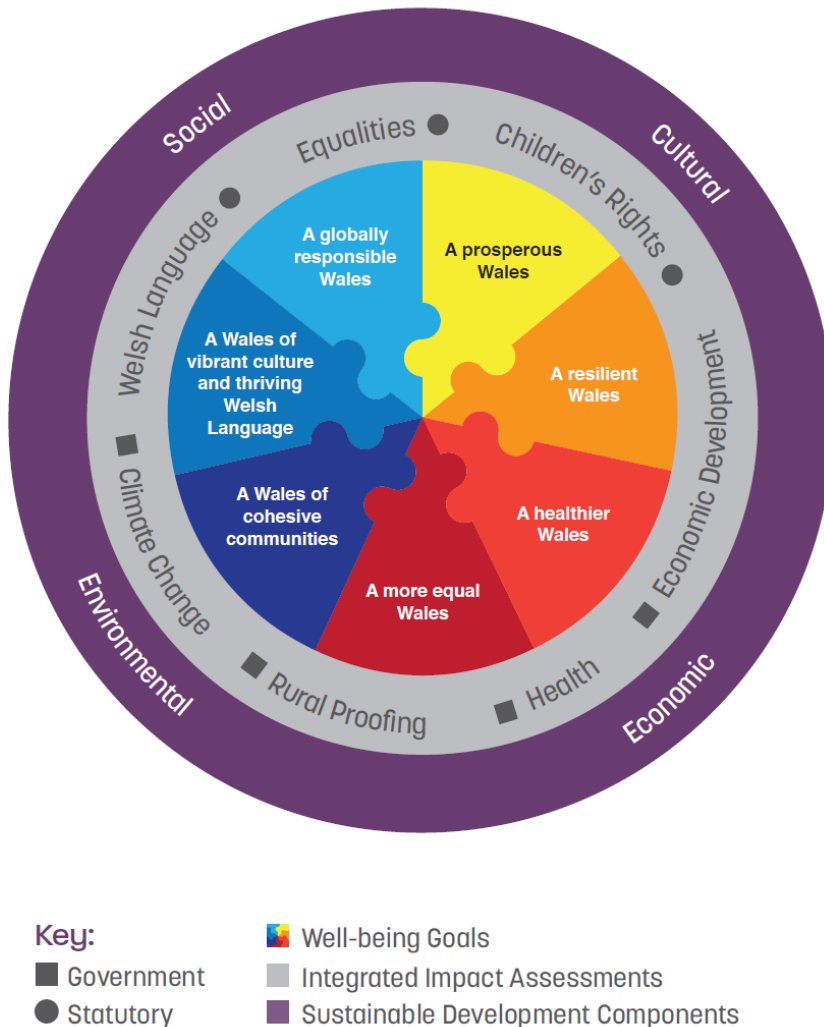
1.4 Well-Being of Future Generation (Wales) Act

1.4.1 The Well-being of Future Generations (Wales) Act 2015[13] (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).

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.
A globally responsible Wales	A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes

Well-being Goal	Description
	account of whether doing such a thing may make a positive contribution to global well-being

Source: Welsh Government, Well-being of Future Generations (Wales) Act 2015: The Essentials[14]

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

1.4.4 The NTDP has an important role in contributing to the achievement of well-being goals over the 5-year plan period, and the approach to appraisal will help the Welsh Government to understand where the NTDP can maximise that contribution. This process was followed for the ISA of the WTS, and the well-being goals were integral to the preparation of the Scoping Report and the ISA Framework (Table 2-3). The well-being goals were also used to inform the review of the evidence, identify issues and structure the ISA Framework. The ISA Framework to be used for the NTDP follows that developed for the WTS, as the NTDP is essentially a document to implement the WTS.

Ways of Working

1.4.5 The sustainable development principle defined by the Act is a fundamental part of how public bodies – including the Welsh Government – must now operate. This includes acting in a manner that seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs, by taking account of the sustainable development principle.

1.4.6 The principle is made up of five ways of working that public bodies are required to take into account when applying sustainable development (see Figure 1-3). These are:

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

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

Well-being Goals	Ways of Working
	Long Term
	Integration
	Collaboration
	Involvement
	Prevention
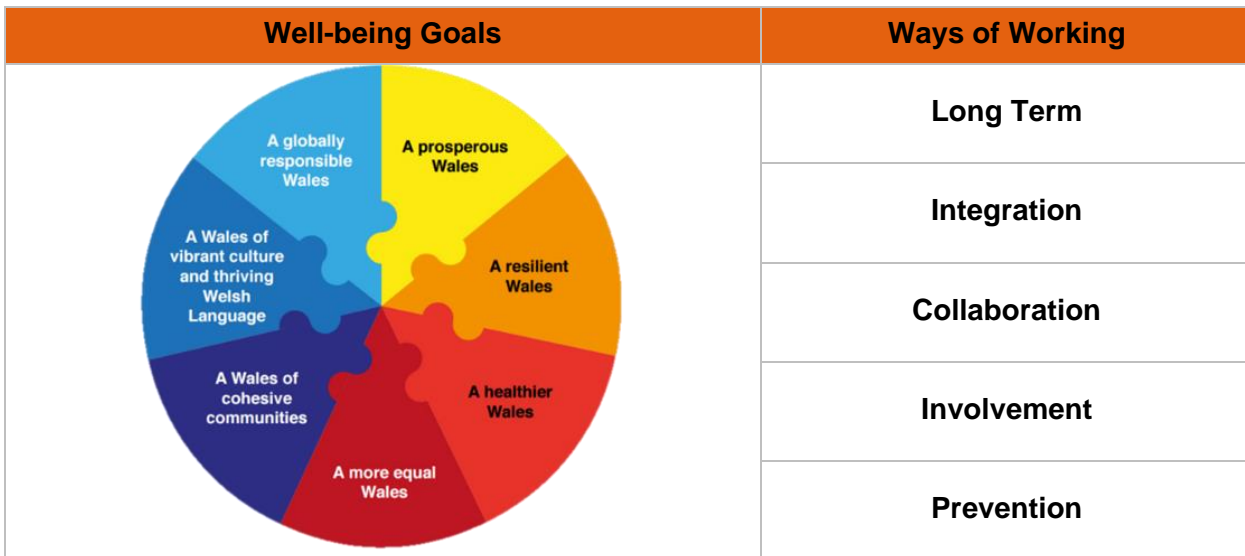
Source: adapted from: Well-being of Future Generations (Wales) Act 2015: The Essentials[15]

The Ways of Working, the Wales Transport Strategy and the National Transport Delivery Plan

1.4.7   The five ways of working are integral to the NTDP preparation-process and therefore, by association, the ISA. During the work Arcadis, the Welsh Government and TfW have undertaken, we have considered how the ways of working shape what we do. Table 1-2 sets out an overview of our approach, which was set at the beginning of the project.

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

Looking to the long term
Development of NTDP
Although a 5-year plan, to ensure we consider the long term, the NTDP has been developed to provide specific projects, schemes, initiatives or interventions that will ensure the long-term sustainable development of Wales through its transport system. Importantly, the NTDP also supports thinking beyond 2040 wherever possible, making use of evidence and trends and seek to understand outcomes over the longest timeframes available. Whilst shorter term projects, schemes, initiatives or interventions are the key element of the NTDP, ultimately the NTDP 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 project and proposal making decisions in the NTDP. 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 tests emerging policy and assess its ability to deliver the long-term objectives. The options that have been developed and

tested through the ISA specifically considers 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. This feeds into the identification of key issues and opportunities for the NTDP to address and has shaped the ISA Framework for assessment of the NTDP.

Taking an integrated approach

Development of NTDP

The NTDP is consistent with and supports the delivery of Welsh Government policies including the WTS; the National Strategy: Prosperity for All, the Economic Action Plan; and Future Wales: the national plan 2040. The NTDP makes important decisions on investment options that will affect the future development of Wales. It identifies and presents specific projects, schemes, initiatives or interventions over a 5-year period.

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

The consultation and supporting ISA workshop with key stakeholders for the ISA of the WTS ensured that a range of views were gathered on the draft ISA Scoping Report including the draft Framework and proposed integrated approach. A cross government approach was undertaken for the ISA of the WTS, which forms the basis of the ISA Framework for the NTDP. This comprised expert policy leads covering decarbonisation, transport, marine planning, natural resources, nature conservation, future trends and statistics. This also ensured the identification of synergies and conflicts at an early stage, ensuring a robust approach to the assessment. This consultation has been continued with NRW in particular, to ensure that the specificity of the ISA Framework, in particular, was relevant to the appraisal of the NTDP. The received comments and how they have been addressed is included within Appendix D.

A collaborative approach evolved throughout the process to fill data gaps, undertake monitoring and increase engagement with stakeholder groups and other interested parties.

Involving people

Development of NTDP

We involved key stakeholders in the development of the NTDP.

Engagement on the draft strategy was held as follows:

- stakeholder input to the development of the plan, including internal and external consultation with key stakeholders.
- 12-week public consultation and engagement on the draft plan document.
- recording the outputs from the consultation exercise.
- analyse feedback and produce a consultation report.
- consultation input to refining the plan

The objectives of the engagement are:

1. To make audiences aware of the development process for the NTDP
2. To make sure that the consultation is inclusive and provides opportunities for involvement by a diverse range of stakeholders and the public.
3. To ensure a high level of awareness and understanding of the plan being proposed.

Role of ISA

The ISA provides an important opportunity to consult on the shaping of the NTDP as it progresses. It is a process that tells the story of the plan aiding understanding of its development.

Future stages of the ISA work involved consulting with different organisations and individuals to ensure a wide range of views continue to be captured and considered whilst finalising the NTDP. The ISA incorporated the promotion and protection of the Welsh language.

Collaborating with others

Development of NTDP

The role of the WTS is 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. The NTDP is a key document in the delivery of the WTS.

As well as major and one-off projects, the NTDP looks to facilitate the delivery of multiple smaller projects, which can help collectively deliver change over the long term. These projects will not be delivered by the Welsh Government directly but through partner organisations, including TfW and Local Authorities.

Role of ISA

The ISA, through the review of plans, programmes and environmental objectives (Appendix A), baseline evidence (Appendix B), helped to identify the key sustainability issues and set out opportunities for the NTDP (Table 5-1). Following engagement and consultation the evidence, plans and programmes etc. have been updated and amended. This led to the update to the ISA Framework used for the appraisal of the WTS, against which the NTDP projects, schemes, initiatives or interventions were tested and helped to maximise collaborative opportunities and ensure the NTDP is as sustainable as possible.

Prevention

Development of NTDP

The WTS 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 so that progress can be tracked. This has given a clear basis on which to plan investment and the development of the network in the way best suited to realising collective priorities, as well as to prevent future transport problems and the impacts of transport, and the NTDP reflects this. The WTS also provides for the safety and protection of disadvantaged and minority groups within Wales, which is reflected in the projects, schemes, initiatives or interventions in the NTDP. The NTDP is subject to a programme of monitoring and review, to establish its progress towards meeting its outcomes.

Role of ISA

The ISA is evidence-based, and the evidence feeds through the Scoping Report and shapes the ISA Framework (see Table 6-2). The review of this evidence identified key issues and opportunities for the NTDP, which is based on that developed for the WTS. This sought to address and ensure the NTDP prevents negative outcomes and enhances positive outcomes where possible (Table 5-1). The identification of these issues and trends at this early stage helped in the development of the NTDP through shaping the ISA Framework objectives and questions. The ISA process ensures that the NTDP will be monitored to ensure the NTDP is being successfully implemented and delivering its objectives, taking into consideration the Monitoring Framework. Any issues highlighted have been fed into the review of the NTDP.

1.5 Legislative Impact Assessments

Strategic Environmental Assessment

1.5.1   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	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, Section 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

Question	Where
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 Appendices D and E 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, Appendices D and E and Table 3-6 of this report
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.	To be completed in next iteration of the ISA Report.
9. A description of the measures envisaged concerning monitoring in accordance with regulation 17.	Table 3-7 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 2016

1.5.2 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.

