

**Taith Regional Transport Plan (RTS) SEA**  
Non-Technical Summary

Taith Consortium  
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# 1 Introduction

## 1.1 Introduction

This is a summary of the Environmental Report (ER) produced as part the Strategic Environmental Assessment (SEA) of the Taith Consortium Regional Transport Plan (RTS). The Environmental Report is available for download from Taith Consortium Website.

There is a requirement for Strategic Environmental Assessments (SEAs) to be carried out under UK and European law for all spatial plans and programmes that may have significant effects on the environment. The UK Environmental Assessment of Plans and Programmes Regulations 2004 transcribe the requirements of European Directive 2001/42/EC 'the assessment of the effects of certain plans and programs on the environment', the 'SEA Directive'.

Under the SEA Directive as transposed into Welsh Law (July 2004), the Regional Transport Plan (RTP) will require a Strategic Environmental Assessment (SEA).

The objectives of the SEA Directive, as set out in Article 1, are 'to provide a high level of protection to 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'.

SEA is a systematic process for identifying and assessing the likely significant environmental effects of a plan or programme and its alternatives. SEA is a policy-aiding rather than a policy-making tool, and helps organisations, plan developers and authorities consider the effects of plans and programmes in a structured way to demonstrate that policy development has considered environmental and other effects.

The main requirements of the SEA Directive and the Environmental Assessment of Plans and Programmes Regulations (Wales) 2004 include: the preparation of an environmental report; consultation; taking the results of the environmental report and consultations into account in decision-making; providing information on the decision; and monitoring. A complete list of the requirements of the SEA Directive is presented in Appendix A of the ER.

## 1.2 The Strategic Environmental Assessment (SEA) Process

This SEA has been carried out in accordance with the information provided in the following documents:

- A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
- Strategic Environmental Assessment Directive: Guidance for Local Planning Authorities 2003
- Strategic Environmental Assessment Guidance for Transport Plans and Programmes TAG Unit 2.11, April 2004. Department for Transport - Transport Analysis Guidance (TAG)
- The Welsh Transport Appraisal Guidance (WelTAG)

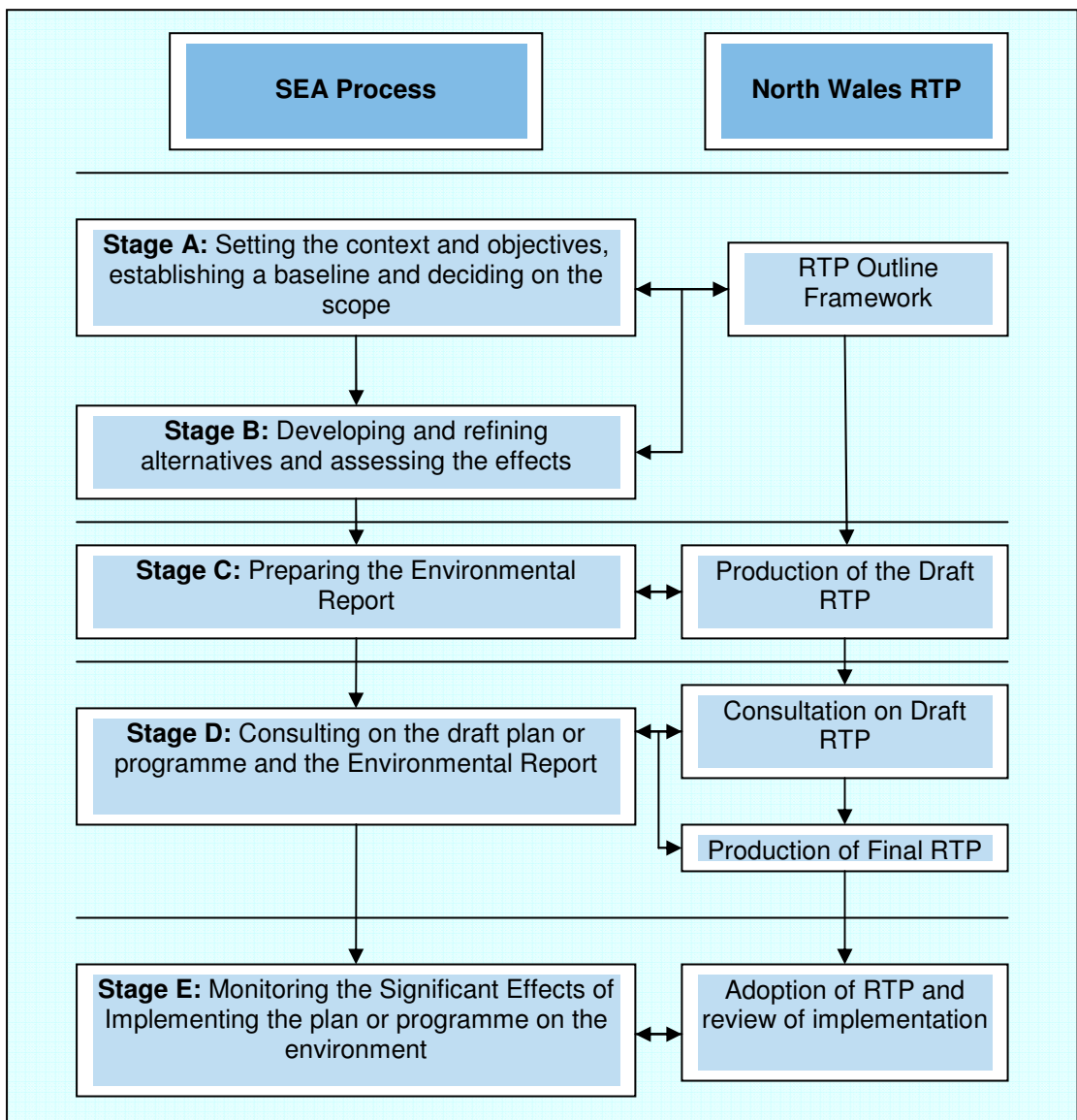
A Practical Guide to the SEA Directive ODPM 2005, breaks the requirements of the SEA Directive down into a series of 'Stages', Stages A to E, each of which will inform and interact with the preparation and production of the Regional Transport Plan. The Department for Transport Guidance 'TAG Unit 2.11' also advises how to integrate the requirements of the SEA Directive with the existing transport appraisal processes – the New Approach to Appraisal (NATA).

