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NORTH EAST LOCAL TRANSPORT PLAN

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Abbreviations

AONB	Area of Outstanding Natural Beauty – now known as National Landscape
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
BAME	Black, Asian and Minority Ethnic
BOA	Biodiversity Opportunity Area
CA	Combined Authority
CEMP	Construction Environmental Management Plan
CO_2	Carbon Dioxide
CSA	Community Safety Assessment
CVD	Cardiovascular Disease
DCLG	Department for Communities and Local Government
DfT	Department for Transport
EqIA	Equality Impact Assessment
ER	Environmental Report
EV	Electric Vehicle
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIRES	Gender Identity Research and Education Society
GVA	Gross Value Added
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HRA	Habitats Regulation Assessment
IAQM	Institute of Air Quality Management
ISA	Integrated Sustainability Appraisal
ITS	Intelligent Transport Systems
JTC	Joint Transport Committee
KPI	Key Performance Indicator
KRN	Key Route Network
LLFA	Local Flood Risk Areas
LNR	Local Nature Reserve
LZEVs	Low or Zero Emission Vehicles
LTP	Local Transport Plan
MaaS	Mobility as a Service
MSFD	Marine Strategy Framework Directive
NbS	Nature based Solutions
NE	North East
NFM	Natural Flood Management
NMU	Non-Motorised Users

NNR	National Nature Reserve
NO_2	Nitrogen Dioxide
NPPF	National Planning Policy Framework
ODPM	Office of the Deputy Prime Minister
PCG	Protected Characteristic Group
PM	Particulate Matter
PPPs	Plans, Policies and Programmes
PRoW	Public Right of Way
pSPA	Potential Special Protection Area
RBD	River Basin District
RIGS	Regional Importance Geological Sites
RNAG	Reason for Not Achieving Good
RPA	Rural Proofing Assessment
SA	Sustainability Appraisal
SAC	Special Area of Conservation
cSAC	Candidate Special Area of Conservation
SEA	Strategic Environmental Assessment
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
TADU	Transport Accident and Data Unit
TAG	Transport Analysis Guidance
TRSE	Transport Related Social Exclusion
UK	United Kingdom
ULEV	Ultra Low Emission Vehicle
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UTMC	Urban Traffic Management Control
WHO	World Health Organisation
WHS	World Heritage Site
WFD	Water Framework Directive
ZEV	Zero Emissions Vehicle

Non-Technical Summary

This is the Non-Technical Summary of the Integrated Sustainability Appraisal (ISA) Report of the Draft North East Local Transport Plan (LTP). The purpose of this Non-Technical Summary is to set out the ISA process and the outcomes derived from this and is intended to inform people who have a general interest in the LTP, but who are not concerned with its detailed technical assessment. Readers are advised to read the full contents of the ISA Report for more detailed information if required.

It is the intention that the LTP will act as an enabler to help meet the Vision for the North East to 'champion the full potential of our region. Collaborating with our partners and local authorities, we'll create a better way of life by connecting communities, giving people the skills to succeed, and improving wellbeing for all, so that the North East is recognised as an outstanding place to live, work, visit and invest'. The vision is based on five commitments of North East CA to reflect the cross-cutting approach that will be required:

1.   A fairer North East;

2.   A greener North East;

3.   A connected North East;

4.   An international North East; and

5.   A successful North East.

The North East CA vision and commitments have been used to develop three strategic themes for transport that will ensure that transport activities contribute to the North East CA role in improving the North East's economy, skills, health, and environment. The three cross cutting themes for transport which underpin the delivery of the North East CA vision and commitments are:

Strategic Theme	LTP Requirement
A more inclusive economy	The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity.
A better environment	The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.
A healthier North East	The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.

Whilst it is important that the LTP delivers the vision for transport across the North East, it is also important that this is done is a way which protects the environment, protects the health and quality of life of the people of the North East and visitors to the region and allows as many different people from as many different areas and communities as possible, the same opportunities for accessing the facilities and services they require whilst promoting sustainable economic growth.

Therefore, the LTP has been subjected to a series of assessments that cover the topics of Sustainability and Strategic Environmental Assessment (SA/SEA), Health Impact Assessment (HIA) and Equality Impact Assessment (EqIA). In addition, consideration has been made of potential implications for rural and coastal areas. Taken together these various assessments are described as an 'Integrated Sustainability Appraisal' (ISA). It is also important to note that as there is a potential that the LTP could lead to a direct or indirect effect on sites which have been designated at the European level for nature conservation purposes (such as Special Areas of Conservation), a Habitats Regulations Assessment (HRA) was also carried out and is reported separately.

A key element of an ISA is the development of an assessment framework, against which LTP will be assessed in order to understand the sustainability performance of the plan. This framework contains a series of objectives as follows:

1.   Protect and Improve air quality

2.   Reduce the impact on environmental noise from transportation sources

3.   Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050

4.   Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding

5.   Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network

6.   Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA)

7.   Protect, enhance and promote geodiversity

8.   Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment

9.   Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity

10.   Protect and enhance the water environment

11.   Protect soil resources and avoid land contamination

12.   Promote sustainable use of resources and natural assets

13.   Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all

14.   Support the wider coordination of land use and energy planning across the North East CA area

15.   Improve health and well-being for all citizens and reduce inequalities in health (utilising the following HIA specific sub-objectives)

   □   Improve accessibility to health and leisure services and facilities and amenities for all
   □   Indirect impacts - Improve affordability of public transport

- □ Improve safety of the transport network (including roads) and reduce the number of accidents and other incidents
- □ Reduce severance
- □ Improve connections between and within communities
- □ Protect health by reducing air, noise, odour and light pollution from transport
- □ Improve access to active travel modes?
- □ Improve access to public transport

16. Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (utilising the following EqIA specific sub-objectives)

- □ Improve accessibility to services, facilities and amenities for all, in particular by 'walk, wheel or cycle' (active travel) modes
- □ Improve affordability of transport
- □ Improve safety of the transport network (including roads) and reduce the number of accidents and other incidents
- □ Improve provision of public transport in rural areas or to those areas experiencing constraint in public transport provision
- □ Reduce severance
- □ Reduce air, noise, odour and light pollution from transport

17. Promote fairness and equity in rural connectivity (utilising the following specific sub-objectives)

- □ Increase access via a range of transport modes for rural communities.
- □ Enable economic growth, and employment diversification in rural areas.
- □ Connecting people with nature

These objectives were accompanied by a series of 'Decision Aid Questions' that helped to ensure that the assessment was consistent and robust. Once the ISA Framework was identified, each element of LTP was assessed against it.

Assessment of Reasonable Alternatives

As well as understanding the sustainability performance of the LTP, it is also important to try and ascertain if implementing the plan will result in a better sustainability outcome compared to 'reasonable alternatives'. In this instance, there is an existing approach to transport planning in the North East that would continue to be implemented in the absence of the proposed LTP. As such, comparison was made of the anticipated likely outcomes of continuing with the existing 'Business as Usual' against implementing a new LTP, to see which approach would likely have the more sustainable outcome.

It was shown that implementation of the LTP represents a more favourable approach to transport planning across most ISA Objectives in comparison to continuing under the present approach. While it is to be recognised that the present approach does have some key elements, such as an active travel network in the region and provision of EV charging points, these elements of the existing transport network are not reaching full potential and there is continued challenges across a range of issues that ultimately result in poorer economic outcomes, poorer connectivity across the region, continued transport related social exclusion and poorer health outcomes. While these issues are multi-faceted and an improved transport network will not completely solve them, the intention is that the LTP will result in an

efficiently designed, simple and easy to use network with extended reach. It can be reasonably expected that this should give people a much greater opportunity to access the services and facilities that they need, as well as to grow the economy.

Compatibility between the LTP Objectives and the ISA Objectives

Early consideration of the key elements to the LTP (in particular the three cross cutting strategic themes) also showed that it could be anticipated that the LTP would be broadly compatible with the aims of the ISA and provide a firm underpinning, that will apply across the LTP and will help to ensure that the sustainability performance of the Plan could be maximised. Key elements of these strategic themes were shown to potentially develop an approach to the LTP that will include an approach to economic development and enable access and overcome inequality, protect the environment, tackle issues relating to a changing climate and help to achieve better health outcomes by encouraging active and sustainable travel. These elements were considered to be in line with the general approach to sustainability that should aim for beneficial effects in respect of economy, environment and society.

Assessment of LTP focus areas

The ISA then examined each of the following LTP focus areas in turn:

- Planning journeys/informing users/supporting customers.
- Ticketing and fares.
- Reach and resilience of infrastructure.
- Safety, especially of women and girls, and other improvements in service quality.
- Connections between different transport types.

These focus areas set out a series of standards, which it is intended will collectively make up the improved transport network and set the framework for interventions which follow in the Delivery Plan.

A common thread running through the focus areas is the overall need to encourage and facilitate a shift to more sustainable modes such as public transport (bus and rail), as well as active travel (walking and wheeling). It is also the intention to make the transport network operate as efficiently as possible. This shift in mode and increased efficiency will be enabled through a variety of mechanisms set out for each focus area such as:

- better, more up to date information that is easier to access,
- a stronger identity for and pride in the network,
- a more resilient network,
- easier, simpler and more affordable fares, better ticketing options and higher service standards,
- better integration of the transport network to make travel as seamless as possible,
- increased reach of the transport network to all areas of the region,
- increased service provision and capacity on the network,
- increased EV charging provision or use of new low or zero emission fuels,
- clear and effective ways to report crime or anti-social behaviour,
- tackling root causes of crime and anti-social behaviour and targeted actions to prevent these,
- increasing trust and perceptions of safety in the transport network,
- a focus on safety and accessibility, particularly for vulnerable users
- a joined up approach to investment and spatial planning

Each of these focus areas were assessed against the ISA Objectives using the following significance scale:

Assessment Scale	Assessment Category	Significance of Effect
+++	Major beneficial	Significant
++	Moderate beneficial	
+	Slight beneficial	Not Significant
0	Neutral or no obvious effect	
-	Slight adverse	
--	Moderate adverse	Significant
---	Major adverse	

Results of the assessment are shown below:

Focus Area		ISA Objective																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Planning journeys	++	+	++	+	+	+	0	+/-	+/-	+	+	+	++	+	++	++	+
2	Ticketing and fares	++	+	++	0	+	+	0	+	+	+	+	+	++	0	++	++	++
3	Reach and resilience	++ / --	+/-	++ / --	++	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+++	++	++	++	++
4	Safety of women and girls	++	++	++ / -	+	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	++	0	++	++	+
5	Connections between transport type	++ / -	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	++	+	++	++	++

While the focus is on sustainable modes and increased transport efficiency, the LTP does recognise that this may not be suitable for all and as such, there are elements of the LTP which still provide mechanisms for more efficient use of private vehicles

Overall, it is considered that the LTP, through shifting travellers to more sustainable and active modes, will be beneficial in respect of reducing air pollution and carbon emissions. It is also likely that noise, associated with the transport network will reduce through reduced volumes of traffic and congestion, as well as increased uptake of EVs. A reduction in disturbance and pollution emissions / deposition would also likely have slight beneficial effects on biodiversity (including those areas designated for nature conservation), the water environment, heritage assets, soils, landscape and townscape and reduce the use of hydrocarbons.

The LTP is also anticipated to result in a more robust and resilient transport network to the effects of a changing climate. As well as more proactive maintenance of drains, or fixing aspects of infrastructure, better information will allow travellers to plan more effectively, or decide not to undertake journeys in the first place. Alternative routes / travel solutions etc will also be identified.

The LTP is considered to be particularly beneficial in terms of economic growth and access to jobs. This will be realised through a focus on connectivity - locally, across the region and beyond. This increased connectivity will be in respect of both people and goods – for example, note is made of improving long distance rail links to help welcome new business and organisations to be based in the North East. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. Note is also made of enhancing links by sustainable means to new employment sites and that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education and essential services. More generally, facilitating journeys by a range of modes will make it easier for people to access employment and economic opportunities more widely across the region. This will also include better facilitation for disabled travellers – this could help to make it easier for people with disabilities to access the job market and therefore increase the workforce. Similarly, an example of the Metro serving disadvantaged areas is given and this could help people in those areas access jobs or training opportunities further afield.

In relation to health, equalities and the effect on rural or coastal communities it is anticipated that the LTP will also bring significant benefits. As noted, employment or training opportunities will increase, alongside better accessibility and connectivity and more affordable fares across the whole of the region. This can be expected to have benefits for wellbeing. Health benefits can also be anticipated from a reduction in pollution, particularly for those more vulnerable members of the community such as children, the elderly and those with certain health conditions. Increased active travel will provide opportunities for people to incorporate more activity into their daily routine, with better access to green spaces.

There will also be better designed and quieter public realm, with potentially a greater 'sense of place' and with safety (particularly for vulnerable travellers) a key focus. For example, note is made there should be wide, segregated and well maintained pedestrian infrastructure with reduced street clutter, dropped kerbs, ramp access provision and other inclusive infrastructure such as well designed crossing points and this general 'decluttering' and improvement of design will help those with visual or physical disabilities to move through the townscape. Signage, lighting and other such aspects will also improve. This will increase safety for all groups and improve wellbeing. Safety and security will be further improved through reduced potential for accidents.

There will also be clear initiatives for ensuring that people using the network have increased trust, confidence and perceptions of safety. Note is made of the need for clear and effective channels through which to report harassment and violence and a need for targeted action and resources assigned to

prevent violence and anti-social behaviour on the region's transport network. It is anticipated this will benefit all vulnerable users.

However, it is also the case that there are aspects of the LTP which not all groups may be able to take full advantage of. For example, an emphasis on active travel may not work well for the elderly, those with certain health conditions, those with young children and so on. The distances in rural areas may mean that active travel routes would be more likely to be used for recreation, rather than the full connectivity they can bring. Similarly, an emphasis on new technology to better disseminate information may not work well for all groups due to language barriers, reading ability, cost, access to technology etc.

However, the LTP recognises these challenges. For example, provision is still made for improving the network for the use of private vehicles – the elderly, or those in rural areas may still need to rely on this mode for some journeys.

It is inherent in the nature of the LTP that it will result in a series of transport infrastructure Interventions, which in some cases will require heavy civil engineering works across large areas, though it is recognised that for the most part this will be in limited areas to address specific issues such as congestion hotspots or providing connections to new developments. Nevertheless, it is in the nature of these works that there will be environmental implications in particular. For example, new infrastructure such as roads (or road widening and junction improvements), as well as interchange hubs and park & ride sites could involve a direct loss of habitat, or soils. There could also be an adverse effect on the water environment through pollution incidents during construction, or through polluted runoff during operation, and would also result in a new feature in the landscape. Increased disturbance could have adverse effects in terms of noise or the setting of heritage assets and so on.

Where it was considered that performance could be improved, a series of recommendations were made to strengthen the focus area wording in order to address those areas identified as adverse or to accentuate those areas of the LTP which have been identified as being beneficial to sustainability. These recommendations resulted in a series of amendments to the LTP which provide greater clarity on how sustainability would be considered during design, construction, maintenance and operation of any intervention / scheme. Of particular note, it is recognised that there will still be work to do in terms of ensuring adverse environmental or social effects are minimised as much as possible, while beneficial effects are maximised. To this end, North East CA have committed to working with partner organisations, including engagement with the statutory bodies of Environment Agency, Natural England and Historic England; undertaking Environmental Impact Assessment, Habitats Regulation Assessment, Health Impact Assessment and Equalities Impact Assessment, as well as the development of Carbon Management Plans and Construction Environmental Management Plans. There are also a series of more specific actions to increase resilience in the transport network and address specific environmental, health or equality related issues.

In conclusion therefore, notwithstanding that the nature of LTP will result in some adverse sustainability effects that will require mitigation, it is considered that the focus areas provide a robust base for an overall good sustainability performance.

Assessment of proposed LTP Delivery Plan

In addition to the LTP focus areas, consideration was made of the Delivery Plan. This Plan contains approximately 300 interventions across a range of intervention types. Of these, 62 have been identified as having Mayoral Commitment and 27 of those are expected to be delivered within the next 3 years. The interventions are programmed over three time periods within the LTP – delivery by 2027, delivery by 2030 and delivery by 2040.

The Interventions comprise of a mix of 'soft' measures, i.e. those which are not likely to require civil engineering or construction activities and include measures such as information provision, ticketing

options and so on. Such measures generally apply across the LTP area. Other Intervention types can be considered 'hard' in the sense that they will require civil engineering and construction activities and these would be developed in discrete locations within the LTP area.

The Intervention types assessed at a high level were:

- New infrastructure projects
- Service improvements (ticketing and fares, vehicles, stations)
- Regulation (land use, vehicle type, financial, planning policy)
- Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships[1]
- Innovation development (planning for the future, trialling ideas, working with other organisations across the North East

An overview of assessment scores for the Intervention types can be seen as follows:

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[1] The ISA combines 'Promotion and sharing information' with 'Creation of Partnerships' Intervention Types into one category owing to the overlapping characteristics of schemes supporting these respective Intervention Types and therefore similarities in respect ISA assessment.

Intervention Type	ISA Objective 1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
New Infrastructure Projects	--	++	--	++	--	++	--	++	--	++	--	++	--	0	--	+	--	+	--	+	--	+	--	+	0	++	0	++	-	++	-	++	0	++
Service improvements (ticketing and fares, vehicles, stations)	-	++	-	+	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	0	0	++	0	++	0	+
Regulation (land use, vehicle type, financial, planning policy)	0	++	0	+	0	++	0	+	0	++	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	++	-	++	-	++	0	0
Promotion and sharing information (marketing, data sharing, workplace engagement) / Creation of Partnerships	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	++	0	+	0	+	0	0
Innovation development (planning for the future, trialling ideas, working with other organisations across the North East)	0	+	0	0	0	+	0	+	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	0	0	0	0	0	+

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In addition to assessing each Intervention type, assessment was made of those Scheme which are likely to be delivered in the period up to 2027.

Bowburn Relief Road

J61 of the A1(M) is operating at capacity following the junction upgrades in 2020. Given the additional demand to be generated by Integra 61 Phase 1, this is due to increase in the future situation. There is no additional capacity on the network for future development, with transport issues preventing economic growth through restricted access to employment opportunities that could otherwise come forward locally.

During construction, significant adverse effects are anticipated towards reducing carbon emissions due to plant and machinery use, and biodiversity due to the intersection of priority habitat.

During operation, significant beneficial effects are anticipated towards promoting economic growth and improving access and connectivity, and to the support land use and energy planning due to the reduced congestion in the local area.

Blyth Relief Road

Delivery of a relief road for Blyth which will create additional radial capacity for Blyth, reducing congestion, improving bus journey time reliability, and creating the space for high quality segregated cycle corridors identified through the Local Cycling and Walking Infrastructure Plan for the town.

The scheme requires the upgrading of the existing A1061 Laverock Hall Road to provide a new 4.5km dual carriageway connection between the A189 Three Horseshoes roundabout to the A193/A1061 roundabout at South Beach. The scheme will also include a single carriageway connection between Chase Farm Drive and Ogle Drive to ensure benefits to the A193 Cowpen Road are maximised .

During construction, significant adverse scores are anticipated towards reducing carbon emissions due to plant and machinery use, and biodiversity due to the loss of priority habitat. Blyth estuary which is part of Northumberland Shore SSSI identified in proximity to the scheme provides wintering grounds for shore birds. Blyth Pier and the estuarine areas of the site are regularly supporting over 250 bird species including international and national significant redshank and golden plover .

During operation, significant beneficial effects are anticipated towards air quality and noise, reducing carbon emissions, promoting economic growth and greater access and connectivity, supporting land use and energy planning, health and wellbeing, promoting greater equality of opportunity and promoting fairness and equity in rural connectivity. This is due to the new and improved road links reducing congestion and bus journey times in the area, as well as a segregated cycle corridor promoting a shift towards active travel, improving access and connectivity to the local area and public transport.

North Shields Ferry Landing

Relocation of the Ferry landing on the north bank of the Tyne to tie in with the regeneration of the fish quay area. The scheme includes :

- new ferry landing at North Shields Fish Quay;
- pedestrian and cycle links between the ferry landing and nearby connecting bus links, and
- improved infrastructure for fishing boats that will also provide wave protection for the ferry operation.

During construction, significant adverse effects are anticipated towards reducing carbon emissions due to plant and machinery use, and historic environment due to intersected conservation area.

During operation, significant beneficial effects are anticipated towards promoting economic growth, supporting land use and energy planning, health and wellbeing, promoting greater equality and

opportunity and promoting fairness and equity in rural connectivity. This is due to the provision of pedestrian and cycle link improving access and connectivity to connecting bus links, promoting a shift to more active travel and public transport.

Mitigation

As part of the ISA assessment process, a series of mitigation measures/approaches have been identified and recommendations made as set out below.

Approach to mitigation	How has this been incorporated into the LTP?
Refining the LTP in order to better reflect the ISA Objectives and improve the likelihood of positive effects and to minimise adverse effects	Assessment was made of a draft LTP and recommendations were made in relation to clarifying and bolstering aspects of sustainability. Ongoing iterative discussion also took place with the Plan making team. New elements relating to Sustainability was added to the LTP Delivery Plan and this sets out approaches to addressing sustainability issues going forward. Of particular note, clear commitment is made to undertaking as required, Health Impact Assessment, Equalities Impact Assessment, Habitats Regulation Assessment and Environmental Impact Assessment. Carbon Management Plans will also be prepared. During construction phase, a Construction Environmental Management Plan will also be developed as required. The focus areas for delivering the LTP also include many aspects of sustainability and clear linkages can be made to the ISA Objectives.
Refining Interventions / Measures in order to improve the likelihood of positive effects and to minimise adverse effects	High level interventions have been set out at this stage of LTP development and have been assessed in the ISA, with appropriate mitigation considered – see Chapter 12. The detailed mitigation for each intervention and how it will be applied will be clarified through further work that is yet to take place. Note that LTP sets out clear commitments by North East CA to undertake the required assessments at appropriate stages and this will inform consideration of mitigation through the design and planning phases.
Technical measures (such as requiring adherence to appropriate guidelines) to be applied during the implementation phase	Clear commitment is made within LTP and its associated Delivery Plan to undertake the required assessments at appropriate stages as set out above. This will require adherence to guidance etc as required. For example, clear reference is made within LTP that North East Combined Authority will ensure to use the latest inclusive design standards across the transport network for any new or improved infrastructure.
Identifying issues to be addressed in Scheme / Intervention assessment (i.e. at Project level), including but not limited to WebTAG, Environmental Impact Assessment and the development of Environmental Management Plans, for	The LTP clearly sets out a process of how environmental issues will be considered in future scheme development. LTP sets out that dependent on the scheme, assessment will include as required, Health Impact Assessment, Equalities Impact Assessment, Habitats Regulation Assessment and Environmental Impact Assessment. Where these statutory assessments are undertaken, they will be guided by the HM Treasury Green Book and DfT Transport Appraisal Guidance (or equivalents prevailing at the time) throughout the life of LTP.

Note typical specific mitigation that may arise from interventions promoted under respective Intervention Types have been outlined in Table 12-2. |

Approach to mitigation	How has this been incorporated into the LTP?
certain projects types of project	
Proposals for changing other plans and programmes	No proposals have been made to change other plans and programmes as the LTP will act in accordance with a range of other Plans and Programmes e.g. local development plans and there are clear commitments made within the LTP to work closely with partner organisations, including the relevant Local Authorities in the North East, to ensure that consideration of sustainability, including health and equality, is made at the earliest possible planning stage for schemes. This is in line with the North East CA Vision to 'collaborate with our partners and local authorities… create a better way of life by connecting communities, giving people the skills to succeed, and improving wellbeing for all…'
Contingency arrangements for dealing with possible adverse effects	The ISA has proposed a series of monitoring indicators. It is anticipated that the monitoring programme will cover significant social, environmental and economic effects and which will involve measuring indicators that will enable the establishment of a causal link between the implementation of the LTP and the likely significant effects (both positive and negative) being monitored. This will allow identification at an early stage of unforeseen adverse effects and allow appropriate remedial action to be undertaken.

Note is also made that North East CA has a statutory duty to monitor the performance of the LTP and its Delivery Plan against their strategic objectives and policies. Feedback from the monitoring process allows the Delivery Plan to be adjusted according to the actual performance against objectives. As noted in the LTP, this monitoring and evaluation will take place on a yearly basis and be publicly accessible via the North East CA website. This provides a level of accountability, informs whether strategies and policies are working, and highlights if KPIs are moving in the desired direction. |

In addition, typical mitigation that may apply to interventions promoted under respective Intervention Types have been outlined for information. Note that mitigation for individual schemes would be developed further and expanded upon as part of the planning and design process and would be informed by any additional assessment such as EIA, HIA, HRA, EqIA and so on. The mitigation would then be detailed in a Construction Environmental Management Plan that would be enacted during the construction phase. North East CA have set out a commitment within the Delivery Plan to ensure that such further assessment is undertaken.

Cumulative, synergistic and indirect effects

There is also a requirement to consider cumulative, synergistic and indirect effects of the LTP as a result of the joint implementation of all elements of the Plan. Secondary and indirect effects are effects that are not a direct result of the plan but occur away from the original effect or as the result of a complex pathway. Cumulative effects arise where several proposals individually may or may not have significant effects but in-combination have a significant effect due to being located in the same area or being developed at the same time. Synergistic effects are when two or more effects act together to create effects greater than the simple sum of the effects acting alone.

Effects were considered in relation to those which will be just a result of LTP ('In-Plan' effects) and those which would be a result of interaction with other plans and projects.

Monitoring

It is important that North East CA understands the effects of implementing the LTP and the ISA therefore outlined a potential series of monitoring indicators that will be considered and finalised alongside final development of the LTP.

Monitoring can be integral to compiling baseline information for future plans and programmes (or in this instance to future iterations of the LTP or to help inform decision making in terms of the LTP Delivery Plan), as well as to preparing information which will be needed for further assessment such as EIA's, HRA's, HIA's, EqIA's etc. of projects. As such, it is the intention that this ISA monitoring will complement the monitoring plan set out in the LTP (see section on Measuring success / key performance indicators). Monitoring and evaluation of progress towards objectives and targets can form a crucial part of the feedback mechanism. Feedback from the monitoring process helps to provide more relevant information that can be used to pinpoint specific performance issues and significant effects, and ultimately lead to more informed decision-making. Note that any further assessment process such as EIA may also identify further monitoring that may be important to undertake at an appropriate time.

It is to be further noted that monitoring does not necessarily need to be undertaken by the responsible authority, rather information used in monitoring can be provided by other bodies. Indeed, due to typical budgetary or resource issues, it is often considered that the most effective monitoring programme utilises information that is already being collected, either by the responsible authority itself or by other bodies with whom information can be shared, rather than proposing the collection of new datasets. The LTP recognises this and notes that North East CA will monitor their KPI's by continuing to collaborate and effectively share data with both regional and national organisations. These include but are not limited to:

- Nexus
- The Transport Accident and Data Unit (TADU)
- Our two Urban Traffic Management Control Centres (UTMCs)
- Transport for the North
- Central Government Sources:
- Department for Transport
- The Department for Energy Security and Net Zero
- The Office of National Statistics
- UK Health Security Agency
- Office for Health Improvement and Disparities
- Government Office for Science
- Public Transport Operators

Next steps

This ISA Report is being published for formal consultation with the Draft LTP. The results of the formal public consultation exercise may well result in changes to the Draft LTP and these may have implications for the ISA results. In addition, the consultation exercise may result in direct changes to the contents of the ISA Report. These will be reported in the next stage of development of the LTP and ISA following adoption of the plan.