1.5.3 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 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.

1.5.4 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.

1.5.5 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.

1.5.6 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 NTDP looks to address these key features and the ISA sets out how this is achieved.

Equalities

1.5.7 The NTDP 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 NTDP.

1.5.8   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.

1.5.9   The requirements for the Equalities Impact Assessment (EqIA) are predominantly addressed through ISA Objectives 1 and 2.

Impact Assessment	ISA Objectives
Equalities	1, 2

Welsh Language

1.5.10 The Welsh Language (Wales) Measure 2011 and Standards require the following effects to be considered:

- What effect, if any, the NTDP 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 NTDP 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 NTDP 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.

1.5.11 The NTDP 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 giving appropriate consideration to the Welsh language, Welsh speaking people and communities; this includes children and young people.

1.5.12 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.

1.5.13 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.

1.5.14 The requirements for the WLIA are predominantly addressed through ISA Objective 5:

Impact Assessment	ISA Objective
Welsh Language	5

Children's Rights Impact Assessment

1.5.15 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.

1.5.16 The scoping work concluded that the NTDP could 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. Children and young people will continue to be engaged to ensure their voices are heard in the development of the NTDP.

1.5.17 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 NTDP 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.

1.5.18 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.

1.5.19 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

1.5.20 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.

1.5.21 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.

1.5.22 This ISA report does not satisfy the requirements of HRA. The HRA is a separate process, and the Screening Report will be publicly available. Appraisals carried out in the ISA have been informed by outcomes of the HRA process, in the next iteration of the ISA Report.

1.6 Non-Legislative Impact Assessments

Rural Proofing

1.6.1 The NTDP 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.

1.6.2 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

1.6.3 The NTDP 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.

1.6.4 The ISA Framework and associated decision-aiding questions ensure that effects on climate change, including adaptation, mitigation and resilience are addressed as the NTDP is assessed, recognising direct and indirect effects the planning system can have on these areas.

1.6.5 The assessments in relation to climate change have primarily been incorporated through:

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

Health

1.6.6 The NTDP could potentially affect 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.

1.6.7 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 NTDP is assessed, recognising direct and indirect effects the planning system can have on these areas.

1.6.8 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

1.6.9 The NTDP 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.

1.6.10 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 NTDP is assessed, recognising direct and indirect effects the planning system can have on these areas.

1.6.11 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 Objectives
Economic Development	3

1.7 The ISA and NTDP processes

Evidence Gathering, ISA Scoping and Stakeholder Engagement

1.7.1 Stage A of the ISA (Scoping) commenced in late 2021 and included further evidence gathering and analysis of sustainability issues and opportunities, building upon the evidence base for the WTS, which dovetailed into the NTDP evidence. The draft Scoping Report for the ISA of the NTDP was one of the first stages in engagement and collaboration for the NTDP. Consultation on the draft Scoping Report was undertaken between 17th December 2021 and 4th February 2022. The ISA Scoping Report was issued to statutory stakeholders for comment, as well as other relevant or interested stakeholders. The report was updated following responses received during the consultation period, which are listed within the ISA Scoping Report.

1.7.2 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 opportunities;
- A4: Developing the ISA Framework; and
- A5: Consulting on the scope of ISA.

Task A1: Identifying other relevant policies, plans and programmes and ISA 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 NTDP 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.

Task A5: Consulting on the scope of ISA

Outcomes of Tasks A1, A2, A3 and A4 should be consulted on with, as a minimum, the statutory consultees of Natural Resource Wales and Cadw.

1.7.3 The Final Scoping Report (February 2022) 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[16] 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 NTDP;
- 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 NTDP has been appraised.

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

1.8 How the ISA has been undertaken

Geographical Scope

1.8.1 The geographical scope of the ISA has been driven by the geographical scope of the NTDP, i.e., covering the whole of Wales and up to the mean low-water spring tide. The geographical scale of baseline issues means that they will relate closely to neighbouring England.

Temporal Scope of the ISA

1.8.2 The NTDP covers the period 2022 to 2027. This 5-year timescale is reflected in the ISA. If there are likely to be any sustainability effects of the NTDP that would last longer than this, these have been considered.

ISA Framework

1.8.3 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 NTDP. Each Objective links to the baseline information; key sustainability issues and opportunities in Wales; and other plans, programmes and strategies relevant to the NTDP. These were established during the scoping stage and subsequently form the basis of the assessment. The ISA Framework also incorporates the requirements of the other integrated assessments.

1.8.4 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:

"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…".

1.8.5 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 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).

1.8.6 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.

1.8.7 The intention of the ISA is to enable the principles of sustainable development to be embedded into the NTDP 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 NTDP could potentially achieve. Each stage of the ISA has been undertaken using an iterative process, with feedback and communication between the NTDP and ISA teams. This process enables the NTDP to take a more sustainable direction in its development. Appraisals are primarily qualitative and undertaken by professional ISA practitioners.

1.8.8 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 1.5 and 1.6).

1.9 Methodology

1.9.1 The approach has included the following steps:

- B1: Testing the plan objectives against the ISA 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 Plan 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 NTDP 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.

1.9.2   Step B1: Testing the plan objectives against the ISA Objectives, is not relevant for the NTDP, as the NTDP follows the objectives set out in the WTS and does not set its own objectives.

1.9.3   Step B2 is limited, as a range of options for the NTDP are not available. Instead, options considered as part of the preparation pf the NTDP focus around the projects set out within the programmes.

1.9.4   Stages B3, B4 and B5 have been completed in Appendices D and E of this ISA Report. The Priorities, Modes and Sectors, and Programmes set out in the NTDP have been assessed in detail for their potential effects on each ISA Objective.

1.9.5   Tables 1-4 and 1-5 set out the scoring method for each of the assessments presented in this report.

1.9.6   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 (NTDP) 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 Report

2.1 Relationship between the NTDP and other Plans and Programmes

2.1.1 A review of other plans and programmes that may affect the preparation of the NTDP was undertaken in order to contribute to the development of the ISA and the NTDP. The results of the review can be found in Appendix A. As the NTDP is a national-level document, the review is primarily focused at a national, UK and international level. The NTDP additionally seeks to influence sub-national level planning in Wales. The ISA Scoping Report (February 2022) identified an extensive list of relevant plans and programmes and how the NTDP 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 NTDP; and
- Determining whether there are clear potential conflicts or challenges between other identified plans, programmes or environmental objectives and the emerging NTDP.

2.1.3 Many of the identified plans, policies and programmes are of relevance to the NTDP and ISA. Of particular importance nationally are the following documents, with which the NTDP shares common aims and objectives:

- Future Wales: The National Plan 2040 (February 2021)[17];
- Prosperity for All: Economic Action Plan (March 2019)[18];
- Prosperity for All: A Low Carbon Wales (June 2019)[19];
- Prosperity for All: A Climate Conscious Wales (November 2019)[20];
- Planning Policy Wales – Edition 11 (February 2021)[21];
- Welsh Government: Advancing Gender Equality in Wales Plan (March 2020)[22];
- Net Zero Wales Carbon Budget 2 (2021 –2025) (October 2021)[23];
- Nature Recovery Action Plan (October 2020)[24]; and
- The Welsh National Marine Plan (November 2019)[25].

2.1.4 A summary of the documents reviewed, and their main findings are presented in

2.1.5 Table 2-1. The full results can be found in Appendix A. The iterative nature of the ISA allows new plans, policies and programmes that are published as the NTDP develops, to be taken into account, and so any new relevant documents of interest may be added in further iterations of the ISA.

Table 2-1 - Summary of international and national plans and programmes reviewed

Level	Summary
International and European Plans and Programmes	A review was undertaken of key International Conventions that could potentially influence the development of the NTDP and the ISA. Key protocols and conventions that are applicable to the ISA of the NTDP include the Paris Agreement (2016), the World Summit on Sustainable Development (2002) and the Rio Convention on Environment and Development (1992).
UK-wide Plans and Programmes	A review was undertaken of relevant publications from organisations - for example, the Department for Transport (DfT), the Department of Business, Energy and Industrial Strategy (BEIS), and the Department for Environment, Food and Rural Affairs (Defra). These publications outline the action plans and strategies across a breadth of topic areas, including 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 (2021) UK Climate Change Risk Assessment (CCRA3) Evidence Report (particularly the 'Summary for Wales'). The objectives of these plans, as well as some of the challenges they raise need to be integrated into the ISA and NTDP 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 the 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 public bodies have also set out their well-being objectives for contributing to the well-being goals. The second State of Natural Resources Report (SoNaRR) (2020), in combination with the National Resources Policy (NRP) (2017), have a

Level	Summary
	particular focus on Welsh natural resources, with the 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. 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 also provide a strategic Wales focus. The NTDP should identify these themes and incorporate them into the Plan to achieve collaborative strategic success.
	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 NTDP seeks 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. Similarly, the Strategy for Older People in Wales should be incorporated to ensure that older people can expect to be able to participate as fully in society as they desire, including contributing to community and family life, influencing decisions and having their needs met.
	The Nature Recovery Action Plan sets out how Wales addresses the Convention on Biological Diversity's Strategic Plan for Biodiversity and meet the associated biodiversity targets. 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 NTDP and have informed the ISA Framework Objectives.

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 and opportunities. Understanding baseline conditions is also essential in order to be able to accurately predict, evaluate and monitor the effects of the NTDP. For example, it is only possible to predict and evaluate the effects of the NTDP on the natural environment when there is a clear understanding of the current state of the natural environment.

2.2.2 As the NTDP is a national-scale document, baseline evidence gathering has been focused on national-scale data with some additional sub-national and localised 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's economic, social, environmental and cultural well-being; and
- Using this information to identify existing problems and opportunities which could be influenced by the NTDP.

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, 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 second SoNaRR produced by Natural Resources Wales in 2021. 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.

Table 2-2: Key sustainability issues and opportunities in Wales, identified during the review of baseline conditions

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP 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 for education and employment, but higher-than-average deprivation for access to services in Central Wales and the Valleys. 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 UK Climate Risk Independent Assessment (CCRA3) Technical Report and the Evidence for the third UK Climate Change Risk Assessment (CCRA3): Evidence for Wales highlight a number of key risks and opportunities facing Wales with regard to business. These could have effects on a number of factors including health and well-being, employment and the economy. Such matters facing Wales can be summarised as risks to business from flooding, loss of coastal locations, water scarcity, reduced access to capital, reduced productivity from disruption to infrastructure etc., disruption to supply chains and changes in demands for goods and services. These could all be taken into	The NTDP 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 NTDP provides an opportunity for the economy to be guided towards a more sustainable future. This can be through the promotion of sustainable travel infrastructure and improvement of access to employment centres. It can also provide a framework that is more responsive to the needs of the economy and able to support new, emerging sectors and support transition of existing ones through the creation and enhancement of networks. Furthermore, it can also help to guide the creation of an environment that is attractive to inward investment and encourages sustainable access to jobs. Similarly, the NTDP may facilitate improvements in access to education. The NTDP could seek to help address issues related to poverty and inequality through access

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	consideration in the NTDP as they will all influence the habits of transport users. • There are issues with provisioning access to schools and employment, as the highest density areas for these are in the South of Wales. These facilities are much more difficult to access by any means other than private owned car in the North of Wales. • 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.	to better education, better connectivity between communities and access to jobs and the job market. Overall, the NTDP 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 NTDP 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. This could be adapted and extended to encourage adults to use active transport methods for travel to work and training. There is also an opportunity through improved public transport schemes to enable people to access a wider range of employment and education options. The NTDP presents an opportunity to improve sustainable and public transport methods to

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
		tourist locations, to facilitate increases in tourism numbers. There is an opportunity for the NTDP 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 so the transport plan must take this into account. These notably occur in urban areas and adjacent to busy roads. • 90% of semi-natural nitrogen sensitive Welsh habitats are subject to nitrogen deposition in excess of critical load limits. • Ammonia remains an issue, both as a local air pollutant and as a contributor to the formation of secondary particulate matter, including the formation of ultra-fine particulates ($PM_{2.5}$), which can have a more serious impact on human health and ecosystems than the larger PM_{10}s. • 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.	*Air Quality* The transport system is a significant contributor to air pollution at present, an opportunity to reduce this negative effect on air quality could be affected by helping to minimise pollution from transport through minimising the distance travelled and encouraging more sustainable modes of transport. Sustainable design and landscaping policies could help to provide opportunities for absorbing some pollutants.