Stages A to E of the SEA process include:

- Stage A – Setting the context and objectives, establishing the baseline and deciding on the scope
- Stage B – Developing and refining alternatives and assessing effects
- Stage C – Preparing the Environmental Report
- Stage D – Consulting on the draft plan or programme and the Environmental Report
- Stage E – Monitoring the Significant Effects of Implementing the plan or programme on the environment

Figure 1 below demonstrates how the development of the RTP links in with the production of the SEA.

**Figure 1: Relationship between the RTP and the SEA**



Box 1 below lists the main sections of the SEA of the North Wales RTP Environmental Report.

**Box 1: Contents of the Environmental Report**

**The Environmental Report Contains:**

- An introduction the North Wales Regional Transport Plan
- SEA Objectives and Sub-Objectives
- A summary of the key environmental, social and economic issues and considerations in North Wales
- A summary of the scoping stage
- The approach and methodology
- Testing the Regional Transport Plan objectives against the SEA objectives
- Assessment results of the SEA of the RTP
- Cumulative effects
- Mitigation and Enhancement Measures
- Monitoring Framework
- Conclusions
- Appendices containing the detailed matrixes of the assessment.

**1.4**

**Contents of the Non-Technical Summary**

Box 2 below lists the contents of this Non-Technical Summary (NTS)

**Box 2: Contents of the NTS**

**This Non-Technical Summary Contains:**

- Taith's vision for the RTP, objectives, priorities and a list of the group headings of the interventions which make up the North Wales Regional Transport Strategy
- A summary of the key environmental, social and economic issues and considerations within North Wales
- Addressing the key Environmental, Social and Economic issues
- The SEA objectives that were used to assess whether the interventions of the Regional Transport Plan are sustainable.
- Findings of the assessment.
- Cumulative effects
- Conclusions

# 2 North Wales RTP

## 2.1 Vision

Taith’s Vision for the North Wales Regional Transport Plan (RTP) is that:

***“Taith will deliver safe, sustainable and efficient transport networks to support the economic and social activities of North Wales’ diverse communities and businesses having regard to its strategic European role.”***

## 2.2 RTP Objectives

Box 3 below lists the objectives of the North Wales RTP.

### Box 3: Objectives of the North Wales RTP

- Optimise accessibility to employment, education, health and services for all the diverse communities of North Wales
- Improve the quality and provision of passenger transport throughout North Wales and to and from the Region
- Facilitate the efficient movement of freight supporting the Region’s industry and commerce and its International Gateway functions
- Provide, promote and improve sustainable forms of transport and infrastructure to minimise the negative impacts of transport on the local and global environment
- Improve safety of all forms of transport
- Enhance the efficiency and use of the transport network
- Upgrade and maintain the transport infrastructure, providing new where necessary

## 2.3 RTP Priorities

The Vision and Objectives defined by Taith are statements of principle setting out what needs to be done to achieve the outcome of safe, efficient, sustainable and environmentally friendly transport to meet the needs of North Wales. To make the links between the high level objectives and what needs to be done to make them happen Taith have produced nine regional priorities. These are listed in Box 4 below.

### Box 4: Priorities of the North Wales RTP

<p><b>Efficiently meeting North Wales’ diverse transport needs</b></p> <p>Providing a transport network for North Wales that recognises the geographic and social diversity of the Region, making best use of the available resources to give efficient movement of both people and freight</p>
<p><b>Passenger transport profile and performance</b></p> <p>Raising the profile and performance of public transport services in the Taith region within an integrated system including trains, high quality fast inter-urban bus and coach services, improved local bus networks and an appropriate mix of services involving smaller vehicles for rural areas.</p>
<p><b>Reducing congestion and journey times</b></p> <p>Resolving congestion and highway access issues.</p>

<p><b>Supporting development</b></p> <p>Supporting the development of towns and other key centres to increase their economic viability and to promote sustainable development and environmental improvement.</p>
<p><b>Safe, efficient, sustainable transport networks</b></p> <p>Maintaining safe, efficient, more sustainable transport networks.</p>
<p><b>Improving rail services for North Wales</b></p> <p>Seeking improvements to all North Wales rail passenger services and facilities.</p>
<p><b>Environmentally-friendly and efficient freight movement</b></p> <p>Implementing road, rail and terminal improvements in conjunction with national and regional agencies and companies.</p>
<p><b>Smart traffic planning and management</b></p> <p>Establishing an integrated North Wales traffic monitoring, information and control network and seeking to promote more sustainable travel behaviour through travel planning and better education in efficient travel choices and driving techniques.</p>
<p><b>Sustainable transport</b></p> <p>Increasing current levels of cycling and walking by residents and visitors</p>

## 2.4

### RTP Interventions

The policies and projects that will be used to deliver the regional objectives and priorities are referred to as interventions and are listed below:

**Connectivity** – Addresses the provision of infrastructure and services to support economic and social outcomes.

**Accessibility** – Looks at the removal of barriers both real and perceived through ways such as improved ticketing, appropriate design and walking/cycle routes to ensure that everyone has access to the transport network.

**Resilience** – Looks at the ability of the transport network to cope with peaks, disruptions from accidents and other incidents.

**Improving Efficiency** – Looks at a joined up way of thinking at policy level, promoting partnership working and application of best practice.

**Safer Journeys** – Looks at improving road safety for pedestrians and road users through the development of infrastructure and education as well as improved personal safety on the transport network by reducing the fear of crime.

**Information and Awareness** – Providing greater choice in options for travel, information about different forms of travel and raising awareness of different travel options.

**Smarter Choices** – Helps to make sustainable travel decisions and using technology to manage transport systems better.

**Infrastructure** – Looks at ways to manage traffic effectively through the development of transport infrastructure.

**Maintenance** – Pro-active maintenance to ensure effective sustainable use of resources and efficient performance of the transport systems.

**Monitoring and Studies** – Collecting data and measuring performance of North Wales transport systems to inform future development.

Table 1 below lists the predicted outcomes that each of the intervention groups will have on the environment, communities and the economy within North Wales.