Summary and Conclusions

North East CA have developed a new LTP to set out the aspirations for the region's transport network up to 2040. It is the intention that this will result in a green, integrated transport network that works for all. North East CA believe this will make sustainable travel options more attractive, convenient, and safer, enabling more people and freight to make greener journeys.

In order to assess the sustainability performance of the LTP, an ISA has been carried out during its development. This ISA process has been thorough and comprehensive, with iterations of the LTP being subject to review by an experienced ISA team who are independent of the plan making team. Close liaison between the ISA team and the Plan making team (North East CA) has taken place throughout this process. It is considered that this approach resulted in an enhanced and more robust incorporation of sustainability considerations to the LTP, in terms of policy approach but also particularly in terms of clarity of actions to be taken as any intervention (scheme) derived from the LTP will be developed.

Based on the findings of the ISA, it is possible to draw a number of key conclusions with regards to the LTP and its implications for sustainability.

In the first instance, it was shown that implementation of LTP represents a more favourable approach to transport planning across most ISA Objectives in comparison to continuing under the present approach. While it is to be recognised that the present approach does have some key elements, such as an active travel network in the region and provision of EV charging points, these elements of the existing transport network are not reaching full potential and there is continued challenges across a range of issues that ultimately result in poorer economic outcomes, poorer connectivity across the region, continued transport related social exclusion and poorer health outcomes. While these issues are multi-faceted and an improved transport network will not completely solve them, the intention is that LTP will result in an efficiently designed, simple and easy to use network with extended reach. It can be reasonably expected that this should give people a much greater opportunity to access the services and facilities that they need, as well as to grow the economy.

Early consideration of the key elements to the LTP (in particular the three cross cutting strategic themes) also showed that it could be anticipated that the LTP would be broadly compatible with the aims of the ISA and provide a firm underpinning, that will apply across the LTP and will help to ensure that the sustainability performance of the Plan could be maximised. Key elements of these strategic themes were shown to potentially develop an approach to the LTP that will include an approach to economic development and enable access and overcome inequality, protect the environment, tackle issues relating to a changing climate and help to achieve better health outcomes by encouraging active and sustainable travel. These elements were considered to be in line with the general approach to sustainability that should aim for beneficial effects in respect of economy, environment and society.

The ISA then examined each of the following LTP focus areas in turn:

- Planning journeys/informing users/supporting customers.
- Ticketing and fares.
- Reach and resilience of infrastructure.
- Safety, especially of women and girls, and other improvements in service quality.
- Connections between different transport types.

These focus areas set out a series of standards, which it is intended will collectively make up the improved transport network and set the framework for interventions which follow in the Delivery Plan.

A common thread running through the focus areas is the overall need to encourage and facilitate a shift to more sustainable modes such as public transport (bus and rail), as well as active travel (walking and

wheeling). It is also the intention to make the transport network operate as efficiently as possible. This shift in mode and increased efficiency will be enabled through a variety of mechanisms set out for each focus area such as:

- better, more up to date information that is easier to access,
- a stronger identity for and pride in the network,
- a more resilient network,
- easier, simpler and more affordable fares, better ticketing options and higher service standards,
- better integration of the transport network to make travel as seamless as possible,
- increased reach of the transport network to all areas of the region,
- increased service provision and capacity on the network,
- increased EV charging provision or use of new low or zero emission fuels,
- clear and effective ways to report crime or anti-social behaviour,
- tackling root causes of crime and anti-social behaviour and targeted actions to prevent these,
- increasing trust and perceptions of safety in the transport network,
- a focus on safety and accessibility, particularly for vulnerable users
- a joined up approach to investment and spatial planning

While the focus is on sustainable modes and increased transport efficiency, the LTP does recognise that this may not be suitable for all and as such, there are elements of the LTP which still provide mechanisms for more efficient use of private vehicles

Overall, it is considered that the LTP, through shifting travellers to more sustainable and active modes, will be beneficial in respect of reducing air pollution and carbon emissions. It is also likely that noise, associated with the transport network will reduce through reduced volumes of traffic and congestion, as well as increased uptake of EVs. A reduction in disturbance and pollution emissions / deposition would also likely have slight beneficial effects on biodiversity (including those areas designated for nature conservation), the water environment, heritage assets, soils, landscape and townscape and reduce the use of hydrocarbons.

The LTP is also anticipated to result in a more robust and resilient transport network to the effects of a changing climate. As well as more proactive maintenance of drains, or fixing aspects of infrastructure, better information will allow travellers to plan more effectively, or decide not to undertake journeys in the first place. Alternative routes / travel solutions etc will also be identified.

The LTP is considered to be particularly beneficial in terms of economic growth and access to jobs. This will be realised through a focus on connectivity - locally, across the region and beyond. This increased connectivity will be in respect of both people and goods – for example, note is made of improving long distance rail links to help welcome new business and organisations to be based in the North East. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. Note is also made of enhancing links by sustainable means to new employment sites and that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education and essential services. More generally, facilitating journeys by a range of modes will make it easier for people to access employment and economic opportunities more widely across the region. This will also include better facilitation for disabled travellers – this could help to make it easier for people with disabilities to access the job market and therefore increase the workforce. Similarly, an example of the Metro serving

disadvantaged areas is given and this could help people in those areas access jobs or training opportunities further afield.

In relation to health, equalities and the effect on rural or coastal communities it is anticipated that the LTP will also bring significant benefits. As noted, employment or training opportunities will increase, alongside better accessibility and connectivity and more affordable fares across the whole of the region. This can be expected to have benefits for wellbeing. Health benefits can also be anticipated from a reduction in pollution, particularly for those more vulnerable members of the community such as children, the elderly and those with certain health conditions. Increased active travel will provide opportunities for people to incorporate more activity into their daily routine, with better access to green spaces.

There will also be better designed and quieter public realm, with potentially a greater 'sense of place' and with safety (particularly for vulnerable travellers) a key focus. For example, note is made there should be wide, segregated and well maintained pedestrian infrastructure with reduced street clutter, dropped kerbs, ramp access provision and other inclusive infrastructure such as well designed crossing points and this general 'decluttering' and improvement of design will help those with visual or physical disabilities to move through the townscape. Signage, lighting and other such aspects will also improve. This will increase safety for all groups and improve wellbeing. Safety and security will be further improved through reduced potential for accidents.

There will also be clear initiatives for ensuring that people using the network have increased trust, confidence and perceptions of safety. Note is made of the need for clear and effective channels through which to report harassment and violence and a need for targeted action and resources assigned to prevent violence and anti-social behaviour on the region's transport network. It is anticipated this will benefit all vulnerable users.

However, it is also the case that there are aspects of the LTP which not all groups may be able to take full advantage of. For example, an emphasis on active travel may not work well for the elderly, those with certain health conditions, those with young children and so on. The distances in rural areas may mean that active travel routes would be more likely to be used for recreation, rather than the full connectivity they can bring. Similarly, an emphasis on new technology to better disseminate information may not work well for all groups due to language barriers, reading ability, cost, access to technology etc.

However, the LTP recognises these challenges. For example, provision is still made for improving the network for the use of private vehicles – the elderly, or those in rural areas may still need to rely on this mode for some journeys.

It is inherent in the nature of the LTP that it will result in a series of transport infrastructure Interventions, which in some cases will require heavy civil engineering works across large areas, though it is recognised that for the most part this will be in limited areas to address specific issues such as congestion hotspots or providing connections to new developments. Nevertheless, it is in the nature of these works that there will be environmental implications in particular. For example, new infrastructure such as roads (or road widening and junction improvements), as well as interchange hubs and park & ride sites could involve a direct loss of habitat, or soils. There could also be an adverse effect on the water environment through pollution incidents during construction, or through polluted runoff during operation, and would also result in a new feature in the landscape. Increased disturbance could have adverse effects in terms of noise or the setting of heritage assets and so on.

Where it was considered that performance could be improved, a series of recommendations were made to strengthen the focus area wording in order to address those areas identified as adverse or to accentuate those areas of the LTP which have been identified as being beneficial to sustainability. These recommendations resulted in a series of amendments to the LTP which provide greater clarity on how sustainability would be considered during design, construction, maintenance and operation of any

intervention / scheme. Of particular note, it is recognised that there will still be work to do in terms of ensuring adverse environmental or social effects are minimised as much as possible, while beneficial effects are maximised. To this end, North East CA have committed to working with partner organisations, including engagement with the statutory bodies of Environment Agency, Natural England and Historic England; undertaking Environmental Impact Assessment, Habitats Regulation Assessment, Health Impact Assessment and Equalities Impact Assessment, as well as the development of Carbon Management Plans and Construction Environmental Management Plans. There are also a series of more specific actions to increase resilience in the transport network and address specific environmental, health or equality related issues.

It is also the case that a series of mitigation measures for different intervention types have been identified through this ISA. At a strategic level, this included refining the LTP itself, refining aspects of the Interventions and noting specific mitigation, ensuring adherence to technical measures, addressing the need for further assessment, working with partner organisations, as well as contingency arrangements for dealing with possible adverse effects.

It is recognised that LTP will not act or be delivered in isolation and will influence and be influenced by, other Plans and Policies or developments across and beyond the North East. It is anticipated that the LTP will act to benefit those other Plans and Policies, though there is a potential for some adverse effects. Nevertheless, it is considered that the LTP sets out an approach to further assessment that will address any cumulative effects arising.

It is important that North East CA understand the effect of the implementation of their LTP and the ISA set out a potential series of monitoring indicators that will be considered and finalised alongside development of the Delivery Plan. These will also complement those KPIs which North East have identified in the LTP for measurement. It is the intention that monitoring will cover social, environmental and economic effects and it will involve measuring indicators that will enable the establishment of a causal link between the implementation of the LTP and the likely effects (both positive and negative) being monitored. This will be of particular benefit to those involved with the next iteration of the LTP and if required, will allow early remediation to be undertaken of any identified adverse effects.

Overall, it is considered that the LTP represents a well-balanced approach in terms of sustainability performance across the full range of potential key effects delineated in the ISA Framework. It is anticipated that this should help ensure that the need for a connected North East, as set out in relation to the vision for the North East can be achieved in a sustainable and integrated fashion.

1.   Introduction

1.1   Purpose of this document

This is the Integrated Sustainability Appraisal (ISA) Report of the North East Local Transport Plan (LTP), which has been prepared by AtkinsRéalis Limited on behalf of North East Combined Authority in respect of fulfilling the requirements of Sustainability Appraisal / Strategic Environmental Assessment (SA/SEA), Health Impact Assessment (HIA), Equality Impact Assessment (EqIA) and Community Safety Assessment (CSA). In addition, Habitats Regulation Assessment (HRA) has been undertaken as a parallel process to the ISA and is reported separately. The ISA Report identifies the likely sustainability effects of implementing the LTP and reports on the process of developing the LTP from a sustainability perspective. An overview of the LTP is presented in the following section.

1.2   The background and need for LTP

The North East CA has a successful legacy and track record of delivery established through effective partnership working between the region's Local Authorities. Prior to the formation of the North East CA, the North East Joint Transport Committee (JTC) co-ordinated the North East's transport policies, funding and delivery on behalf of the two combined authorities that preceded the North East Combined Authority (North East CA). The North East Transport plan (2021-2035), developed by North East CA, is the current adopted Transport Plan for transport this was inherited by the North East CA. The plan sets out the region's transport aspirations up to 2035. It included a programme of around 240 schemes which equal at least £6.8 billion of transport investment.

Following a devolution deal for the North East in December 2022, the roles and responsibilities of the North east Joint Transport Committee were merged into the new North East Combined Authority (North East CA). North East CA was formed on 7 May 2024 and is led by an Elected Mayor and Cabinet. The combined authority covers the seven local authority areas of County Durham, Gateshead, Newcastle, North Tyneside, Northumberland, South Tyneside, Sunderland, and the Northumberland National Park authority, with a total population of just over 2 million.

The North East Devolution Deal gives the Combined Authority powers, specific to transport including: "the ability to introduce bus franchising, control appropriate local transport functions e.g., local transport plans, and the control of a key route network".

North East CA are developing a new statutory Local Transport Plan to reflect the region's transport priorities and setting out the approach to achieve a green, integrated transport network that works for all with a timeline and plan for delivery up to 2040. This involves creating a green, integrated transport network that works for all. North East CA believe this will make sustainable travel options more attractive, convenient, and safer, enabling more people and freight to make greener journeys.

North East CA's vision is to 'champion the full potential of our region. Collaborating with our partners and local authorities, we'll create a better way of life by connecting communities, giving people the skills to succeed, and improving wellbeing for all, so that the North East is recognised as an outstanding place to live, work, visit and invest'.

The vision is based on five commitments of North East CA to reflect the cross-cutting approach that will be required:

1.   A fairer North East;

2.   A greener North East;

3.   A connected North East;

4.   An international North East; and

5.   A successful North East.

Transport will act as an enabler to help meet the vision and each of the five North East CA commitments. The North East CA vision and commitments have been used to develop three strategic themes for transport that will ensure that transport activities contribute to the North East CA role in improving the North East's economy, skills, health, and environment. The three cross cutting themes for transport which underpin the delivery of the North East CA vision and commitment are set out in Table 2-1 and presented in Figure 2-1.

Table 2-1 - North East CA Themes

Strategic Theme	LTP Requirement
A more inclusive economy	The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity.
A better environment	The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.
A healthier North East	The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.

Figure 2-1 – North East CA vision and commitments linkages with strategic themes for transport
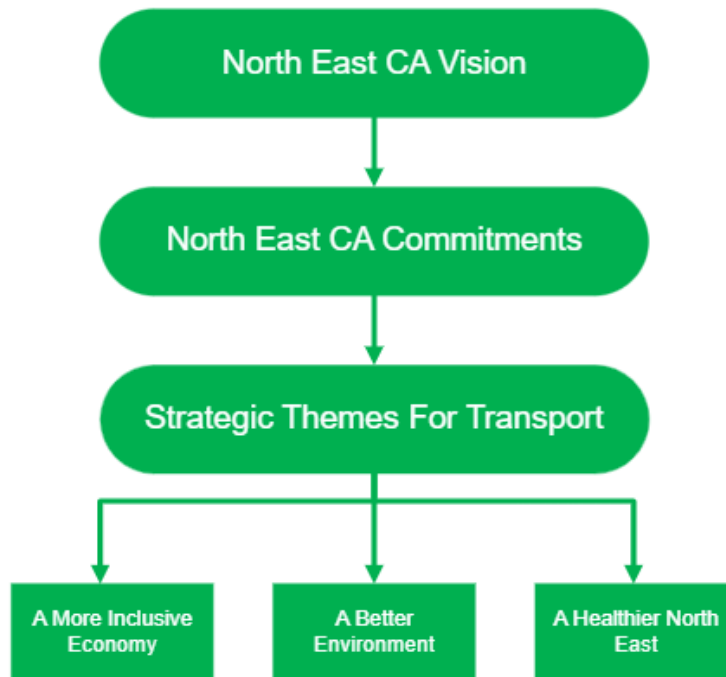
There are a range of challenges in the North East (as with elsewhere in the United Kingdom) brought about by significant environmental and societal changes. It is the intention that the implementation and delivery of policies and schemes in the LTP will contribute to tackling these challenges currently facing the North East. A summary of the challenges can be broadly considered to be:

- Car and van journeys made up 58% of all journeys made in 2022 and car ownership in the North East is increasing.
- Public transport use is falling over the long-term. Since 2014, Bus and Metro passenger journeys per head and vehicle miles have both decreased.
- 31% of residents in the North East (622,000 people) are at risk of transport related social exclusion (TRSE).
- A range of transport issues has led to a contrast between rural isolation in our more remote areas and poor air quality and congestion in parts of our towns and cities.
- Commuting to workplaces is dominated by car travel, so congestion is a significant issue on our roads, which affects public transport access and attractiveness, reduces productivity, and increases inactivity and vehicle emissions.
- Transport contributes a significant proportion of carbon emissions. Approximately 97% of transport generated greenhouse gas emissions in the region are from roads, with A-roads being the greatest contributor.
- In 2022, only 36% of journeys to school (5–16-year-olds) were made by active travel, the second lowest percentage of any region in England.

As such, the update of LTP shows an ongoing commitment from the North East CA to take action to deliver wide-ranging improvements for cleaner, healthier and safer transport across the region.

The LTP will consist of an overarching Strategic (LTP) document which provides the overall context, purpose and direction of the plan and is accompanied by a Delivery Plan which will articulate LTP interventions to be tested by evidence from an Integrated Sustainability Appraisal (ISA).

2. Approach to the ISA

2.1 Introduction

The National Planning Policy Framework (NPPF) identifies three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for transport plans such as the NE LTP to perform a number of roles (adapted from the NPPF):

- **economic role** - contributing to building a strong, responsive and competitive economy, by ensuring that the right type of transport is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
- **social role** - supporting strong, vibrant and healthy communities, by providing the transport required to meet the needs of present and future generations; and by creating a high quality transport system, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and
- **environmental role** - contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

The ISA is aimed at ensuring the early integration of sustainability considerations into the development of the LTP. As such it will be an iterative assessment process informing the LTP as it develops, to ensure that potential significant effects arising from the LTP are identified, assessed, mitigated and communicated to plan-makers.

It is also a fundamental requirement that the ISA ensures the North East CA meet all legislative requirements, to address:

- Strategic Environmental Assessment (SEA) in accordance with the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/ 1633, "2004 Regulations" as amended).
- Habitats Regulation Assessment (HRA) required under Regulation 63 (and Regulation 105 with respect to land use plans) of The Conservation of Habitats and Species Regulations 2017 (as amended) (SI No. 2017/1012)s .
- Equality Impact Assessment (EqIA), as required by section 149 of the Equality Act 2010, as amended.
- Health Impact Assessment - while there is no statutory requirement, it is considered good practice and in keeping with promoting healthy and safe communities as per the National Planning Policy Framework.
- Rural Proofing Assessment - while there is no statutory requirement, it is considered good practice and in keeping with promoting fair and equitable policy outcomes in rural areas.

The ISA will be an iterative assessment process informing the LTP as it develops, to ensure that potential significant effects arising from the LTP are identified, assessed, mitigation opportunities identified and communicated to plan-makers.

2.2 Sustainability Appraisal / Strategic Environmental Assessment

Due to the potential for the LTP to lead to schemes which will require an Environmental Impact Assessment, it is a statutory requirement that SEA is undertaken under the European Directive 2001/42/EC 'on the assessment of certain plans and programmes on the environment' (the 'SEA Directive'). The SEA Directive came into force in the UK through the Environmental Assessment of Plans and Programmes Regulations 2004 (the "SEA Regulations"). While the United Kingdom has now left the EU, the SEA Regulations still apply to a wide range of plans and programmes, including transport plans, and modifications to them.

The overarching objective of the SEA Directive 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… with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans… which are likely to have significant effects on the environment.*" (Article 1)

The main requirements introduced by the SEA Regulations are that:

- The findings of the SEA are published in an Environmental Report (ER), which sets out the significant effects of the draft plan.
- Consultation is undertaken on the plan and the ER.
- The results of consultation are taken into account in decision-making relating to the adoption of the plan.
- Information on how the results of the SEA have been taken into account is made available to the public.

Although the requirements to carry out SA and SEA are distinct, DCLG (Department for Communities and Local Government, proposed that both can be satisfied through a single appraisal process. It has produced guidance (see Chapter 4 Methodology) to ensure SAs meet the requirements of the SEA Directive whilst widening the Directive's approach to include economic and social issues as well as environmental ones.

In this ISA process, the ISA Report incorporates the SEA requirement for an Environmental Report.

2.3 Health Impact Assessment

While there is no statutory requirement to undertake an HIA in relation to the LTP, it was recognised that it provides a useful way to support efforts to improve health of individuals and communities and help address health inequalities. In short, it was recognised that the LTP policies and proposals have the potential to impact on factors influencing the health of communities and individuals such as noise and air quality, access to key services and facilities, as well as the design of transport infrastructure. Undertaking an HIA ensured that potential impacts of the LTP on health and health inequalities have been considered as advised in National Planning Policy Framework (NPPF).

The incorporation of HIA is also in keeping with good practice. It is also the case that the Department for Transport (DfT) Transport Analysis guidance indicates that consideration of 'Human Health' is a legal requirement in a SEA and that an HIA is an integral part of an SEA to identify and inform health issues in Plans.

2.4 Equality Impact Assessment

An EqIA has been undertaken as it fulfils the statutory duties of public bodies to ensure the promotion of equalities under the Equality Act 2010 and subsequent Public Sector Equality Duty.

The purpose of an EqIA is to ensure plans and programmes do not discriminate against any individual or community and where possible promotes equality. An EqIA considers impacts on a variety of groups, mainly focussing upon the 'protected characteristic groups' (PCGs) established under the Act, namely:

- **Age –** this refers to persons defined by either a particular age or a range of ages;
- **Disability –** a disabled person is defined as someone who has a physical or mental impairment that has a substantial and long-term adverse effect on his or her ability to carry out day-to-day activities;
- **Gender -** an individual's actual or perceived sex, gender identity, self-image, appearance, behaviour, or expression, whether or not that gender identity, self-image, appearance, behaviour or expression is different from that traditionally associated with the sex assigned at birth;
- **Gender reassignment -** this refers to people who are proposing to undergo, are undergoing, or have undergone a process for the purpose of reassigning their gender identity;
- **Marriage -** marriage can be between a man and a woman or between two people of the same sex;
- **Civil Partnership -** Civil partnership can be between a man and a woman or between two people of the same sex. Civil partners must not be treated less favourably than married couples;
- **Pregnancy and maternity -** pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth;
- **Religion or belief -** religion means any religion a person follows. Belief means any religious or philosophical belief, and includes those people who have no formal religion or belief;
- **Race -** the Equality Act 2010 defines race as encompassing colour, nationality (including citizenship) and ethnic or national origins; and
- **Sexual Orientation -** a person's sexual orientation relates to their emotional, physical and/or sexual attraction and the expression of that attraction.

The Act also makes explicit the concept of 'dual discrimination', where someone may be discriminated against or treated unfairly on the basis of a combination of two of the protected characteristics.

DfT Transport Analysis guidance 2009 requires an evidence-led EqIA to be completed to help inform the development of the transport plan, ensuring it addresses any equality issues identified and takes account any impacts the plan may have on the local communities. Although not defined in the Equality Act, it is also the case that the issue of 'low income' and the implications of this were considered in the assessment.

The EqIA process is fully reported in this ISA Report.

2.5   Rural Proofing Assessment

In addition to the above assessments this appraisal will also look to 'rural proof' the NE LTP. The official Rural-Urban Classification for England defines settlements with populations of 10,000 or more as 'urban', and 'rural' areas as everywhere else. This definition covers everything from rural towns (including those that are located near large urban centres, and which are primarily commuter towns, as well as traditional market towns that still serve as an important hub for the wider area), to villages, hamlets and isolated dwellings; it also covers all types of open countryside.

Rural proofing recognises that rural areas have some significant barriers to economic growth and quality of life improvements which urban areas do not have. These barriers may, for example, include a lack of access to goods and services, more limited public transport services, or fuel poverty exacerbated by more costly fuels. This is particularly relevant for the North East CA area as there are extensive rural areas, mainly in Durham and Northumberland.

Government guidance states that the aim of rural proofing is to: "Make sure that the needs and interests of rural people, communities and businesses in England are properly considered". This ensures that the action required to ensure fair outcomes from policy/plan delivery across rural and urban areas is determined and addressed in the plan/policy making process.

2.6   Reporting and Consultation as part of the ISA process

Key consultation requirements are those set in the SEA Regulations which identify three organisations (in England) to act as statutory consultation authorities in the SEA process: Environment Agency, Natural England (formerly English Nature and the Countryside Agency) and Historic England.

Two consultation periods involving the statutory consultation authorities and, in the latter period, the public are also set in the SEA Regulations. The consultation periods relate to:

- Scoping. The responsible authority is required to send details of the plan or programme to each consultation authority so that they may form a view on the scope, level of detail and appropriate consultation period of the Environmental Report. The consultation authorities are required to give their views within five weeks.
- The Environmental Report. The responsible authority is required to invite the consultation authorities and the public to express their opinions on the Environmental Report and the plan or programme to which it relates.

The responses from this consultation have been used to inform the ISA and have helped refine the LTP.

Key reporting requirements are those set by the SEA Directive and SEA Regulations:

'An Environmental Report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.'

As already indicated, the SEA Report has been integrated in this ISA Report. Table 2-2**Error! Reference source not found.** sets out the way the specific SEA requirements have been met in this report.

Table 2-1 - Schedule of SEA Requirements

	Information to be included in the Environmental Report under the SEA Regulations (Regulation 12 and Schedule 2)	Where covered in the ISA Report
1.	An outline of the contents, main objectives of the plan, and of its relationship with other relevant plans and programmes	Chapter 1 and 5
2.	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan;	Chapter 6 and 8
3.	The environmental characteristics of areas likely to be significantly affected	Chapter 6 and Appendix C & D
4.	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Chapter 6 and Appendix C & D
5.	The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation	Chapter 5 and Appendix B
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 such as: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage including architectural and archaeological heritage; landscape; the interrelationship between the above factors	Chapters 9 to 11 & 13
7.	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan	Chapter 12
8.	An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter 8
9.	A description of measures envisaged concerning monitoring in accordance with Regulation 17	Chapter 14
10.	A non-technical summary of the information provided under paragraphs 1 to 9	Non-Technical Summary

The ISA Report is thus an important consultation document and likely to be of interest to a wide variety of readers including decision makers, other plan/programme practitioners, statutory consultees, NGOs and members of the public. It accompanies the draft LTP on public consultation.

2.7   Habitat Regulation Assessment

Habitats Regulation Assessment (HRA) is required by Regulation 63 of The Conservation Habitats and Species Regulations 2017 (as amended)[2] (the 'Habitats Regulations') for all plans and projects which may have likely significant effects on a European site and are not directly connected with or necessary to the management of the European site. Regulation 105 of the Habitats Regulations relates specifically to land use plans and requires the plan-making authority to make an appropriate assessment of the implications for European sites, before the plan is given effect. The NE LTP itself is not directly connected with, or necessary to, the nature conservation management of any European sites.

European Sites refer to sites protected in the UK under the Habitats Regulations. These include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), originally created under the European Commission Birds Directive and Habitats Directive, respectively. In addition, in accordance with UK policy[3], listed and proposed Wetlands of International Importance are included, which form part of a global network of protected sites created under the Ramsar Convention (also referred to as Ramsar sites), as well as sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential SPAs, possible SACs and listed or proposed Ramsar sites[4]. All of the above sites will be referred to as 'international sites'.

The stages of the HRA process are:

- Stage 1 - Screening: To assess whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect on a European Site.
- Stage 2 - Appropriate Assessment: To determine whether, in view of a European Site's conservation objectives, the project or plan (either alone or in combination with other projects and plans) would have an adverse effect (or risk of this) on the integrity of the site with respect to the conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed.
- Stage 3 - Derogations (allow exceptions): Where a project or plan is assessed as having an adverse residual impact (or risk of this) on the integrity of a European Site, it may qualify for a derogation. Three legal tests must be applied in the following order:
  1. There are no feasible alternative solutions that would be less damaging or avoid damage to the site.
  2. The proposal needs to be carried out for imperative reasons of overriding public interest.
  3. The necessary compensatory measures can be secured.