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	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.	*Noise Pollution* The NTDP 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 • 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 and marine biodiversity is under threat from transport infrastructure, pollution and climate change, all of which are effects that come from the transport network. • Changes in habitat quality coming from changes to the groundwater regime, changes in natural rates of flow from hard surfaces increasing surface water flooding, each of which pose a threat to biodiversity. • A change in soil leaching and erosion patterns and changes to microclimate from light and radiation emissions can threaten ecosystems.	*Biodiversity, Flora and Fauna and Ecosystem Resilience* The NTDP can both benefit and enhance biodiversity through guiding the location and manner in which new transport infrastructure occurs. It provides opportunities to ensure biodiversity is protected and enhanced through the transport system, not just in terms of protected sites but also in terms of biodiversity and connectivity in general. Other benefits might include improved habitat management; new structures e.g. bridges and tunnels may provide habitats for some species e.g. bats; and habitat creation. There is opportunity for the NTDP to introduce additional green infrastructure as part of future transport proposals to support

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	• Disturbance to fauna from noise, lighting and vibrations from traffic and road lighting. • Road structures may cause problems for certain birds/mammals by reducing visibility. • The edge habitat or ecotone and traffic on the road may facilitate dispersal for some species. This may result in dispersal and establishment of alien and invasive species or pest species that may have secondary effects on biological communities. • Surrounding habitats may be placed under increasing public pressure, because of access, leading to effects including the disturbance of animals, and physical destruction of ground flora. Also, litter may accumulate along roads and infrastructure. • Off-site habitat losses and changes in habitat quality in relation to the obtaining and disposal of materials e.g. mining for aggregates for road building.	placemaking as well as biodiversity, flora and fauna.
	Climate, Flood Risk and Coastal Erosion • The effects of climate change are increasing and adaptation and resilience to its effects is an increasing necessity. Notably, flood risk is a significant issue in Wales including coastal, fluvial and surface water flooding that may affect transport infrastructure. This is exacerbated by an increase in extreme weather events and this means that properties and businesses are increasingly becoming at risk. Disruption can disproportionately impact communities with fewer and less resilient transport options.	***Climate, Flood Risk and Coastal Erosion*** The NTDP 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 programmes set out in the NTDP could be designed to help minimise flood risk. Transport infrastructure should be designed to be resilient to erosion and other impacts of

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	• Climate change will impact on Wales in ways other than just flooding, such as more extreme weather events, an increase in storminess, higher maximum and minimum temperatures, more severe droughts and exacerbated rates of coastal erosion. Climate change will also affect habitats and species throughout Wales. • The Third UK Climate Change Risk Assessment Technical 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.	climate changes, including increased storminess and temperature extremes. The NTDP should focus on significantly reducing greenhouse gas emissions from transport, through the promotion of more sustainable transport methods such as public transport and active travel. Provision could be made within the NTDP for increasing the provision of electric vehicle charging points to encourage the uptake of electric vehicles.
	Geology and Soils • In the future, geological hazards may change as a response to climate change. For example, coastal erosion, landslides and pollution from former mine sites. This poses significant risks to the transport system. • The soils of best quality and most productive agricultural land are a scarce and finite resource in Wales and soil quality has deteriorated over time across all habitats. This is important for biodiversity, landscape character, tourism, agricultural productivity and climate change resilience. Topsoil, in particular peaty soils in Wales are a major carbon sink which needs protection. All of this must be taken into account when planning the location of future transport infrastructure.	*Geology and Soils* The NTDP has an opportunity to guide the sustainable use of Wales's geology and soils in the transport system in terms of their use in the construction of transport infrastructure or utilising previously developed land and contributing to the ongoing remediation or land and soils. Aspects such as this, as well as the management or avoidance of geological hazards could be noted in the ISA for further specific projects in lower-level plans or projects, should the relevant spatial detail not be included at the high level of the NTDP.

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	Water Environment The quality of Wales's water bodies is still not up to Water Framework Directive requirements with only 40% being of good ecological status in 2020. Transport activities can be a big contributor to poor water quality. In many Welsh rivers, flows are particularly vulnerable to climate change because they tend to rise and fall quickly in response to rainfall. Increased surface water flows during winter, resulting from increased precipitation from climate change, may increase pressure upon sewerage and drainage systems and diffuse pollution. 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).	**Water Environment** The NTDP could help facilitate the development of new of transport infrastructure and transport routes in a manner that seeks to avoid pollution of water bodies. Aspects such as this could be noted in the ISA for further specific projects in lower-level plans or projects, should the relevant spatial detail not be included at the high level of the NTDP.
	Minerals and Waste The country still has substantial resources if required. sustainable management of this extraction is necessary for ongoing or future activity. Minerals safeguarding can sometimes also conflict with other forms of development e.g. transport infrastructure.	**Minerals and Waste** The NTDP has an important role to play with regard to minerals demand (through economic aspirations), planning and management. It can help to guide the sustainable use of such resources through its policies. Aspects such as this could be noted in the ISA for further specific projects in lower-level plans or projects, should

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	There may be high material requirements for construction of transport infrastructure putting further strain on the limited resources.	the relevant spatial detail not be included at the high level of the NTDP.
	Covid-19 The Covid-19 pandemic has impacted most on the most vulnerable individuals and deprived communities. The long-term impacts of the pandemic are currently unknown and, whilst there have been some beneficial impacts, including improved air quality and greater reliance on active travel, the approach to recovery should promote social, health and economic equality.	**Covid-19** The NTDP has a role to play in the recovery from Covid-19, particularly addressing changes in mobility. The NTDP 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 relatively poor across much of rural Wales. Although the health of those living in rural communities is generally good compared to those of urban environments. It is not clear how this is likely to change in the wake of the COVID-19 pandemic. • Factors specific to a rural environment compared to those of urban environments that can impact on health more significantly and lead to inequalities and poorer health, such as distance from public services and support, availability of transport, and the ageing population. Access to healthcare can be limited in many	Overall, the NTDP could help to achieve the important balance of economic and social improvement that is also sustainable and respects the country's valuable natural and cultural environment. The NTDP could recognise the potential for natural green spaces as places for health and recreation, connecting habitats and supporting community interaction. Improving the access to green and open spaces, including National Parks, could greatly encourage healthier lifestyles and a healthier population could enable people (including children) to achieve their

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	parts of rural Wales. Public transport is important for both the sustainability and independence of rural communities. • Whilst people are living longer and the rates of some diseases is decreasing, challenges such as living environment and modern lifestyles can contribute towards increasing levels of chronic diseases such as diabetes, joint problems, heart disease and some cancers which in turn can lead to disability and increased demand on health services. In addition, poor mental health can also be an underpinning factor in a number of physical diseases and unhealthy lifestyles. Poor air quality, noise and light pollution as well as road traffic crashes can have direct effects on the physical and mental health of the population. • The transport system could be put under strain through a projected increase in net-migration mainly from within the UK and with urban areas projected to see greatest increase. • Increasing levels of those aged 65 and over could present pressures across the country (dependent on whether healthy life expectancy i.e., the number of years you live a healthy life, continues to track overall life expectancy) e.g., provision of appropriate services for an older generation (e.g. transport). • Issues relating to young people relate to their transition from dependence to independence, as transport plays an important role at particular 'trigger points' such as the move from primary to secondary school, and the move from education to employment.	potential and to make Wales a more equal society. Protecting and enhancing green infrastructure throughout Wales is an opportunity to enhance people's access to green and open spaces. Access to a diverse range of semi-natural and natural habitats, as well as providing space for outdoor exercise and community engagement, is fundamental to physical and mental wellbeing. The NTDP has an important contribution to make towards ensuring that human health is provisioned through improved access to health facilities, a focus on reducing air pollution emissions, road safety and the encouragement of active travel in order to improve health and well-being and reduce inequalities. (It should be noted that a lot of active travel occurs within the context of trip chaining). Overall, the NTDP can help to address issues surrounding the aging population through facilitating the provision of accessible transport services supported by connective infrastructure to meet local population growth needs and the needs of individual groups.

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	• Health inequalities reflect inequalities in the distribution of health determinants, such as access to transport, education and employment opportunities. • Disabilities and/or mobility impairments can be both physical and mental barriers to using the transport network across all modes. • Road transport has five main impacts on public health: air pollution, physical inactivity, road safety, noise and the isolation faced by vulnerable people due to fear of road danger, which prevents them accessing employment or educational opportunities, social networks, local amenities and services (including healthcare), adding to the risk of mental and physical ill-health. • Issues relating to women specifically can relate to a fear of crime on public transport. • Physical accessibility to transport may have an effect on disabled people accessing public transport. • There is still a high risk of road casualty for younger people which must be addressed by the NTDP. • 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.	An equal Wales can enable people to reach their full potential whilst addressing social, economic, cultural and environmental inequality. The NTDP could provide an opportunity to reduce isolation and encourage the development of integrated and liveable communities through provisioning the inclusivity of public transport to allow everyone to have the same level of access. The transport system should ensure that all groups are able to access public transport and the transport network equally and without fear or prejudice. Reducing inequality can be achieved by increasing access for the most deprived more than the least deprived or increasing access for the most deprived and keeping the least deprived constant, any other form would involve the reduction of access to either or both groups so should not be an aim of the NTDP. Health inequalities can also be addressed through policies and infrastructure to promote active travel, thereby increasing physical activity, reducing pollution and noise. Active travel measures should be focussed in areas of deprivation to reduce inequalities.

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	• People on low incomes (living in a deprived area is used as a proxy for a low income) and without access to a car are likely to walk further. Their lack of transport options, which may include affordability of public transport, may limit life and work opportunities. People living in deprived areas can be particularly vulnerable to road traffic incidents. This group may also have increased stress levels, a poor physical environment can be considered a barrier to active travel. • Minorities are more likely to live in a household without a car and so will be more reliant on public transport. 77 racially aggravated offences took place across three years on British railways. The NTDP must provide for the safety and inclusion of minorities across all modes of public transport. • Women and minority groups are more likely to travel by bus, however more investment is being put into rail as a method of public transport. The NTDP must provision for a more equal Wales by placing the necessary investment in the public transport most used by these groups or removing any potential barriers to other types of transport to these groups. • Levels of noise pollution around key roads within Wales are high. Noise can have multi-ranging effects, including on landscape receptors, ecological resources and human health. • The gender pay gap overall is increasing within Wales. The NTDP must ensure that men and women working for the transport system are paid equally for carrying out the same job.	