**Table 1: Predicted Outcomes of the North Wales RTP**

Intervention	Outcomes
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>■ Improved bus and coach services including an equivalent standard of service for towns with and without a rail service</li> <li>■ Developing innovative services using DRT, community transport, shared cars, taxis, passenger carrying vehicles owned by councils, local agencies and businesses or other flexible shared transport to complement the local bus service and rail networks. Such services will be particularly appropriate in areas where population density is low or for tackling social inclusion problems by meeting specific local needs.</li> <li>■ Fast, reliable rail services between North Wales and other parts of Wales, the UK and Europe.</li> <li>■ Promoting efficient freight movement, whilst adopting principles that minimise the environmental impact of freight traffic;</li> <li>■ Improved interchange between services and modes, including park and ride</li> <li>■ Schemes to facilitate walking and cycling</li> <li>■ Maximising the potential of Holyhead and other North Wales ports for international and coastal trade to and from Ireland, the UK and Europe.</li> <li>■ Road improvements to assist sustainable travel</li> </ul>
<b>Access</b>	<ul style="list-style-type: none"> <li>■ ensuring transport is not seen as a barrier to investment, residence or tourism in North Wales</li> <li>■ Taith smartcards</li> <li>■ reducing journey times for North-South movements, both within North Wales and for inter-Regional journeys</li> <li>■ improving effective movement around the local network</li> <li>■ using available resources including developer contributions to maximise accessibility by all modes.</li> </ul>
<b>Resilience</b>	<ul style="list-style-type: none"> <li>■ managing the roads to keep traffic moving as smoothly as possible</li> <li>■ giving priority to buses and lorries where appropriate</li> <li>■ improving maintenance to avoid collapses of infrastructure, for example ensuring watercourses are kept clear and can accommodate expected flows</li> <li>■ contingency planning to deal with accidents and other incidents in key locations</li> <li>■ in the longer term combining coastal and flood defences with transport infrastructure</li> </ul>
<b>Improving efficiency</b>	<ul style="list-style-type: none"> <li>■ Seeking “Network Stability” agreements with bus operators to define levels and relative pricing of commercial and subsidised bus services to be provided through the plan period</li> <li>■ Producing a “Buses on the Highway” agreement which will specify traffic management, parking control and road maintenance standards to improve service reliability and ride quality on bus routes across North Wales;</li> <li>■ Forming a Taith Freight Forum to deliver the North Wales Freight Strategy.</li> </ul>
<b>Safer Journeys</b>	<ul style="list-style-type: none"> <li>■ meeting and exceeding national and regional casualty reduction targets by 2010;</li> <li>■ developing links between the CCTV systems used in town centres and by public transport operators to assist detection of anti-social behaviour and reduce public perceptions of threats to personal safety;</li> <li>■ improving the consistency and quality of schools transport services;</li> <li>■ safe routes in communities;</li> <li>■ speed management review.</li> </ul>
<b>Information and Awareness</b>	<ul style="list-style-type: none"> <li>■ travel planning, transport information and travel education resources and links;</li> <li>■ educational resources such as information on green travel choices</li> <li>■ tools for teaching and practising safer driving and fuel conservation both for commercial and private transport users</li> <li>■ Increasing current levels of cycling and walking by residents and visitors</li> </ul>

Intervention	Outcomes
<b>Smarter Choices</b>	<ul style="list-style-type: none"> <li>■ encourage the transfer of freight from road to rail and sea transport</li> <li>■ respect and enhance the natural and historic environment by promoting sustainable travel;</li> <li>■ offer appropriate travel choices where possible, recognising that for many car travel will be the most efficient (and often the only) way of making essential journeys;</li> <li>■ Promoting integration between all transport modes through consistent standards, appropriate infrastructure, effective information, through ticketing and marketing, in particular facilitating good interchange with rail services.</li> <li>■ improving and making safer existing walking and cycling networks, strategically expanding them so that routes link into regional and National networks;</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>■ Programmes of schemes to implement the strategic options will be drawn up at the next stage of the RTP. Section 3.6 indicates how we will build up the programmes.</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>■ maintain and upgrade all aspects of transport infrastructure to ensure that it is fit for purpose.</li> <li>■ manage traffic flows and arrange maintenance to improve efficiency and minimise adverse environmental impacts of transport throughout the region</li> <li>■ adopting management and maintenance regimes and standards to ensure that the public highway, cycling and walking networks encourage safe, efficient performance for vehicles and pedestrians</li> </ul>
<b>Monitoring and Studies</b>	<ul style="list-style-type: none"> <li>■ highway and public transport monitoring and control centres</li> <li>■ carry out studies for the implementation of sustainable travel modes</li> </ul>

# 3 Key Issues and Considerations

The following boxes 5, 6 and 7 provides a summary of the key sustainability, environmental and social issues and considerations that have been identified for North Wales.

## Box 5: Environmental Considerations

### Environmental Considerations:

- Taith is both a Rural and urban region
- The region has diverse landscapes, a large proportions of which are of very high quality (including the AONBs, Clwydian Range, Lleyn, Anglesey Snowdonia National Park and a number of Heritage Coasts)
- Large proportions of North Wales is designated as areas of nature conservation importance (international to local level designations)
- The region has rich biodiversity and geodiversity
- The region has rich and diverse built heritage
- There are a number of areas affected by fluvial and tidal flooding. This reduces the amount of potentially developable land available which leads to an increase in pressure for development in other areas e.g. green belt and along the coastal strip
- The effects of road traffic, which is the third biggest and fastest growing source of greenhouse gas emissions in Wales
- Transport systems are likely to become more vulnerable to the effects of climate change particularly flooding in the spatially constrained low lying areas along the coast
- Need to consider opportunities for reducing or minimising light pollution through design, efficient and effective street lighting
- Aging road, rail, water and sewage infrastructure pose a threat to transportation due to the financial burdens associated with maintenance and replacement and the disruption caused when the infrastructure breaks down e.g. collapsed sewers
- The risk of flooding due to a lack of sewerage capacity could be reduced by separating surface and foul water drainage
- Need to consider opportunities for reducing the threat of urban diffuse pollution on fresh water ecosystems and natural habitats through the use of oil interceptors and sustainable urban drainage systems (SUDS)
- Need to consider the pollution effects associated with winter gritting (rock salt)
- There are increased pressures on Ground Water (use and pollution)
- Need to consider the suite of potential air pollutants (NO<sub>2</sub>, CO<sub>2</sub>, SO<sub>2</sub> and PM<sub>10</sub>) to ensure that these do not exceed National Air Quality Objectives
- Mitigate the spread of aggressive/evasive non-native species that threaten natural habitats (e.g. Japanese Knotweed, Himalyan Balsalm) by considering the control of soil and earth movements and identifying opportunities to limit the potential dispersal of these species on vehicles (wheels and body work)
- North Wales is running out of landfill space. This could have a negative effect on transport by increasing the distances waste has to be transported. Therefore need to examine alternative solutions to minimise these effects e.g. the recycling of construction waste, transportation of waste to alternative facilities, using more sustainable methods of transportation e.g. rail and water
- Transport developments should be kept as far as possible outside the floodplain and new transport developments within a floodplain should include mitigation to minimise that
- Need to identify opportunities to reduce or prevent increases in ambient noise levels from transport
- Need to consider the protection of greenfield sites and carbon rich soils
- Identify opportunities for increased use of park and ride schemes, integrated transport systems, car sharing, green travel plans, etc.