It is normal to identify international sites within a plan area, up to 15 km from the plan area and up to 30 km for SACs with bats as a qualifying feature, to capture all possible effects from implementation of the plan. The international sites identified in the search areas are detailed in Table 2-3 below. This includes 18 SACs, eight SPAs and five Ramsar sites within the NE LTP area.

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[2] SI No. 2017/1012. Includes amendment by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).

[3] Ministry of Housing, Communities & Local Government (2023) National Planning Policy Framework. Paragraph 187.

[4] SCIs are sites that were adopted by the European Commission before the end of the Transition Period following the UK's exit from the EU, but not yet formally designated by the government of each country. There is one SCI in the UK, located in Scotland.

Table 2-2 - International Sites for Nature Conservation within and adjacent to the Plan area

Location	SAC	SPA	Ramsar sites
Within the LTP Area	There is 18 SAC Sites in the North East CA Area: • North Pennine Moors; • Moor House-Upper Teesdale; • North Pennine Dales Meadows; • River Eden • River Tweed • Border Mires, Kielder Butterburn; • North Northumberland Dunes; • Durham Coast; • Ford Moss; • Newham Fen; • Thrislington; • Harbottle Moors; • Simonside Hills; • Tweed Estuary; • Roman Wall Loughs; • Castle Eden Dene; • Berwickshire and North Northumberland Coast; • Tyne and Allen River Gravels.	There is 8 SPA Sites in the North East CA Area: • Northumberland Marine; • Holburn Lake and Moss; • Lindisfarne • Northumbria Coast • Coquet Island • Farne Islands • North Pennine Moors.	There is 5 Ramsar Sites in the North East CA Area: • Holburn Lake and Moss; • Lindisfarne; • Northumbria Coast; • Irthinghead Mires.
Within 15km of the LTP Area	There are 4 SAC within 15km of the North East CA Area: • Bolton Fell Moss; • Tyne and Nent; • Walton Moss.	There is one SPA within 15km of the North East CA Area: • Teesmouth and Cleveland Coast.	There is one Ramsar sites within 15km of the North East CA Area: • Teesmouth and Cleveland Coast
Within 30km of the LTP Area for bat SACs	There are no SACs within 30km of the North East CA Area with bats as a qualifying feature.	N/A	N/A

As noted, HRA is a parallel and separate process to ISA and informs the ISA regarding effects on international sites. The HRA of the LTP is being undertaken separately from the ISA and the key output will be the HRA Stage 1 Screening Report. It is important to note that if the HRA Screening Report determines that there is likely to be a significant effect on international sites, then it will be necessary to undertake a Stage 2 Appropriate Assessment (as required by the Habitats Regulations), which will examine the impacts of the LTP against the conservation objectives of the international sites.

3. Scope of the ISA

3.1 Geographical and temporal scope of LTP

The North East LTP covers a large and diverse region, with a wide range of transport challenges. These regional challenges sit within diverse environmental and socio-economic settings.

The plan area is made up of two county unitary authorities (Durham and Northumberland) and five metropolitan boroughs (Gateshead, Newcastle, North Tyneside, South Tyneside and Sunderland). The Location Map in Appendix D provides the location of the plan area and the local authorities contained within.

In addition, Northumberland National Park authority is contained within the Plan area, with a remit to conserve and enhance the natural beauty, wildlife and cultural heritage of the Northumberland uplands – 405 square miles of hills and valleys stretching from Hadrian's Wall northwards to the Cheviot Hills on the border with Scotland. Figure 3-1 below further provides an overview of the North East CA region and location of National Park within it.

A separate devolved region comprising five councils, the Tees Valley, borders the south of the combined authority's devolved region.

It is also important to recognise that the implementation of the LTP may also have effects outside of the North East CA area. The Local Authorities adjacent to the North East CA region are as follows:

- Scottish Borders
- Cumberland
- Westmorland and Furness
- North Yorkshire
- Darlington Stockton on Tees
- Hartlepool

Figure 3-1 – North East Combined Authority Area

3.2   Technical scope

The ISA has a very wide remit and considers the following topics associated with the various assessment processes it covers.

SA / SEA

The SEA Directive and the SEA regulations require that the likely significant effects on the environment are assessed, considering the following factors and interrelationship between them:

- Biodiversity.
- Population.
- Human health (covering noise issues among other effects on local communities and public health).
- Fauna and flora.
- Soil;
- Water.
- Air.
- Noise.
- Climatic factors.
- Material assets (covering infrastructure, waste and other assets),
- Cultural heritage including architectural and archaeological heritage.
- Landscape.

SA guidance requires the consideration of socio-economic factors alongside the environmental factors identified above.

HIA

Department of Health guidance recommends that the assessment of transport plans should consider the following topics:

- Transport to work, shops, schools and healthcare.
- Walking and cycling.
- Community severance.
- Frequency and severity of crashes.
- Collisions causing injury and fatal accidents.
- Air pollution, noise.
- Ageing population and increasing disability.

From an HIA perspective, in addition to the wider population as a whole (considered as residents / visitors and employees), there are vulnerable social groups that need special consideration in transport planning with regards to their health. These groups are likely to experience transport-related exclusion and / or be subject to negative externalities of transport and are as follows:

- Children and adolescents– who as non-drivers are reliant on others for motorised transport and who suffer the greatest impacts of transport policy on their health, particularly children in low-income families.

- Vulnerable travellers, including cyclists, pedestrians and commuters – this would include consideration of those who are more likely not to own a car in some communities and find it harder to travel to shops, employment, healthcare and other services.
- Older people – who may feel vulnerable using public transport, who often need to seek health services and who are particularly vulnerable to road crash related injuries. Their continuing independence at home is often dependent upon reliable transport options.
- Disabled and people with other health problems – who may not be able to access many forms of transport or need special arrangements to access those. They are more likely to find it difficult to walk and may also be disadvantaged by the cost of transport.
- Low income groups – who are likely to walk further because they cannot afford public transport or to own a car and whose lack of transport options may limit life opportunities. They suffer the most from injuries, noise pollution and air pollution.

An overview of the baseline for the North East CA as a whole, along with the review of relevant Plans and Policies has shown that all of the above groups are present within the North East CA and likely to utilise the transport network.

EqIA

The EqIA process focuses on the consideration of the potential LTP effects on nine protected characteristic groups (PCGs) identified in the Equality Act 2010 that are relevant to the transport agenda:

- Age.
- Disability.
- Gender.
- Gender reassignment.
- Marriage and Civil Partnerships.
- Pregnancy and maternity.
- Race.
- Religion or belief.
- Sexual orientation.

A degree of overlap between the HIA vulnerable social groups and the EqIA protected characteristics has been acknowledged by both HIA and EqIA processes. Consistency between the two assessments has been ensured, where appropriate, particularly in terms of assumptions, analysing techniques and findings.

An overview of the baseline for North East CA as a whole, along with the review of relevant Plans and Policies has shown that all of the above groups are present within North East CA and likely to utilise the transport network.

4. ISA Methodology

The ISA has been used as a tool for improving the sustainability performance of LTP. Specifically, this has been achieved through allowing sustainability objectives to be considered throughout the plan's formulation process.

As has already been stated, the ISA process fully integrates a range of assessment processes: SA/SEA, HIA, EqIA and RPA. HRA has been undertaken in parallel to the ISA and its results incorporated into the ISA as appropriate. Table 4-1 demonstrates how the integration has been planned and achieved throughout all the preparation stages of the ISA and LTP.

4.1 Assessment methodology

The ISA methodology adopted was developed broadly based on published guidance documents:

- Transport Analysis Guidance (TAG) 2.11 Strategic Environmental Assessment for Transport Plans and Programmes, Department for Transport, 'In Draft' Guidance, April 2009.
- Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents - Guidance for Regional Planning Bodies and Local Planning Authorities, by the ODPM, the Scottish Executive, the Welsh Assembly Government and the Northern Ireland Department of the Environment November 2005.
- A Practical Guide to the Strategic Environmental Assessment Directive, by the ODPM, the Scottish Executive, the Welsh Assembly Government and the Northern Ireland Department of the Environment, September 2005.
- Draft Guidance on Health in Strategic Environmental Assessment, Consultation Document, Department of Health, 2007.
- National Planning Policy Framework, 2023 and associated Planning Practice Guidance (various dates from March 2014).

The work undertaken to-date involved the completion of SA/SEA stages A, B and C and associated tasks (see Table 4-1) together with HIA, EqIA, RPA and HRA (in parallel).

Table 4-1 - LTP preparation activities with the ISA and HRA processes

Transport Planning Stage	Sustainability Appraisal/ Strategic Environmental Assessment		Habitats Regulation Assessment	Health Impact Assessment	Equalities Impact Assessment	Rural Proofing Assessment
	Stage	Tasks	Tasks	Tasks	Tasks	Tasks
Determining the scope of the LTP clarifying goals; specifying the problems or challenges the authority wants to solve	A. Setting the context and objectives, establishing the baseline and deciding on the scope	Review and confirm plans/programmes and strategies at a National, Regional and Local Level		Confirm and identify Health related plans/programmes and strategies (as part of SA/SEA)	Review and confirm plans/programmes and strategies	Review and confirm plans/programmes and strategies
		Review and confirm Sustainability themes		Review and confirm health-related themes (as part of SA/SEA)	Review and confirm equality-related themes	Review and confirm rural related themes
		Review and update Baseline data and likely future trends	Confirm identification of all international sites within and up to 20km around the Strategy area	Gather data relating to health (as part of SA/SEA).	Review and update Baseline evidence	Review and update Baseline evidence
		Review and confirm Key sustainability issues – update these if required	Confirm details of all international sites	Review and confirm health specific issues (as part of SA/SEA)	Review and confirm equalities specific issues	Review and confirm specific issues relevant to the rural area
		Review objectives and decision-making questions (SA/SEA Framework) – update these if required	Liaise with SA/SEA team to ensure SA/SEA Framework covers international sites appropriately	Ensure inclusion of Health specific objectives in SA/SEA Framework	Ensure inclusion of Equalities specific objectives in SA/SEA Framework	Ensure inclusion of specific objectives in SA/SEA Framework that reflect rural issues
		Prepare ISA Scoping Report to consult with relevant consultees	Input into ISA Scoping Report	Input into ISA Scoping Report	Input into ISA Scoping Report	Input into ISA Scoping Report
		Review consultation responses and update scoping information for ISA Report	Review consultation responses as part of SA/SEA for any aspects of note in relation to HRA	Review consultation responses and update scoping information for ISA Report	Review consultation responses and update scoping information for ISA Report	Review consultation responses and update scoping information for ISA Report
Generating options for the LTP to resolve these challenges; appraising the options and predicting their effects	B. Developing, refining and appraising strategic options	Review and confirm Assessment of Plan objectives against the updated SA/SEA Framework	Review proposals and considerations of likely impacts	Review and confirmation of Plan objectives and strategic options be undertaken within SA/SEA	Review and confirmation of Plan objectives and strategic options be undertaken within SA/SEA	Review and confirmation of Plan objectives and strategic options be undertaken within SA/SEA
		Review and confirm Appraisal of Plan strategic options	Identification and consideration of other plans and projects			
		Review and confirm Evaluation / selection of Plan preferred options.				

Transport Planning Stage	Sustainability Appraisal/ Strategic Environmental Assessment		Habitats Regulation Assessment	Health Impact Assessment	Equalities Impact Assessment	Rural Proofing Assessment
	Stage	Tasks	Tasks	Tasks	Tasks	Tasks
Selecting preferred options for the LTP and deciding priorities	C. Assessing the effects of the draft LTP	Predict and assess effects of new or revised options taken forward. Confirm findings in relation to previously assessed schemes.	HRA review of proposals in draft Strategic Transport Plan (screening and appropriate assessment)	*Predict and assess effects of new or revised preferred options to be undertaken within SA/SEA.*	*Predict and assess effects of new or revised preferred options to be undertaken within SA/SEA.*	*Predict and assess effects of new or revised preferred options to be undertaken within SA/SEA.*
		Review and confirm proposed mitigation measures – if required, new mitigation measures to be developed	Review and confirm and if required, propose mitigation measures	*Review and confirm and if required, propose mitigation measures within SA/SEA*	*Review and confirm and if required, propose mitigation measures within SA/SEA*	*Review and confirm and if required, propose mitigation measures within SA/SEA*
		Develop monitoring programme	*Monitoring as part of SA/SEA*	*Monitoring as part of SA/SEA*	*Monitoring as part of SA/SEA*	*Monitoring as part of SA/SEA*
Production of the draft LTP	C. Prepare ISA Report		Prepare HRA Report	*HIA fully documented in ISA Report (no separate output but HIA component properly identified)*	*EqIA fully documented in ISA Report (no separate output but EqIA component properly identified)*	*RPA fully documented in ISA Report (no separate output but Rural Proofing component properly identified)*
Consultation on draft LTP (North East CA to undertake)	D. Consulting on ISA Report		**HRA Report sent to Natural England for agreement on findings**	*HIA Consultation included in ISA Report consultation*	*EqIA Consultation included in ISA Report consultation*	*RPA Consultation included in ISA Report consultation*
Production of final Local Transport Plan	*D. Assess significant changes*		*Assess significant changes*	*HIA assessment of significant changes undertaken as part of SA/SEA*	*EqIA assessment of significant changes undertaken as part of SA/SEA*	*RPA assessment of significant changes undertaken as part of SA/SEA*
Adoption of Local Transport Plan	*D. Post Adoption Statement*		*Prepare updated HRA Report*	*Relevant results reported in Post Adoption Statement*	*Relevant results reported in Post Adoption Statement*	*Relevant results reported in Post Adoption Statement*

SA / SEA

Stage A - Setting the Context and Establishing the Baseline

Other Relevant Legislation, Plans and Programmes

The LTP will both influence and be influenced by other plans, policies and programmes (PPPs) produced by local and combined authorities, by statutory agencies and other bodies with plan making responsibilities. Legislation is a further driver that sets the framework for the LTP, both directly and indirectly. Relevant legislation, plans and programmes have been identified and considered to inform the preparation of this ISA Report (see Chapter 5).

Baseline information and Key Sustainability Issues

To predict accurately how potential LTP proposals will affect the current baseline, it is first important to understand its current state and then examine the likely evolution of the environment without the implementation of the plan. Baseline information provides the basis for understanding existing local environmental, economic and social issues, in particular in respect of health and equality, and alternative ways of dealing with them; formulating objectives to address these issues and predicting and monitoring sustainability effects.

Key sustainability issues in general, and those pertaining to health and equality in particular, across the North East CA have been identified as a result of the analysis of the baseline data and the review of other plans and programmes. The identification of these issues helped focus the ISA processes on the aspects that really matter. Implications to LTP development and opportunities for how the LTP could assist in addressing these issues were also identified.

Information on key baseline and sustainability issues is presented in Chapter 6 of this report.

Developing the ISA Framework

A set of ISA Objectives has been developed, against which the policies and proposals in LTP could be assessed.

For each objective, assessment aid questions were set out to form the ISA framework. The assessment aid questions provided a clarification of the intended interpretation of each objective to support direction of change sought through the implementation of LTP. The questions have guided the LTP assessment process.

The ISA Objectives and assessment aid questions were refined through the consultation on the Scoping Report and are presented in Chapter 7 of this report.

Stage B – Developing alternatives

Testing LTP Objectives against the ISA Objectives

A compatibility assessment of LTP objectives in its initial stages of preparation against the ISA objectives was carried out, as part of the iterative process to assess the sustainability of LTP objectives. This assessment ensured that consideration of the ISA Objectives informed the development and refinement of the LTP Objectives and provided a suitable framework for developing alternatives (see Chapter 8 of this report).

Developing, refining and appraising Strategic Alternatives

Consideration of alternative strategies for LTP is an integral part of the plan development. Strategic alternatives were identified by SCC and have been assessed as part of the ISA process.

This task comprised the prediction of changes arising from the LTP's alternative strategies. While carrying out this evaluation, each alternative was considered in the context of whether it would have a likely significant effect in relation to each of the ISA objectives. The results are presented in Chapter 8 of this report.

Assessing the effects of the draft LTP

Assessing the significance of predicted effects is essentially a matter of judgement. There are a number of factors that will determine the significance of an effect, e.g. its scale and permanence and the nature and sensitivity of the receptor. It is very important that judgements of significance are systematically documented, in terms of the particular characteristics of the effect which are deemed to make it significant and whether and what uncertainty and assumptions are associated with the judgement. The assessment of significance also includes information on how the effect may be avoided or its severity reduced.

In the current practice of IA (influenced by SEA), the broad-brush qualitative prediction and evaluation of effects can be often based on a qualitative seven point scale in easily understood terms. In general, this assessment has adopted the scale shown in Table 4-2 to assess the significance of effects of the schemes and proposals in the LTP.

Table 4-2 - Criteria for assessing significance of effect

Assessment Scale	Assessment Category	Significance of Effect
+++	Major beneficial	Significant
++	Moderate beneficial	
+	Slight beneficial	Not Significant
0	Neutral or no obvious effect	
-	Slight adverse	
--	Moderate adverse	Significant
---	Major adverse	

Moderate and strong beneficial and adverse effects (and combination of this type of effect) have been considered of significance, whereas no effect and slight beneficial and adverse effects (and combination of this type of effect) have been considered non-significant.

Assessments have been undertaken for proposals contained in the Draft LTP. The results are discussed in Chapter 10.

As part of the assessment of the Draft LTP, a number of mitigation measures (recommendations) are set out in Chapter 11. The North East CA has given careful consideration to these recommendations and has addressed these as appropriate in the preparation of the Draft LTP for public consultation.

The term mitigation encompasses any approach that is aimed at preventing, reducing or offsetting significant adverse environmental effects that have been identified. A range of measures applying one or more of these approaches has been considered in mitigating any significant adverse effects predicted as

a result of implementing the LTP. In addition, measures aimed at enhancing positive effects have also been considered. All such measures are generally referred to as mitigation measures.

However, the emphasis of the assessments has been in the first instance on proactive avoidance of adverse effects. Only once alternative options or approaches to avoiding an effect have been examined, then ways of reducing the scale/importance of the effect have been examined and proposed.

Mitigation can take a wide range of forms, including:

- Refining intervention measures in order to improve the likelihood of positive effects and to minimise adverse effects.
- Technical measures (such as setting guidelines) to be applied during the implementation stage.
- Identifying issues to be addressed in project environmental impact assessments for certain projects or types of projects.
- Proposals for changing other plans and programmes.

The assessment also considered cumulative, indirect (secondary) and synergistic effects of the Draft LTP as outlined in the following section.

Secondary and Cumulative Effects Assessment

Annex I of the SEA Directive requires that the assessment of effects include secondary, cumulative and synergistic effects.

Secondary or indirect effects are effects that are not a direct result of the plan but occur away from the original effect or as a result of the complex pathway e.g. a development that changes a water table and thus affects the ecology of a nearby wetland. These effects are not cumulative and have been identified and assessed primarily through the examination of the relationship between various objectives during the Assessment of Effects.

Cumulative effects arise where several proposals individually may or may not have a significant effect, but in-combination have a significant effect due to spatial crowding or temporal overlap between plans, proposals and actions and repeated removal or addition of resources due to proposals and actions. Cumulative effects can be:

- Additive - the simple sum of all the effects.
- Neutralising - where effects counteract each other to reduce the overall effect.
- Synergistic - is the effect of two or more effects acting together which is greater than the simple sum of the effects when acting alone. For instance, a wildlife habitat can become progressively fragmented with limited effects on a particular species until the last fragmentation makes the areas too small to support the species at all.

Many sustainability problems result from cumulative effects. These effects are very hard to deal with on a project by project basis through Environmental Impact Assessment. It is at the strategic level that they are most effectively identified and addressed.

Cumulative effects assessment is a systematic procedure for identifying and evaluating the significance of effects from multiple activities. The analysis of the causes, pathways and consequences of these effects is an essential part of the process.

Cumulative (including additive, neutralising and synergistic) effects have been considered throughout the entire ISA process, as described below:

- Identification of key sustainability (including detailed health and equality) issues as part of the review of relevant strategies, plans and programmes and baseline data analysis.
- Establishing the nature of likely cumulative effects, causes and receptors.
- Identifying key receptors (e.g. specific wildlife habitats) in the process of collecting baseline information and information on how these have changed with time, and how they are likely to change without the implementation of the LTP.
- Particularly sensitive, in decline or near to their threshold (where such information is available) or with slow recovery receptors have been identified through the analysis of environmental issues and problems.
- The development of ISA objectives and assessment aid questions has been influenced by cumulative effects identified through the process above and ISA objectives that consider cumulative effects have been identified.
- Cumulative effects of LTP proposals have been assessed.

The results are presented in Chapter 12 of this report.

Monitoring the effects of the LTP implementation

Monitoring involves measuring indicators which will enable the establishment of a causal link between the implementation of the plan and the likely significant effect (positive or negative) being monitored. It thus helps to ensure that any adverse effects which arise during implementation, whether or not they were foreseen, can be identified and that action can be taken by the North East CA, or partner bodies, to deal with them.

A monitoring programme has been prepared showing, for each significant effect, what data should be monitored, the source of the data, the frequency of monitoring, as well as when and what actions should be considered if problems are identified from the monitoring.

The results are presented in Chapter 13 of this report.

Stage C – Preparing the ISA Report

This ISA Report has been prepared to accompany the draft LTP on consultation.

Stage D - Consulting on the Draft Revised LTP and ISA Report

Assessing significant changes

The ISA Report will be published for formal consultation with the Draft LTP. The results of the formal public consultation exercise may well result in changes to the Draft LTP and these will have implications for the ISA Report. In addition, the consultation exercise may result in direct changes to the contents of the ISA Report. These will be reported in the Post Adoption Statement.

Post Adoption Statement

Following completion of the public consultation and preparation of the Final LTP document, a statement (separate document) will be prepared setting out the following:

- How sustainability considerations have been integrated into the plan, for example any changes to or deletions from the plan in response to the information in the ISA Report.
- How the ISA Report has been taken into account.

- How the opinions and consultation responses have been considered and addressed. The summary should be sufficiently detailed to show how the plan was changed to take account of issues raised, or why no changes were made.
- The reasons for choosing the plan as adopted in the light of other reasonable alternatives dealt with.
- The measures that are to be taken to monitor the significant environmental effects of implementation of the LTP.

Health Impact Assessment

In order to ensure that potential impacts of the LTP on health and health inequalities have been considered and to fulfil the requirements of health legislation, a Health Impact Assessment (HIA) has been undertaken in a fully integrated fashion with the SA/SEA process as set out in Table 4-1. The need for HIA arises from the recognition that the LTP proposals may impact on the factors influencing the health of communities and individuals, including such factors as noise and air quality, accessibility to key services and facilities and the design of transport infrastructure.

Approach to HIA

The HIA objectives that have been considered have been developed in the light of HIA guidance and identified health issues, as well as the consultation that has taken place. The approach to the HIA has ensured that all relevant topics have been considered throughout the assessment process from establishing the baseline and building up the area's population profile in terms of health, identifying the key issues, developing the ISA Framework, assessing the LTP, mitigation and monitoring.

The HIA has identified actions that can enhance positive effects and reduce or eliminate negative effects of the LTP, with respect to health and health inequalities.

HIA consultation

Consultation to inform the HIA has been undertaken as part of the overall SA/SEA process. Consultation responses have been analysed to inform the HIA (see reporting and consultation as part of the ISA process).

Equality Impact Assessment

In order to ensure that potential impacts of the LTP on equality have been considered and to fulfil legislative requirements, an Equality Impact Assessment (EqIA) has been undertaken in a fully integrated manner with the SA/SEA process.

Approach to EqIA

The EqIA objectives that have been considered have been developed in the light of EqIA guidance and identified equalities issues, as well as the consultation that has taken place. The approach to the EqIA has ensured that all relevant topics have been considered throughout the assessment process from establishing the baseline and building up the area's population profile in terms of equalities, identifying the key issues, developing the ISA Framework, assessing the LTP, mitigation and monitoring.

EqIA consultation

Consultation to inform the EqIA has been undertaken as part of the overall SA/SEA process. Consultation responses have been analysed to inform the EqIA (see reporting and consultation as part of the ISA process).

Rural Proofing Assessment

In order to ensure that potential impacts of the LTP on rural communities have been considered, a Rural Proofing Assessment (RPA) has been undertaken in line with the HM Treasury's Green Book[5] in a fully integrated fashion with the SA/SEA process as set out in Table 4-1. Government guidance states that the aim of rural proofing is to "*Make sure that the needs and interests of rural people, communities and businesses in England are properly considered*". This ensures that the action required to ensure fair outcomes from policy/plan delivery across rural and urban areas is determined and addressed in the plan/policy making process.

Approach to RPA

The RPA objectives that have been considered have been developed in the light of government guidance and identified rural issues, as well as the consultation that has taken place. The approach to the RPA has ensured that all relevant topics have been considered throughout the assessment process from establishing the baseline and building up the regions rural profile, identifying the key issues, developing the ISA Framework, assessing the LTP, mitigation and monitoring.

RPA consultation

Consultation to inform the RPA has been undertaken as part of the overall SA/SEA process. Consultation responses have been analysed to inform the RPA (see reporting and consultation as part of the ISA process).

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[5] The Green Book: appraisal and evaluation in central government - GOV.UK

5. Review of relevant legislation and other plans and programmes

5.1 Introduction

The first task of the ISA is the identification of other relevant plans, policies, programmes and legislation. This helps to identify relevant environmental and wider sustainability themes, baseline information and key issues. The LTP must be prepared to take these PPPs into account as it may influence and be influenced by them.

The SEA Regulations specifically states that information should be provided on:

"The relationship [of the plan or programme] with other relevant plans and programmes"

"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"

In addition to this, the PPPs related to wider sustainability, HIA, EqIA and RPA have also been considered.

5.2 Methodology

Both the LTP and the ISA Report should be set in the context of international, national, regional and local objectives along with environmental, strategic planning, transport, health, social, economic and equality policies.

Relevant plans and programmes include those at different levels (international, national, regional and local) which influence the Transport Plan, or those in other sectors which contribute, together with the Transport Plan, to sustainability conditions of the area to which they apply.

Appendix B lists the documents reviewed to identify environmental, social (health and equality) and economic themes. A series of key generic themes which have emerged from the review are presented below.

5.3 Themes

The review of PPPs revealed a large number of common themes in terms of their objectives relating to sustainability within the context of transport planning. These are listed below:

Air Quality

- Reduce emissions of NO_2.
- Reduce emissions from road transport in particular.
- Reduce emissions from other forms of transport.
- Increase use of low emission / zero emission at point of use vehicles.
- Reduce emissions of PM10 and PM2.5.

Greenhouse gas (GHG) Emissions

- Reduce GHG emissions, particularly CO_2.
- Maximise the use of renewable energy.
- Increase energy efficiency and make use of new technology.
- Minimise use of fossil fuels.
- Contribute to the achievement of Net Zero Carbon

Adaptation to a Changing Climate and Flooding

- Prepare for extreme weather events and sea level rise.
- Minimise the risk and impact of flooding.
- Avoid development in floodplains when possible.
- Help meet objectives of Flood Risk Management Plans allowing for climate change.
- Help ensure active travel routes are not subject to weather extremes (for example heat or wind).