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	• Women are more likely to have diverse patterns of trip chaining, particularly when accompanying a child. They therefore tend to be more economically sensitive to the costs of public transport, particularly buses, and particularly as women tend to earn less on average than men.	
4. A Wales of cohesive communities	• Bus fares are rising in cost at a rate higher than inflation, this could exclude some people or communities from this form of transport due to a price barrier. • The number of deaths on the road is remaining consistent year to year when it should be improving, more efforts should be made to provision the safety of drivers and other road users as much as possible. • Levels of noise pollution around key roads within Wales are high. Noise can have multi-ranging effects, including on landscape receptors, ecological resources and human health. • Rural Isolation and loneliness can lead to mental health problems, this can be caused by a less accessible transport system reducing access to communities, but also cars travelling through communities can sever communities and promote isolation. • When people are travelling, they should be able to do so without the fear or threat of crime.	The NTDP could support the creation of connections between and within safe and well-maintained communities through public transport opportunities and active travel opportunities including foot and cycle paths. The NTDP could also plan for reducing the need to travel; and provide opportunities to access new and existing development and services by a range of sustainable travel modes and or improvements to digital connectivity. By reducing the amount of single-occupancy car journeys, the risk to non-motorised users could be reduced and the issue of isolation be lessened. The NTDP could consider strategic transport proposals in terms of the opportunities they present to encourage regional equality as well as improving human health, landscape and nature conservation from a reduction in noise and light pollution. Transport schemes can improve road safety, which can improve actual and perceived

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
		road safety. Driver stress can also be improved by the introduction of transport schemes.
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, such as due to customer service staff not speaking Welsh.	*Welsh Language* The NTDP has an opportunity to protect and promote the use of the Welsh language through the transport system through encouragement of its use in sign posting and employees of bus and train stations. The NTDP could seek to ensure that access to Welsh-Medium education facilities is specifically targeted as part of this aim, to support the strategy seeking to expand Welsh-Medium education provision. The NTDP could also seek to support the aim to increase the range of services offered to Welsh speakers, and an increase in use of Welsh-language services. The NTDP could also seek to 'support the socioeconomic infrastructure of Welsh-speaking communities' through its policies, helping to support the aim of 'Develop[ing] a new regional focus to economic development to help all parts of Wales to benefit from prosperity and support each area to develop its own distinctive identity.'

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
		Within the NTDP 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 • Wales is renowned for its high-quality landscapes with over 50% of the land area being nationally valued for its scenic quality and character. National Parks and Areas of Natural Beauty are internationally recognised Designated Landscapes and cover 25% of Wales. This has implications for new transport infrastructure within these areas with a key challenge for sustainable management being to enable appropriate levels of growth whilst retaining the distinctiveness of places and landscapes. This must also recognise that the natural and historic components of landscape are important to both place and the cultural value of landscape. • The loss of visual amenity and character could have impacts on local people and tourists. • Motor traffic, parking and associated impacts can blight the character of landscapes and townscape.	***Landscape and Townscape Character*** The transport system has a major role to play in how future transport infrastructure development will affect landscape, townscape, and sense of place in general. There is an opportunity for improved access to valued landscapes, townscapes and viewpoints, including by sustainable and active travel modes to reduce the impact of motor traffic. The NTDP has an opportunity to provide high quality transport connections to National Parks for both tourists/visitors and local leisure users. There is an opportunity to incorporate dark sky-friendly lighting to new developments to support the dark sky designations and efforts to maintain these, alongside dark-sky tourism.
	Historic Environment, Cultural Heritage and Assets • Wales has a wealth of historic and cultural assets which are important components of national cultural identity. Many such	***Historic Environment, Cultural Heritage and Assets***

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	assets are at risk from, for example, decay, climatic factors, neglect and inappropriate development. As with other environmental factors, protecting and provisioning fair access to cultural heritage assets is a key challenge for sustainable planning of the transport system. New development can have a range of direct and indirect effects on heritage assets which need to be avoided or mitigated. This includes effects from noise and air pollution from construction of busy traffic routes in close proximity to culturally significant areas which may make them less appealing to visit or decrease their visual amenity (indirect effects), it also includes the physical removal of heritage assets as this may be required for the development of new travel infrastructure. Effects on the historic environment can include the intensification of existing traffic or the construction of new road or rail. Increasing levels of congestion can affect historic towns, cities and the countryside, while development of new transport infrastructure can affect historic landscapes and may cause direct damage to heritage assets.	As with landscape, the NTDP has a major role to play in the protection and enhancement of cultural heritage through guidance to the transport system. This could include the recognition that non-designated heritage assets are also an important part of the make-up of cultural identify and sense of place and that indirect effects on the setting of assets are also important considerations. Opportunities also exist for the NTDP to promote awareness of cultural heritage and encourage the enhancement of access to cultural education centres. The NTDP could seek to identify and protect transport infrastructure that may be of heritage value in its own right. The NTDP 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.
6. A globally responsible Wales	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	The NTDP has an opportunity to help promote low carbon fuels and improved standards of energy efficiency in transport infrastructure.

Well-being Goals	Summary of Key Issues	Opportunities for the NTDP to Address
	efficiency improvements in industry. However, again there are challenges to maintain these positive trends.	The NTDP should aim to reduce the growth of motor traffic.
	Wales's high ecological footprint must be maintained and not compromised by transport developments.	The NTDP must promote sustainable transport modes (including active travel and Ultra Low Emission Vehicles (ULEVs)).
	Measures must be taken to provision the safety of pedestrians and cyclists on the road in order to promote it as a viable form of transport.	The NTDP presents an opportunity to implement the sustainable transport hierarchy:
	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.	Firstly, by reducing the need to travel unsustainably: • bring services closer to people, integrated planning (communities built around transport hubs) • flexible working, homeworking Secondly, by widening and promoting more sustainable travel choices: • integration, modal shift. Thirdly, by make better use of the existing transport network: • managing demand, facilities, capacity.

2.3 ISA Framework

2.3.1 To test the performance of the NTDP, an ISA Framework containing 13 ISA Objectives (covering social, economic, environmental and cultural issues) was established. The NTDP 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 A series of questions has been designed to help measure the performance of the NTDP components against the ISA Objectives. Baseline data at the national and sub-national scale was collated (as presented in 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 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 (Table 2-2), the ISA Objectives were refined to ensure that they account for these key sustainability issues.

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 this report, notably: Health, Equalities, Welsh Language, Rural Proofing, Children's Rights, Climate Change and Economic Development;
- Experience of developing other ISA 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 NTDP was assessed against all ISA Objectives to the same level of detail.

Table 2-3: ISA Framework Objectives and Questions

ISA Objectives	Decision aiding questions Will the NTDP...?	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?	A Wales of cohesive communities A prosperous Wales A healthier Wales

ISA Objectives	Decision aiding questions Will the NTDP...?	Well-being goal
	• Create the conditions within which equalities based on background or circumstances can be improved? • Create the conditions within which gender inequality may be reduced? • Create the conditions within which age inequality may be reduced? • Create the conditions within which inequalities based on disability can be improved, in accordance with the Social Model of Disability? • Encourage and support an increase in levels of participation and attainment in education for all members of society through increased accessibility? • Support the third sector and community transport providers and identify opportunities for growth in order to reduce inequalities between urban, rural and semi-rural communities?	
3. To support sustainable economic development and diversity	• Support equitable access to employment, education and training opportunities? • Encourage sustainable access to tourist facilities and attractions? • Encourage the promotion of improved and resilient international transport links, including by air, sea, road and rail? • Support the regeneration of underperforming areas? • Support freight transport and improve the reliability and resilience of the road, rail and air freight transport networks? • Encourage inward investment? • Encourage improved productivity through enhanced connectivity? • 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 prosperous Wales A more equal Wales A Wales of vibrant culture and thriving Welsh language A globally responsible Wales
4. To protect and promote Welsh culture and improve	• Promote sustainable and resilient access to Wales's cultural and heritage assets and activities? • Encourage the enhancement of cultural heritage assets, recreational spaces and their setting?	A Wales of vibrant culture and thriving Welsh language

ISA Objectives	Decision aiding questions Will the NTDP...?	Well-being goal
access to cultural and recreational spaces	• 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?	
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 Objectives	Decision aiding questions Will the NTDP...?	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's 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

ISA Objectives	Decision aiding questions Will the NTDP...?	Well-being goal
		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 and enhancement of biodiversity, geodiversity and ecosystems	• Promote the establishment of more coherent and resilient ecological networks on land that safeguard ecosystem services for the benefit of wildlife and people? • Encourage the conservation and enhancement of designated nature conservation sites, habitats and species including their connectivity in the landscape? • 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 prosperous Wales A resilient Wales 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?	A prosperous Wales A resilient Wales A healthier Wales

ISA Objectives	Decision aiding questions Will the NTDP...?	Well-being goal
	• Reduce overall waste volumes through transport initiatives? • Encourage the conservation of soil, including avoiding soil pollution? • Increase opportunities to enjoy Wales's natural environment and rights of way network through all forms of active travel?	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 Regulation 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 NTDP Reasonable Alternatives

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 NTDP, 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   As the preparation of the NTDP is an iterative process, the ISA has appraised the draft NTDP and final iterations of the NTDP, engaging in discussions with the NTDP and regional teams. Prior to the final NTDP being prepared, other options were considered through the plan-making process, including through the Welsh Transport Appraisal Guidance (WelTAG) process, and therefore, some proposals were discounted before reaching the draft NTDP stage, and were not considered reasonable alternatives to be appraised through the ISA. All options set out within the draft NTDP were appraised within the Interim ISA Report. The final iteration of the NTDP has refined these options, taking into consideration the appraisals and recommendations set out in the Interim ISA Report. This final iteration of the ISA has subsequently appraised the final version of the NTDP and the preferred options.

3 Assessment of the NTDP

3.1 Summary of the NTDP appraisals

3.1.1 The NTDP 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 structure of the NTDP is as follows:

1. Strategic Context
2. The NTDP: Turning Strategy into Action
3. What we will deliver – Key Priorities
   - Priority 1: bring services to people in order to reduce the need for people to use their cars on a daily basis
   - Priority 2: accessible, sustainable and efficient transport services and infrastructure
   - Priority 3: behaviour change
4. What we will deliver – Transport Modes and Sectors
   - Active Travel
   - Bus
   - Rail
   - Roads, Streets and Parking
   - Third Sector
   - Taxis and Private Hire Vehicles
   - Freight and Logistics
   - Ports and Maritime
   - Aviation

A. Useful Terms
B. Programmes, projects and interventions
   - National Transport Delivery Plan Management
   - Integrated Journey Planning and Ticketing
   - Behavioural Change
   - Active Travel
   - Bus
   - Rail
     - Access for All
     - Cardiff Central Enhancement Projects
     - Programme of ongoing targeted improvements to stations across the Wales and Borders Network
     - Introduction of additional rail services

- o Introduction of new Rolling Stock
- o Community Rail, British Transport Police and Modal Shift
- South Wales Mainline
  - o South Wales Mainline Strategic Development
  - o Additional Stations (5) between Cardiff and Severn Tunnel Junction
  - o Cardiff to Swansea including New Stations package
  - o Swansea to Severn Tunnel Junction capacity improvements
  - o Cardiff to Swansea Electrification
  - o Penarth/ Vale of Glamorgan Electrification
- North Wales Metro
  - o Strategic Development including studies and analysis to inform future schemes
  - o Active Travel Local Connectivity: Stations and Transforming Towns
  - o Interchange Hubs
  - o Borderlands
  - o North Wales Mainline Phases 1/2/3
  - o Deeside
  - o Shotton Interchange
  - o North and West Wales Rail Innovation
- Swansea Bay and West Wales Metro
  - o St Clears Station Reopening
  - o West Wales Rail Interchange and Hub Improvements
  - o Swansea Bay Area Metro Phase 1 & 2
  - o Swansea Bay Hydrogen Fuel Cell Bus Project
  - o Pembrokeshire Hydrogen Fuel Cell Bus Project
  - o Traws Cymru T5 Hydrogen Fuel Cell Bus Project
  - o Traws Cymru T6 Hydrogen Fuel Cell Bus Project
  - o Active Travel to Stations
  - o Swansea to Aberystwyth Transport Link
- South Wales Metro
  - o Strategic development including studies and analysis to inform future schemes and extensions
  - o CVL Enhancements Package
  - o CVL Extensions Package
  - o Valley Line Enhancement and Extensions (non-CVL) Package
  - o Local Station/ Interchange Enhancements Packages
  - o Active Travel Package
  - o Bus and Bus Rapid Transit Package
  - o Metro Enhancement Framework Corridor Studies
- Strategic Road Network
    - o Annual Programme of Capital Maintenance and Renewal

- o Schemes Under Construction
- o Cross Border Schemes
- o Trunk Road Active Travel Programme
- o Trunk Road Modal Shift Programme
- o Trunk Road Safety and Resilience Programme
- EV Charging
- Freight and Logistics
- Streets and Parking
- Air Quality
- Aviation
- Third Sector
- Taxis and Private Hire Vehicles
- Ports and Maritime
- C. Delivery Pathways

3.1.3 The ISA has focused on the appraisal of the key priorities, modes and sectors, and programmes.

3.1.4 The priorities set out in the NTDP align with the priorities set out in the WTS, and the NTDP sets out how these priorities will be delivered. The appraisal of the NTDP priorities is therefore mainly akin to the appraisal of the WTS priorities prepared in 2021. The modes and sectors of the NTDP align with the Mini Plans of the WTS. Again, the NTDP modes and sectors expand and provide additional detail to that set out in the WTS. The appraisal of the modes and sectors, therefore, largely follow the appraisal of the Mini Plans prepared in 2021.