**Box 6: Social Considerations****Social Considerations:**

- In some parts of the region there is generally an ageing population exacerbated by increased in-migration of elderly workforce/early retirees and an outflow of students and young people seeking employment in other areas e.g. Cardiff. This places increased pressures on public transport to provide access to local services e.g. healthcare/support. Also leads to local school closures and the relocation of employment, requiring people to travel further.
- The SEA and RTP needs to consider access to sustainable, affordable transport
- In terms of accessibility need to consider the impacts associated with the changes to the NHS (centralisation and decentralisation of services)
- Transport needs to be interlinked with the allocation of housing
- There is insufficient supply of residential land and a lack of affordable housing to meet projected demands. This places increased demand and pressure on public transport and transport networks
- General increases in the levels and duration (increased night time travel) of noise and vibration from transport can effects human health
- Some North Wales Super Output Areas fall within the 10% of most deprived areas in Wales. These areas are identified in the Welsh Assembly Government's Flagship programme to tackle deprivation in Wales. Transportation and accessibility is an important component of this programme
- Need to consider the implementation of Home Zones and Quiet Lanes
- As well as environmental issues associated with air quality and climate change, congestion can also effect individuals in terms of health and wellbeing (poor air quality and local environmental conditions (noise and visual amenity), stress and inconvenience due to journey delays etc)
- Need to consider road safety risks associated with speeding traffic
- Sensitive planning is required to ensure that new road schemes or other transport links don't cause community severance
- Need to consider opportunities for reducing crime on public transport e.g. installation of CCTV on buses and trains and in stations and associated car parking facilities (secure parking and CCTV)
- Obesity and poor health are key issues affecting parts of North Wales. It is important for the SEA and RTP to look at opportunities for promoting walking and cycling in terms of creating healthier lifestyles as well as being more sustainable modes of transport.
- Need to ensure that the RTP addresses local issues as well as regional, where one intervention may be appropriate for some localities it may not appropriate in others. Timing should also be considered as interventions / schemes may not be applicable seven days a week e.g. market towns may only be congested on the days of the week that the market is open.
- Need to ensure the RTP and the policies it contains and projects it supports and promotes are in compliance with the Welsh Language Act

**Box 7: Economic Considerations****Economic Considerations:**

- North Wales has important links to Chester, Manchester, Liverpool and the North West, the M54/West Midlands, Ireland and Trans-European links (through Holyhead)
- There is good connectivity east/west but poor road and rail connectivity north/south inter-and intra-regionally
- The area used to have a thriving economy based around the manufacturing industry. The decline in this industry has lead to high economic inactivity and large areas of social deprivation. The lack of employment in these areas places increased pressure on public transport and demands for affordable transport to enable people to access alternative sources of employment located in other parts of the region or neighbouring areas e.g. Chester
- The out-flow of students and potentially skilled workers reduces the investment potential of the area for businesses. This further reduces employment opportunities in the area.
- It is important to ensure the transport network supports Welsh Spatial Planning proposals, particularly for regeneration
- Aging road, rail, water and sewage infrastructure can have economic consequences where disruption to travel due to the collapse of a sewer or a gas leak effects the movement of good and materials and the provision of services.
- Congestion affects the economy by causing delays in the movement of goods and services and people travelling to and from work which have significant economic costs in terms of time and money

# 4 SEA Topics and Objectives

- The region experiences significant annual increases and decreases in traffic as result of tourism.
- There are also fluctuations in traffic levels associated with the University of Bangor
- Need to identify opportunities for park and ride schemes, travel plans and integrated transport schemes associated with tourist attractions and areas of economic development and growth.

## 4.1 SEA Topics

The SEA Regulations 2004 for Wales require certain topics to be considered. For the North Wales Regional Transport Plan the SEA topics have been expanded to incorporate the key issues identified in the Wales Transport Strategy (WTS). The topics that have been addressed are listed in Box 8 below.

### Box 8: SEA Topics

<b>Environmental Topics</b>
<ul style="list-style-type: none"> <li>■ Air Quality</li> <li>■ Climatic Factors</li> <li>■ Noise and Vibration</li> <li>■ Biodiversity</li> <li>■ Soils</li> <li>■ Water including quality, resources and flood risk</li> <li>■ Natural resources</li> <li>■ Historic Environment</li> <li>■ Landscape</li> </ul>
<b>Social Topics</b>
<ul style="list-style-type: none"> <li>■ Population including severance and accessibility</li> <li>■ Human Health including physical fitness</li> </ul>
<b>Economic Topics</b>
<ul style="list-style-type: none"> <li>■ Business Environment</li> </ul>

## 4.2 SEA Objectives of the North Wales Regional Transport Plan

Objectives are statements of what is to be achieved in terms of environmental protection and sustainable development. They have been designed to ensure environmental considerations are taken into account in the preparation of the RTP.

A set of SEA objectives were developed as part of the SEA undertaken for the Wales Transport Strategy (WTS). These comprised eleven overarching SEA objectives, each with a set of sub-objectives.

To ensure consistency between the WTS and the North Wales RTP SEA, the WTS overarching SEA objectives have also been used as part of the SEA of the North Wales RTP. However, the sub-objectives that were developed by the WTS SEA were reviewed, and modified to ensure that they were relevant to the key environmental/sustainability consideration identified for North Wales.

As well as tailoring the WTS sub-objectives to the requirements of North Wales, an extra overarching objective was added to consider economic elements of the RTP. This was to widen the coverage of the SEA to enable the assessment to be more sustainable, rather than only environmentally focused. Table 2 below lists the SEA objectives and sub-objectives used to assess the North Wales RTP.