Biodiversity, Fauna and Flora

- Protection of sites designated for nature conservation purposes.
- Protect and enhance endangered or important species and habitats.
- Contribute to the delivery of biodiversity strategies and plans.
- Increase important habitat.
- Protect, maintain and where possible enhance natural habitat networks and green infrastructure, to avoid fragmentation and isolation of networks.
- Achievement of 10% Biodiversity Net Gain

Cultural Heritage

- Conserve and protect historic assets (designated and undesignated) and those of cultural note, including archaeology and historic landscapes as well as the settings of heritage assets.
- Improve access to historic assets, including buildings and landscapes of value where appropriate.
- Sympathetic design and use of vernacular architecture when appropriate to enhance the local character and 'sense of place'.

Water Resources

- Protect and improve the quality of ground and surface water.
- Help to meet objectives of the Water Framework Directive (WFD).
- Make use of Sustainable Drainage Systems (SuDS).

Land Use, Soil and Agriculture

- Prioritise development on brownfield sites.
- Seek to reclaim derelict and contaminated land.
- Protect farmland and soils, particularly those of the highest value.

Landscapes and Townscapes

- Protect and enhance landscape, particularly those recognised of national importance) and townscape character and local distinctiveness.
- Protect tranquillity from the impacts of noise and light pollution.

Natural Resources and Waste

- Ensure efficient resource use and minimise resource footprint.
- Use secondary and recycled materials.
- Consider opportunities to maximise on-site re-use of materials.
- Employ waste reduction methods to minimise construction and maintenance waste.
- Reduce the amount of waste disposed of at landfill.
- Promote circular economy.
- Avoid the sterilisation of mineral resources.

Economic Themes

- Improve physical accessibility to jobs through the location of employment sites and transport links close to areas of high unemployment.
- Widen the number and range of accessible employment opportunities and support growth in employment and labour productivity.
- Make the North East CA area more attractive for inward investment.
- Improve rail and road journey reliability for business users.
- Support local businesses.
- Support enhancement of local economy and overall prosperity.
- Support development of the skills base.

Health Themes

- Tackle poor health by improving the health of everyone, and of the worst off in particular.
- Reduce health inequalities among different groups in the community (e.g. young children, pregnant women, black and minority ethnic people, older people, people with disabilities, low income households).
- Support the public to make healthier and more informed choices with regard to their health and adopt physically active lifestyles.
- Address pockets of deprivation, including those in rural areas.
- Provide physical access for people with disabilities.
- Provide or improve access to local health and social care services.
- Provide opportunities for increased exercise, thus reducing obesity, particularly in children, and illnesses such as coronary heart disease.
- Provide for an ageing population.
- Promote healthy lifestyles through exercise, physically active travel and access to good quality and affordable food, which can assist in reducing both physical and mental illnesses.

Equality Themes

- Recognise people's different needs, situations and goals and remove the barriers that limit what people can do and can be
- Create sustainable communities which are active, inclusive, safe, tolerant and cohesive
- Create sustainable communities which are fair for everyone - including those in other communities, now and in the future
- Improve economic, social and environmental conditions particularly in the most deprived areas
- Ensure fair access to and distribution of resources across the community, including rural areas
- Assess and address the impacts upon diverse communities including cultural, racial, economic, generational, social (including disabilities) and religious mixes
- Create a sense of belonging and wellbeing for all members of the community
- Provide physical access for people with disabilities
- Minimise isolation for vulnerable people
- Protect human rights (e.g. the right to liberty and security of person) and fundamental freedoms (e.g. a right to freedom of thought, conscience and religion, freedom of expression, etc.)
- Prohibit discrimination, harassment and victimisation on such grounds as sex, race, language and religion
- Promote equality of opportunity in the way services are planned, promoted and delivered
- Treat everyone with dignity and respect

Community Safety Themes

- Create communities which are safe, inclusive, fair, tolerant and cohesive.
- Maintain reductions in crime and anti-social behaviour.
- Improve perceptions that the communities are safe places to work, live and visit.
- Reduce speeding and improve road safety.

Rural Proofing Themes

- The sustainable growth and expansion of all types of business in rural areas
- The development and diversification of agricultural and other land-based rural businesses
- Sustainable rural tourism and leisure developments which respect the character of the countryside
- The retention and development of accessible local services and community facilities, such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship
- Protecting the rural environment and enhancing natural capital assets

Cross cutting

- Support the UK Government's 25 Year Plan to Improve the Environment 2018 goals and key actions as follows:
  - Using and managing land sustainably, including embedding an "environmental net gain" principle into development.
  - Recovering nature and enhancing the beauty of landscapes.
  - Connecting people to the environment to improve health and wellbeing.
  - Increase resource efficiency and reducing pollution.

- Securing clean, healthy and productive and biologically diverse seas and oceans.
- Protecting and improving the global environment.

- Support Environment Act 2021 stipulations:
  - targets for four priority areas: (a) air quality; (b) water; (c) biodiversity; (d) resource efficiency and waste reduction to be set.
  - two priority areas: air quality (PM2.5 air quality target) and biodiversity (species abundance target) and important new target to reverse the decline in species abundance by the end of 2030
  - environmental improvement plan for significantly improving the natural environment for a period no shorter than 15 years.
  - 10% biodiversity net gain required for new development.
  - prevent waste/reduce the amount of a product that becomes waste and increase re-use, redistribution, recovery and recycling.

- Support the objectives and Policies of relevant Local Development Plans
  - **County Durham -** the County Durham Plan was adopted in October 2020 sets out a vision for housing, jobs and the environment until 2035, as well as the transport, schools and healthcare to support it. The plan aims to:
    - Continue the economic growth and investment in the county
    - Secure more and better jobs in County Durham
    - Address the causes of climate change and adapt to its affects
    - Create and enhance vibrant communities for all our towns and villages
    - Provide a wide choice of quality homes to meet everyone's needs and ensure they're built where people want to live, reducing the need to travel
    - Secure the infrastructure to support new development and to relieve congestion and improve air quality
    - Protect the natural and historic environment
  - Gateshead & Newcastle Upon Tyne - Gateshead are in the beginning of preparing a new local plan. The current adopted local plan is the 'core strategy and urban core plan for Gateshead and Newcastle Upon Tyne'. This plan was adopted in March 2015 and sets out the spatial planning framework to deliver economic prosperity up to 2030. The Plan includes 12 strategic objectives which aim to:
    - Encourage population growth in order to underpin sustainable economic growth.
    - To increase our economic performance, resilience, levels of entrepreneurship, skills and business formation by promoting Gateshead and Newcastle as the strong regional economic focus and by ensuring the supply of suitable, flexible and diverse business accommodation.
    - To increase our competitiveness by improving and expanding the role of the Urban Core as the regional destination for business, shopping, education, leisure, tourism and as a place to live.
    - To strengthen Newcastle's position as the regional retail centre. To ensure the provision of quality District and Local centres with a diverse range of shops and services that are accessible to meet the needs of all local communities
    - Expand leisure, culture and tourism providing for all age groups and diversifying the evening economy
    - Ensure that our residential offer provides a choice of quality accommodation in sustainable locations to meet people's current and future needs and aspirations; improving opportunities to

live in the Urban Core; and providing a broader range of accommodation including in new neighbourhoods

- Ensure that our residential offer provides a choice of quality accommodation in sustainable locations to meet people's current and future needs and aspirations; improving opportunities to live in the Urban Core; and providing a broader range of accommodation including in new neighbourhoods

- Manage and develop our transport system to support growth and provide sustainable access for all to housing, jobs, services and shops.

- Improve sustainable access to, within and around the Urban Core by promoting fast and direct public transport links to the heart of the Urban Core, increasing walking and cycling and minimising through traffic

- Ensure the development and use of land protects, sustains and enhances the quality of the natural, built and historic environment, making the Urban Core a high-quality exemplar for Gateshead and Newcastle, and ensuring our communities are attractive, safe and sustainable.

- Provide the opportunity for a high quality of life for everyone and enhance the wellbeing of people to reduce all inequalities.

- To reduce CO_2 emission from development and future growth while adapting to the issues, mitigating adverse impacts and taking advantage of the opportunities presented by climate change.

- Improve the function, usability and provision of our green infrastructure and public spaces by providing a network of green spaces and features which are connected and accessible for all.

▫ **North Tyneside -** the North Tyneside plan was adopted in 2017 and sets out the Council's approach towards shaping future sustainable development in the Borough up to 2032. The plan sets out 11 objectives to deliver the vision of the plan:

- Ensure a sustainable future for North Tyneside with communities and infrastructure that are well placed to mitigate climate change

- Diversify, strengthen and grow the local economy providing excellent job opportunities for everyone

- Give all residents the opportunity to live free from crime and enjoy a healthy lifestyle, achieving their potential in work and education

- Provide an appropriate range and choice of housing to meet current and future evidence-based needs for market and affordable housing

- Revitalise the town centres

- Regenerate the Borough

- Manage waste as a resource and minimise the amount produced and sent to landfill

- Protect and enhance the natural environment

- Protect and enhance the built and historic environment

- Ensure sustainable access throughout the Borough, with the wider region and beyond

- Enhance the image of the Borough

▫ **Northumberland -** The Northumberland Local Plan 2016 to 2036 was formally adopted by Northumberland County Council on 31 March 2022. The Plan contains eight strategic objectives to help deliver the vision for Northumberland, which given the importance of Northumberland's environment, the overarching aim is to deliver sustainable economic growth whilst conserving and enhancing Northumberland's distinctive and valued natural, historic and built environment. The strategic objectives are:

- Economy and jobs

- Homes

- Environment

- Connections
- Community health and wellbeing
- Climate change
- Resources
- Quality of place

▫ **South Tyneside -** South Tyneside are currently developing a new Local plan which will set out how they will meet the area's future social, economic and environmental needs. The adopted Local Development Framework is the current Plan that guides development and use of land in the borough and was adopted in June 2007. The vision which seeks to 'concentrate development on key regeneration / development areas, but ensuring this is not at the expense of maintaining communities and providing full access to the major facilities and developments' ensures:

  - development meets the needs of North East residents and businesses without compromising the ability of future generations to enjoy the same quality of life that we aspire to;
  - delivers the regeneration of the Borough. In doing so, focus development on: - the main centres of South Shields, Jarrow and Hebburn; - major riverside sites – bringing life back to the riverside and creating sustainable communities where people choose to live;
  - proposals are of sufficient scale can deliver a major change in the perception of the Borough and have the greatest impact on the economy, opportunity for new housing, quality of life and cultural facilities;
  - all residents have a choice of good quality and affordable housing in a variety of tenures and which meets their future needs;
  - natural and built environment that is valued, protected, enhanced and capitalised on for the benefit of all;
  - all those within the Borough can access the opportunities that are available, with reliable public transport, efficient road network and above all, focusing on delivering accessibility rather than relying on mobility; and
  - despite the focus on the big projects and key regeneration areas, the suburban areas and villages outside of the key regeneration hot-spots must not be ignored – ensuring appropriate levels of essential services are provided and that any local needs for development are met.

▫ **Sunderland -** The Sunderland Core Strategy and Development Plan sets out the long-term plan for development across the city to 2033. The Plan was adopted in January 2020. The Plan's strategic priorities are:

  - To deliver sustainable economic growth and to meet objectively assessed needs for employment and housing, in particular through providing opportunities for young economically active age groups and graduates
  - To identify land we need for development in the right locations so we can protect our most vulnerable assets and while ensuring we meet our sustainable growth ambitions.
  - To promote healthy lifestyles and ensuring the development of safe and inclusive communities, with facilities to meet daily needs that encourage social interaction and improve health & wellbeing for all.
  - To provide a range and choice of accommodation, house types and tenures to meet the diverse needs of current and future residents.
  - To provide a wide portfolio of employment sites to support the development of key employment sectors and expand the opportunities for new office development.
  - To support and improve the vitality and economic performance of the Urban Core and designated centres.
  - To protect, sustain and enhance the quality of the built and historic environment and the delivery of distinctive and attractive places.

- To protect and enhance the city's biodiversity, geological resource, countryside and landscapes whilst ensuring that all homes have good access to a range of interlinked green infrastructure.
- To adapt to and minimise the impact of climate change by reducing carbon emissions, maximising the use of low carbon energy solutions and seeking to reduce the risk/impact of flooding
- To manage waste as a resource and minimise the amount produced and sent to landfill.
- To promote sustainable and active travel and seek to improve transport infrastructure to ensure efficient, sustainable access.
- To manage the city's mineral resources ensuring the maintenance of appropriate reserves to meet needs.
- To ensure that the city has the infrastructure in place to support its future growth and prosperity

6. Baseline information and key sustainability issues

6.1 Introduction

In order to assess the potential sustainability effects of the LTP on North East CA, it is necessary to establish a baseline against which predicted effects can be assessed, and then to identify issues and trends that are related to each of the environmental, social and economic interests that may be affected by, or affect, the proposed plan. This is in keeping with the SEA Regulations which states that the Environmental Report should provide information on:

"The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" and *"The environmental characteristics of areas likely to be significantly affected"* (Schedule 2)

and

"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 on the conservation of wild birds and the Habitats Directive " (Schedule 2).

To accurately predict how LTP proposals will affect the environmental characteristics, it is important to understand the current state of the environment and then examine the likely evolution of the environment without the implementation of the plan. In this report, given its remit is broader than environmental sustainability, the current state regarding wider sustainability (environment, social and economic) has been characterised.

6.2 Methodology

Existing baseline information provides the basis for the prediction and monitoring of the effects of the implementation of LTP and helps identify sustainability issues and alternative ways of dealing with them (implications and opportunities).

It should be noted that the ISA process does not require the collection of primary data, but relies on the analysis of existing information. As such, where data gaps exist this is highlighted in this report.

As ISA is an iterative process, subsequent stages in its preparation and assessment might identify other issues and priorities that require the sourcing of additional data and/or information and identification of monitoring strategies. This makes the ISA process flexible, adaptable and responsive to changes in the baseline conditions and enables trends to be analysed over time.

Indicators have been selected for their ability to provide objective data that will, over time, offer an insight into general trends taking place. Throughout the assessment process the following issues will need to be addressed:

- What is the current situation, including trends over time?
- How far is the current situation from known thresholds, objectives or targets?
- Are particularly sensitive or important elements of the environment, economy or society affected?
- Are the problems of a large or small scale, reversible or irreversible, permanent or temporary, direct or indirect?
- How difficult would it be to prevent, reduce or compensate for any negative effect?
- Have there been, or will there be, any significant cumulative or synergistic effects over time?

The most efficient way to collate relevant baseline data is through the use of indicators whenever possible (see below). This ensures that the data collation is both focused and effective. The identification of relevant data has taken place alongside the review of other relevant legislation, plans, policies and programmes (Chapter 5 and Appendix B), the identification of sustainability issues (this section) and developing the ISA framework (Chapter 7).

6.3   Data Analysis

Data have been collated and analysed for the following indicators (as detailed in Appendix C):

Environmental Data

- CO_2 emissions.
- Climate change.
- Local air quality.
- Noise / Light pollution ('Tranquillity').
- Biodiversity, fauna and flora (including designated sites).
- Landscape and townscape.
- National Character Areas.
- Heritage assets.
- Green space.
- Soil / land classification.
- Water quality.
- Flooding.
- Waste and resources.

Economic Data

- Employment.
- Long term trends in population.

- Economic sectors, including those related to rural output.
- Performance gap and sub-regional performance.
- Identification of economic centres.

Social Data (including Health, Equalities and Rural)

- Population and diversity.
- General health statistics.
- Accessibility.
- Road safety and accidents.
- Physical activity in children and adults.
- Equality target groups.
- Multiple deprivation.

The baseline data provides an overview of the sustainability characteristics of the LTP area. This overview, together with contextual information, is presented in Appendix C. The analysis of the baseline has highlighted a number of key issues in the North East CA area. These, together with implications and opportunities arising for LTP, have been summarised in Table 6-1.

6.4   Data Limitations

It is believed that the data sets available provide a comprehensive overview of the sustainability situation across the North East CA area however it should be bourne in mind that the assessment is desk based and relies principally on open source data, where available.

6.5   Key sustainability issues, implications and opportunities

The SEA Regulations states that the Environmental Report should provide information on:

"Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive." (Schedule 2)

This ISA is concerned with the three dimensions of sustainability (social, environmental and economic) and the identification of problems much broader than required by the SEA Regulations.

As such, the following sections provide a description of key baseline data and associated sustainability issues together with a discussion on the implications/opportunities of such issues to LTP. The analysis of baseline data and sustainability issues has influenced the development of the ISA Framework (see Chapter 7) in terms of formulating sustainability objectives and assessment aid questions. Note that this

section has been updated with information received as part of consultation responses made to the ISA Scoping Report and the identification of further relevant information during the assessment process.

It should be noted that, because HIA, EqIA and RPA are also being undertaken, the approach involved the identification of generic HIA, EqIA and RPA key sustainability issues, implications and opportunities and objectives. These have been further developed to ensure a more in-depth level of coverage of issues to satisfy specific HIA and EqIA requirements leading to the development of HIA and EqIA sub-objectives (see Chapter 7).

Table 6-1 - Key Issues, Implications and Opportunities for the LTP

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Air Quality & Noise Air pollution impacts on public health, the natural environment and the economy. Air quality has improved in the UK over the last sixty years as a result of the switch from coal to gas and electricity for heating of domestic and industrial premises, stricter controls on industrial emissions, higher standards for the composition of fuel and tighter regulations on emissions from motor vehicles. However, poor air quality, particularly due to emissions from motor vehicles, remains a significant issue for community health for the population as a whole but particularly for certain vulnerable or protected characteristic groups such as the elderly, children, those with existing health conditions, those who are pregnant and those living in areas of deprivation. Poor air quality is generally associated with urban/industrial areas and major road infrastructure and this is reflected in the typical location for Air Quality Management Areas (AQMA), many of which have been designated due to high NO_2 (tailpipe emissions) and Particulate Matter (PM10 and PM2.5) (emissions, tyres and brake wear). Across the region air quality is generally good with a total of four AQMAs identified within the North East CA area, all of which have been designated for Nitrogen dioxide with neither Northumberland, South Tyneside or Sunderland having any. Each of the local authorities have their own Air Quality Strategy (AQS) aimed at tackling the AQMAs in their areas and improving general air quality in the region (Northumberland and Sunderland are the exception as they are not required to produce AQSs). These strategies focus on reducing the	The LTP should aim to protect and improve air quality in the region, particularly where it may impact on vulnerable receptors. It should seek to ensure that reducing NO_2 and particulate emissions is a fundamental principle of the Plan. LTP should also aim to meet Government targets for air quality and be reflective of appropriate legislation and should consider ecological receptors alongside human receptors when dealing with air quality. The LTP should aim to preserve environmental noise quality where it is good, and seek to reduce the impact of transportation on identified Noise Action Important Areas. Examples of how this could be addressed include development and promotion of sustainable modes of transport including active modes, encouraging uptake of EVs (e.g. through developing greater EV infrastructure), smarter travel management such as workplace, residential and school travel plans, creation of inter-modal interchanges, sustainable freight movements and traffic management interventions.	Protect and improve air quality. Reduce the impact on environmental noise from transportation sources.

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
current levels of pollutants in the region by promoting modal shift to more sustainable modes such as active travel, public transport and electric vehicles. The UK Government has noted that addressing road transport emissions presents the most significant opportunity to tackle this specific exceedance problem (NO_2 pollution). While noise is a natural consequence of a mature and vibrant society, it can have serious implications for human health, quality of life, economic prosperity and the natural environment. The World Health Organisation (WHO) recognises noise as one of the top environmental hazards to health and well-being in Europe Environmental noise impacts on public health and quality of life. The most widespread sources of noise pollution and exposure in England are from various forms of transport. Local Authorities are required to create noise maps and produce Noise Action Plans, in line with the Environmental Noise Directive. Noise Important Areas identify 'hotspot' locations where the highest 1% of noise levels at residential locations can be found and therefore highlight where further investigation should be directed. There are 341 Noise Action Important Areas within the North East CA area, located on the local rail and road networks. Noise Action plans have been identified at specific locations along the A69, A1, A167, A191, A1058, A194, A184, A1018, A19, A690, A690 and the A1(M). **Likely evolution of baseline** Improving - At the national level air quality is generally improving as industrial practices, energy sources and tighter environmental legislation have contributed to reductions in pollutants. This is the same for noise pollution. Nevertheless, they remain significant issues in many discrete areas and have significant ongoing issues in respect of health.		

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Greenhouse gas emissions and a changing climate The release into the atmosphere of greenhouse gases (e.g. CO_2, CH_4, N_2O, O_3) resulting from fossil fuel usage, agriculture, land use change and other human activities has been linked with atmospheric warming and global climate change. By 2050 projection show that the North East of England will experience hotter temperatures in both summers and winters with an the annual temperature expected to rise by of 1.0 to 5.0°C. High summer temperatures are expected to become more frequent with a greater number of hot days in summer and autumn. In addition, winter is expected to become wetter with greater seasonal precipitation contrasts leading to drier summers and wetter winters with less snowfall expected. Changes in temperature and rainfall patterns, along with more frequent extreme weather events, create the situation where a greater degree of resilience will have to be incorporated into plans and proposals. The region has collaborated with local business, education, public sectors and civil society to create 'Net Zero North East England' which commits to decarbonizing the economy and creating a net zero region. Utilizing 15 indicators that provide insights into the extent and nature of progress towards Net Zero the partnership board supported though the Combined Authority aims to ensure decarbonisation is cleaner, greener and fairer. As noted by the Committee for Climate Change, domestic transport emissions of road transport account for around a quarter of UK greenhouse gas emissions. In the North East region, transport takes	LTP should seek to ensure that reducing CO_2 emissions and achieving Net Zero carbon is a core component. Net Zero North East England has "committed to align our decision making, as organisations and individuals, to creating a Net-Zero North East England"[8] and plan to create a detailed vision for the region going forward. Although it should also be realistic that projected levels of traffic growth mean emissions will likely remain an issue and that removals will therefore be required. The LTP should also seek to ensure that new transport interventions maximise the opportunity for increasing tree / vegetation cover (using native species), where practical, in order to absorb increased amounts of CO_2 from the atmosphere, e.g. through the use of street trees or planting in other areas of transport infrastructure. As with air quality, other examples of how CO_2 emissions could be addressed include development and promotion of sustainable modes of transport including active modes, encouraging uptake of EVs (e.g. through developing greater EV infrastructure), smarter travel management such as workplace, residential and school travel plans, creation of inter-modal interchanges, sustainable freight movements and traffic management interventions.	Reduce carbon emissions from transport and contribute to meeting the UKs and North East CAs net zero carbon targets by 2050

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[8] Net Zero North East England (2024) *Statement of Intent.* Available at https://www.netzeronortheastengland.co.uk/statement-of-intent

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective

up the largest percentage of emissions at 30%6, which is a higher proportion than in the UK as a whole (where transport makes up 26%).

At present, fossil fuel dependency remains high. In 2022 - the most recent full year for which data is available - the majority of the primary energy, external consumed within the UK (78.4%) came from coal, oil and gas. This is likely to remain so for some time, despite renewable electricity generation reaching a near record share of 50.9% of total generation in the 1st quarter or 2024, compared to 24.7% in 2022. Wind contributed more electricity than gas generation for the second consecutive quarter7. In recent years there have also been marked improvements in vehicle efficiency and an increasing uptake of and provision for electric vehicles (EV). In their North East Zero Emissions Vehicle (ZEV) Strategy, the region acknowledges the impact that vehicles have on emissions and aim to promote a switch to ZEVs by those currently making journeys by private cars and vans. As of 2023 ZEVs made up just less than 1% of registered vehicles with access to 850 publicly accessible charging points across the region. The strategy aims to increase the number of ZEVS by improving the charging network. This includes a delivery plan worth approximately £80m and has identified an initial 221 strategically located charging points to grow the charging network across the region.

Nevertheless, some degree of climate change will occur, with the UK's Climate Projections showing that the UK as a whole is likely to

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[6] Transport (netzeronortheastengland.co.uk)
[7] Energy Trends June 2024 (publishing.service.gov.uk)

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
experience hotter, drier summers, warmer, wetter winters and rising sea levels. This is likely to have a significant effect on a range of environmental conditions, including the water environment. **Likely evolution of baseline** Declining - Interventions at the local and regional level have started to reduce the rate of greenhouse gas emissions; and actions outside the LTP are contributing to a reduction in emissions. However, the underlying trend points towards a slowing of emissions rather than reversal of trends. Climate change is recognised as a global concern with the UK anticipated to experience hotter, drier summers; warmer, wetter winters; and rising sea levels. These trends are anticipated to continue irrespective of interventions from outside the LTP.		
Biodiversity, Fauna and Flora and Geodiversity There are a wide range of sites designated for nature conservation within the North East CA area. There are five Ramsar sites; 'Holbourn Lake and Moss' designated for its wet mire habitat and the associated bird interest, 'Lindisfarne' designated due to its coastal habitat supporting internationally important numbers of wintering waterfowl, 'Teesmouth and Cleveland Coast' designated due to its habitat supporting internationally important numbers of waterbirds, 'Northumbria Coast' designated due to its coastal habitats supporting a range of nationally important species, and 'Irthinghead Mires' designated due to its composition of five high quality blanket mires.	The LTP should aim to protect and enhance all sites of biodiversity importance and should place a particular emphasis on protecting sites designated for nature conservation and geodiversity purposes. This could be achieved by ensuring that planning / design of transport interventions avoid sensitive areas and through the adoption of best practice wildlife friendly designs into transport interventions. Where this is not possible, there should be mitigation and compensation for losses. Consideration should also be made of protected and priority species and their habitats. In addition, consideration should be given to those sites designated for their geodiversity. Opportunities for new habitat creation, enhancement and nature connectivity and associated with	Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA)

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective

There are 82 Special Protect Areas (SPAs) in England classified for their presence of protected bird species. Eight of these SPAs[9] are located within the North East CA area, – 'Coquet Island' SPA which was classified for four breeds of birds, 'Farne Islands' SPA for five species of birds, 'Holburn Lake & Moss' SPA for one species of bird, 'Lindisfarne' SPA for 18 breeds of birds, 'North Penine Moors' SPA for four breeds of birds, 'Northumberland Marine' SPA for seven breeds of birds, 'Northumbria Coast' SPA for four breeds of birds, and 'Teesmouth and Cleveland Coast' SPA for seven breeds of birds.

There are 18 SACs which include Berwickshire & North Northumberland Coast SAC, Border Mires, Kielder-Butterburn SAC, Castle Eden Dene SAC, Durham Coast SAC, Ford Moss SAC, Harbottle Moors SAC, Moor House-Upper Teesdale SAC, Newham Fen SAC, North Northumberland Dunes SAC, North Pennine Dales Meadows SAC, North Peninne Moors SAC, River Eden SAC, River Tweed SAC, Roman Wall Loughs SAC, Simonside Hills SAC, Thislington SAC, Tweed Estuary SAC, and Tyne & Allen River Gravels SAC.

233 Sites of Special Scientific Interest (SSSIs) are distributed across the North East CA area. Some of these are designated for their biological interest and some for their geological interest.

The region has a large ancient tree resource with approximately 1,222 areas (approximately 9,975 ha) of Ancient Woodland.