3.1.5 The programmes of the NTDP indicate timeframes of the proposals and initiatives set out within the modes and sectors sections of the NTDP. The list of programmes includes specific schemes or proposals which would be expected to help facilitate the priorities and key aims of the NTDP. All of the projects identified within a programme will be assessed as part of an independent work stream. The role of the ISA is to appraise if the initiative as a whole is in line with the ambitions of the WTS and would result in sustainable development.

3.1.6 Some of the projects detailed within the programmes have been assessed by other appraisal processes, including through the Welsh Transport Appraisal Guidance (WelTAG) process and as part of the Wales Roads Review. Appendix C sets out compatibility assessments of the WelTAG Integrated Impact Assessment guidance and the Wales Roads Review criteria against the ISA Objectives. The compatibility assessments highlight that a lot of the criteria used within these two assessment processes align with the ISA Objectives. Therefore, the ISA process has not sought to assess all aspects of the projects set out within the programmes as it is understood that they will be assessed through the WelTAG and Wales Road Review processes.

3.1.7 In February 2022, the Deputy Minister announced plans to establish the North Wales Transport Commission (NWTC) led by Lord Terry Burns. "*The North Wales Transport Commission will build on the great work already being delivered by the North Wales Metro programme such as this fflecsi service and consider the needs of all communities; both urban and rural, along the coast and inland*". The Commission will be taking an evidence-led approach to produce recommendations that will help deliver a high-quality integrated transport system for north Wales, improving the way we travel while cutting emissions. The conclusions of the Welsh Government's Roads Review will form part of that evidence base for the Commission's recommendations, which are due to be presented in 2023.

3.1.8 The appraisal of the key priorities and modes and sectors are summarised in Table 3-2 and 3-3 and are presented in full in Appendix D. The appraisal of the programmes is summarised in Table 3-4 and in full in Appendix E.

Table 3-1: 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 3-2: Summary of the key priorities appraisals

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

Table 3-3: Summary of modes and sectors appraisals

ISA Objective	1. Health	2. Cohesion & equality	3. Economic development	4. Welsh culture	5. Welsh language	6. GHG emissions	7. Climate change	8. Air quality	9. Landscape & townscapes	10. Heritage	11. Ecosystems	12. Natural Resources	13. Tranquility
Mode & Sector: Active Travel	++	++	++	+	+	++	+	++	+	+	+	+	+
Mode & Sector: Bus	++	++	+	+	+	+	O	+	+	+	+	+	+
Mode & Sector: Rail	++	++	++	+	+	++	O	+	+	+	+	+	+
Mode & Sector: Roads, Streets and Parking	++	++	+	+	O	+/-	+	+	+	+	+	+	+
Mode & Sector: Third Sector	++	++	+	+	O	+	O	+	+	+	+	+	+
Mode & Sector: Taxis and Private Hire	+	+	+	+	O	+	O	+	O	O	+	+	+
Mode & Sector: Freight and Logistics	+	+	+	O	O	+	O	+	-	O	+	+	+
Mode & Sector: Ports and Maritime	+	+	++	++	O	+	+	+	O	O	O	+	O
Mode & Sector: Aviation	-	-	+	+	O	--	O	--	-	O	-	-	--

Table 3-4: Summary of programmes appraisals

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
Programme: Integrated Journey Planning and Ticketing	+	+	+	+	++	+	O	+	O	O	O	+	+
Programme: Behavioral Change	+	+	O	O	+	++	O	+	O	O	+	+	+
Programme: Active Travel	++	+	+	+	O	++	-	++	+	+	+	+	+/-
Programme: Bus	+	++	++	+	++	+	?	+	?	?	+	+	+
Programme: Rail													
Access for all	+	++	+	+	O	+	O	+	O	O	O	+	O
Cardiff Central Enhancement Projects	++	+	+	+	O	+	?	+	?	?	O	+	O
Ongoing targeted improvements to stations across the Wales and Borders Network	+	+	+	+	O	++	+	++	+/-	+/-	+	+	?
Introduction of additional rail services (requiring infrastructure works by Network Rail)	+	+	+	+	O	+	O	+	O	O	O	+	-
Introduction of new Rolling Stock	+	+	+	O	O	+	O	+	O	O	O	+	O
Community Rail. British Transport	+	+	?	O	O	+	O	+	+	O	+	+	O

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
Police and Modal Shift													
Programme: South Wales Mainline													
South Wales Mainline Strategic Development	+	+	+	+	O	+	?	+	+/-	?	O	+	O
Additional Stations (5) between Cardiff and Severn Tunnel Junction	+	+	+	+	O	+	?	+	+/-	?	?	+	O
Cardiff - Swansea inc New Stations package	+	+	+	+	O	+	?	+	?	?	?	+	O
Swansea – Severn Tunnel Junction capacity improvements	+	+	+	+	O	+	?	+	?	?	?	+	O
Cardiff – Swansea Electrification	+	O	O	O	O	+	O	+	O	O	O	+	+
Penarth/ Vale of Glamorgan Electrification	+	O	O	O	O	+	O	+	O	O	O	+	+
Programme: North Wales Metro													
Strategic Development including studies and analysis to inform future schemes	+	+	+	+	+	+	+	+	+	+	+	+	+
Active Travel Local Connectivity: Stations and Transforming Towns	++	+	O	+	+/-	++	O	++	+	+	++	+	+

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
Interchange Hubs	+	+	+	+	+/-	+	-	+	+	?	-	+	?
Borderlands	+	+	+	+	+/-	+	+/-	+	?	+	-	+	O
North Wales Mainline Phases 1/2/3	+	+	+	+	+/-	+	-	+	+/-	+/-	-	+	O
Deeside	+	+	+	+	+/-	+	-	+	?	+/-	-	+	O
Shotton Interchange	+	+	+	O	+/-	+	-	+	O	?	-	+	O
North and West Wales Transport Innovation	+	+	+	+	+/-	+	?	+	?	+/-	+/-	+	+/-
Programme: Swansea Bay and West Wales Metro													
St Clears Station Reopening	+	+	+	+	O	+	+/-	+	+	O	+	+	O
West Wales Rail Interchange and Hub Improvements	+	+	+	+	O	+	-	+	+	?	-	+	?
Swansea Bay Area Metro Phase 1 & 2	+	+	+	+	O	+	?	+	+/-	?	-	+	O
Swansea Bay Hydrogen Fuel Cell Bus Project	?	O	+	O	O	+	O	+	O	O	O	+/-	+
Pembrokeshire Hydrogen Fuel Cell Bus Project	?	O	+	O	O	+	O	+	O	O	O	+/-	+
Traws Cymru T5 Hydrogen Fuel Cell Bus Project	?	O	+	O	O	+	O	+	O	O	O	+/-	+

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
Traws Cymru T6 Hydrogen Fuel Cell Bus Project	?	O	+	O	O	+	O	+	O	O	O	+/-	+
Active Travel to Stations	++	+	O	+	O	++	+	++	+	+	+	+	+
Swansea Aberystwyth Transport Link	+	+	+	+	O	+	?	+	-	-	-	+	+/-
Programme: South Wales Metro													
Strategic development including studies and analysis to inform future schemes and extensions	+	+	+	+	+/-	+	+	+	+	+	+	+	+
CVL Enhancements Package	+	+	+	+	+/-	+/-	-	+	+/-	?	+/-	+/-	+/-
CVL Extensions Package	+	+	+	+	+/-	+/-	-	+	+/-	?	+/-	+/-	-
Valley Line Enhancement and Extensions (non-CVL) Package	+	+/-	+	+	+/-	+	-	+/-	+/-	?	+/-	+/-	+/-
Local Station/ Interchange Enhancements Packages	+	+	+	+	+/-	+	-	+/-	+/-	?	+/-	+/-	+/-
Active Travel Package	++	+	+	+	+/-	++	-	+	+/-	?	+/-	+/-	O
Bus and Bus Rapid Transit Package	+	+/-	+	+	+/-	+	-	+	+/-	?	+/-	+/-	O
Metro Enhancement	?	+	+	?	+/-	+	-	+/-	+/-	?	+/-	+/-	+/-

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
Framework Corridor Studies													
Programme: Strategic Road Network	+	O	+	+	O	-	+/-	-	?	?	?	-	-
Programme: EV Charging	+	+/-	O	O	O	++	-	+	O	O	+/-	+	+
Programme: Streets and Parking	+	+	O	+	O	+/-	-	+/-	O	O	O	+/-	O
Programme: Air Quality	+	+	O	O	O	++	O	++	O	O	+	+	+
Programme: Aviation	-	-	+	+	O	+/-	O	+/-	+/-	?	O	+	+
Programme: Third Sector	++	++	+	+	O	+	O	+	O	O	+	+	+
Programme: Taxi and Personal Vehicle Hire	+	+	+	+	O	+	O	+	O	O	+	+	O
Programme: Freight and Logistics	?	?	+	O	O	+	?	?	?	?	-	?	-
Programme: Ports and Maritime	O	+	+/-	+	O	+	?	+/-	?	?	-	+	-

3.2 Summary of the Legislative Impact Assessments

Habitats Regulations Assessment

3.2.1   The HRA is a parallel but separate process to the ISA. An HRA Screening has been prepared which assesses the modes and sectors and programmes set out in the NTDP.

3.2.2   A number of NTDP sections and Annex 2 programmes have been screened in on the basis that the proposals could have a LSE on qualifying features or the conservation objectives of a European or Ramsar site.

3.2.3 Some uncertainty has also been identified in relation to some programmes for which screening has not been possible at this stage due to infrastructure locations not being identified. As LSEs and uncertainty have been identified in the screening stage, the HRA must now progress to the second stage (Appropriate Assessment) in which the potential effects and uncertainty identified will be considered in more detail, including any mitigation already proposed and identifying additional mitigation if necessary.

3.2.4 The Appropriate Assessment will involve the assessment of whether a European/ Ramsar site's integrity or conservation objectives could be affected by the NDTP programmes and will include an in-combination affects assessment. As part of this, a review of the PIPs for the European sites potentially effected should be carried out to define the impact pathways and verify any LSE.

Equalities Impact Assessment

3.2.5 The Equalities Impact Assessment seeks to assess the NTDP 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.

3.2.6 The NTDP seeks 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. 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.

3.2.7 The introduction of integrated ticketing and journey planning and ensuring that the views of the transport system users are taken into consideration, would help to ensure that the diverse needs of Wales's 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.

3.2.8 The promotion of working at or near home, as well as the increase in active travel and public transport use, would increase opportunities to access employment and services for many people, including with protected characteristics and socio-economically disadvantaged.

3.2.9 The NTDP seeks to introduce Welsh language standards for public transport services to help break down existing barriers in terms of language and ensure that Welsh seeking users would be able to make equal use of the transport system (including active travel, public transport and the road network) equally.

3.2.10 The NTDP recognises that, for rural communities, the use of private cars 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. However, the NTDP also considers ways public transport options could be improved in these areas, and have initiated trials, such as the fflecsi scheme, to provide more services to rural communities and help to reduce reliance on personal car use where possible.