Table 2: SEA Objectives and Sub-Objectives

SEA Topics	SEA Objectives
<b>Air Quality</b>	<p><b>Objective 1: Minimise transport related air pollution</b></p> <p>Sub Objectives which will enable Objective 1 to be achieved.</p> <ul style="list-style-type: none"> <li>➤ To reduce negative impacts of transport on local air quality</li> <li>➤ To avoid exceedance of the UK National Air Quality Targets</li> <li>➤ To reduce the need to travel, especially by car</li> <li>➤ To reduce the volume of traffic</li> <li>➤ To reduce congestion</li> </ul>
<b>Climate Change</b>	<p><b>Objective 2: Reduce transport related greenhouse gas emissions and ensure that adequate adaptation measures to climate change are in place</b></p> <p>Sub Objectives which will enable Objective 2 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To reduce the emission of greenhouse gases from transport (especially CO2)</li> <li>➤ To encourage the use of low-polluting vehicles</li> <li>➤ To promote the use of more sustainable transport modes</li> <li>➤ To reduce the need to travel</li> <li>➤ To minimise the vulnerability of new transport infrastructure to the impacts of climate change</li> <li>➤ To encourage a shift of transporting freight on road towards rail or water</li> <li>➤ To reduce congestion.</li> </ul>
<b>Noise and Vibration</b>	<p><b>Objective 3: Minimise transport related noise and vibration</b></p> <p>Sub Objectives which will enable Objective 3 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To reduce the number of people being affected by transport noise</li> </ul>
<b>Biodiversity</b>	<p><b>Objective 4: Ensure that biodiversity is valued protected and enhanced</b></p> <p>Sub Objectives which will enable Objective 4 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To avoid transport related damage to International (Ramsar), European (SPA and SACs), National (SSSI, NNRs and UKBAP habitats) and local designated wildlife sites and protected species.</li> <li>➤ To avoid disturbance to other, non-designated habitats and species</li> <li>➤ To avoid habitat fragmentation</li> <li>➤ To manage the transport network in away that protects and enhances biodiversity and avoids irreversible losses e.g. through the creation of wildlife corridors</li> <li>➤ To protect enhance and create appropriate wildlife habitat and biodiversity and enable all users of the transport system to access and appreciate our natural heritage</li> <li>➤ To minimise wildlife casualties in the transport network</li> <li>➤ To avoid the loss of woodland cover and geological resources.</li> </ul>
<b>Soils</b>	<p><b>Objective 5: Reduce transport related contamination and safeguard soil quality and quantity</b></p> <p>Sub Objectives which will enable Objective 5 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To avoid, reduce and mitigate related contamination of soils.</li> <li>➤ To protect carbon rich soils</li> <li>➤ To use land efficiently and minimise development on Greenfield sites</li> </ul>
<b>Water including quality, resources and flood risk</b>	<p><b>Objective 6: Minimise transport related impacts on water resources, flood plains and areas of flood risk</b></p> <p>Sub Objectives which will enable Objective 6 to be achieved</p> <ul style="list-style-type: none"> <li>➤ Limit transport related pollution of water resources</li> <li>➤ To minimise the impact of new transport infrastructure in groundwater protection zones</li> <li>➤ To minimise the impact of new transport infrastructure on flood plains and areas of flood risk</li> <li>➤ To avoid and reduce the extent of non permeable surfaces and encourage SUDS in new transport infrastructure</li> </ul>

SEA Topics	SEA Objectives
<b>Natural resources</b>	<p><b>Objective 7: Ensure that natural resources and energy are used efficiently</b></p> <p>Sub Objectives which will enable Objective 7 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To minimise the use finite resources and to promote the use of secondary and recycled materials for transport infrastructure (minimising transport related waste to landfill)</li> <li>➤ To minimise transport related use of energy resources and to promote the use of renewable energy</li> <li>➤ To promote the efficient use of street lighting</li> </ul>
<b>Historic Environment</b>	<p><b>Objective 8:Ensure that diversity, local distinctiveness and cultural heritage is valued, protected and enhanced</b></p> <p>Sub Objectives which will enable Objective 8 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To minimise negative effects of transport on cultural assets, the historic environment and local distinctiveness</li> <li>➤ To ensure access to areas valued for cultural heritage by alternatives to the car</li> <li>➤ To provide opportunities to enhance the cultural environment</li> <li>➤ Promote sustainable tourist travel schemes</li> <li>➤ Incorporate quality design</li> </ul>
<b>Landscape</b>	<p><b>Objective 9:Ensure that landscape is valued, protected and enhanced</b></p> <p>Sub Objectives which will enable Objective 9 to be achieved</p> <p>To protect and enhance landscape character and townscape from negative impacts of transport</p> <ul style="list-style-type: none"> <li>➤ To promote a high quality built environment through sensible planning and design</li> <li>➤ To minimise loss of tranquillity and light pollution caused by transport</li> <li>➤ To provide opportunities to enhance distinctive landscapes and townscapes (e.g. Conservation Areas, National Park, Areas of Outstanding Natural Beauty(AONB)) within Taith</li> <li>➤ To minimise the impact of tourist travel on landscapes and townscapes</li> <li>➤ To incorporate quality design into transport developments</li> </ul>
<b>Population including severance and accessibility</b>	<p><b>Objective 10: Provide inclusive access to all services and facilities and reduce severance</b></p> <p>Sub Objectives which will enable Objective 10 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To improve sustainable access to facilities for all</li> <li>➤ To improve access to employment areas especially for rural households and socially deprived communities</li> <li>➤ To reduce transport related community severance</li> <li>➤ To improve the quality and provision of public transport (including cost)</li> <li>➤ To improve effective integration of different modes of travel</li> <li>➤ To provide effective pedestrian access to/within town and district centres</li> </ul>
<b>Human Health including physical fitness</b>	<p><b>Objective 11: Protect and promote everyone's physical wellbeing</b></p> <p>Sub Objectives which will enable Objective 11 to be achieved</p> <ul style="list-style-type: none"> <li>➤ To promote healthier lifestyles through encouraging a shift towards more sustainable modes of travel</li> <li>➤ To increase safety and security for all users of the transport system and to reduce fear of crime</li> <li>➤ To reduce road traffic accidents</li> <li>➤ To ensure access to health facilities by a wide range of sustainable modes of travel</li> <li>➤ To ensure access to open spaces of amenity and recreational value</li> <li>➤ To reduce congestion</li> </ul>

SEA Topics	SEA Objectives
<b>Business Environment</b>	<b>Objective 12: To support the Business Environment</b>  Sub Objectives which will enable Objective 12 to be achieved <ul style="list-style-type: none"><li>➤ To provide sustainable transport solutions which will encourage businesses development and investment</li><li>➤ To improve rural transport links to support the diversification of the rural economy</li><li>➤ To improve access to education and training, and support provision of skilled employees to the economy</li><li>➤ To improve sustainable transport links to key areas of economic growth/regeneration</li><li>➤ To improve strategic transport links with the rest of Wales, the UK and Ireland</li><li>➤ To support tourism within Taith</li><li>➤ To enhance access to tourist destinations</li><li>➤ To reduce congestion</li></ul>

# 5 Findings of the SEA

## 5.1 Introduction

Tables 3 below provide a summary of the positive and negative effects of the North Wales RTP on the SEA Objectives.