There are 15 NNRs mainly concentrated in County Durham and Northumberland. In addition, there are a range of sites designated at

transport developments should be explored, e.g. through the use of appropriate locally native species in landscaping plans, through creation of new road verges and enhancement of the existing road verge network. The potential for biodiversity creation in brownfield sites should be also taken into account. There should therefore be achievement of Biodiversity Net Gain in areas not formally designated, with guidance on the appropriate form of biodiversity enhancement taken from the relevant Biodiversity Opportunity Area (BOA) guidance.

Other opportunities for the LTP include the following:

- avoid the fragmentation of green and blue infrastructure, which contributes to protecting natural habitats and biodiversity;
- the need for cohesive habitat networks to help habitats and species adapt to the consequences of climate change;
- enhancement of the green and blue infrastructure through, for example, footpaths, cycle lanes and other public rights of ways and appropriate design/alteration/replacement/mitigation of waterbody crossings/culverts to reduce the heavily modified impacts on nature.

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[9] https://jncc.gov.uk/our-work/list-of-spas/

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
the local level including 97 Local Nature Reserves (LNRs) predominantly found along the southwestern boundary of the region. Key pressures and risks in respect of biodiversity and nature conservation that are particularly relevant have been identified from air pollution and climate change, which can change distribution of species and habitats. There are three Local Nature Recovery (LNR) strategies being developed across the region by Durham County Council, by the North of Tyne Combined Authority and by the South of Tyne and Wear. The LNRs are aimed at prioritising the nature emergency on a local and focused level. New transport interventions have the potential to impact on the sites of ecological or geological value and more generally on the network of linked multi-functional green spaces, comprising the local green infrastructure, through direct land take for infrastructure (which may contribute to fragmentation) and construction and operational disturbance (noise, vibration, light pollution, etc.) and emissions / contamination (air, water and soil), though they may also provide opportunities for enhancement. Increased accessibility to designated sites also has the potential to adversely impact on them. Direct road kill can also impact on some species. On the other hand, transport infrastructure can provide opportunities for increased biodiversity, or to aid certain species such as the range of policies developed by Defra and the Highways Agency (now Highways England) relating to pollinators.	Increased accessibility to appropriately designed multi-functional green infrastructure can play a significant role in diverting access pressure away from more sensitive sites, such as those designated for wildlife and geological conservation. In parallel with the ISA of the LTP, HRA is being undertaken which will identify the internationally designated nature conservation areas to avoid, or where this is not possible, appropriate mitigation measures to identify very early on in the development of LTP.	

Likely evolution of baseline

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Uncertain - The designated elements of North East CA area biodiversity resource are afforded some protection from the pressures of development, outside the LTP. However, much of the green infrastructure network is not designated. Climate change will likely result in decline of some habitats and species, though may afford opportunities for other species, including invasive species.		
Water Resources & Water Quality There are considerable pressures on water resources with resulting major impacts on many of the waterbodies across the UK. By 2050, England as a whole, is looking at a shortfall of nearly 5 billion litres of water per day between the sustainable water supplies available and the expected demand[10]. This is more than a third of the 14 billion litres of water currently put into public water supply. As of July 2021, 15 water companies in England were designated as areas of serious Water Stress[11]. For the purposes of taking a holistic approach to management of water resources and to address the pressures on the water environment, under the Water Framework Directive (WFD), the UK has been divided into a series of River Basin Districts (RBDs). The three RBDs of relevance to the LTP are the Northumbria, Humber and Solway Tweed RBDs. As with most water bodies in England, there are a range of significant water management issues manifested in these RBDs. Pollution from towns, cities and transport is a key challenge noted for each RBD with a number of reasons for not achieving good (RNAG) identified for each RBD (487 for Humber, five for Solway Tweed and 114 for	The LTP should seek to prevent pollution of water bodies (including groundwater) both during the construction and operation of any transport intervention. This could be achieved via the appropriate use of SuDS or other appropriate measures, such as Nature based Solutions (NbS) or Natural Flood Management (NFM) and new approaches in road drainage design / transport interventions to enhance water quality and reduce pollution and flood risk. Risk to all types of water bodies (not just main rivers) is to be considered during any scheme design. Recognition of the objectives of the WFD should be made and all opportunities to help meet the objectives of the WFD should be taken when possible. Green-blue Infrastructure should be considered in the LTP in the context of the aims of the WFD and	Protect and enhance the water environment

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[10] [A summary of England's revised draft regional and water resources management plans - GOV.UK (www.gov.uk)](www.gov.uk)
[11] [Updating the determination of water stressed areas in England - consultation response document (publishing.service.gov.uk)](publishing.service.gov.uk)

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Northumbria). Transport continues to be a polluter for each of these basins but is not a main polluter for any with 'physical modifications' and rural areas being greater influences in all cases. Water runoff from roads, containing pollutants such as oil, is identified as being a key contributor to water quality issues. 18% of water body failures in England are caused by road water runoff, as per the WFD, with 1 million instances in the UK where water from roads meets watercourses (outfalls)[12].	how this can realise these, as well as other wider, benefits and objectives.	

Groundwater provides a third of drinking water in England, and it also maintains the flow in many rivers. Protecting these sources will help ensure that water is safe to drink.

In order to help protect sources, Source Protection Zones (SPZs) for groundwater sources such as wells, boreholes and springs used for public drinking water supply have been defined. Across the North East CA area there are four Drinking Water Safeguard Zones for Surface Water: Cumwhinton and Castle Carrock, Acomb Landing and Moor Monktown, Whittle Dene and Warkworth. There is also one Drinking Water Safeguard Zone located in North Northumbria.

Likely evolution of baseline

Declining – according to the Environment Agency, water quality in the UK in declining, with all groundwater and surface water in England being polluted. Run off from transport was noted as one of the main causes of water pollution (18%) in surface water. Significant challenges remain as noted in the River Basin Management Plans.

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[12] Road runoff pollution causing 'catastrophic damage' to UK's waterways | New Civil Engineer

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Adaptation to a changing climate and flooding Current observations indicate that the UK is continuing to warm. In 2022, five new national temperature records were set, including a highest daily maximum temperature record of 40.3°C and highest daily minimum temperature of 26.8°C. Many stations recorded their lowest December daily maximum and daily minimum temperatures since December 2010. The most recent decade (2013–2022) has been on average 0.3°C warmer than the 1991–2020 average and1.1°C warmer than 1961–1990. Annual precipitation has increased across the UK in the last few decades. For the most recent decade (2013–2022) UK winters have been 10% wetter than 1991–2020 and 25% wetter than 1961–1990, with much smaller changes for spring, summer and autumn overall. Rainfall in 2022 was 94% of the 1991–2020 average. 2022 included the UK's eighth wettest February on record but January, March, April, July and August were all notably dry, particularly across England and Wales, and the UK had its driest summer since 1995. These general trends are expected to be similar in the North East CA area. Significant proportions of the UK population are at risk from flooding, although the degree of risk varies, with a range of factors affecting potential risk. The Flood Directive (2007/60/EC) was transposed into English law in the form of the Flood and Water Management Act 2010 (England & Wales). The Directive requires the production of flood hazard maps and flood management plans. In relation to the LTP	LTP should seek to ensure that transport infrastructure minimises any negative effects arising from flooding and avoids where possible areas of highest flood risk. Flood risk should be considered in any design and the implementation of SuDS and other similar appropriate measures or new approaches should be considered and encouraged where feasible. LTP should ensure that where transport interventions require a land take from the floodplain there are appropriate compensatory measures put in place. LTP should seek to explore the possibilities for creating blue infrastructure which can both help to manage localised flood risk and simultaneously create new habitats. LTP should recognise the challenges that a changing climate will bring and aim to reduce the impacts. More frequent and extreme weather events should be considered in any infrastructure design and maintenance procedures / regime.	Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding.

area, there is flood management plan in place to cover the relevant river basin. This flood management plan is at the river basin level, but at the local authority level Strategic Flood Risk Assessments is being completed. The flood risk plan introduces a series of measures / actions to be undertaken to prevent flood risk and reduce the likelihood of flooding affecting people and property in certain locations. Each of the local authorities within the region have (or are in the process of producing) a local flood risk management plan which lay out similar objectives informed by those at a regional and national level. These focus on:

- Improving knowledge regarding flood risk
- Encouraging proactive investigation and protection from flooding
- Increasing resilience to flooding through better infrastructure management
- Protecting the environment and economy,
- Working with new developments to ensure effective flood management

The North East Evidence Hub[13] states that 3% of the North East area is at high risk of flooding. The EA currently maintain £733 million of assets protecting the North East from fluvial flooding and coastal erosion. Flood risk presents a significant planning issue in the development of major infrastructure projects, both in terms of potential direct impacts on the project itself and indirect impacts associated with

[13] Adapting to change (netzeronortheastengland.co.uk)

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
works (such as increased run-off). In relation to transport infrastructure, there is a direct flood risk to the infrastructure itself, e.g. roads, rail lines, or development of other transport infrastructure can aggravate existing flood risk in a wide range of ways, for example by requiring land take from flood plains, or by changing the drainage regime, etc. Expected climate change impacts to transport infrastructure include increased risk of extreme flooding (from more frequent "heavy precipitation events") and more extreme weather events from higher temperatures and increased wind and rain in winter months. This is likely to result in: • Direct impacts of flooding on transport infrastructure, now and into the future. • Secondary impacts of flooding such as flood damage to bridges, embankments, surfaces etc. • Making driving more hazardous through for example higher wind speeds, greater levels of water on carriageways etc. Other climate change impacts to transport infrastructure could include: • Impacts from extreme temperatures such as rail buckling and passenger discomfort. • Increased disruption to operations, e.g. lift of aircraft reduced through higher temperature. **Likely evolution of the baseline**		

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Declining - Climate change is recognised as a global concern with the UK anticipated to experience hotter, drier summers; warmer, wetter winters; and rising sea levels. These trends are anticipated to continue irrespective of interventions from outside LTP.		
Land use, soil and contaminated land Land uses across the North East is predominately rural with only 6% considered developed land with a large portion of the region, 48%, classified as agriculture. The more urbanised areas include the city of Newcastle upon Tyne, Durham, and Sunderland, with areas of urban fringe associated with the main towns and distinct pockets of 'isolated' urban development in the form of villages and small towns across the region. Soils in England are already, and continue to be, degraded by human activity including intensive agriculture, historic levels of industrial pollution and urban development (including transportation networks), making them vulnerable to erosion (by wind and water), compaction and loss of organic matter. Many areas of land in the UK have been contaminated by past industrial and other human activities, including former factories, storage depots and landfills. It is worth noting that large parts of the North East have a strong industrial heritage. Transportation infrastructure is also a frequent source of land contamination. Land could be contaminated by a wide range of harmful substances such as oils and tars, heavy metals, asbestos and chemicals.	Soil is a non-renewable resource and is vulnerable to erosion, degradation and contamination. In addition, historic land uses have contributed to contamination across large areas. LTP should seek to make best use of areas that are already urbanised and provide an opportunity for regeneration / improvements to land quality. Where use of agricultural land is unavoidable, measures should be taken to avoid those areas of the highest quality and aim to protect soil and agricultural holdings through avoidance of impacts such as contamination or severance. LTP must protect soils as they are essential for achieving a range of important ecosystem services and functions. In particular, LTP must ensure that soil resources are protected during the construction phase of interventions. Dealing with the past pollution / contamination legacy is a major issue and should be addressed at all opportunities due to its ongoing environmental impact.	Protect, enhance and promote geodiversity

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
By its nature, it is often very difficult to know where land has been contaminated previously or is currently suffering ongoing contamination. As such the number of known sites of contamination is likely to be only a very small fraction of the overall number of potentially contaminated sites.	LTP should seek to avoid land that is covered by Mineral Safeguarding Area designations, to prevent the sterilisation of key mineral resources.	
The geology of North East CA is dominated by mudstone, sandstone and limestone of the Carboniferous period but also hosts a number of outcrops. This include andesite and granite bedrock forming Cheviot hills in Northumberland. To the south of the region coal formations overlies the repetitive the mudstone and sandstone.		
Likely evolution of the baseline		
Declining - it is likely that greenfield sites will experience increasing pressure for development in preference to the complexities of redeveloping previously developed and potentially contaminated sites. This could reduce available high quality soil resources and fail to realise the potential of existing capacity within existing urban and previously developed areas. Remediation of contamination is likely to remain sporadic and reflective of individual site requirements.		
Cultural Heritage There are two World Heritage sites within the region: Hadrian's Wall and Durham Cathedral. Both landmarks are legally protection by an international convention administered by UNESCO for their cultural and historical significance. Hadrian's Wall is 118km long and is one of the most well-known Roman Empire frontiers while Durham Cathedral is the largest example of Norman architecture in England.	LTP should aim to conserve and enhance designated and non-designated heritage assets and their and settings in a manner according to their significance. Transport related development / infrastructure should be sensitively designed to be sympathetic to its existing character and quality and opportunities	Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
There are of course a wide range of other historic and cultural heritage features located across the region and which span the full range of human settlement, from the prehistoric to the present. These include Scheduled Monuments, Registered Parks and Gardens and Listed Buildings. Numbers of sites are as follows: • Listed Buildings – 10,184 • Registered Parks and Gardens – 46 • Scheduled Monuments – 1,288 • Registered Battlefields – 6 • Buildings listed on Heritage at Risk – 236 • Protected Wrecks – 57 It is important to note that the nature of cultural heritage features means that not all are known at present; in particular, buried archaeological remains. **Likely evolution of the baseline** Stable / Declining - Designated heritage assets benefit from protection that will continue without the LTP. However, there is a risk or uncoordinated and piecemeal development resulting in the successive erosion of the quantum and integrity of the region's cultural heritage resource.	for improving settings should be examined. Better accessibility to the historic environment should also be an aim for LTP where appropriate. Where schemes would involve physical development that could affect previously undiscovered archaeological assets the design of the scheme and site selection should be informed by early investigation of the potential archaeological interest of the affected land.	
Landscapes and townscapes North East CA covers a large area containing a wide variety of landscapes ranging from the remote hills and forests to an extensive	The LTP should seek to preserve and enhance the character of North East CA landscape and townscape by ensuring that its integrity and valuable	Conserve and enhance the natural beauty the North East's protected landscapes, seascapes

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
coastline forming its eastern border. To the northwest is the Northumberland National park which is the most remote and least populated park in England and is known for the breathtaking beauty of the remote uplands of the Cheviot Hills and the fine historical landscapes of the border valleys. To the west is the North Pennines National Landscape characterised by open moors, attractive meadows and woods. The eastern coastline plays host to two heritage coasts (Durham and Northumberland) known for their dramatic views and varies between long sand beaches to high black basalt headlands. Also found, throughout the region, are a series of woods and rivers stretching through rural and urban areas There are also a range of settlement types, from the smallest hamlet and isolated farmstead in rural areas, to larger conurbations centred on towns and cities such as Newcastle Sunderland, or Durham. There are 14 National Character Areas within and intersecting North East CA. It is also intersected by the Northumberland National Park. There are a range of pressures on landscape, many of which are altering landscapes in a direction which could be regarded as inconsistent with the traditional landscape vernacular of the area. These changes are a reflection of the fact that the landscape of the UK has changed over many years due to a range of issues such as urbanisation, changes to agriculture, reduced tranquillity, loss of habitats and forests, etc. The Plan Area is intersected by two National Landscapes (formerly known as Areas of Outstanding Natural Beauty); North Pennines and the Northumberland Coast.	natural open space is not lost. Design should note the local vernacular architecture when possible. The LTP should also aim to ensure that transport interventions avoid sensitive areas and respect particular landscape or townscape settings, with consideration made of design quality in both an urban and rural setting. Opportunities for landscape enhancement should be explored, e.g. through sympathetic design and enhancements to existing landscape improvement areas, as well as new planting opportunities (using native species) associated with transport development. Where a scheme would involve physical development within any of the two National Landscapes within the plan area, guidance should be sought from the relevant adopted National Landscapes Management Plan, and through consultation with the relevant National Landscapes Office. Where a scheme would involve physical development within a Conservation Area or a wider area for which a townscape/urban character appraisal has been undertaken, the design of the	and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
There are 217 Conservation Areas in the region mainly concentrated in the east, southeast and south of the plan area. **Likely evolution of the baseline** Stable - Many of the region's most exceptional landscape and townscapes benefit from protection through designations that will persist in the absence of the LTP. In general terms, modern design / landscaping principles and interested parties expectations are promoting a renewed focus on the quality of scheme design and this trend is likely to continue, though risks from increased urbanisation and infrastructure development remain	scheme should take account of relevant guidance for the Conservation Area / townscape character area.	
Waste Management and Resource Efficiency The transport sector can impact on and interact with a wide range of resources such as through energy (fuel) use, use of construction materials (aggregate, concrete, etc.), waste generation and disposal, etc. New transport interventions' construction contributes to increase the levels of waste generated if building materials are not efficiently used / reused. With more waste being produced, trip kilometres to transport such waste is likely to increase, thus generating more traffic. Transport is the largest energy consuming sector in the UK, representing 38% of final energy consumption in 2022. This share is now almost equal to that of 2019 following significant drops when Covid related travel restrictions were imposed in 2020 through to the first quarter of 2021. Despite road and air consumption increasing	The LTP should seek to promote a circular economy by promoting re-use, resource efficiency and minimising waste. The LTP should seek to reduce consumption of resources, such as construction materials, e.g. through encouraging the use of recycled or secondary materials. This will also reduce the need to transport these materials and transport the waste by-products. The LTP can also help reduce the consumption of fuel by promoting a shift to more sustainable forms of transport such as active modes like cycling and walking, as well as low or zero emission vehicles (LZEVs).	Promote sustainable use of resources and natural assets

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
substantially, air consumption remains notably lower than pre-pandemic values. Energy use by road vehicles showed steady growth between 1970 and 1990, increasing by an average of 2.8% per annum. Growth then remained fairly stable until it peaked at 29,622 ktoe in 2007, the year prior to the 2008 recession. Growth in consumption turned positive again in 2014. Traffic in 2022 was impacted by the travel restrictions that were in place across the country between March 2020 and March 2022 due to the coronavirus (COVID-19) pandemic. Overall traffic levels in 2022 were estimated to be 1% higher than 2021 but remain below pre-pandemic 2019 levels. Motor vehicle traffic on Great Britain roads increased by 8.8% between 2021 and 2022. Traffic in 2022 was approximately 4.4% lower than when compared to 2019 pre-pandemic levels. Air passenger travel in 2021 was still well below pre-pandemic levels at only 17.4% of 2019 levels. Between 2021 and 2022, petroleum consumption increased by 96% for air transport, 47% for water transport and 7% for rail. As of January 2022, there were 42 electric vehicle charging devices per 100,000 population in the UK. It is anticipated that uptake of EV will increase across the UK. **Likely evolution of the baseline** Uncertain - Continued growth in the region will contribute towards a trend of increased waste and resource use. While new approaches are helping to shift towards greater efficiencies in resource use and	Appropriate management and maintenance of transport infrastructure can meet waste and resource goals as well as a range of other objectives.	

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
adherence to the waste hierarchy, underlying waste generation volumes are anticipated to increase cumulatively. Energy usage within transport is falling and there will be an increase in the uptake of EVs (particularly when the EV charging network fully develops) alongside increased decarbonisation of electricity supply.		
Economy, Employment and Skills North East CAs economy is worth around £54 Billion and includes over 830,000 jobs. Some of the key employers within North East CA include the public sector alongside a growing education and health sector. Alongside this retail and hospitality also provide many entry level job opportunities. Manufacturing remains above the national average as an employer within the North East although jobs have been falling in recent years. North East CA's economy in 2022 had a GDP (at current market prices) worth £54 Billion, making up 2.5% of England's total GDP. The gross annual pay across the region is £25,000 which is 18% below the national average of England excluding London. This GDP gap has continued to increase since the 2008 recession and is mainly due to weak productivity growth across the region. Some of the challenges that attribute to this include limits within the sectoral composition, business density and skills and labour force density. Some of the most significant challenges facing North East CA is reminiscent of other rural areas across the country, these include an	The LTP should improve transport links within and between employment (commercial and industrial) centres and improve connectivity to support business-to-business markets and access to wider and highly skilled labour markets. Improved connectivity should be achieved by sustainable and affordable modes of transport and/or improved digital connectivity. Reliability and resilience of transport links should be improved to enhance further the productivity and competitiveness of North East CA economy. The LTP should seek to reduce road congestion (therefore reducing the time to commute and transport goods). The LTP should seek to limit the rising costs associated with travel to assist in enhancing accessibility to education, training, cultural and leisure activities and employment opportunities within the region. The LTP should consider that high quality green and blue infrastructure can play an important role in enhancing the visual appeal of transport infrastructure and help to encourage new inward	Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
ageing population alongside challenges around accessing services and meeting housing demand. The North East's Gross Value Added (GVA) per hour worked (as a proportion of England excluding London) remains lower than the rest of the country, currently sitting at 89%, 11% lower than the national average (excluding London). The GVA saw a slight increase during 2020 when fewer hours were being worked in less productive sectors but this decreased again when Covid-19 restrictions were lifted. There was also an added impact in 2021 on the automotive section (one of the most productive in the region) when there was a global semi-conductor shortage. Between April 2023 and March 2024 72.6% of the population across the North East of England were economically active. In 2023, 4.6% of the population of working age were unemployed, which is higher than the national rate (3.8%). North East CA have a high proportion of residents working in high level occupations (43%) which is less than the England average (46%). Where professional occupation was the largest with 8% of the population classified as professional followed by 5.30% as associate professional and technical occupations. The proportion of residents educated to Level 4+ across the plan area is 24%, which is 10% less than that of England (34%). The majority of the forecast population growth is anticipated in the 65+ age group which is estimated to grow by 23% between 2020 and	investment, as well as help to retain high skilled labour.	

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
2043. In contrast, the working age population is expected to decrease by 2%. The impact of Covid-19 and an increase in working from home, along with greater online commerce, will likely require a greater digital connectivity, which will help to reduce transport need. **Likely evolution of the baseline** Uncertain – while North East CA area will likely remain a premier location for employment, with a highly skilled workforce, it is not immune to uncertainties relating to the outcome of the Covid-19 pandemic and wider macro-economic uncertainties such as that related to 'Brexit'.		
Patterns of land use and transport Overall North East CA is a largely rural area with an approximate density of 250 people/km^2 which is slightly lower than the UK density of 276 people/km^2. The density across North East CA ranges across the local authorities with the more rural regions like Northumberland at a density of only 65 people/km^2 while one of the major cities in the area, Newcastle, has a density of 2,711 people/km^2. The region covers around 6% of the total area of England and is over 7,700km^2. It is predominantly rural with farming contributing 48% of the total area. North East CA have assumed responsibilities of the former North East LEP with a business board designed to promote and develop economic growth across the region.	The LTP should support a co-ordinated approach to land use (including development of housing) and transport planning across the region and prioritise investment in this regard. A growing EV charging network will have both implications for the energy supply sector and transport sector which the LTP will need to address.	Support the wider coordination of land use and energy planning across the North East CA

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective

Strategic connections such as the electrified East Coast Rail connect Newcastle to Edinburgh and York and place it on a primary route between London and Edinburgh. Similarly the A1 runs through the region, forming another strategic link between the English and Scottish capitals.

Its location along the coast provides easy access to ports namely Port of Sunderland, Port of Tyne (including international ferry terminal) and Port of Blyth. North East CA also hosts the Newcastle international Airport providing a strategic international connection.

Car usage has risen in the region with the percentage of households with one or more car or van raising from 685 to 72% from 2011 to 2021. The 2021 census also indicates that 45% of those working travel less than 10km to work yet less than 20% of those who do walk or cycle to work while 67% use private vehicles. In addition, according to a North East CA area breakdown of the Department for Transport (DfT) 2022 National Travel Survey, car and van journeys made up 58% of all journeys made in 2022. Recently, the government promised a £19.8 billion investment into transport as part of the Network North Plan.

Likely evolution of the baseline

Stable / Uncertain – North East CA will likely remain a relatively rural region with most of its population centred around urban areas like Newcastle, Sunderland and Durham. There is uncertainty how this may change over time though due to a likely rise in homeworking and e-commerce and a consequent change in commuting patterns.

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Population and Health The total population across North East CA is 1,994,084 people with the largest settlements being Sunderland, Newcastle and Durham. Life expectancy in the North East CA is lower than the national average for both men and women. The average life expectancy at birth in 2020 was 77.18 years for males (compared to the national average of 79.3 years for males) and 81.4 years for females (compared to the national average of 83.0 years for females). The healthy life expectancy, which is 59 for women and 58 for men, is also less than the national average at 62). Both life expectancy and healthy life expectancy have decreased in the last 10 years. In the North East CA area, 3.8% of the working age population (16-64) were claiming Job Seeker's allowance in 2024 which is a slightly lower rate than England. From 2018 in 2022, the proportion of the population reported to have a long term Musculoskeletal (MSK) problem reduced from 24.4% to 22.1%. This is still the highest MSK reporting rates in the country and 4.5% higher the country's average. The proportion of people with a long-term illness or disability, categorised under the Equality Act, averages 21% across the region which is greater than England (17.3%). In the North East, infant mortality was 3.5 per 1,000. Across the plan area 9.2% of the population has diabetes which is on par with the national average.	The LTP should seek to provide accessible and affordable transport, enabling good access to education, employment, fresh food, friends and family, leisure and health services and facilities, which would particularly benefit those in low income groups. Indirectly, health levels could be improved through secondary effects of policies to reduce air pollution; decreasing noise pollution as well as traffic congestion. Improving walking and cycling facilities for both purposeful and recreational trips will both improve physical activity levels as well as decrease air pollution and traffic. Improving access to and provision of greenspace and improving the physical environment in general may increase both informal and formal physical activity levels, as well as create a general sense of wellbeing.	Improve health and well-being for all citizens and reduce inequalities in health

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
The region has a higher rate of adult smokers at an average of 15% than England at 13%. 1 in 4 adults (25.1%) in the North East CA area are physically inactive (undertaking less than 30 minutes of physical activity per week). The north east is also the region with the highest proportion of obese adults at 32.4% which is significantly higher than the 26.2% average for the country. North East CA has a lower mortality rate from cancer in under 75-year olds compared to the national average. The under 75 mortality rate from cancer (2022/2023) is 137.2 per 100,000 people. The under 75 mortality rate from cardiovascular diseases (2022/2023) is 90.8 per 100,000 people, also lower than England. It is important to note that COVID-19 has impacted different groups within the population in different ways. **Likely evolution of the baseline** While population levels are likely to continue to rise, there is uncertainty over migration levels due to a lack of clarity on issues such as 'Brexit'. Population profiles are also likely to continue to get older – this will likely result in changes to overall health outcomes with an increased number of long-term conditions.		
Population and Equalities In North East CA under 16 year olds make up approximately 18.5% of the population, whilst 16 to 64 year olds make up approximately 62.2%. Older people (those aged 65 years and over), make up 20.7%	The LTP should aim for all citizens the opportunity to access transport and related services that come with this.	Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
of the population. In England, the percentage of people between 0-15 is 18.5%, working age population is 63.2% and those aged 65+ is 18.6%. In England 51% of the population are female, and the remaining 49% are male. The gender split for North East CA, mirrors the English proportions. Gender-based violence in public space (e.g. street harassment) is a barrier to safe mobility and participation in public life for women and girls. In the UK, 86% of women aged 18-24 and 71% of women of all ages have experienced sexual harassment in public spaces, including public transport. The gendered division of domestic and caring responsibilities also means women make more frequent, short journeys throughout the day, whereas men make fewer but longer journeys during peak hours. In 2021, 3.5% of the region's residents identified their ethnic group within the "Asian, Asian British or Asian Welsh" category. This is lower than the English average of 9.6%. 93.4% of people in North East CA identified their ethnic group within the "White" while 1.23% identified their ethnic group within the "Mixed or Multiple" category. The proportion identifying as "Black, Black British, Black Welsh, Caribbean or African" was 0.97%. In the 2021 census, 93.24% of residents in this region stated they were born in the UK. Outside of the UK, the most represented area was the Middle East and Asia with 2.66% of the population. In 2021, 40.32% of North East CA residents reported having "no religion", while the largest supported religious group was Christianity at 50.78% of people.	The Equalities Act 2010 provides a legislative framework to protect the rights of individuals and advance equality of opportunity for all. When considering approaches to community engagement, it is important to understand the diversity of the populations and their needs and experiences as individuals. This requires examining the different issues, barriers and priorities for women and men and meeting any identified requirements. This may include, for example, not discriminating against employees because of their gender, ensuring both men and women have the same access to educational facilities, and considering safety and security issues for travelling, as research has shown that women experience more perceived safety issues when travelling alone than men.	