Welsh Language Impact Assessment

3.2.11 The Welsh Language (Wales) Measure 2011[26] and Welsh Language Standards (No. 7) Regulations[27] requires an impact assessment to consider the following three questions, which have been considered as part of the ISA process:

1. what effect the NTDP would have on the opportunities for other persons to use the Welsh language;
2. how the NTDP could positively affect opportunities for people to use the Welsh language; and
3. how the NTDP 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.

3.2.12 The NTDP seeks to ensure that the transport system encourages the regular use of the Welsh language as part of an 'accessible, sustainable and efficient transport' network. The use of Welsh language on signage (which is a legal requirement) and Welsh language training programmes for 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.

3.2.13 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.

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

Children's Rights Impact Assessment

3.2.15 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 NTDP will impact on children up to the age of 18, either directly or indirectly.

3.2.16 The NTDP 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 NTDP seeks to improve existing pedestrian and cycle routes and expand the network of active travel routes across Wales. In addition, the safety of these routes would be improved to include lighting. This would help to ensure children can safely travel between home and school. One of the NTDP initiatives is to introduce a national default 20mph speed limit on restricted roads sup

3.2.17 the change to the default speed limit on Restricted Roads from 30mph to 20mph. Reducing speed limits would be expected to help to improve safety, in particular for children, by reducing road collisions, as well as providing more opportunities to walk and cycle and improving health and wellbeing by reducing air pollution.

3.2.18 Older children and young people generally have a greater reliance on public transport, in particular for accessing school and recreational facilities. Improving the attractiveness and perceived safety of buses, as well as increasing the frequency of bus services would be beneficial for these groups. In addition, the NTDP aims to enhance connectivity between different transport routes through the development of integrated ticketing and journey planning, which could potentially allow children to be more independent in their transport choices.

3.2.19 The NTDP seeks to improve and maintain a range of different transport options, seeking to improve connectivity between communities. This improved connectivity would also enhance accessibility to green and open spaces, thereby allowing for more opportunities for physical exercise, 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 the Non-Legislative Impact Assessments

Rural Proofing

3.3.1 Just over a third of Wales's 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 NTDP seeks to improve the range of public transport opportunities available in rural areas, including piloting the fflecsi services, which are 'demand responsive services, booked through an app or call centre'. They seek to address issues with first and last mile public transport and extend the reach of Wales's public transport offering to more rural communities. In addition, the NTDP

seeks to support more efficient road journeys and promotes the increased use of electric vehicles. However, these initiatives alone would be unlikely to fully solve the problem and it would be unlikely to allow people living in rural areas to travel as efficiently or sustainably as those living in urban areas

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 NTDP 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 Overall, the proposals and initiatives set out in the NTDP would be likely to have some benefits to rural communities, but the plan alone cannot solve all of these issues.

Climate Change

3.3.4 The proposals and initiatives set out in the NTDP seeks to result in significant reductions in the volume greenhouse gas emissions associated with Wales's transport sector. This would primarily be achieved as a result of encouraging and facilitating higher rates of walking, cycling and public transport use, with subsequent reductions in the number of cars on the road.

3.3.5 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 residents to travel more efficiently when private car use is required. More efficient journeys for freight movements could help to reduce the carbon footprint of Wales's freight sector. This would be emphasised by the NTDP promoting rail or water-based freight movements over HGVs.

3.3.6 The NTDP seeks to promote the use of vehicles using alternative fuels to petrol or diesel. This includes increasing the availability and distribution of electric vehicle charging points to help reduce greenhouse gas emissions from private vehicle use. The NTDP also sets out initiatives for the electrification of buses and trials for the use of hydrogen powered buses in Swansea. Other proposals to reduce greenhouse gas emissions include the electrification of the rail fleet, with phased transitions through the use of bi-mode and tri-mode vehicles.

3.3.7 The NTDP seeks to ensure that, for example, Cardiff Airport puts in place a robust decarbonisation strategy and that people access airports via public transport instead of car to help offset these emissions. The use of private vehicles and HGV freight movements are a larger sources of greenhouse gas emissions in Wales than aviation currently is; and therefore, the commitment to a healthy aviation sector would not lead to an overall adverse effect on this ISA Objective.

Health

3.3.8 The NTDP seeks to ensure that public transport is more accessible for a wider range of people. Improved access to higher quality and more attractive public transport options that get people to where they need to go would be likely to have health benefits, for example, by enhancing access health and social care facilities; promoting physical exercise, leisure and recreational opportunities; and enabling access to open space and semi-natural habitats which are beneficial for mental health and wellbeing. The use of public transport over private car use also helps to combat the risk of social isolation by providing a greater opportunity for informal community interactions. Roads, and particularly busy roads, can lead to severance for communities, with potentially adverse health effects.

3.3.9 The NTDP 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.

3.3.10 Air pollution is hugely detrimental to people's health, with particulate matter (PM_{10}) and nitrogen dioxide (NO_2) pollution thought to be associated with around 2,700 deaths in Wales each year (2011 to 2013 data)[28]. The transport sector is a key contributor for these forms of pollution. The NTDP seeks to 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 Wales's roads and, in so doing, would help to reduce the rate of mortality in Wales associated with air pollution.

Economic Development

3.3.11 The proposals and initiatives set out in the NTDP would be likely to have a positive effect on economic development and the Welsh economy. Enhanced active travel routes and public transport networks, which would be made increasingly accessible to all communities, would help to ensure more equitable access to education and employment opportunities across Wales.

3.3.12 Travel improvements could result in an increase in footfall, for example within town or village centres, thereby providing a boost to the local economy. This would be particularly the case where active travel routes are enhanced as there may be greater take-up of walking and cycling. As well as potentially bringing additional customers, improved access to businesses would increase the range of employment opportunities available.

3.3.13 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. Therefore, in encouraging public transport use, the NTDP could lead to economic

growth. Improving the ease of access to town centres and high streets, as well as large cultural events as well as historic and environmental assets, would further help to stimulate the economy.

3.3.14 More efficient journey times, via integrating ticketing and journey planning as well as more efficient vehicles and timetabling, 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. The NTDP seeks to promote the use of rail and water freight movements rather than road, which would be likely to be able to carry more product per vehicle and travel more quickly than road freight, and therefore benefiting the local economy.

3.3.15 A more connected Wales with more efficient, more attractive and safer routes 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.

3.4 Cumulative Effects Assessment

3.4.1 In addition to appraising each of the proposals and initiatives set out in the NTDP 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 3-5 and presented in full in Table 3-6.

Table 3-5: Cumulative effects assessment summary of scores (full assessment in Table 3-6)

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

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

Table 3-6: Cumulative effects of the NTDP

ISA Objective	Score	Duration Certainty	Cumulative effects
1. To contribute to an improvement in physical, mental and social health and well-being for all, including contributing towards a reduction in health inequalities across Wales	++	Long term High	The NTDP seeks to ensure that public transport is more accessible to a wider range of people. 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. The introduction of integrated ticketing and journey planning would help to make journeys via public transport easier, quicker and less stressful for users. Public transport also helps to combat the risk of social isolation by providing a means for informal community interactions. 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 NTDP seeks to facilitate significantly higher rates of walking and cycling for people in Wales. Walking and cycling are not only the most sustainable forms of travel but also provide significant health benefits, for example, encouraging physical exercise, mental wellbeing benefits from spending time outdoors, and increased opportunities for community interactions. Encouraging physical exercise could help to reduce health inequalities, reduce the proportion of the population with obesity, and other 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. One of the NTDP initiatives supports the change to the default speed limit on Restricted Roads from 30mph to 20mph. Reducing speed limits would be expected to help to improve safety, in particular for children, by reducing road collisions, as well as providing more opportunities to walk and cycle and improving health and wellbeing by reducing air pollution. The NTDP would ensure that the strategic road network is maintained, in conformity with Welsh Government 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. 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
			Air pollution is hugely detrimental to people's health, with particulate matter (PM_{10}) and nitrogen dioxide (NO_2) pollution thought to be associated with around 2,700 deaths in Wales each year (calculated from 2011 – 2013 statistics)[29]. The transport sector is a key contributor for these forms of pollution. The NTDP seeks to encourage and facilitate higher rates of active travel and public transport use and support the uptake of electric vehicles, which would be likely to reduce the number of high-polluting vehicles on Wales's roads, 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 positive 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.
			Improvements in digital technology and the COVID-19 pandemic have led to an increase in the number of people working from home. The commute to and from work is a key opportunity for exercising via walking and cycling and, with people commuting less, 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, which is supported by the NTDP. The NTDP seeks to support employment opportunities being located near homes, which would be likely to increase the use of active travel for commuting shorter distances to work. 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 and initiatives set out in the NTDP 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
2. To create the conditions within which an improvement in social cohesion and equality can be achieved	++	Long term High	The implementation of the NTDP would help to combat social and economic inequalities through developing a transport system that is accessible for, and utilised by, all members of society irrespective of background, gender, age, and disability. In doing so, the NTDP would improve equality of opportunity in terms of access to services, employment, leisure and education facilities. The introduction of integrated ticketing and journey planning and ensuring that the views of the transport system users are taken into consideration, would help to ensure that the diverse needs of Wales's 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 NTDP seeks to introduce Welsh language standards for public transport services to help break down existing barriers in terms of language and ensure that Welsh speaking users 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 in Wales. 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 NTDP recognises that, for rural communities, the use of private cars 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. However, the NTDP also considers ways public transport options could be improved in these areas, and have initiated trials, such as the fflecsi scheme, to provide more demand-responsive public transport services to rural communities and help to reduce reliance on personal car use where possible. Overall, it is considered to be likely, with a high level of certainty, that the proposals and initiatives set out in the NTDP 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 that benefits all people in Wales), on social cohesion and equality.
3. To support sustainable economic	++	Long term High	The NTDP 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. The promotion of working at or near

ISA Objective	Score	Duration Certainty	Cumulative effects
development and diversity			home, as well as the increase in active travel and public transport use, would increase opportunities to access employment and services for many people, including with protected characteristics and socio-economically disadvantaged. 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 modes of transport are improved. This would provide businesses with access to a wider pool of potential employees. 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, by encouraging public transport use, the NTDP could contribute 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. More efficient journey times, via integrating ticketing and journey planning as well as more efficient vehicles and timetabling, 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. The NTDP seeks to promote the use of rail and water freight movements rather than road, which would be likely to be able to carry more product per vehicle and more quickly than road freight, and therefore benefiting the local economy. Improvements to the active travel infrastructure in Wales could also enhance the attractiveness of the active tourism sector, such as hiking or mountain biking. Overall, it is considered to be likely, with a high level of certainty, that the proposals and initiatives set out in the NTDP 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.