**Table 3: Positive and negative outcomes of the Interventions on the SEA Objectives**

Intervention Group	Findings	
	Positive Outcomes	Negative Outcomes
Connectivity	<ul style="list-style-type: none"> <li>■ Improved connectivity between facilities and areas</li> <li>■ improved connectivity between different modes of transport</li> <li>■ Improved quality of public transport</li> <li>■ Reduced cost of public transport for some sectors of the community.</li> </ul>	<ul style="list-style-type: none"> <li>■ Negative impacts associated with the construction of transport infrastructure</li> </ul>
	<p>The assessment produced a number of positive and negative effects in terms of the SEA objectives. The majority of the interventions had positive effects on the following objectives, Accessibility (SEA Objective 10), Business Environment (SEA Objective 12), Physical Wellbeing (SEA Objective 11), Reduce Transport Related Greenhouse Gas Emissions (SEA Objective 2) and Air Quality (Objective 1).</p> <p>In terms of the potential negative effects associated with connectivity interventions most relate to the policies, schemes or studies that would involve the provision of new infrastructure e.g rail infrastructure, freight interchanges, distribution centres and rural hubs. In most cases it was identified that in general these are likely to be localised, short term, environmental effects on noise (SEA objective 3); biodiversity (SEA objective 4); water quality and flood risk (SEA objective 6); built heritage and archaeology (SEA objective 8) and landscape (SEA Objective 9) associated with the construction of new, or any modified, transport infrastructure. There may also be longer term negative effects on local noise levels, biodiversity, flood risk and landscape/townscape character from the operation of new infrastructure.</p>	
Accessibility	<ul style="list-style-type: none"> <li>■ Improved access to the public transport system</li> <li>■ Improved ticketing on the public transport system</li> <li>■ Possibility of a mode shift from private vehicles to more sustainable forms of transport such as public transport system</li> <li>■ Improved health through the encouragement of cycling and walking within the region.</li> </ul>	<ul style="list-style-type: none"> <li>■ Negative impacts associated with the construction of transport infrastructure</li> </ul>
	<p>In terms of positive effects, most relate to the provision of improved access to services, facilities and employment (SEA objectives 10 and 12) and promoting walking and cycling as a means to tackling health and mobility problems within the region.</p>	

Intervention Group	Findings	
<b>Resilience</b>	Positive outcomes	Negative outcomes
	<ul style="list-style-type: none"> <li>■ <b>Reduced congestion</b></li> <li>■ <b>Improved reliability and efficiency of the public transport system</b></li> <li>■ <b>Improved traffic management</b></li> <li>■ <b>Possibility of a mode shift from private vehicles to more sustainable forms of transport such as public transport.</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Increased congestion associated with inappropriate design</b></li> </ul>
	<p>The proposed interventions developed under the reliance group focus on improving the ability of the road network to cope with the disruptions and reduce the associated traffic delays and congestion caused by peak traffic, accidents, other incidents and extreme weather. These interventions will therefore have positive effects on the key SEA objectives relating to air quality (SEA objective 1), greenhouse gas emissions (SEA objective 2), business environment (SEA objective 12), accessibility (SEA objective 10) and physical wellbeing (SEA objective 11).</p> <p>The proposed interventions listed above could potentially have some negative effects on the SEA objectives, although these are limited and are only of minor significance. There is the potential that the intervention involving the restriction of delivery times in certain locations could have a negative effect on the business environment (SEA objective 12). However, solutions to minimise any disruption to businesses would be taken into account before any schemes were implemented.</p>	

Intervention Group	Findings	
<p><b>Improving Efficiency</b></p>	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ <b>Development of regional travel plans reducing reliance on private vehicles</b></li> <li>■ <b>Possibility of a mode shift from private vehicles to more sustainable forms of transport such as public transport.</b></li> <li>■ <b>Improved road safety through the application of road safety schemes around schools</b></li> <li>■ <b>Improved health through the promotion of walking and cycling</b></li> <li>■ <b>Improved access for pedestrians particularly in rural communities</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Potential for impacts on access and the business environment due to the incurred costs of congestion charging.</b></li> <li>■ <b>Reduction in passenger capacity as a result of freight being accorded appropriate priority on rail.</b></li> </ul>
	<p>The assessment has identified that the majority of public sector efficiency intervention are likely to have positive effects on the SEA objectives, although there may be some negative environmental effects.</p> <p>Ultimately successful implementation of the interventions developed to improve public sector will have positive effect on a number of the SEA objectives, in particular those relating to air quality (SEA Objective 1), and greenhouse gas emissions (SEA Objective 2) by encouraging a modal shift from cars to public transport, walking and cycling and promoting more sustainable forms of freight transport (rail).</p> <p>Although the majority of interventions will have positive effects on the SEA objectives there are also likely to be some negative effects. The most significant of these relates to the proposals for promoting the best use of Air Service and supporting WAG in investigating the role and sustainable growth of air freight to assist inward investment. Whilst these interventions would have positive effects on the business environment (SEA objective 12), they are also likely to have significant negative effects on greenhouse gas emissions (SEA objective 2) as a result of the concerns over air travel being a major contributor to climate change through the high levels of carbon emission within upper layers of the atmosphere. Further consideration would also be required in terms of supporting air freight in terms of the local effects that construction and operation of the supporting infrastructure e.g. airports, airfields, runways would have on the local environmental SEA objectives (e.g. effects on noise, air quality, biodiversity, landscape, built heritage and archaeology and water quality).</p> <p>Negative effects have been identified in relation to air quality (SEA objective 1), greenhouse gas emissions (SEA objective 2), and access (SEA objective 10) through the implementation of intervention 4.14 which as a result of freight being accorded appropriate priority on rail could lead to a reduction in passenger capacity.</p> <p>The potential future use of congestion charging may also have negative impacts on access (SEA objective 10) in rural areas where the car can often be a necessity and the business environment (SEA objective 12) in all areas through increased costs incurred by businesses.</p>	