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Deprivation is dispersed across England. 61% of local authority districts contain at least one of the most deprived neighbourhoods in England. The North East has the highest percentage of households deprived in one or more dimension, at 54.4%. **Likely evolution of the baseline** Uncertain – it is unclear how economic uncertainties will impact on the diversity of the region, though it is considered that North East CA area will likely remain less diverse than the UK as a whole. It is anticipated that deprivation across the area will remain high, however on the whole it is anticipated that the region will improve in terms of wealth, but increased deprivation could be manifested in pockets.		
Population North East CA has a higher crime rate than England, with 98 crimes recorded per 1,000 people in comparison to England which has 84 crimes per 1,000 people. The most common recorded crime across the plan area was classified as violence against the person at 36.8 per 1000 people, followed by theft offences at 27.5 per 1000 people. A significant 10% reduction in the level of crime was estimated in the year ending September 2022 compared with the pre-coronavirus pandemic year ending March 2020. It appears too early to say whether or not the decreases seen in most crime types occurring during the coronavirus pandemic will come to represent a sustained change in long-term trends. In 2022, there were 2381 reported road collisions across the region, of which 39 were fatal.	The LTP should consider interventions that engender a sense of safety and reduce crime and fear of crime through indirect measures via incorporation of design features such as additional lighting, CCTV and rapid response by police / security on transport, active street frontages, development reaching 'secured by design' standards). Interventions that discourage incidences of anti-social behaviour and opportunistic crime, often attributed to 'boredom' or a 'lack of things to do', through increasing accessibility to community facilities, especially open and green space and leisure facilities, should be considered in the LTP.	

Key Sustainability Issue	Implications / Opportunities for LTP	ISA Objective

Likely evolution of the baseline

Stable / Uncertain – crime is closely linked to economic outcomes and it is unclear how economic uncertainties (post Covid-19 and Brexit as well as other global issues) will be reflected in crime statistics. It is noted, for example, that reports of sexual harassment on public transport have jumped 63% across Britain, comparative to pre-COVID 19. Overall, it is anticipated that the North East CA area will continue to have a higher crime rate relative to other parts of England. The LTP should therefore consider interventions that engender a sense of safety and reduce crime and fear of crime through indirect measures via incorporation of design features such as additional lighting, CCTV and rapid response by police / security on transport, active street frontages, development reaching 'secured by design' standards).

Interventions that discourage incidences of anti-social behaviour and opportunistic crime, often attributed to 'boredom' or a 'lack of things to do', through increasing accessibility to community facilities, especially open and green space and leisure facilities.

6.6   Population and health

As set out in Chapter 2, Health Impact Assessment (HIA) is a practical approach used to judge the potential health effects of a policy, programme or project on a population, particularly on vulnerable or disadvantaged groups.

From a review of the population and human health baseline (presented in Appendix C) for the region as a whole, it has been possible to identify a number of groups who, along with the population as a whole (wider groups) could be considered vulnerable in terms of their health and wellbeing. These groups and the rationale for their identification is outlined in Table 6-2 below.

Table 6-2 - Population groups potentially vulnerable to transport measures in the North East

Groups	Relevant receptor / medium	Explanation	Are these groups present within North East CA area?
Wider Groups – adults / working people	Residents living in houses, operators and users of community land and facilities, business owners and users, users of open space, recreation and leisure activities, Non-motorised Users (NMU), public transport users and vehicle travellers	The key challenge to the physical health, mental and social wellbeing of the local resident population arises from inactivity and unhealthy lifestyle choices and are also linked to the local transportation and road network. Residents of properties in the wider study area, employees and customers at the retail, commercial and industrial businesses interspersed throughout the area, walkers and cyclists using recreation routes and the local footpath and cycleway network, visitors to nearby visitor attractions, and public transport users are likely to be most exposed to health impacts.	Yes – the North East CA area had an estimated population of 1,994,084 in 2022. The overall proportions for the male/female population (49%/51% respectively) is equal to that of England as a whole. As would be anticipated, the population profile covers all age groups, though there is a general trend toward an aging population. 20.4% of the population are aged 65 years and over, similar to the England average of 18.3%.
Sensitive Group - Families with children and adolescents, (pregnant women, babies, children and adolescents)	Residential houses, community services and facilities, open space, greenspace and recreational facilities, PRoW, local footpaths and cycleways, Schools nurseries, day care centres, residential houses	Children and adolescents constitute a sensitive population group due partly to their need to be able to move around freely to and from school, open space, greenspace and recreational activities, whilst they lack the experience and judgement displayed by adults when moving around in traffic and public spaces[14] and when using public transport and related infrastructure. Hence, children and adolescents as pedestrians[15] and cyclists are at elevated risk from danger distributed by motorised transport.	Yes – within the population of the North East CA children within the ages of 0 – 15 make up 17.7% of the population, though this is lower than the English average of 18.5%.

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[14] World Health Organisation (2018, December) Adolescents: health risks and solutions (https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions)

[15] Child Accident Prevention Trust (2013) Child death from road traffic accidents (http://makingthelink.net/child-deaths-road-traffic-accidents)

Groups	Relevant receptor / medium	Explanation	Are these groups present within North East CA area?
		Furthermore, children are more sensitive than adults to air pollution[16], noise[17], odour[18] and other environmental factors and their bodies and minds are less able to deal with them.

Particularly susceptible children are those from low-income[19] and/or black and minority ethnic (BME) backgrounds[20] and/or living in deprived areas. | |
| Sensitive Group – People who are physically or mentally disadvantaged (elderly people, people with physical disabilities, people with other health problems or impairments) | Residential houses, retirement / Care homes, community services and facilities (including health centres / clinics and hospitals), open space, PRoW and local footpaths | Elderly people constitute a sensitive group as they are more sensitive than young and middle-aged adults. Generally, the older people are, the slower their movement and reactions and the poorer their hearing[21]. They can be more at risk from injury and may fear falls, steps or lack of suitable footpaths, lack of safe crossing points and short crossing times at safe crossing points and other aspects of the surrounding built environment[22]. This can deter them from outdoor activity, especially walking, whereas walking is critical for muscle strength and reduces the risk of falls amongst other benefits. | Yes – the population in North East CA in the age range 65+ is currently 20.4%. Numbers in this age group are 401,839 and could grow over the coming year as the age range with the most individuals in it is the 50 to 64 years with 20.8% of the population. Numbers of those 85 years and over are 49,244.

21.3% of the population in the North East CA are considered to have a |

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[16] World Health Organisation (2018) Air pollution and child health: prescribing clean air (https://www.who.int/ceh/publications/air-pollution-child-health/en/)
[17] World Health Organisation Data and statistics (http://www.euro.who.int/en/health-topics/environment-and-health/noise/data-and-statistics)
[18] Agency for Toxic Substances and Disease Registry (2015, October) (https://www.atsdr.cdc.gov/odors/faqs.html)
[19] British Medical Journals, Wickham. S, Anwar. E, Barr.B, Law. C, Taylor-Robinson.D (2016, July) Poverty and child health in the UK: using evidence for action (https://adc.bmj.com/content/101/8/759)
[20] Parliamentary Office of Science and Technology (2007, January) (https://www.parliament.uk/documents/post/postpn276.pdf)
[21] Transport for London (2013, April) Older Pedestrians and Road Safety, Research Debrief (http://content.tfl.gov.uk/older-pedestrians-research-report.pdf)
[22] Asher. L, Aresu. M, Falaschetti. E, Minell. J (2012) Most older pedestrians are unable to cross the road in time: a cross-sectional study (http://ageing.oxfordjournals.org/content/41/5/690.full.pdf+html?sid=4b5142fa-92a1-4cd5-80b1-4eb35701432e)

Groups	Relevant receptor / medium	Explanation	Are these groups present within North East CA area?
		Elderly people can also feel more sensitive when using public transport[23,24]. They also often need to seek health services. Their continuing independence at home is often dependent on having available a range of transport mode and route options. People who are disabled and/or with physical and/or mental illnesses or impairments constitute a sensitive group as they may not be able to access many forms of transport or need special arrangements and/or support to access these[25]. They are more likely to find it difficult to walk or travel independently and can also be disadvantaged by the cost of transport. Any changes in access, such as greater travel distances, diversions or replacement services during construction would have particular impacts on this group. Chronically ill persons, for example, people with impaired lung function, can be more adversely affected by air pollution[26]. The same is true of hypersensitive individuals such as asthmatics[27].	limiting long term illness or disability under the Equality Act.[29]

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[23] Shrestha.B.P, Millonig.A, Hounsell.N.B, McDonald.M (2017) Review of Public Transport Needs of Older People in European Context (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5656732/)

[24] https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_june15_the_future_of_transport_in_an_ageing_society.pdf (page 10)

[25] House of Commons Briefing Paper (2018, October) Access to transport for disabled people, Number CBP 601 (https://researchbriefings.files.parliament.uk/documents/SN00601/SN00601.pdf)

[26] DEFRA UK AIR, Air Information Resource, Effects of air pollution (https://uk-air.defra.gov.uk/air-pollution/effects)

[27] Asthma UK (https://www.asthma.org.uk/advice/triggers/pollution/)

[29] Office for National Statistics (2023) *2021 Census Profile for areas in England and Wales* 2021 Census Profile for areas in England and Wales - Nomis (nomisweb.co.uk)

Groups	Relevant receptor / medium	Explanation	Are these groups present within North East CA area?
		Noise can cause hypertension and cardio-vascular problems[28]. Those who already have these conditions can be more troubled by noise than others.	
		People with existing physical and mental illnesses, including sleep disturbance, anxiety and depression, are likely to be more sensitive to changes to their local environment.	
Sensitive Group - People who are materially disadvantaged	Residential houses, community services and facilities, local businesses, open space, greenspace and recreational facilities, PRoW, local footpaths and cycleways, public transport, bus stops	People on low incomes (living in deprived areas is a proxy measure for low income) and people without access to a car constitute a sensitive group as they are likely to walk further because they cannot afford public transport or to own a car, and their lack of transport options may limit life and work opportunities. Those on low incomes may be less able to adapt to changes in access, such as greater travel distance or alternative transport provision.	Yes – the percentage of people considered in Income Deprivation in the North East CA is 16.5%.[30]
		People living in deprived areas tend to suffer the most from road traffic incidents (deaths and injuries), noise and air pollution, as they tend to be characterised by high traffic volume, as well as other environmental burdens such as industrial facilities. This group is generally more likely to already have reduced access to health and social care as well as reduced access to other services and amenities.	21.8% of children are considered to be living in child poverty along with 19.0% older people in Deprivation.
		This group may have increased stress levels due to the factors above. In addition, this group is more sensitive to food insecurity, which has an access dimension.	

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[28] Munzel T, Schmidt FP, Steven S, Herzog J, Daiber A, Sorensen M. Environmental Noise and the Cardiovascular System. J Am Coll Cardiol. 2018;71(6):688-97 (Extract from Journal of the American College of Cardiology 2018; http://www.intuition-physician.com/wp-content/uploads/2018/05/Evironmental-Noise-and-Cardiovascular-Health.pdf)

[30] Exploring local income deprivation (ons.gov.uk)

Groups	Relevant receptor / medium	Explanation	Are these groups present within North East CA area?
Sensitive Group – People from black and minority ethnic backgrounds	Residents living in houses, operators and users of community land and facilities, users of open space, recreation and leisure activities, Non-motorised Users (NMU), public transport users and vehicle travellers	There is a general consensus that inequalities exist in the health and healthcare experiences of ethnic minority groups in England[31]. Access to primary health services is generally equitable for ethnic minority groups, but this is less consistently so across other health services. People from the gypsy or Irish traveller, Bangladeshi and Pakistani communities have the poorest health outcomes across a range of indicators and compared to white populations, disability-free life expectancy is estimated to be lower among several ethnic minority groups. While the incidence of cancer is highest in the white population, rates of infant mortality, cardiovascular disease (CVD) and diabetes are higher among black and south Asian groups. CVD and diabetes cause significant morbidity among these groups, much of which can be prevented by public health measures aimed at tackling risk factors such as obesity, poor diet, inadequate physical activity and smoking[32].	Yes – 3.7% of North East CA identify as Asian, Asian British or Asian Welsh and 1.0% as Black, Black British, Black Welsh, Caribbean or African.

[31] BME_needs_assessment_final.pdf (derbyshire.gov.uk)
[32] The health of people from ethnic minority groups in England | The King's Fund

6.7   Population and Equalities

As discussed in Chapter 2, in accordance with the Equality Act (2010) Act, EqIA considers there to be nine relevant 'protected characteristics' as follows:

- Age;
- Disability;
- Gender;
- Gender reassignment;
- Marriage and Civil Partnership;
- Pregnancy and maternity;
- Religion or belief;
- Race;
- Sexual Orientation;

The local Government Equality Duty (as set out in the Equality Act 2010) sets out a clear expectation that each year data on the nine protected character groups is collected by local authorities and published. This data is summarised in Table 6-3 below.

Table 6-3 - Protect characteristics among the population of the North East

Protected Characteristic	North East CA presence
Age	**North East CA** North East CA has an even distribution of children and young adults with a smaller proportion of older adults. This is typical in a developed country and suggests a lower birth rate and a higher quality of life. Population aged 0 – 4 years: 5.1% Population aged 5 – 15 years: 12.6% Population aged 16 – 24 years: 10.8% Population aged 25 – 64 years: 51.1% Population aged 65 years and over: 20.4% **County Durham,** Durham has an even distribution of children and young adults with a smaller proportion of older adults. This is typical in a developed country and suggests a lower birth rate and a higher quality of life. Population aged 0 – 4 years: 4.7% (English Average 5.4%) Population aged 5 – 15 years: 12.1% (English Average 13.1%) Population aged 16 – 24 years: 11.2% (English Average 10.6%) Population aged 25 – 64 years: 50.6% (English Average 52.4%) Population aged 65 years and over: 21.3% (English Average 18.3%) **Gateshead,**

Gateshead has an even distribution of children and young adults with a smaller proportion of older adults. This is typical in a developed country and suggests a lower birth rate and higher quality of life.

Population aged 0 – 4 years: 5.1% (English Average 5.4%)

Population aged 5 – 15 years: 12.4% (English Average 13.1%)

Population aged 16 – 24 years: 9.4% (English Average 10.6%)

Population aged 25 – 64 years: 52.8% (English Average 52.4%)

Population aged 65 years and over: 20.3% (English Average 18.3%)

Newcastle,

Newcastle has many children and young adults and a lower number of older adults. This suggests a slightly higher birth and death rate. Indicates a slightly lower quality of life.

Population aged 0 – 4 years: 5.2% (English Average 5.4%)

Population aged 5 – 15 years: 12.0% (English Average 13.1%)

Population aged 16 – 24 years: 19.0% (English Average 10.6%)

Population aged 25 – 64 years: 48.9% (English Average 52.4%)

Population aged 65 years and over: 14.9% (English Average 18.3%)

North Tyneside,

North Tyneside has an even distribution of children and young adults with a smaller population of older adults. This is typical in a developed country and suggests a lower birth rate and higher quality of life.

Population aged 0 – 4 years: 5.3% (English Average 5.4%)

Population aged 5 – 15 years: 12.7% (English Average 13.1%)

Population aged 16 – 24 years: 8.3% (English Average 10.6%)

Population aged 25 – 64 years: 53.2% (English Average 52.4%)

Population aged 65 years and over: 20.6% (English Average 18.3%)

Northumberland,

Northumberland has an even distribution of children and young adults and a slightly larger older adult population. This suggests a slightly lower birth and death rate, indicating a higher quality of life.

Population aged 0 – 4 years: 4.4% (English Average 5.4%)

Population aged 5 – 15 years: 11.7% (English Average 13.1%)

Population aged 16 – 24 years: 8.1% (English Average 10.6%)

Population aged 25 – 64 years: 50.3% (English Average 52.4%)

Population aged 65 years and above: 25.4% (English Average 18.3%)

South Tyneside,

South Tyneside has an even distribution of children and young adults and a smaller proportion of older adults. This is typical in a developed country and suggests a lower birth rate and higher quality of life.

Population aged 0 – 4 years: 5.3% (English Average 5.4%)

Population aged 5 – 15 years: 12.6% (English Average 13.1%)

Population aged 16 – 24 years: 8.9% (English Average 10.6%)

Population aged 25 – 64 years: 52.2% (English Average 52.4%)

Population aged 65 years and above: 20.9% (English Average 18.3%)

Sunderland

Sunderland has a fairly even distribution of children and young adults and a smaller proportion of older adults. This is typical in a developed country and suggests a lower birth rate and higher quality of life.

Population aged 0 – 4 years: 5.1% (English Average 5.4%)

Population aged 5 – 15 years: 12.5% (English Average 13.1%)

Population aged 16 – 24 years: 9.8% (English Average 10.6%)

Population aged 25 – 64 years: 52.2% (English Average 52.4%)

Population aged 65 years and above: 21.5% (English Average 18.3%)

Disability	In 2021, 10.4 million people (17.8%) were limited by their daily activities in England and Wales in the UK. The 2021 Census asked a question about whether day-to-day activities were limited by a long-term health problem of disability.

North East CA

A slightly higher proportion of people living in North East CA (21.2%) say their day-to-day activities are limited a lot or a little by long term health conditions by long-term health conditions than in England as a whole (17.3%).

County Durham,

A slightly higher proportion of people living in County Durham (22.4%) say their day-to-day activities are limited a lot or a little by long term health conditions than in England as a whole (17.3%).

Gateshead,

A slightly higher proportion of people living in Gateshead (21.4%) say their day-to-day activities are limited a lot or a little by long term health conditions than in England as a whole (17.3%)

Newcastle,

A slightly higher proportion of people living in Newcastle (20.9%) say their day-to-day activities are limited a lot or a little by long term health conditions than in England as a whole (17.3%)

North Tyneside,

A slightly higher percentage of people living in North Tyneside (19.8%) say their day-to-day activities are limited a lot or a little by long term health conditions than in England as a whole (17.3%)

Northumberland,

A slightly higher proportion of people living in Northumberland (19.6%) say their day-to-day activities are limited a lot or a little by long term health conditions than in England as a whole. (17.3%)

South Tyneside,

A slightly higher proportion of people living in South Tyneside (22.1%) say their day-to-day activities are limited a lot or a little by long term health conditions than England as a whole (17.3%).

Sunderland

A slightly higher proportion of people living in Sunderland (23.1%) say their day-to-day activities are limited a lot or a little by long term health conditions than England as a whole (17.3%).

Gender	

Gender-based violence in public space (e.g. street harassment) is a barrier to safe mobility

and participation in public life for women and girls. In the UK, 86% of women aged 18-24 and 71% of women of all ages have experienced sexual harassment in public spaces, including public transport. The gendered division of domestic and caring responsibilities also means women make more frequent, short journeys throughout the day, whereas men make fewer but longer journeys during peak hours. However, transport systems are designed to optimise peak-hour long distance radial journeys into city centres, which reflects a male bias. To democratise the right to safe mobility, gender disparities in the transport system need to be addressed.

North East CA

Based on ONS Mid-2022 Population Estimates, the North East CA ratio of males (49%) and females is (51%) is equal to the national average (Males 49% and females 51%).

In the North East CA area, Males outnumber females from ages 0 to 25. Females outnumber males from 25 to 90+. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.

Durham

The Durham ratio of males (48.8%) and females (51.2%) of all ages is moving towards one of equality, which is similar to the national average (Males 49% and females 51%).

In Durham, males outnumber females for each year from 0 to 29, apart from ages 25 to 29. Females outnumber males from in every from age 70 and up. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.

Gateshead

The Gateshead ratio of males (49.2%) and females (50.8%) of all ages is moving towards one of equality, which is equal to the national average (Males 49% and females 51%).

In Gateshead, males outnumber females for each year from 0 to 30. Females outnumber males for every year from 30 to 90+, apart from ages 35 to 40, and ages 50 to 55. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.

Newcastle

The Newcastle ratio of males (49.6%) and females (50.4%) of all ages is moving towards one of equality, which is equal to the national average (Males 49% and females 51%).

	In Newcastle, males outnumber females for each year from 0 to 30, apart from ages 15 to 20. Females outnumber males from ages 55 and up. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.
	North Tyneside
	The North Tyneside ratio of males (48.6%) and females (51.4%) of all ages is moving towards one of equality, which is similar to the national average (Males 49% and females 51%).
	In North Tyneside males outnumber females for each year from 0 to 25. Then females outnumber males or each year from 25 to 90+. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.
	Northumberland
	The Northumberland ratio of males (48.9%) and females (51.1%) of all ages is moving towards one of equality, which is similar to the national average (Males 49% and females 51%),
	In Northumberland males outnumber females for each year between 0 to 30. Females outnumber males in every year from 30 to 90+. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.
	South Tyneside
	The South Tyneside ratio of males (48.7%) and females (51.3%) of all ages is moving towards one of equality, which is similar to the national average (Males 49% and females 51%).
	In South Tyneside males outnumber females for each year between 0 to 25. Females outnumber males in every year from 25 to 90+. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.
	Sunderland
	The Sunderland ratio of males (48.7%) and females (51.3%) of all ages is moving towards one of equality, which is similar to the national average (Males 49% and females 51%).
	In Sunderland males outnumber females for each year between 0 to 25. Females outnumber males in every year from 25 to 90+. This is similar to England as a whole where males outnumber females each year from 0 to 24 and females outnumber males from age 25 upwards.
Gender reassignment	Transgender status applies to people 'whose gender identity and/or expression differs from their birth sex'.
	Gender Identity Research and Education Society (GIRES) is a UK wide organisation whose purpose is to improve the lives of trans and gender non-conforming people of all ages, including those who are non-binary and non-gender. They work in collaboration to empower and give a voice to trans and gender non-conforming individuals and their families. GIRES estimate 1% (650,000) of the UK population experience some degree of gender non-conformity. GIRES also charts the growth rates of those seeking medical support in relation to transitioning. This has increased by 20% per annum

among young people with about 26,000 individuals seeking medical care across the UK.

North East CA

In North East CA, GIRES estimate that approximately 19,700 individuals are experiencing some degree of gender non-conformity.

Durham

In Durham, GIRES estimate that approximately 5,220 individuals are experiencing some degree of gender non-conformity.

Gateshead

In Gateshead, GIRES estimate that approximately 1,960 individuals are experiencing some degree of gender non-conformity.

Newcastle

In Newcastle, GIRES estimate that approximately 3,000 people are experiencing some degree of gender non-conformity.

North Tyneside

In North Tyneside, GIRES estimate that approximately 2,100 people are experiencing some degree of gender non-conformity.

Northumberland

In Northumberland, GIRES estimate that approximately 3,200 people are experiencing some degree of gender non-conformity.

South Tyneside

In South Tyneside, GIRES estimate that approximately 1,480 people are experiencing some degree of gender non-conformity

Sunderland

In Sunderland, GIRES estimate that approximately 2,740 people are experiencing some degree of gender non-conformity.

Marriage and Civil Partnership	**North East CA** In 2021, under half of the people (43%) in North East CA said they were married or in a registered civil partnership, compared with 45.7% in 2011. The percentage of adults in North East CA that had divorced or dissolved a civil partnership increased slightly from 9.4% to 9.5%. In North East CA in 2021 38.1% of those aged 16 and over had never been married or in civil partnership. This was slightly higher than England (37.9%). These figures include same-sex marriages and opposite-sex civil partnerships. **Durham** In 2021, under half of the people (43.4%) in Durham said they were married or in a registered civil partnership, compared with 47.4% in 2011. The percentage of adults in Durham that had divorced or dissolved a civil partnership had increased from 9.7% to 10.0%. In Durham in 2021 36.9% of those aged 16 and over had never been married or in civil partnership. This was lower than in the North East (38.1%) and England (37.9%). These figures include same-sex marriages and opposite-sex civil partnerships. **Gateshead**

In 2021, under half the people (42.3%) in Gateshead said they were married or in a registered civil partnership, compared with 44.7% in 2011. The percentage of adults in Gateshead that had divorced or dissolved a civil partnership had remained the same at 9.4%. In Gateshead in 2021 38.8% of those aged 16 and over had never been married or in civil partnership. This was higher than in the North East (38.1%) and England (37.9%).

These figures include same-sex marriages and opposite-sex civil partnerships.

Newcastle

In 2021, under half of the people (35.3%) in Newcastle said they were married or in a registered civil partnership, compared with 36.5% in 2011. The percentage of adults in Newcastle that had divorced or dissolved a civil partnership had decreased from 8.0% to 7.4%. In Newcastle in 2021 50.0% of those aged 16 and over had never married or in civil partnership. This was significantly higher than in the North East (38.1%) and England (37.9%).

These figures include same-sex marriages and opposite-sex civil partnerships.

North Tyneside

In 2021, under half of the people (44.5%) in North Tyneside said they were married or in a civil partnership, compared with 46.7% in 2011. The percentage of adults in North Tyneside that had divorced or dissolved a civil partnership had slightly increased from 10.1% to 10.2%. In North Tyneside in 2021 35.8% of those aged 16 or over had never been married or in civil partnership. This was lower than the North East (38.1%) and England (37.9%).

These figures include same-sex marriages and opposite-sex civil partnerships.

Northumberland

In 2021, slightly under half of the people (49.3%) in Northumberland said they were married or in a civil partnership, compared with 52.3% in 2011. The percentage of adults in Northumberland that had divorced or dissolved a civil partnership had increased from 9.3% to 9.9%. In Northumberland in 2021 30.5% of those aged 16 or over had never been married or in civil partnership. This was lower than the North East (38.1%) and England (37.9%)

These figures include same-sex marriages and opposite-sex civil partnerships.

South Tyneside

In 2021, under half the people (41.6%) in South Tyneside said they were married or in a civil partnership, compared with 43.9% in 2011. The percentage of adults in South Tyneside that had divorced or dissolved a civil partnership had remained the same at 10.3%. In South Tyneside in 2021 38.0% of those aged 16 or over had never married or in civil partnership. This was lower than the North East (38.1%) and higher than England (37.9%).

These figures include same-sex marriages and opposite-sex civil partnerships.

Sunderland

In 2021, under half the people (42.6%) in Sunderland said they were married or in a civil partnership, compared with 45.2% in 2011. The percentage of

	adults in Sunderland that had divorced or dissolved a civil partnership had decreased from 9.2% to 9.0%. In Sunderland in 2021 38.7% of those aged 16 or over had never married or in civil partnership. This was higher than the North East (38.1%) and higher than England (37.9%).
Pregnancy and maternity	Data for 2022 shows the number of live births in the North East CA to be 24,701 and England as a whole it was 577,046.