ISA Objective	Score	Duration Certainty	Cumulative effects
4. To protect and promote Welsh culture and improve access to cultural and recreational spaces	+	Long term Medium	The NTDP promotes more sustainable, resilient, and equitable access for all people to cultural and recreational spaces. 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. The NTDP recognises the strain that large scale cultural and tourist events, such as major sporting events, can place on the transport system. The NTDP seeks to ensure that these events can continue to take place and thereby continue to have a significantly benefit Wales's economy, society, and culture. Overall, it is likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP 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), on Welsh culture, which could lead to a positive cumulative effect over time against this objective.
5. To encourage the protection and promotion of the Welsh language	+	Long term Medium	The NTDP seeks to ensure that the transport system encourages the regular use of the Welsh language as part of a transport system that seeks to improve customer experiences through 'improving accessibility, facilities and signage'. 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 transport services. Welsh language training programmes for 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. 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 and initiatives set out in the NTDP 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	+	Long term Medium	Proposals and initiatives set out in the NTDP in-combination would be likely to lead to reductions in the greenhouse gas emissions associated with Wales's transport sector in the long term. This would primarily be achieved as a result of encouraging and facilitating higher rates of walking,

ISA Objective	Score	Duration Certainty	Cumulative effects
			cycling and public transport usage, which is likely to happen over time as people become more familiar with a new way to travel, with subsequent reductions in the number of cars on the road.
			Ensuring that services and facilities are in proximity to where people live, along with an increased number of people working from home, would reduce the need for people to travel and would 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's freight sector.
			The NTDP would make owning an electric or cleaner vehicle a more viable option over a petrol- or diesel-powered vehicle through supporting the distribution of electric vehicle (EV) charging points which would contribute to lowering emissions. The NTDP also promotes schemes for the electrification of public transport and is trialling the use of hydrogen as a fuel for buses in Swansea.
			However, whilst the initiatives of the NTDP would be likely to facilitate significant reductions in greenhouse gas emissions associated with movements on the road network, there is a risk of this being undermined to some extent by the aviation industry.
			The NTDP, in line with the WTS, is committed to maintaining a healthy aviation sector in Wales as it has significant economic benefits. The Aviation chapter of the NTDP seeks to ensure that, for example, Cardiff Airport prepares a robust decarbonisation strategy. However, the measures described in the NTDP would be unlikely to truly offset the emissions associated with aviation. Cars and HGVs are a much greater source of greenhouse gas 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.
			Just over a third of Wales's 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 NTDP seeks to improve accessibility for those within rural communities through initiatives such as the fflecsi scheme. However, whilst there is greater support for electric vehicles, and enhancements to community transport services, which 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.
			Overall, it is considered that, with a medium level of certainty, the NTDP would result in long term minor positive (not significant) effects on greenhouse gas emissions.

ISA Objective	Score	Duration Certainty	Cumulative effects
7. To enable climate change resilience	+	Long term Low	New and improved walking and cycling links, as promoted through the NTDP, could result in an increase in the green infrastructure cover along these routes that could help to manage surface run off and to alleviate flood risk, depending on specific design. The NTDP seeks to protect biodiversity and ecosystems which can be key features in enabling climate change resilience, such as storing carbon, filtering air pollutants, helping prevent flood risk and reducing soil erosion. The extent of which the NTDP would lead to increased green infrastructure to help alleviate flood risk is highly uncertain. Overall, it is considered to be likely, with a low level of certainty, that the proposals and initiatives in the NTDP 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), on climate change resilience.
8. To protect and improve air quality	+	Long term Medium	The transport sector, and particularly car, HGV, aviation, and port related transport, are significant sources of both greenhouse gas emissions and air pollution. The NTDP seeks to make a significant reduction in people's reliance on private cars for travel. It would do so by promoting active travel where appropriate through new and enhanced walking and cycling routes and promoting the use of public transport for longer journeys through more attractive and efficient transport networks. 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 NTDP 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 reduce the emissions generated by vehicles that are in use, including private cars and buses. Improved maintenance and management of the existing road network would also be likely to allow for more efficient journeys, including less congestion and idling, that would result in less pollution. It is likely that such management and maintenance would present opportunities for enhancing the green infrastructure coverage along road corridors, which help to filter out and sequester air pollutants. Overall, it is considered to be likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP would cumulatively result in long term minor positive (not significant) effects, including directly (e.g., by reducing air pollution associated with car use) and

ISA Objective	Score	Duration Certainty	Cumulative effects
			indirectly (e.g. incorporating air pollution sequestering green infrastructure into transport corridors), on air pollution.
9. To protect and enhance the local distinctiveness of our landscapes and townscapes	+	Long term Low	The likely reduction in the number of cars on the roads through the NTDP 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 NTDP promotes the enhancement of green infrastructure, with benefits including the high visual amenity value of green infrastructure and semi-natural habitats, as well as its role in screening areas from the visual impacts of new development. However, it is uncertain the extent to which the enhancement of the green infrastructure network would be implemented as a result of the NTDP.

Overall, it is considered to be likely, with a low level of certainty, that the proposals and initiatives set out in the NTDP 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 | + | Long term Medium | Throughout Wales, there are historic railroads, tunnels, and paths which are of significant heritage value. As with landscape and townscape character, the reduction in the number of cars on the road promoted through the NTDP, and the subsequent avoidance and minimisation of noise, air, light, and other visual disturbances, could 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 promoted through the NTDP, which could potentially benefit the setting of heritage assets and historic areas due to the high visual amenity value of green infrastructure and semi-natural habitats, as well as its role in screening areas from the visual impacts of new development. However, it is uncertain the extent to which the enhancement of the green infrastructure network would be implemented as a result of the NTDP. |

ISA Objective	Score	Duration Certainty	Cumulative effects
			Improving the connectivity of public transport and active travel options 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 and initiatives set out in the NTDP 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), on heritage assets.
11. To promote the conservation and enhancement of biodiversity, geodiversity and ecosystems	+	Long term Medium	The NTDP 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.
			It is likely that the NTDP would avoid adverse effects on ecosystems caused by new roads fragmenting habitats and isolating species as new road building is currently on hold subject to the Wales Roads Review. The effects on ecosystems from new roads associated with new developments, such as housing, would be addressed through the planning system and the site-specific impact assessment undertaken as part of this process.
			The transition towards low-emission modes of travel, including active travel, public transport, and electrification of vehicles would help to avoid and minimise adverse effects on habitats that are sensitive to air quality, particularly where pollutant critical loads are already being exceeded.
			The maintenance and management of existing transport infrastructure could potentially present opportunities to incorporate green infrastructure elements that enhance their biodiversity value, such as by installing green infrastructure along road corridors. Where new walking and cycling paths are installed, these would present an opportunity to incorporate green infrastructure elements that are not only biodiverse but deliver wider ecosystem benefits including wildlife

ISA Objective	Score	Duration Certainty	Cumulative effects
			corridors, air quality improvements, water filtration, carbon sequestration and enhancements to landscapes and townscapes. However, it is uncertain the extent to which the enhancement of the green infrastructure network would be implemented as a result of the NTDP.
			Overall, it is considered to be likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP would cumulatively result in long term minor positive (not significant) effects, including directly (e.g. by incorporating biodiversity 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's 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	+	Long term Medium	The NTDP 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. Furthermore, the NTDP seeks to reduce the need to travel, further reducing the quantity of natural resources used in the transport sector.

The maintenance of existing transport infrastructure through the NTDP 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.

Fundamental to the aims of the NTDP is a reduction of cars on Wales's roads. This would lead to a reduction in pollutants from exhaust or spills falling onto the tarmac, and therefore there would be less chance of surface water run off carrying these pollutants into the soil, ground water and surface water, leading to an improvement in water 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 would be likely that this would be reduced to some extent by proposals throughout the NTDP 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 and initiatives set out in the NTDP 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. |

ISA Objective	Score	Duration Certainty	Cumulative effects
13. To enable the protection of tranquil areas and prevention of noise and light pollution	+	Long term Medium	The NTDP would lead to an increased uptake of public and active transport modes, thereby decreasing personal 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 for electric vehicles, which are significantly quieter than petrol- and diesel-powered vehicles, the NTDP would likely help reduce noise disturbances associated with transport. It would be expected that a reduction in the number of cars on the road through the promotion of active travel and public transport options would help to reduce transport-associated light pollution. However, other initiatives of the NTDP, such as lighting on active travel routes and within Interchange Hubs could result in increased lighting to help improve safety and reduce the fear of crime, which may increase light pollution if these are installed in rural areas. Overall, it is considered to be likely, with a medium level of certainty, that the proposals and initiatives set out in the NTDP would cumulatively result in long term minor positive (not significant) direct effects on tranquillity, and the prevention of noise and light pollution.

3.5 Recommendations

3.5.1 The recommendations proposed in the Interim ISA Report for the draft NTDP are set out in Table 3-7 below. The table also sets out the TfW team's response to these recommendations.

Table 3-7: Recommendations to the draft NTDP

NTDP Section	Arcadis Recommendation	Welsh Government Response
General		
	The NTDP should preserve and enhance a healthy green infrastructure network, where possible, to result in a number of benefits, including to reduce the risk of biodiversity loss. Other benefits include enhancing urban biodiversity such as habitats and species, improving human health and wellbeing, supporting natural flood risk reduction, improving water quality and air quality, helping protect important views, screening developments that disrupt the landscape or historic character, helping to reduce urban heating and supporting carbon sequestration. The greater the scale and connectivity of the green infrastructure network, the greater the benefits.	We support the general recommendation and would note that these aims are already incorporated in a variety of documents. The WelTAG will build these into programmes and projects from the early stages of development and our SRN and CVL biodiversity action plans address a number of these issues in our infrastructure operations.
	SuDS should be incorporated into development where appropriate, with benefits including reducing the likelihood of pollutants reaching nearby watercourses helping to reduce water pollution, reducing runoff by reducing impermeable surfaces, allowing the infiltration of water into the ground helping prevent surface water flooding, and benefiting the local ecosystem.	There already requirements in place for SuDS to be incorporated in developments which programmes with the NTDP will incorporate.
	The NTDP should promote the use of recycled, low carbon or locally sourced material in developments where appropriate to help reduce the quantity of raw materials extracted. This can additionally ensure development is in keeping with the surrounding landscapes and townscapes.	We support the recommendation. We would expect these considerations to be taken into account by those developing and delivering the individual projects.
	The NTDP should ensure staff within the transport sector are trained to ensure they can provide the best	We have and are developing further guidance for sectors on the support and use of the

NTDP Section	Arcadis Recommendation	Welsh Government Response
services to Welsh speaking users and support the use of the Welsh language where appropriate.		Welsh language. Staff within TfW are provided with the opportunity to undertake Welsh language training and are provided with other training related to the Welsh language appropriate to their role.
	New and updated active travel routes should include directional LED lighting to minimise light dispersal, particularly in and around tranquil areas. This additionally can help to improve safety along routes by providing visibility.	We have extensive guidance on the development of active travel routes and these considerations are included within the guidance and also through a project development stage gate process. This ensures a range of factors are considered and the most appropriate solution is provided based on the particular local circumstances.
Modes & Sectors		
Active Travel	Further reference should be made to active travel routes being designed around those with limited mobility/vision.	Additional text has been included in the NTDP noting this.
	Access to Welsh language education facilities should be included in improvement of active travel routes.	Additional text has been included in the NTDP noting this.
	The NTDP should ensure that any new active travel routes climate resilient through design and construction.	This is included within the active travel guidance.
Roads, Streets and Parking	The NTDP should include measures to seek to reduce the effect of the road network in terms of noise and light pollution by including specific road building materials or the use of natural	Additional text has been included in the NTDP noting this.