Intervention Group	Findings	
Safer Journeys	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ Improved personal safety on the transport system</li> <li>■ Improved education of road safety</li> <li>■ Improve safety for road users</li> <li>■ Possibility of a mode shift from private vehicles to more sustainable forms of transport such as public transport due to improved safety on the transport network.</li> </ul>	
	<p>All interventions will have a positive effect on the SEA objective relating to physical wellbeing and personal safety (SEA objective 11). In terms of the safety of road users, the interventions aim to use a variety of mechanisms to try and reduce speeding and encourage safer driving. These include reviews of speed limits in certain areas and increasing education and awareness amongst drivers and road users of safer driving. The majority of safer journey interventions focus directly on personal safety for school children, pedestrians, cyclists, public transport users and horse riders. They look at implementing safety zones around schools, increased education and awareness of road safety for school children, pedestrians and other road users, and the installation of CCTV and help points on public transport and at interchanges.</p> <p>Positive impacts have also been found on air quality (SEA objective 1) and greenhouse gas emissions (SEA objective 2) associated with a mode shift from the car to public transport resulting from improved safety and a reduced fear of crime. This will also have a positive impact on access (SEA objective 10). Intervention 5.9 encouraging employers to become involved in managing occupational road risk will have a positive impact on (SEA objective 12) the business environment.</p> <p>Although the majority of effects on the SEA objectives are positive there could potentially be some negative effects. These relate mainly to landscapes and townscapes (SEA objective 9) and the historic built environment (SEA objective 8) which could be adversely affected by the introduction of safety features e.g. into the existing scene and increased street/footpath lighting. Lighting could particularly be a problem in rural areas where existing levels of street lighting are generally low. However, through appropriate and sensitive design and implementation of safety measures, any significant effects on landscapes, streetscapes or the historic built environment can be avoided or reduced.</p>	

Intervention Group	Findings	
,Information and Awareness	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ Reduced impacts on greenhouse gas emissions and improved air quality through Travel Planning, Sustainable transport modes, Car sharing and Park and ride</li> <li>■ Improved health through increased amounts of walking and cycling and reduced emissions.</li> <li>■ Improved access to services</li> <li>■ Sustainable tourism</li> </ul>	<ul style="list-style-type: none"> <li>■ Negative impacts associated with the construction of any transport related infrastructure</li> </ul>
	<p>The assessment has identified that the majority of information and awareness interventions are likely to have positive effects on the SEA objectives, although there may be some negative environmental effects.</p> <p>The interventions developed as part of the smarter choices group are likely to have significant positive effects on the following SEA Objectives: Accessibility (SEA Objective 10), Air Quality (SEA Objective 1), Business Environment (SEA Objective 12), Greenhouse Gas Emissions (SEA Objective 2) and Physical Wellbeing (SEA Objective 11).</p> <p>In addition to the positive effects identified above, there are some potential negative effects on the SEA objective related to any infrastructure that is required to relay real time information.</p> <p>However through appropriate mitigation measures, compliance with legislative requirements and application of best practice these impacts can be reduced.</p>	

Intervention Group	Findings	
Smarter Choices,	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ Reduced impacts on greenhouse gas emissions and improved air quality through Travel Planning, Sustainable transport modes, Car sharing and Park and ride</li> <li>■ Improved health through increased amounts of walking and cycling and reduced emissions.</li> <li>■ Improved access to services</li> <li>■ Sustainable tourism</li> </ul>	<ul style="list-style-type: none"> <li>■ Negative impacts associated with the construction of transport infrastructure</li> <li>■ Negative impacts associated with park and ride schemes.</li> </ul>

Intervention Group	Findings
	<p>The assessment has identified that the majority of smarter choices intervention are likely to have positive effects on the SEA objectives, although there may be some negative environmental effects.</p> <p>The interventions developed as part of the smarter choices group are likely to have significant positive effects on the following SEA Objectives: Accessibility (SEA Objective 10), Air Quality (SEA Objective 1), Business Environment (SEA Objective 12), Greenhouse Gas Emissions (SEA Objective 2) and Physical Wellbeing (SEA Objective 11).</p> <p>In addition to the positive effects identified above, there are some potential negative effects on the SEA objectives. These are mainly related to the interventions which look at the construction and operation of park and ride schemes.</p> <p>However through appropriate mitigation measures, compliance with legislative requirements and application of best practice these impacts can be reduced, although there are likely to be some residual effects on local air quality (SEA objective 1), noise (SEA objective 3), flood risk (SEA Objective 6), landscape (SEA objective 9), biodiversity (SEA objective 4) and health (SEA objective 11) within the immediate vicinity of a park and ride development once operational.</p>

Intervention Group	Findings	
Infrastructure	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ Improved air quality through reduced congestion</li> <li>■ Reduced greenhouse gas emissions through reduced congestion due to incident management and more efficient freight transfers</li> <li>■ Efficient use of natural resources</li> <li>■ Improved health through increased walking and cycling</li> </ul>	<ul style="list-style-type: none"> <li>■ Negative impacts associated with construction of transport infrastructure</li> </ul>
	<p>A number of the proposed interventions are likely to have a positive effect on the SEA objectives in particular those that focus on traffic management and reducing congestion which will have positive effects on SEA Objectives 1 and 2 (air quality and greenhouse gas emissions). Improvements in the transport infrastructure and highway network to facilitate bus priorities and walking and cycling will have positive effects on SEA objectives 10 and 11, accessibility and physical wellbeing. Reductions in traffic delays and congestion through traffic management (e.g. signage, parking controls, and incident management), and improvements to highway capacity and infrastructure (e.g. interactive signage, parking provisions and port facilities etc) will also have positive effects on the business environment (SEA objective 12).</p> <p>Although a number of the infrastructure interventions are likely to have positive effects on the SEA objectives they are also likely to have a number of negative effects. Most of these effects relate to proposed road improvement schemes and possible parking provisions for road freight. The potential negative effects relating to new infrastructure and facilities (rail, road and docks) include: Air Quality (SEA Objective 1), Noise (SEA Objective 3), Biodiversity (SEA Objective 4), Water Quality and Flood Risk (SEA Objective 6), Built Historic Environment (SEA Objective 8) and landscape (SEA Objective 9). The most significant effects could occur where infrastructure developments are located in areas of floodplain, areas located within landscapes that are protected or of recognised high value, areas located within conservation areas or areas of importance in terms of the historic built environment, areas that support species that are protected under the Habitats Directive and areas located within or that could affect designated sites of nature conservation value.</p> <p>However, through appropriate mitigation measures, compliance with legislative requirements and application of best practice these potential effects can be reduced, although there are likely to be some residual negative effects on local air quality (SEA objective 1), biodiversity (SEA objective 4), landscape (SEA objective 9), water quality and flood risk (SEA objective 6) and noise (3) associated with the operation of new rail, road or docks infrastructure and facilities.</p>	