In 1999, the government announced its 10-year Teenage Pregnancy Strategy for England, which aimed to reduce the conception rate for women aged under 18 years. This was followed by the release of the Teenage pregnancy prevention framework guidance in 2018, which aims to prevent unplanned pregnancy and promote healthy relationships among young people in England. In 2021, the number of conceptions for women aged under 18 years had a small increase from 12,576 in 2020 to 13,131 in 2021, after a long-term trend of decreasing numbers (this however may have been in part due to uncharacteristically low numbers of conceptions reported in 2020 and 2021 due to disruption in birth registrations because of COVID-19). Regionally, the North East of England recorded the most conceptions of 15- to 17-year-olds per 1,000 women - 19.4 as of June in 2020. This was significantly higher than the rate recorded for England as a whole at 14.7.

Young mothers can often lack access to key sources of information such as antenatal classes and peer support programmes, friends with children, family and other support networks which enable breastfeeding.

In Quarter 2 2019/20 it was recorded that 55.2% of mothers breastfed 6-8 weeks after birth. This was higher than in England where it was recorded to be 47.9%.

North East CA

Data for 2022 shows the number of live births in North East CA to be 24,701 and for England as a whole it was 577,046.

Durham

Data for 2022 shows the number of live births in Durham to be 4,505 and for England as a whole it was 577,046. Durham has a higher proportion of teenage mothers than in England as a whole (0.7%).

Gateshead

Data for 2022 shows the number of live births in Gateshead to be 1,850 and for England as a whole it was 577,046. Gateshead has a higher proportion of teenage mothers (1.0%) than in England as a whole (0.7%).

Newcastle

Data for 2022 shows the number of live births in Newcastle to be 3,070 and for England as a whole it was 577,046. Newcastle has a higher proportion of teenage mothers than England as a whole (0.7%).

North Tyneside

Data for 2022 shows the number of live births in North Tyneside to be 1,898 and for England as a whole it was 577,046. North Tyneside has a lower proportion of teenage mothers (0.4%) than England as a whole (0.7%)

Northumberland |

	Data for 2022 shows the number of live births in Northumberland to be 2,464 and for England as a whole it was 577,046. Northumberland has a higher proportion of teenage mothers (0.9%) than England as a whole (0.7%).
	South Tyneside
	Data for 2022 shows the number of live births in South Tyneside to be 1,436 and for England as a whole it was 577,046. South Tyneside has a higher proportion of teenage mothers (1.0%) than England as a whole (0.7%)
	Sunderland
	Data for 2022 shows the number of live births in Sunderland to be 2,593 and for England as a whole it was 577,046. Sunderland has a higher proportion of teenage mother (1.3%) than England as a whole (0.7%).
Religion or belief	In 2021, for the first time in a census of England and Wales, less than half of the population (46.2%, 27.5 million people) described themselves as 'Christian', a 13.1% decrease from 59.1% (33.3 million) in 2011; despite this decrease 'Christian' remained the most common response to the religion question. There were increases in the number of people who described themselves as 'Muslim' (3.9 million, 6.5%) and 'Hindu' (1.0 million, 1.7%). The North East and South West are the least religiously diverse regions, with 4.2% and 3.2%, respectively, selecting a religion other than 'Christian'.
	North East CA
	In 2021, 40.0% of North East CA residents reported having 'No religion', up from 23.4% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than North East CA. In 2021, 50.8% of people in North East CA described themselves as Christian (down from 67.5%) and while 5.0% did not state their religion.
	Durham
	In 2021, 38.6% of Durham residents reported having 'No religion', up from 20.9% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than Durham. In 2021 54.6% of people in Durham described themselves as Christian (down from 72.0%) and while 5.1% did not state their religion.
	Gateshead
	In 2021, 40.1% of Gateshead residents reported having 'No religion', up from 23.9% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than Gateshead. In 2021 50.8% of people in Gateshead described themselves as Christian (down from 67.0%) and while 4.5% did not state their religion.
	Newcastle
	In 2021, 40.8% of Newcastle residents reported having 'No religion', up from 28.3% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than Newcastle. In 2021 41.3% of people in Newcastle described themselves as Christian (down from 56.4%) and while 6.0% did not state their religion.
	North Tyneside
	In 2021, 46.1% of North Tyneside residents reported having 'No religion', up from 28.1% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than North Tyneside. In 2021 46.6% of people in North Tyneside described themselves as Christian (down from 63.8%) and while 4.8% did not state their religion.

Northumberland

In 2021, 40.1% of Northumberland residents reported having 'No religion', up from 23.9% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than Northumberland. In 2021 53.2% of people in Northumberland described themselves as Christian (down from 68.6%) and while 5.0% did not state their religion.

South Tyneside

In 2021, 39.3% of South Tyneside residents reported having 'No religion', up from 21.1% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than South Tyneside. In 2021 52.6% of people in South Tyneside described themselves as Christian (down from 70.3%) and while 4.5% did not state their religion.

Sunderland

In 2021, 39.5% of Sunderland residents reported having 'No religion, up from 21.9% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than Sunderland. In 2021 53.2% of people in Sunderland described themselves as Christian (down from 70.3%) and while 4.5% did not state their religion.

Race	**North East CA** In 2021, 3.7% of North East CA residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 2.9% in 2011. This is lower than the English average of 9.6%. 93.0% of people in North East CA identified their ethnic group within the 'White' category (compared with 95.3% in 2011), while 1.3% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 1.0%. According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white. **Durham** In 2021, 1.5% of Durham residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 0.9% in 2011. This is lower than the English average of 9.6%. 96.8% of people in Durham identified their ethnic group within the 'White' category (compared with 98.2% in 2011), while 0.9% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African was 0.3%. According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white. **Gateshead** In 2021, 2.5% of Gateshead residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 1.9% in 2011. This is lower than the English average of 9.6%. 93.5% of people in Gateshead identified their ethnic group within the 'White' category (compared with 96.3% in 2011), while 1.2% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 1.1% According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white.

Newcastle

In 2021, 11.4% of Newcastle residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 9.7% in 2011. This is lower than the English average of 9.6%. 80.0% of people in Newcastle identified their ethnic group within the 'White' category (compared with 85.5% in 2011), while 2.3% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 1.1%.

According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white.

North Tyneside

In 2021, 2.6% of North Tyneside residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 1.9% in 2011. This is lower than the English average of 9.6%. 94.9% of people in North Tyneside identified their ethnic group within the 'White' category (compared with 96.6% in 2011), while 1.4% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 0.6%.

According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white.

Northumberland

In 2021, 1.1% of Northumberland residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 0.8% in 2011. This is lower than the English average of 9.6%. 97.6% of people living in Northumberland identified their ethnic group within the 'White' category (compared to 98.4% in 2011), while 0.8% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 0.2%.

According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white.

South Tyneside

In 2021, 2.9% of South Tyneside residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 2.2% in 2011. This is lower than the English average of 9.6%. 94.4% of people living in South Tyneside identified their ethnic group within the 'White' category (compared with 95.9% in 2011), while 1.4% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 0.5%.

According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white.

Sunderland

In 2021, 3.0% of Sunderland residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 2.7% in 2011. This is lower than the English average of 9.6%. 94.6% of people living in Sunderland identified their ethnic group within the 'White' category (compared to 95.9% in 2011), while 0.9% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African' was 1.0%.

According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white.

Sexual Orientation	**North East CA**

North East CA

This relates to whether a person's sexual attraction is towards their own gender, the opposite gender, or to both genders.

The 2021 census for the North East found that 1,983,335 people (91.0%) identified as straight or heterosexual and 65,822 (3.0%) identify as gay or lesbian, bisexual, or other (LGB+).

The 2021 Census for England and Wales found that 43.4 million people (89.4%) identified as straight or heterosexual and 1.5 million people (3.2%) identified with an LGB+ orientation ('Gay or Lesbian', 'Bisexual' or 'Other sexual orientation')

Durham

The 2021 census for Durham found that 396,553 people (91.4%) identified as straight or heterosexual and 12,369 (2.5%) identify as gay or lesbian, bisexual, or other (LGB+).

Gateshead

The 2021 census for Gateshead found that 147,379 people (91,12%) identified as straight or heterosexual and 5,492 (3.41%) identify as gay or lesbian, bisexual or other (LGB+).

Newcastle

The 2021 census for Newcastle found that 217, 008 people (87.3%) identified as straight or heterosexual and 12,559 (5.1%) identify as gay or lesbian, bisexual, or other (LGB+).

North Tyneside

The 2021 census for North Tyneside found that 157,223 people (91.67%) identified as straight or heterosexual and 5,321 (5.9%) identify as gay or lesbian, bisexual or other (LGB+).

Northumberland

The 2021 census for Northumberland found that 247,747 people (92.10%) identified as straight or heterosexual and 6,029 (2.3%) identify as gay or lesbian, bisexual or other (LGB+).

South Tyneside

The 2021 census for South Tyneside found that 111,601 people (92.0%) identified as straight or heterosexual and 3,186 (5.2%) identify as gay or lesbian, bisexual or other (LGB+).

Sunderland

The 2021 census for Sunderland found that 208,166 people (92.1%) identified as straight or heterosexual and 5,819 (2.5%) identify as gay or lesbian, bisexual or other (LGB+).

7.   ISA Framework

7.1   Introduction

In order to follow good practice in sustainability appraisal, a number of bespoke sustainability objectives have been developed for the ISA. These ISA objectives reflect the sustainability objectives the North East CA LTP should be aiming to achieve and the areas of sustainability that the LTP is expected to impact upon or have an influence on. The expectation is that even though some objectives may not be within the LTP's direct remit, the LTP should be able to influence the direction of change through setting out clear policies and approaches which could inform the work of North East CA's partners and other stakeholders.

7.2   Assessment Framework

The establishment of appropriate objectives and guide questions is central to the appraisal process and provides a method to enable the consistent and systematic assessment of the effects of the North East CA LTP.

The ISA objectives for the LTP have been worded so that they reflect one single desired direction of change for the theme concerned and do not overlap with other objectives. They include both externally imposed social, environmental and economic objectives as well as others devised specifically in relation to the context of the LTP. It should be noted that, from an assessment perspective, all ISA objectives are considered equally important to be achieved by the LTP and that there is no inherent prioritisation of objectives. The ultimate aim is for the LTP to achieve net benefits across the three dimensions of sustainability (environmental, social and economic dimensions).

In order to assess how each aspect of the LTP performs against each of the ISA objectives, a series of decision-making criteria have been developed. The decision-making criteria are a way of guiding the assessment. They are not the only considerations to be taken into account when determining likely effects arising from the LTP, as it is unlikely that every relevant question can be known at this stage and not all questions may be applicable in all scenarios. But they do provide a useful starting point and a transparent structure to help demonstrate how the assessment of the effects arising from the implementation of the LTP has been undertaken. As the ISA progressed, they also helped in the development of a set of indicators to be included in the monitoring programme.

An ISA Framework of 17 objectives and associated decision-making questions has been drawn up, developed through the analysis of baseline information and identification of key sustainability issues and opportunities, as well as the review of relevant plans, policies and legislation. In addition, decision making questions have been identified to substantiate the proposed ISA Objectives and HIA, EqIA and Rural Needs Assessment sub-objectives.

The ISA objectives and associated Assessment Aid Questions are presented in Table 7-1. Table 7-2 to Table 7-4 show proposed HIA, EqIA and Rural Proofing sub-objectives and decision-making questions, respectively. Note that the application of the Framework in relation to HIA, EqIA and Rural Proofing Sub-Objectives are considered 'in the round' and a judgement made as to how well that aspect of the LTP being considered performs.

It is also to be noted that there is a certain degree of cross-over of Assessment Aid Questions within the ISA Framework i.e. the same question is asked across a number of Objectives. The rationale for this is that while the question may be the same, it is considered from a differing viewpoint and within a different

context. This is the role of the Assessment Aid Questions i.e. to help consider all aspects of an Objective in arriving at an assessment of the performance.

Table 7-1 - ISA Objectives

No.	Topic	ISA Objective	Assessment aid questions
Environmental			
1.	Air Quality & Noise Pollution	Protect and improve air quality	*Will the LTP:* ▪ Minimise emissions of particulate matter and other pollutants from transport that effect human health or biodiversity? ▪ Improve air quality within AQMAs and avoid the need for new AQMAs? ▪ Promote the use of low emission or zero emissions vehicles, including through promotion of associated infrastructure? ▪ Reduce traffic growth and congestion and promote safer and more sustainable transport patterns across the North East? ▪ Promote walking and cycling and improve infrastructure and its safety and accessibility for these forms of travel? ▪ Promote enhancements to green infrastructure networks to facilitate increased absorption and dissipation of nitrogen dioxide and other pollutants? ▪ Contribute to meeting the National Air Quality Objectives or other local air quality initiatives? ▪ Contribute to meeting relevant statutory targets in the Environment Act 2021? ▪ Contribute to meeting WHO Nitrogen Dioxide limits?
2.		Reduce the impact on environmental noise from transportation sources	*Will the LTP:* ▪ Preserve environmental noise quality where it is good, particularly in urban areas, both during construction and operation? ▪ Contribute to lowering of noise levels in Noise Action Important areas? ▪ Protect and enhance tranquillity?
3.	Climate	Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050	*Will the LTP:* ▪ Reduce the need to travel? ▪ Promote and enable the use of sustainable forms of transport and reduce car use? ▪ Promote better coordination and integration of different transport modes? ▪ Encourage greater carbon efficiency in the movement of goods and people? ▪ Encourage use of new low or zero carbon transport technologies (EV, hydrogen)? ▪ Encourage use of the transport estate for low carbon energy generation?

			- Contribute to necessary removal of residual carbon emissions from the atmosphere? - Identify opportunities to enhance carbon removal through promoting new and enhancing existing green infrastructure? - Identify initiatives aiming to reduce traffic speed in residential areas without increasing carbon dioxide emissions? - Encourage greater and more robust digital connectivity to allow increased uptake of home working, home schooling, online commerce and online health services? - Promote delivery of local services to reduce the need to travel? - Support provision of delivery consolidation centres and encourage goods delivery mode-shift? - Reduce embodied and operational carbon through the design of new transport infrastructure?
4		Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding	*Will the LTP:* - Minimise the risk of flooding through design and implementation of SuDS and upstream storage Natural Flood management when possible? - Minimise the risk of flooding by avoiding areas of flood risk / flood plain when possible? - Ensure provision of appropriate compensatory measures are in place when there is no other option to landtake from areas of flood plain? - Lead to development that is flood resilient over its lifetime, taking into account the effects of climate change, without increasing the flood risk elsewhere and identifying opportunities to reduce the risk overall? - Encourage design for successful adaptation (including through green and blue infrastructure) to the predicted changes in weather conditions and frequency of extreme events (freezing, heat waves, intense storms), from a changing climate?
5	Biodiversity	Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	*Will the LTP:* - Protect and enhance nationally designated sites such as SSSIs, National Nature Reserves, heritage Coasts and Marine Conservation Zones, including those of potential or candidate designation? - Protect and enhance valued habitat and populations of protected/scarce species on locally designated sites, including Key Wildlife Sites, Local Wildlife Sites and Local Nature Reserves? - Manage highway operational and maintenance pressures on designated sites and valued habitat and populations of protected/scarce species on locally designated sites, including Key Wildlife Sites and Local Nature Reserves? - Provide opportunities to improve / enhance and where possible connect sites designated for nature conservation?

			▪ Prevent development on irreplaceable habitats, such as ancient woodland and ancient and veteran trees except in exceptional circumstances and with appropriate compensation measures? ▪ Protect and enhance the North East's ecological networks (the Nature Recovery Network) and support Local Nature Recovery Strategies? ▪ Protect and enhance priority habitats, and the habitat of priority species? ▪ Promote new habitat creation or restoration and linkages with existing habitats? ▪ Reduce or avoid impacts to habitats with important roles in carbon sequestration? ▪ Increase the resilience of biodiversity to the potential effects of climate change? ▪ Encourage sensitive or nature inclusive design? ▪ Mandate 10% Biodiversity Net Gain for any new transport infrastructure development using latest Defra metric? ▪ Contribute to meeting relevant statutory targets in the Environment Act? ▪ Prevent spread of invasive species (native and non-native), including new invasive species because of climate change? ▪ Protect areas designated as Natural Greenspace? ▪ Protect and enhance green infrastructure and avoid severance of habitats links? ▪ Minimise habitat fragmentation and severance of species migration and commuter routes? ▪ Promote new habitat creation or restoration and linkages with existing habitats?
6		Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA)	*Will the LTP:* ▪ Protect and enhance (directly or indirectly) sites of international importance (SACs, SPAs and Ramsar sites, including those of potential candidate designation) identified as part of the HRA screening process? ▪ Take on board the HRA findings and recommendations? ▪ Support continued improvements to the condition status of the UK's national site network?
7	Geodiversity	Protect, enhance and promote geodiversity	*Will the LTP:* ▪ Protect and enhance geodiversity resource? ▪ Protect or enhance SSSIs designated for their geological interest? ▪ Support access to, interpretation and understanding of the region's designated sites of geological interest? ▪ Avoid the degradation and removal, wherever possible, of Regionally Important Geological and Geomorphological Sites (RIGS)?

			▪ Seek to protect and avoid degradation of the North Pennines Geopark?
8	Historic Environment	Protect and enhance the significance cultural heritage assets including their settings, and the wider historic environment	*Will the LTP:* ▪ Conserve and enhance the significance of designated heritage assets including their settings (such as Scheduled Monuments, Listed Buildings and structures, Registered Parks and Gardens, Registered Battlefields and Conservation Areas)? ▪ Conserve and enhance the significance of non-designated heritage assets (e.g. locally important buildings and archaeological remains, including newly discovered heritage assets) including their settings? ▪ Maintain or improve access to heritage assets? ▪ Promote transport schemes which tackle traffic congestion in the regions historic villages, towns and cities, whilst conserving and enhancing the historic environment? ▪ Maintain or allow opportunities to be taken to improve the interpretation, understanding and appreciation of the significance of heritage assets?
9	Landscape and Visual	Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity	*Will the LTP:* ▪ Protect or enhance nationally and locally designated landscapes and townscapes and seascapes, plus their settings? ▪ Maintain the character of the North East stretches of coastline identified and locally 'designated' as Heritage Coasts? ▪ Safeguard the protected Northumberland National Park International Dark Sky Reserve from excessive artificial light at night? ▪ Support the purposes and duty of the Northumberland National Park? ▪ Conserve, protect and enhance natural environmental assets (e.g. parks and green spaces, common land, woodland / forests etc) as they contribute to landscape and townscape quality? ▪ Support the integrity and uphold the statutory purposes of any areas designated for landscape value ie, National Parks and National Landscapes, including in conjunction with the provisions of any relevant Management Plan? ▪ Promote / protect Public Rights of Way (PRoW)? ▪ Support measures to enhance the resilience of ecosystems at a landscape scale and also to maximise benefits including public access and enjoyment of landscapes? ▪ Minimise noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views? ▪ Prevent development in green field land?

10	Water	Protect and enhance the water environment	*Will the LTP:* ▪ Protect ground, surface, estuarine and coastal water quality? ▪ Support measures to attain good environmental status / potential of both marine and coastal/estuarine waters as determined by the WFD and MSFD? ▪ Safeguard the availability of water resources (surface and groundwater)? ▪ Minimise and remove/mitigate physical alterations to water bodies? ▪ Minimise the use of water resources / water consumption? ▪ Protect, enhance and create green infrastructure contributing to improvements in the quality of surface water run-off? ▪ Promote where possible the minimisation of the use of impermeable hard surfacing and promote the use of SuDS and upstream storage (Natural Flood Management - NFM)? ▪ Provide opportunities to improve Green / blue infrastructure? ▪ Promote use of SuDS in appropriate places, recognising that these may not be suitable for areas that are contaminated? ▪ Reduce operational and accidental discharges to the water environment? ▪ Contribute to meeting relevant statutory targets in the Environment Act 2021?
11	Soil	Protect soil resources and avoid land contamination	*Will the LTP:* ▪ Assist in facilitating the re-use of previously developed land? ▪ Seek to remediate contaminated land? ▪ Avoid transport-related infrastructure development upon the best and most versatile agricultural land (Grade 1 to 3a agricultural land)? ▪ Ensure the protection of soil resources and reduce soil quality degradation during transport-related infrastructure construction activities? ▪ Avoid the sterilization of viable mineral resources?
12	Natural Resources	Promote sustainable use of resources and natural assets	*Will the LTP:* ▪ Reduce the consumption of primary, natural resources through encouraging the use of recycled and / or secondary materials with transport-related infrastructure projects? ▪ Encourage resource efficiency during the whole project life cycle of transport-related infrastructure projects i.e. from concept through design and operation to decommissioning? ▪ Seek to reduce fuel use through fuel efficiency measures and a shift towards more sustainable forms of transport in the delivery of transport-related infrastructure projects;

			- Improve accessibility to the Combined Authority's waste management infrastructure, particularly those facilities that support recycling, composting and material recovery; - Promote the use of local suppliers that use sustainably-sourced and locally produced materials with transport-related infrastructure projects? - Promote increasingly more sustainable waste management practices with transport-related infrastructure projects in line with the waste hierarchy? - Support the delivery of a network of sustainable waste management facilities and mineral infrastructure needed to deliver growth? - Promote a Circular Economy?

Economic			
13		Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all	*Will the LTP:* - Support economic activities in areas of high growth pressures? - Support economic activities in rural areas? - Support improved availability and accessibility to good quality education, training and employment opportunities, particularly in high unemployment areas? - Contribute to establishing an effective transport network that increases investment? - Reduce congestion and improve / enhance journey time reliability on the highways and rail network? - Support the development of transport solutions which integrate with digitally smart networks and promote access to these networks?
14		Support the wider coordination of land use and energy planning across the North East CA area	*Will the LTP:* - Support the development of EV charging networks and integrate these with new developments? - Support the development of new compact, higher density mixed use development that reduces the need to travel by private car, coordinated with public transport and 'walk, wheel or cycle' (active travel) infrastructure and results in shortened trip distances, particularly for employment and education purposes? - Support digital integration to optimise use of energy systems and provide integrated real time transport information to inform decisions - Support housing and employment development in areas that are or will be served by rail transport or other forms of public transport? - Support the development of electric transport solutions which integrate with local virtual energy networks?

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			▪ Minimise cumulative and synergistic effects resulting from the in-combination effects of transport proposals and new development areas?

Social			
15		Improve health and well-being for all citizens and reduce inequalities in health *(HIA specific objective)*	*Will the LTP:* ▪ Promote health and well-being, including of vulnerable groups (children and young people; older people; disabled people and people with long term health conditions; low-income groups and communities with high levels of deprivation; minority ethnic groups; cyclists, pedestrians, commuters by public transport, drivers) and of the wider population (residents, workers, commuters, tourists and visitors)? ▪ Minimise nuisance on communities and their facilities including air, noise and light pollution? ▪ Provide for facilities that can promote more social interaction and a more active lifestyle and enjoyment of the countryside and coasts? ▪ Promote initiatives that enhance safety and personal security for all, but particularly for women and girls as a group at risk? ▪ Promote Access to Greenspace and Green Infrastructure Standards?
16		Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society *(EqIA specific objective)*	*Will the LTP:* ▪ Promote greater equality of opportunity to the varying age groups of residents (such as the older population and younger travellers), disabled people, different nationalities and ethnic groups, different religious groups, low income and unemployed people, different sex and sexual orientation groups?

Rural			
17		Promote fairness and equity in rural connectivity	*Will the LTP:* ▪ Promote sustainable development and rejuvenation of rural areas? ▪ Increase connectivity via a range of transport modes for rural communities? ▪ Connect people with nature?

Table 7-2 - Health Impact Assessment Objectives

HIA Objective	HIA sub-objectives	Assessment aid questions

| Improve health and well-being for all and reduce health inequalities | Improve accessibility to health and leisure services and facilities and amenities for all | *Will the LTP:*
▪ Ensure that (new and existing) developments are accessible (particularly on foot, by cycling or public transport) to health and care services, education, employment and other essential services, particularly for the most vulnerable groups?
▪ Promote and enable measures to help all residents to adopt healthy lifestyles (e.g. access to leisure services and facilities that improve health and wellbeing), particularly for the most vulnerable groups?
▪ Promote accessibility (particularly on foot or by cycling or public transport) to open space and recreational activities (e.g. playing fields, sports facilities, footpaths etc), particularly for vulnerable groups?
▪ Protect and enhance green infrastructure, a network of linked, multifunctional green spaces in and around the area's towns and cities, thus creating new or improved public green space?
▪ Support publicity or awareness-raising campaigns and/or education and practical offers to promote active modes of transport or physical activity?
▪ Provide overall accessibility improvements that improve the quality of life of users and therefore bring health benefits?
▪ Provide specific accessibility improvements for groups who may face barriers to accessibility to avoid widening inequalities such as disabled people, older people, and women and girls travelling alone? |
| | Indirect impacts - Improve affordability of public transport | *Will the LTP:*
▪ Provide affordable transport options to ensure accessibility to vital health services, work, education, training and skills as well as social / leisure activities?
▪ Provide affordable transport options to ensure accessibility to key facilities such as open spaces, employment locations etc
▪ Promote use of technology to reduce transport costs for users i.e. MaaS, integrated ticketing and smart cards, whilst ensuring those without access to technology or for whom technology may present a barrier can still access services (ie., avoiding digital exclusion)?
▪ Provide transport services that provide appropriate and/or statutory fare structures (i.e. concessionary fares on public transport services) to ensure the most vulnerable groups in terms of health (children, older), can afford to use transport options to access healthcare and other key facilities? |

	Improve safety of the transport network (including roads) and reduce the number of accidents and other incidents	*Will the LTP:* ▪ Provide initiatives that enhance road safety and therefore reduce the number of accidents, particularly for vulnerable users– children, older people, disabled people, and those in deprived areas? ▪ Promote initiatives that enhance safety and personal security for all, but particularly for women and girls as a group at risk?
	Reduce severance	*Will the LTP:* ▪ Improve access to essential facilities such as healthcare services to reduce any existing severance issues? ▪ Reduce the physical and perceived impact of the transport system on the local environment? (particularly for the most vulnerable population in terms of severance and health – including older and disabled people)
	Improve connections between and within communities	*Will the LTP:* ▪ Provide opportunities to travel within and between communities? ▪ Provide increased opportunities to improve social interactions, particularly for those at risk of transport related social exclusion?
	Protect health by reducing air, noise, odour and light pollution from transport	*Will the LTP:* ▪ Aim to minimise air, noise, odour and light pollution during construction and operation? ▪ Promote practices, equipment and materials which reduce vibration and air, noise, odour, and light pollution to protect health and reduce the risk of harm? ▪ Reduce transport contributions to air and noise pollution, particularly around locations where more vulnerable users may spend more time such as children, older people, and pregnant women, and around areas of deprivation? Specific locations include schools and colleges, healthcare facilities, residential and care homes, and more deprived areas. ▪ Promote practices, equipment and materials which reduce vibration and air, noise, odour and light pollution to assist to protect health and reduce the risk of harm?
	Improve access to active travel modes?	*Will the LTP:* ▪ Increase opportunities to access active travel modes such as walking, wheeling, and cycling that directly improve health outcomes?