NTDP Section	Arcadis Recommendation	Welsh Government Response
	buffers, which could also contribute to improved biodiversity and air quality.	
Third Sector	Reference should be made to improving accessibility to Welsh language communities and therefore supporting these communities, e.g. in North Wales and the Lyn Peninsula as well as West Wales.	Additional text has been included in the NTDP noting this.
Taxis and Private Hire	Standards in relation to Welsh Language should be incorporated into the proposed driver training.	This will be considered and incorporated as appropriate into the new licencing standards and training requirements as they are developed.
	The NTDP should ensure that electric taxi/PHVs access will not be reduced, and enhancement of EV infrastructure will occur throughout both urban and rural Wales.	We are committed to retaining and where possible improving the number of accessible vehicles. The full fleet of 50 EV taxis we have procured for the "try before you buy" schemes are all accessible. Our wider programmes on EV charging will support EV infrastructure development in all areas of Wales.
Freight and Logistics	The NTDP should make reference to the benefits to noise from a decarbonised fleet.	Additional text has been included in the NTDP noting this.
Programmes		
Active Travel	The NTDP should ensure that active travel provision can be accessed by wheelchair users and those with disabilities.	This is included within the active travel act guidance and additional text has been included in the NTDP noting this.
Bus	New infrastructure, including the interchange hubs, should include	Although not specifically included within the bus section this is already included within

NTDP Section	Arcadis Recommendation	Welsh Government Response
	active travel provision, including cycle storage and safe walking routes.	the NTDP active travel section and will be incorporated into best practice guidance on interchanges being developed.
	The redesign of the bus networks should include routes to key cultural features and recreational spaces and include enhanced frequencies of buses for larger cultural events.	These will be part of the considerations in the network redesign.
Rail/ South Wales Mainline	Capacity and frequency enhancements should encourage late-night trains to provide access to public transport after later events to reduce reliance on taxis and personal vehicles.	In developing services there will be a balanced consideration of the cost, usage and wider benefits services can provide on a route-by-route basis.
North Wales Metro	New stations and interchanges should be located within walking distance of employment or residential centres.	There are many considerations which need to be considered when locating a new station or interchange and these would be a significant factor. We also support transport orientated development of sites which do not rely on the car and are or could be easily served by walking, cycling and public transport.
	Capacity and frequency enhancements should encourage late-night trains to provide access to public transport after later events.	In developing services there will be a balanced consideration of the cost, usage and wider benefits services can provide on a route-by-route basis.
Swansea Bay and West Wales Metro	It is recommended that with the introduction of digital tickets and integrated ticketing, the option for paying by cash and using paper tickets should be maintained.	These options will be retained while is a demand. In developing our PAYG ticketing solutions we will be exploring the use of prepayment cards

NTDP Section	Arcadis Recommendation	Welsh Government Response
		to allow those without bank cards to access these services.
	If trials are successful, the NTDP should ensure it supports the expansion of hydrogen and electric buses and the introduction of hybrid trains to further decarbonise the network.	The objective of our trials is to determine the best option each specific use. We are committed to the introduction of zero tailpipe emission buses for the whole fleet by 2035.
	The development and route selection of the Swansea to Aberystwyth Rail link should consider resilience to flooding and coastal erosion, as well as to extreme weather events, with the route avoiding coastlines where possible	These will be considered as they are considerations in all of our major scheme developments.
South Wales Metro	The NTDP should include provision for light and noise targets around tranquil areas and the Brecon Beacons International Dark Sky Reserve, to ensure no adverse effects are caused within tranquil areas.	Noise and light pollution are considered in all project developments through the WelTAG process. As the referenced schemes are still in the early stages of development it is not possible to set targets at this stage.
Strategic Road Network	It is recommended that improvements to the SRN should include provision of EV charging stations.	This is included within our EV charging programme.
EV Charging	The NTDP should aim to ensure new EV charging points utilise brownfield land where possible.	We support this approach, but it will be subject to local planning considerations on a case-by-case basis.
Freight and Logistics	The strategy should seek to reduce barriers between UK countries and lead to an increase in efficiency, leading to wider economic development.	We would expect this to be part of the freight and logistics plan and note that similar objectives were included in the recent Union Connectivity Review recommendations which we support.

NTDP Section	Arcadis Recommendation	Welsh Government Response
Streets and Parking	The policies designed should include provision for disabled and family parking	This is generally a matter for local authorities who have manage these on a location specific basis.
Air Quality	The new Clean Air Strategy should include specific targets for reducing NO_2, ground-level ozone and particulate matter (PM) for high-pollution areas to ensure air quality is improved, which would benefit physical health.	These are not within the scope of the NTDP but will be part of the Air Quality Update Plan which was consulted on in 2021 and will be part of The Clean Air (Wales) Bill we hope to introduce in 2023.
	Development within tranquil areas is limited to prevent emission of noise, light or air pollution, and that works should only take place within social hours. TAN11 could include guidance related to increasing vegetation	Although desirable for other reasons such as safety and disruption it may not always be possible to carry out works in social hours, particularly on parts of the rail network. TAN 11 will provide advice on noise and soundscape which will include advice on these matters.
Aviation	The Welsh Government should engage in discussion with CIAL to ensure targets within the Environmental Flight Plan are met	This is part of our ongoing engagement with CIAL on their Environmental Flight Path.
	The NTDP should look to improve aviation connectivity between the North and South of Wales or improve public transport access to all accessible airports for those living in the North or Mid-Wales.	Our transport programmes including the bus network redesign, rail and Metro programmes seek to improve connectivity with all key services and destinations.
	The NDTP should encourage the next iteration of the Environmental Flight Path to build on this work and aim to reduce fossil fuel use and emissions further through ongoing discussion with CIAL, including by increasing the number of electric vehicle charging	This is part of our ongoing engagement with CIAL on their Environmental Flight Path.

NTDP Section	Arcadis Recommendation	Welsh Government Response
	points, and the number of electric vehicles within airport operations.	
	The NTDP should encourage further plans and programmes as part of the Cardiff Airport Environmental Flight Path that would improve air quality through ongoing discussion with CIAL, including improved public transport services to Cardiff Airport.	This is part of our ongoing engagement with CIAL on their Environmental Flight Path. The provision of public transport connectivity to Cardiff Airport will be part of our South Wales Metro programme and bus network redesign.
Taxis and Private Hire	The NTDP and White Paper on taxi/PHV licensing should include provision for disabled users and the driver training should include best practice guidelines to ensure disabled users have better access to private hire vehicles. The stakeholder engagement on potential reforms should take into account all opinions from people of a range of backgrounds to ensure the reforms would benefit the most people.	Although outside the scope of the NTDP, the development of taxi/PHV licensing reforms will incorporate these items.
	The national training course should be provided in both Welsh and English.	
Ports and Maritime	Plans for offshore energy production should include measures to conserve or enhance maritime biodiversity where possible.	This is outside of the scope of the NTDP but will be considered as part projects developed as part of the Marine Energy Programme.

3.5.2 The final NTDP has been amended to reflect the recommendations set out above as appropriate. These changes have led to a more positive sustainability impact of the NTDP when considered cumulatively but did not lead to direct changes to the previously identifies ISA scores.

3.6 Monitoring – significant effects

3.6.1 The ISA has identified the likely effects of the NTDP 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 NTDP, including the effects of specific aspects or the cumulative effects of NTDP 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 NTDP, 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 NTDP post-adoption to feed into future plan review and revision. Table 3-8 proposes a Monitoring Framework to keep track of the sustainability effects of the NTDP, for which it would be appropriate to integrate with NTDP monitoring. This is a draft and will be subject to discussion and refining with the Welsh Government. In addition to monitoring the extent to which the NTDP results in the effects identified in the ISA, the Monitoring Framework provides an indication of the effects of the NTDP 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 NTDP, new information, which will help inform the review of the NTDP, will be added to the NTDP 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 NTDP over the 5-year plan period.

Table 3-8: Proposed 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	++	• 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 with two or more healthy lifestyle behaviours. • NI4. Levels of nitrogen dioxide (NO_2) pollution in the air. • NI5. Percentage of children with two or more healthy lifestyle behaviours.

ISA Objectives	Cumulative Effect	Proposed monitoring indicators NI: national well-being indicators
inequalities across Wales		• 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. • Households exposed to air pollutants and/or environmental noise from transport.
3. To support sustainable economic development and diversity	++	• Percentage of people in employment. • NI24. 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.

ISA Objectives	Cumulative Effect	Proposed monitoring indicators NI: national well-being indicators
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.
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	+	• Hectares of healthy ecosystems that form part of the transport network.

ISA Objectives	Cumulative Effect	Proposed monitoring indicators NI: national well-being indicators
conservation and enhancement of biodiversity, geodiversity and ecosystems		• 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 and Next Steps

4.1 Conclusion

4.1.1 This document comprises the ISA of the final NTDP (February 2023). It satisfies the requirements of an Environmental Report as per the SEA Regulations. The NTDP has been appraised for its likely significant effects against each of the ISA Objectives.

4.1.2 The ISA is a process that has been highly integrated with the development of the NTDP, involving a close working relationship between the ISA experts and the Welsh Government. During this process, the ISA has enabled the Welsh Government to embed the principles of sustainability and wider considerations into the NTDP proposals and initiatives from the outset.

4.1.3 The ISA provides a consultation tool, providing the general public and statutory bodies with an analysis of how the NTDP 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 NTDP.

4.1.4 The ISA fundamentally provides a summary of the effects of the NTDP, for consideration by the Welsh Government, when considering the adoption of the NTDP. Once adopted, it will be with the Welsh Government's awareness and acceptance of the effects predicted and described in the ISA.

4.2 Stages C and E: ISA Report and Monitoring

4.2.1 This ISA Report is published in order to accompany the final NTDP consultation.

4.2.2 The draft NTDP and its accompanying documents were published for consultation with relevant stakeholders, including the general public. The consultation was held between 19th July and 11th October 2022. Responses received have been taken into consideration as part of the finalisation of the NTDP and this ISA Report.

1 Available at: Well-being of Future Generations (Wales) Act 2015 – The Future Generations Commissioner for Wales [Accessed: 23.03.22]
2 Available at: Llwybr Newydd: the Wales Transport Strategy 2021 | GOV.WALES [Accessed: 23.03.22]
3 Available at: Future Wales: The National Plan 2040 | GOV.WALES [Accessed: 23.03.22]
4 Available at: Estimating the mortality burden of air pollution in Wales_V15.docx (live.com) [Accessed: 22.03.22]
5 Available at: Llwybr Newydd: the Wales Transport Strategy 2021 | GOV.WALES [Accessed: 23.03.22]
6 Available at: Future Wales: The National Plan 2040 | GOV.WALES [Accessed: 24.03.22]
7 Available at: Wales infrastructure investment plan: project pipeline March 2021 | GOV.WALES [Accessed: 24.03.22]
8 Available at: Wales infrastructure investment strategy 2021 | GOV.WALES [Accessed: 24.03.22]
9 Available at: Net Zero Wales | GOV.WALES [Accessed: 23.03.22]
10 Available at: 42949 Second All Wales Low Carbon Delivery Plan (2021-2025) (gov.wales) [Accessed: 23.03.22]
11 Available at: EUR-Lex - 32001L0042 - EN - EUR-Lex (europa.eu) [Accessed: 23.03.22]
12 Available at: The Environmental Assessment of Plans and Programmes Regulations 2004 (legislation.gov.uk) [Accessed: 23.03.22]
13 Available at: Well-being of Future Generations (Wales) Act 2015 (legislation.gov.uk) [Accessed: 22.03.22]
14 Available at: well-being-of-future-generations-wales-act-2015-the-essentials.pdf (gov.wales) [Accessed: 22.03.22]
15 Available at: well-being-of-future-generations-wales-act-2015-the-essentials.pdf (gov.wales) [Accessed: 22.03.22]
16 Available at: A Practical Guide to the Strategic Environmental Assessment Directive (publishing.service.gov.uk) [Accessed: 22.03.22]
17 Available at: Update to Future Wales - The National Plan 2040 (gov.wales) [Accessed 22.03.22]
18 Available at: Prosperity for All: economic action plan | GOV.WALES [Accessed: 24.03.22]
19 Available at: Prosperity for all: a low carbon Wales | GOV.WALES [Accessed: 24.03.22]
20 Available at: Prosperity for all: A Climate conscious Wales | GOV.WALES [Accessed: 24.03.22]
21 Available at: Planning policy Wales | GOV.WALES [Accessed: 24.03.22]
22 Available at: advancing-gender-equality-plan.pdf (gov.wales) [Accessed 22.03.22]
23 Available at: Net Zero Wales Carbon Budget 2 (2021 to 2025) | GOV.WALES [Accessed: 24.03.22]
24 Available at: The Nature Recovery Plan for Wales - Part 1: Our Strategy for Nature (gov.wales) [Accessed 22.03.22]
25 Available at: Welsh National Marine Plan: document | GOV.WALES [Accessed: 24.03.22]
26 Available at: Welsh Language (Wales) Measure 2011 (legislation.gov.uk) [Accessed: 23.03.22]
27 Available at: The Welsh Language Standards (No. 7) Regulations 2018 (legislation.gov.uk) [Accessed: 23.03.22]
28 Available at: Estimating the mortality burden of air pollution in Wales_V15.docx (live.com) [Accessed: 23.03.22]
29 Available at: Estimating the mortality burden of air pollution in Wales_V15.docx (live.com) [Accessed: 22.03.22]