Intervention Group	Findings	
Maintenance	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ Improved air quality and reduced greenhouse gas emissions due to reduced congestion through transport infrastructure maintenance</li> <li>■ Positive effects on business and the economy through reduced delays.</li> </ul>	
	<p>Increased and improved maintenance will have positive impacts on access (SEA objective 10), air quality (SEA objective 1) and greenhouse gas emissions (SEA objective 2) and health (SEA objective 11) associated with reduced levels of congestion from improved highway maintenance.</p>	

Intervention Group	Findings	
Monitoring and Studies	Positive Outcomes	Negative Outcomes
	<ul style="list-style-type: none"> <li>■ Improved health through increased walking, cycling and road safety monitoring</li> <li>■ Positive effects on business and the economy through reduced delays.</li> </ul>	
	<p>Increased and improved monitoring and studies will have positive impacts on access (SEA objective 10) through the creation of a database and mapping system which can be used to monitor and maintain the footpath and cycleway infrastructure. Studies will also address future transport initiatives and sustainable modes which will have positive impacts on SEA objects 1 and 2, air quality and greenhouse gas emissions in the future.</p>	

# 6 Cumulative Effects

## 6.1 Introduction

The following chapter summarises the key environmental effects discussed in Chapter 8 with regard to the overall cumulative effects that the proposed RTP is likely to have on environment.

## 6.2 Cumulative Effects

Ultimately the main aims of the RTP are:

- To encourage more sustainable travel and increased participation in walking and cycling through a range of interventions ranging from:
  - Physical improvements to bus, rail, footpath and cycleway infrastructure
  - Improving the quality, accessibility and reliability of public transport services and facilities e.g. number of routes, frequency and timings of services, quality of vehicles and stations/bus stops, cycle stores etc
  - Raising awareness of the different choices and options for more sustainable travel through increased provision of information about public transport services, footpaths, cycleways, multimodal interchanges and car sharing options; promoting travel planning within businesses and schools; encouraging local councils to lead by example in terms of more sustainable personal travel options; promoting options for home working to reduce the need to travel; and encouraging partnership working with other government agencies and across local authorities to promote a more joined up 'integrated' approach to land use planning and transport
  
- To promote more sustainable freight transport, building on opportunities for promoting an increase in road/rail/sea transport through Holyhead
- To improve road safety and removing real and perceived barriers to travel (personal safety) through education, information, training, and increased use of CCTV at bus stops, stations and on public transport
- To manage the highway network (on other transport infrastructure) in ways that maximise its resilience and therefore reduce traffic delays and congestion associated with incidents, accidents, illegal parking, road works, and extreme weather condition
- To ensure that there are appropriate measures for maintenance of the transport infrastructure in place to minimise disruption and to identify sources of data and types of information for the purposes of monitoring to ensure that where possible the transport network can be subject to continual review and improvement in the future and to enable any issues that may arise to be dealt with effectively and efficiently

Based on the key aims listed above the SEA assessment concludes that overall the RTP will, if successfully implemented, have significant positive effects on:

- Local air quality (SEA Objective 1) – through increased use of public transport, walking and cycling and reduced congestion
- Greenhouse gas emissions (SEA Objective 2) - through increased use of public transport, walking and cycling, reduced congestion and promoting sustainable freight transport
- Accessibility (SEA Objective 10) – through improving access to public transport through costs (e.g. travelcards), improved availability of services and routes (bus and rail), increased frequency of services, removing real and perceived barriers e.g. personal safety, greater awareness and information about travel choices, promoting walking and cycling
- Physical wellbeing and personal safety (SEA Objective 11) – promoting walking and cycling, improving road and personal safety

- Business environment (SEA Objective 12) – improving access to employment, reducing delays to movement of goods and resources and freight, promoting rail and sea freight and improving existing road freight facilities

Although the majority of interventions presented within the RTP, and therefore the RTP as a whole is likely to have predominantly positive effects, there are requirements for infrastructure improvements to support greater use of public transport e.g. rail and road and to support more sustainable freight transport e.g. port infrastructure and rail/road/sea interchanges. The construction and operation of this infrastructure is likely to give rise to significant adverse effects on air quality (SEA objective 1), noise (SEA objective 3), biodiversity (SEA objective 4), water quality and flood risk (SEA objective 6), archaeology and the historic built environment (SEA objective 8) and landscape (SEA objective 9).

However, through appropriate mitigation measures, compliance with legislative requirements and application of best practice these impacts can be reduced, although there are likely to be some residual negative effects on local air quality (SEA objective 1), biodiversity (SEA objective 4), landscape (SEA objective 9), water quality and flood risk (SEA objective 6) and noise (3) associated with the operation of new rail, road or dock facilities.

Overall, with the exception of some residual negative impacts associated with construction of infrastructure it is expected that the cumulative effect of the implementation of all groups will be positive on environmental, social and economic outcomes.

Table 4 below presents a summary of the overall effects of the RTP on the SEA objectives.

Table 4: Cumulative Effects

	SEA Objectives											
Intervention Group	Objective 1: Minimise transport related air pollution	Objective 2: Reduce transport related greenhouse gas emissions and ensure that adequate adaptation measures to climate change are in place	Objective 3: Minimise transport related noise and vibration	Objective 4: Ensure that biodiversity is valued protected and enhanced	Objective 5: Reduce transport related contamination and safeguard soil quality and quantity	Objective 6: Minimise transport related impacts on water resources, flood plains and areas of flood risk	Objective 7: Ensure that natural resources and energy are used efficiently	Objective 8: Ensure that diversity, local distinctiveness and cultural heritage is valued, protected and enhanced	Objective 9: Ensure that landscape is valued, protected and enhanced	Objective 10: Provide inclusive access to all services and facilities and reduce severance	Objective 11: Protect and promote everyone's physical wellbeing	Objective 12: To support the Business Environment
Connectivity	✓ x	✓ x	x	x		x		x	x	✓ x	✓	✓
Access	✓ x	✓	x	x		x		x	x	✓	✓	✓
Resilience	✓ x	✓ x								✓	✓ x	✓ x
Improving Efficiency	✓ x	✓ x						x		✓ x	✓	✓ x
Safer Journeys	✓	✓ x						x		✓	✓	✓
Information and Awareness	✓ x	✓	x	x		x		x		✓	✓	
Smarter Choices,	✓	✓		x		x			x	✓	✓	
Infrastructure	✓ x	✓ x	x	x		✓ x	✓	x	x	✓	✓ x	✓
Maintenance	✓	✓								✓	✓	
Monitoring and Studies	✓	✓								✓	✓	✓