		■ Consider ways to increase opportunities to access active travel modes such as walking, wheeling, and cycling for groups who may face barriers to this such as women, people living in deprived areas, older people, and people living with a disability or long-term illness.
	Improve access to public transport	*Will the LTP:* ■ Increase opportunities for all members of society to access public transport options, particularly those more vulnerable or isolated members of the community, as well as those who may have difficulty using 'walk, wheel or cycle' (active travel) modes?

Table 7-3 - EqIA Objectives for the North East CA Local Transport Plan

EqIA Objective	EqIA sub-objectives	Assessment aid questions
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	Improve accessibility to services, facilities and amenities for all, in particular by 'walk, wheel or cycle' (active travel) modes	*Will the LTP:* ■ Improve access to essential facilities, including employment, healthcare and education, particularly for those in the most deprived areas (20% most deprived nationally), older and disabled people? ■ Improve public realm and overall environment including green infrastructure in the most deprived areas (20% most deprived nationally)? ■ Improve walking, cycling and public transport measures in the most deprived areas (20% most deprived nationally)? ■ Provide transport services/ initiatives that are accessible and affordable for all, including those with a physical or learning disability and those with limited mobility? (this includes physical access to services and provision of accessible information on transport service) ■ Provide transport services that are welcoming for all groups of society to increase availability of travel options? ■ Provide initiatives that improve perceptions of transport, and therefore increase range of travel options available? ■ Take due regard of requirements for travel by disabled and mobility impaired people? ■ Provide initiatives to encourage access to and uptake of Public Transport for those whose first language may not be English? ■ Provide initiatives to encourage access to and uptake of Public Transport for those whose who don't have access to digital services?

	Improve affordability of transport	Will the LTP:
		▪ Provide transport services that are financially accessible for all, specifically those in the most income deprived areas nationally or those on limited incomes?
		▪ Provide transport services or initiatives that improve the affordability of travel options in the area, specifically the most deprived areas and vulnerable users?
		▪ Provide transport services that provide appropriate and/or statutory fare structures for vulnerable users (i.e. concessionary fares on public transport services)?
		▪ Promote use of technology to reduce transport costs for users i.e. MaaS, integrated ticketing and smart cards?
	Improve safety of the transport network (including roads) and reduce the number of accidents and other incidents	Will the LTP:
		▪ Ensure safe paths for walking and cycling?
		▪ Ensure initiatives aiming to reduce traffic speeds in residential areas and promote safer driving?
		▪ Promote road safety awareness for all, with particular emphasis on more vulnerable members of society such as children and young people and those with disabilities?
		▪ Reduce the total killed and seriously injured in traffic accidents, particularly for vulnerable users in terms of accidents - children, young males, older people and those from deprived areas?
		▪ Reduce the total slight casualties?
		▪ Improve the safety of vulnerable road users such as pedestrians, motorcyclists and cyclists?
	Improve provision of public transport in rural areas or to those areas experiencing constraint in public transport provision	Will the LTP:
		▪ Increase provision of public transport (including frequency of service and extent of routes) in areas which have been more constrained in level of provision?
	Reduce severance	Will the LTP:
		▪ Improve access to essential facilities to reduce any existing severance issues?
		▪ Improve accessibility between and within communities?
		▪ Improve access to information for all users to promote a range of travel options, including active travel ('walk, wheel or cycle'), available for all?
		▪ Reduce the physical and perceived impact of the transport system on the local environment? (particularly for the most vulnerable population in terms of severance – including older children and disabled people)

	Reduce air, noise, odour and light pollution from transport	*Will the LTP:* • Improve impact of transport on the local environment to create more welcoming areas for travel? • Provide transport options that improve / do not worsen air and noise pollution levels, particularly for the most vulnerable groups • Reduce traffic levels and congestion and promote more sustainable transport patterns across the area, particularly focusing on areas with poor air quality (e.g. AQMAs)? • Promote sustainable travel to reduce the environmental impact of transport for vulnerable groups?

Table 7-4 - Rural Needs Assessment Objectives

Rural Proofing Objective	Rural Proofing sub-objectives	Assessment aid questions
Rural Proofing	Increase access via a range of transport modes for rural communities.	*Will the LTP:* • Improve the sustainable transport network in rural areas (i.e. improvements to public and 'walk, wheel or cycle' active travel) whilst also recognising that for some in rural areas the car is still essential for accessibility? • Better enable people with specific needs to access transport and day to day activities?
	Enable economic growth, and employment diversification in rural areas.	*Will the LTP:* • Support diversified economic activities in rural areas? • Enhance access to rural employment opportunities? • Improve people's ability to work or run a business from home?
	Connecting people with nature	*Will the LTP:* • Impact those wishing to visit the countryside for recreation and enjoyment? • Protect and enhance natural capital assets

8. Assessment of Reasonable Alternatives

8.1 Introduction

The Environmental Assessment of Plans and Programmes Regulations 2004 ("the SEA Regulations") require that when an environmental report on a proposed plan or programme is prepared, it must identify, describe and evaluate the likely significant effects of implementing reasonable alternatives to the plan or programme which it assesses, as well as the likely significant effects of the plan or programme itself. The analysis of reasonable alternatives is to take into account "the objectives and the geographical scope of the plan".

In line with the principles of good policy making and with the requirements of the SEA legislation, reasonable alternatives for implementing the aims of the LTP have been considered.

8.2 Defining the reasonable alternatives

It is to be noted that as part of the development of the LTP, consideration was made by North East CA to a range of travel scenarios that reflected those set out by Transport for the North for the Strategic Transport Plan for the north of England (and which therefore apply to the North East region). These scenarios were used to test the proposed areas of focus of the LTP, as well as proposed interventions. The scenarios considered four potential future outcomes as follows:

- Just about managing - This scenario sees a state of inertia, although this should not be taken as neutral. It sees a future where people do not alter their behaviours much from today, or give up certain luxuries, although there is a gradual continued trend towards virtual interaction. Economic growth continues at a moderate rate, but it is largely consumption-led and unequal, lacking agility and vulnerable to shocks. This scenario is led by markets, without much increase in political direction, with its biggest driver being economic.

- Digitally distributed - This scenario sees a future where digital and technological advances accelerate, transforming how we work, travel and live. In general, we embrace these technological changes and the move towards a distributed, service-based transport system. Long-term climate change targets are met, but there is slow progress in the short-term due to a general preference for individualised mobility over traditional public transport. This scenario is led by technology, with the biggest drivers being technical advances and a willingness to embrace mobility-as-a-service and shared mobility in the long-term.

- Prioritised places - This scenario sees a significant shift in political and economic direction to ensure that no place is left behind. Every area, including cities, towns, and rural and coastal areas, has a bespoke local economic strategy, supported by investment in local assets, specialisms, and economic and social infrastructure. Community, localism, and place-making across the North is applied to build a sense of local identity to improve local economies. There is a focus on work-life balance and social equity within and between places. This scenario is led by a change in priorities, with its biggest driver being the push for a fairer redistribution of economic prosperity.

- Urban zero carbon - This scenario sees a significant shift in public attitudes towards action on climate change, and a strong national Government response to meet it. There is a boost to economic productivity to levels consistent with the Northern Powerhouse Independent Economic Review, primarily through a combination of urban agglomeration and place-making. Transport users demand and embrace publicly available transit and active travel options, as there is a blurring of the line between 'public' and 'private' with increasing shared mobility systems online. This scenario is led by attitudes to climate action and urban place-making, with the biggest drivers being strong Government policy and trends of urban densification.

North East CA utilised a qualitative matrix to consider the above scenarios to test the strategic objectives of the LTP within the five areas of focus, against the Future Transport Scenarios using a Policy 'Stress Test' as defined the UK

Government's Futures Toolkit. The results are presented in the LTP, with the analysis showing a general alignment to all future scenarios with a limited number of suggested modifications under certain scenarios. As there was no preferred scenario identified, there was a general conclusion that the LTP can withstand a variety of future trend changes. As the policy foundation was considered to be sound, interventions included within the delivery plan that deliver against the objectives of the LTP were therefore also considered to be sound. Nevertheless, it is the noted intention that North East CA will continue to test interventions against future scenarios. Further details can be found in the Carbon Assessment in Appendix G.

On the basis that consideration of future scenarios had been made (with no preferred scenario identified) and that there was a commitment to consider future scenarios on an ongoing basis, the ISA concentrated on strategic alternatives that reflected the number of challenges that were identified in relation to transport in the North East and which are outlined in the LTP. These include:

- Car and van journeys made up 58% of all journeys made in 2022 and car ownership in the North East is increasing.
- Public transport use is falling over the long-term. Since 2014, Bus and Metro passenger journeys per head and vehicle miles have both decreased.
- 31% of residents in the North East (622,000 people) are at risk of transport related social exclusion (TRSE).
- A range of transport issues has led to a contrast between rural isolation in more remote areas and poor air quality and congestion in parts of towns and cities.
- Actual and perceptions of violence against women and girls can act as a barrier to use of active travel and public transport.
- Commuting to workplaces is dominated by car travel, so congestion is a significant issue on the regions roads, which affects public transport access and attractiveness, reduces productivity, and increases inactivity and vehicle emissions.
- Transport contributes a significant proportion of carbon emissions. Approximately 97% of transport generated greenhouse gas emissions in the region are from roads, with A-roads being the greatest contributor.
- In 2022, only 36% of journeys to school (5–16-year-olds) were made by active travel, the second lowest percentage of any region in England.

Two alternative strategic scenarios have been identified for the purpose of the assessment. These are:

- Alternative 1: To continue under the present approach to planning and investment (Business as Usual).
- Alternative 2: Implement the proposed LTP.

It is anticipated that the Business as Usual (Alternative 1) approach will continue with current transport trends in terms of:

- Trip numbers per person.
- Average trip lengths.
- Proportion of travel by walking/cycling/micromobility.
- Proportion of travel by public transport/shared transport.
- Steady increase in proportion of trips by EVs.
- New infrastructure e.g. road schemes.

It is anticipated that implementing the LTP policies (Alternative 2) will lead to:

- Fewer trips per person on average.
- Shorter average trip lengths.
- A higher proportion of trips by walking/cycling/micromobility.
- A higher proportion of trips by public transport/shared transport.

- A higher proportion of travel by EV.
- A reduction in traffic congestion and smoother flowing traffic.
- Potentially some new infrastructure to support the changes (e.g., cycle lanes, bus lanes, minor highway improvements).

Comparing these alternatives also allows identification of effects in the absence of implementing LTP.

It should also be noted that a high level assessment of intervention types has been completed and is outlined in Chapter 11. The assessment findings of the intervention types will also be utilised on an ongoing basis to further inform the development of interventions / schemes and allow for identification and implementation of reasonable alternatives should they be required.

8.3   Assessing the reasonable alternatives

'Alternative 1: To continue under the present approach to planning and investment' and 'Alternative 2: To Implement the proposed LTP' have been assessed against the ISA Framework. Note that this is a high level comparative assessment of the two Alternatives only with the purpose of identifying a preferred alternative in sustainability terms – the detailed policy approach to LTP is appraised in detail using the ISA Framework set out in Chapter 7.

As such, in consideration of two Alternatives, the assessment is undertaken in comparison of anticipated likely sustainability performance relative to each other and in order to draw comparison between Alternatives on a broad level, the following scale in Table 8-1 has been used:

Table 8-1 - Assessment scale to compare alternatives

Scale	Description
Large Beneficial	A significantly positive outcome is anticipated
Beneficial	Minor positive outcome is anticipated
Neutral	This alternative is anticipated to have the same outcome
Adverse	Minor adverse outcome is anticipated
Large Adverse	A significantly adverse outcome is anticipated

The assessment has been undertaken by grouping ISA Objectives that are impacted in the same way by particular proposals.

Grouped ISA Objectives: Objective 1 - Protect and improve air quality and Objective 3 - Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

Air quality has improved in the UK over the last sixty years as a result of the switch from coal to gas and electricity for heating of domestic and industrial premises, stricter controls on industrial emissions, higher standards for the composition of fuel and tighter regulations on emissions from motor vehicles. There has also been a large growth, particularly in recent years, of renewable sources of energy such as wind and solar. However, poor air quality, particularly due to emissions from motor vehicles, remains a significant issue for community health for the population as a whole but particularly for certain vulnerable or protected characteristic groups such as the elderly, children, those with existing health conditions, those who are pregnant and those living in areas of deprivation. While the North East has generally good air quality, with some of the lowest levels of one of the most harmful air pollutants ($PM_{2.5}$) in the United Kingdom, it does have other pollutants associated with transport such as nitrogen dioxide (NO_2). This is often found in urban areas (with specific reasons relating to a combination of traffic, road

layout, topography etc.) and frequently those that are considered more deprived. Poor air quality is also often caused in discrete locations in the North East, for example by pinch points in the road network causing congestion.

A total of four AQMAs have been identified within the North East CA area, all of which have been designated for Nitrogen dioxide (NO_2) with neither Northumberland, South Tyneside or Sunderland having any. Each of the local authorities have their own Air Quality Strategy (AQS) aimed at tackling the AQMAs in their areas and improving general air quality in the region (Northumberland and Sunderland are the exception as they are not required to produce AQSs). These strategies focus on reducing the current levels of pollutants in the region by promoting modal shift to more sustainable modes such as active travel, public transport and electric vehicles, though it is recognised that the AQMAs include areas where national air quality objectives are likely to be met. There is also a Clean Air Zone introduced (January 2023) that covers some of Newcastle and Gateshead.

The UK Government has noted that addressing road transport emissions presents the most significant opportunity to tackle this specific exceedance problem (NO_2 pollution). However, it is important to note that there are other elements which also need to be addressed in addition to road vehicles and this includes reducing emissions from other forms of transport such as rail and aviation.

As noted by the Committee for Climate Change, domestic transport emissions of road transport account for around a quarter of UK greenhouse gas emissions. In the North East region, transport takes up the largest percentage of emissions at 30%, which is a higher proportion than in the UK as a whole (where transport makes up 26%). Within the North East, approximately 97% of transport related greenhouse gas emissions are from road based transport ('A' roads being the greatest contributor at 48%), though it is worth noting that the region has made significant progress in reducing emissions – net CO_2 emissions decreased by more than half between 2005 and 2022.

In recent years there have also been marked improvements in vehicle efficiency and an increasing uptake of and provision for electric vehicles (EV). In their North East Zero Emissions Vehicle (ZEV) Strategy, the region acknowledges the impact that vehicles have on emissions and aim to promote a switch to ZEVs by those currently making journeys by private cars and vans. As of 2023 ZEVs made up just less than 1% of registered vehicles with access to 850 publicly accessible charging points across the region. The strategy aims to increase the number of ZEVS by improving the charging network. This includes a delivery plan worth approximately £80m and has identified an initial 221 strategically located charging points to grow the charging network across the region.

Nevertheless, with a growth in population and vehicle numbers, congested and slow moving traffic will be experienced more frequently resulting in higher levels of vehicle emissions localised concentrations and potential issues with local air quality, especially when including the likely diversion of traffic due to congestion onto less appropriate roads with adjacent housing. Alternative 1 is also anticipated to result in new infrastructure such as roads, with no clear focus on improving the uptake of EVs (as of 2023 these made up 1% of registered vehicles in the region), or other approaches such as reducing the need to travel, areas with restricted access, shift to sustainable / active modes etc. There will be elements of sustainable modes and public transport in the current approach, but these may continue to have noted problems such as poor uptake of active modes (e.g. only 36% of journeys to school are by active modes - the second lowest percentage in England) and more rural areas experiencing poor connectivity and low frequency of bus service.

Alternative 2 – To implement the proposed LTP

Air quality is anticipated to benefit in localised areas as the LTP has a clear focus on encouraging a modal shift away from private vehicles to more active modes and public transport. This shift will be facilitated across the region, including rural areas, though the nature of the shift means it would most likely be more effective in urban areas, with it recognised that there will still be a role for private cars to ensure rural connectivity. It is also anticipated that the implementation of LTP should result in a more efficient transport network for example through increased provision of up to date information (over and above that already provided) to help people plan effective journeys in advance, as well as dynamic real time information to help manage the network. The LTP will also result in a public transport network with greater reach, compared to that at present.

In addition, air quality is anticipated to improve in comparison to the present approach, through increased focus on / encouragement for the uptake of LZEVs – this is likely to include increased coverage of publicly available charging points (over those already provided), as well as the development of hydrogen as a fuel for heavier vehicles.

There will also be interventions such as upgrades to junctions to remove discrete pinch points in the road network and therefore improve traffic flow and consequently allow vehicles to operate more efficiently, though it should be recognised that this can also attract additional traffic flows, with consequent adverse effects on air quality.

In relation to carbon emissions, the quantified assessment has identified that the LTP Delivery Programme has the potential to reduce traffic by approximately 1.6 billion vehicle-km per annum before 2030, around 2.5 billion between 2030 and 2035, and around 4.1 billion vehicle-km per annum after 2035. The large increase after 2035 would be associated with the delivery of major rail schemes, including (for example) Northern Powerhouse Rail.

Overall, the impacts of the programme on traffic demand are estimated to be approximately 3.7% before 2030, 5.6% between 2030 and 2035, and around 9% after 2035.

Active travel interventions are forecast to have limited impacts on carbon emissions, because these address shorter journeys, and the scale of investment is forecast to target a relatively small proportion of the total population. Bus priority interventions, and improvements to bus stations, will also have relatively limited impacts, because again target a relatively modest proportion of transport users.

Table 8-2 - Air quality and carbon emissions objective alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Protect and improve air quality Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050	Negative	Positive

Grouped ISA Objectives: Objective 2 - Reduce the impact on environmental noise from transportation sources; Objective 10 - Protect and enhance the water environment; Objective 11 - Protect soil resources and avoid land contamination

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

There are significant challenges in relation to emissions from transportation, including noise emissions, as well as emissions to the water or soil environments. For example, run off from transport was noted as one of the main causes of water pollution (18%) in surface water in relevant River Basin Management Plans and this would be anticipated to continue in the absence of LTP through accidental spillage of hydrocarbons and detritus from brakes and tyres. Similarly, pollution through accidental spillage or construction works can impact on soil resources, leading to contamination. Soil and agricultural resources can also be lost due to infrastructure development, including that related to the transport network.

In respect of noise, the most widespread sources of noise pollution and exposure in England are from various forms of transport and it is noted that within the North East, 6% of the population live near major road routes and are exposed to more than 55dB of noise at night – this can have health implications through disturbed sleep and increased stress, though not all members of the population will experience the same effects, even if exposed to the same level of noise.

Noise Important Areas identify 'hotspot' locations where the highest 1% of noise levels at residential locations can be found and therefore highlight where further investigation should be directed. There are 341 Noise Action Important Areas within the North East CA area, located on the local rail and road networks. Noise Action plans have been identified at specific locations along the A69, A1, A167, A191, A1058, A194, A184, A1018, A19, A690, A690 and the A1(M). It is anticipated that these Action Plans would continue to try to address noise at these locations in the absence of the LTP.

Alternative 2 – To implement the proposed LTP

As with continuing under the present approach, new development promoted or enabled through LTP could have implications for the water environment, as well as soil and agricultural resources. It is also the case that existing and new transport infrastructure will be operated under LTP, with potential for noise implications at discrete locations. However, there are a range of focus areas within LTP that can help address many of these issues and minimise adverse effects.

For example, a general focus on shifting journeys to more sustainable modes such as active travel or public transport, should reduce the risk of pollution incidents through accidents and will reduce road and other runoff containing residue of tyre and brake wear.

Nevertheless, LTP will promote new infrastructure and this could result in the loss of soil resources or increase noise. For example, note is made of the provision of park & ride sites in rural areas.

Table 8-3 - Noise, geodiversity, water and soils alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Reduce the impact on environmental noise from transportation sources; Protect, enhance and promote geodiversity Protect and enhance the water environment; Protect soil resources and avoid land contamination	Negative	Positive

Grouped ISA Objectives: Objective 4 - Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

Current indications are that the climate of the North East, like that of the rest of the UK, is changing. This has profound implications for the transport network, with adverse effects likely from extreme weather events. Noted examples for the North East include the potential for extreme heat / cold to damage rail tracks or rail infrastructure such as electric lines, as well as road surfaces, increased wind with consequent risk of falling or flying debris, as well as difficulty walking particularly for those with mobility issues. In addition, extremes of temperature will likely make making journeys for passengers uncomfortable or even dangerous in some circumstances. Similarly, extremely wet conditions put transport infrastructure at risk of flooding, though transport infrastructure itself can

exacerbate this situation in some locales due to impermeable surfaces, changes to flood plains, changes to hydrological regimes and so on. Increased wet conditions can also lead to land instability.

It is noted that at present, some communities in the North East, such as those in more exposed coastal locations can be more negatively affected by extreme weather events and in the absence of increased resilience, this isolation would continue or increase.

At present in the North East, as with other parts of the UK, there are flood management plans in place to cover relevant river basins. All the flood risk plans introduce a series of measures / actions to be undertaken to prevent flood risk and reduce the likelihood of flooding affecting people and property in certain locations. It is also the case that there is a series of existing flood alleviation and flood protection measures across the region.

Alternative 2 – To implement the proposed LTP

As with the present approach, it is anticipated that LTP will result in additional infrastructure. This will continue to be protected from extreme weather such as flooding by existing flood plans and flood protection measures. Nevertheless, LTP goes beyond the present approach by more specifically recognising the need to adapt and be resilient to climate change. Clear note is made that the network should be able to deal with disruptions and extreme weather more effectively. Specific note is made of the need for investment and maintenance requirements and that pothole and surface imperfections will be addressed swiftly and drainage should be regularly maintained to mitigate flooding. Further note is made of the development of a strategy to maintain and improve transport assets (Transport Asset Management Plan) and it is anticipated this would help long term asset performance that would require addressing effects of a changing climate.

In addition, it is anticipated that LTP will put an increased focus on proactive maintenance, including on the drainage network, as well as repair of road surfaces.

It is also the case that LTP sets out a range of approaches to reducing the driver of climate change i.e. it has set out how carbon emissions from transport will be reduced. This includes an emphasis on more active travel, a shift to public transport, encouragement for the uptake of LZEVs and new fuels such as hydrogen.

It is considered that implementing LTP will have a positive effect on maximising adaptation and resilience of the transport network to the effects of a changing climate in comparison to continuing under the present approach.

Table 8-4 - Adaptation and resilience alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding	Negative	Positive

Grouped ISA Objectives: Objective 5 - Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network; Objective 6 - Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA); Objective 7 - Protect, enhance and promote geodiversity

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

Across the North East are a number of sites designated for nature conservation, as well as valuable ecological networks and individual plants and species of importance. At the highest level, the designated sites include five Ramsar sites, eight Special Protection Areas, 18 Special Areas of Conservation and 233 Sites of Special Scientific Interest (including a number designated for Geodiversity). There are also considerable resources of ancient woodland and 15 NNRs mainly concentrated in County Durham and Northumberland. In addition, there are a range of sites designated at the local level including 97 Local Nature Reserves (LNRs) predominantly found along the southwestern boundary of the region. New transport interventions have the potential to impact on the sites of ecological or geological value and more generally on the network of linked multi-functional green spaces, comprising the local green infrastructure, through direct land take for infrastructure (which may contribute to fragmentation) and construction and operational disturbance (noise, vibration, light pollution, etc.) and emissions / contamination (air, water and soil), though they may also provide opportunities for enhancement. Increased accessibility to designated sites also has the potential to adversely impact on them. Direct road kill can also impact some species. Other key pressures that can impact biodiversity and which have clear linkages to transport are air pollution and climate change.

It is the case though that existing transport schemes do provide opportunities to address some areas of concern and these would continue in the absence of LTP. For example, there is a requirement for schemes to have a minimum of 10% Biodiversity Net Gain. It is also the case that there is an existing set of requirements and mechanisms to protect those sites designated for nature conservation. For example, there are three Local Nature Recovery (LNR) strategies being developed across the region by Durham County Council, by the North of Tyne Combined Authority and by the South of Tyne and Wear. The LNRs are aimed at prioritising the nature emergency on a local and focused level. There are also national strategies such as the range of policies developed by Defra and the Highways Agency (now Highways England) relating to pollinators. Nevertheless key pressures such as habitat loss, air pollution and climate change will continue.

Alternative 2 – To implement the proposed LTP

LTP has a range of implications for biodiversity and potentially sites designated for nature conservation. While there may still be continuing impacts from transport infrastructure, both during operation but also through development, LTP sets out elements that can help to minimise effects. These include a general reduction in traffic levels e.g. through a focus on more sustainable modes (including public transport) and active travel. This clear focus away from the use of private vehicles should reduce disturbance to designated sites and habitats and reduce the potential for direct strike / road kill. It is also the case that reductions in air pollution emissions may also reduce pollution deposition on valuable habitats.

LTP also sets out a range of measures that will provide opportunities. For example, there is a focus on improvements to the public realm which will provide opportunities for planting that could increase habitat or general biodiversity. Active travel routes would also provide opportunities for green infrastructure to be incorporated, as well as increase access for people to the countryside. Regular maintenance, would provide opportunities for addressing the problem of invasive species.

On the whole, it is considered that LTP will have a positive effect on designated sites (including those for geodiversity) and biodiversity in general.

Table 8-5 - Designated sites, biodiversity and geodiversity alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network; Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA); Protect, enhance and promote geodiversity	Negative	Positive

Grouped ISA Objectives: Objective 8 - Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment; Objective 9 - Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

The North East has some significant cultural heritage assets, with the two World Heritage sites of Hadrian's Wall and Durham Cathedral pre-eminent. In addition, examples include Scheduled Monuments, Registered Parks and Gardens, Battlefields and Listed Buildings. Of course, the nature of cultural heritage features means that there are likely to be many other features not currently know such as buried archaeological remains. As with across the United Kingdom, there is an ongoing risk of uncoordinated and piecemeal development resulting in successive erosion of the quantum and integrity of the region's cultural heritage resource. While these assets (and their settings) could be affected by transport interventions, in the absence of LTP protection will continue to be provided to these cultural heritage features (for example through protection afforded to Scheduled Monuments) and it is likely that new sites will join the list, e.g. through archaeological discovery, or new interpretations of existing sites.

In relation to landscapes, North East CA covers a large area containing a wide variety of landscapes ranging from the remote hills and forests to an extensive coastline forming its eastern border. To the northwest is the Northumberland National park which is the most remote and least populated park in England, while to the west is the North Pennines National Landscape characterised by open moors, attractive meadows and woods. The eastern coastline plays host to two heritage coasts (Durham and Northumberland) known for their dramatic views and varies between long sand beaches to high black basalt headlands. Also found, throughout the region, are a series of woods and rivers stretching through rural and urban areas. There are also a range of settlement types, from the smallest hamlet and isolated farmstead in rural areas, to larger conurbations centred on towns and cities such as Newcastle Sunderland, or Durham.

There are a range of pressures on landscape, many of which are altering landscapes in a direction which could be regarded as inconsistent with the traditional landscape vernacular of the area. These changes are a reflection of the fact that the landscape of the UK has changed over many years due to a range of issues such as urbanisation, changes to agriculture, reduced tranquillity, loss of habitats and forests, etc. The Plan Area is intersected by two National Landscapes (formerly known as Areas of Outstanding Natural Beauty); North Pennines and the

Northumberland Coast. There are also 217 Conservation Areas in the region mainly concentrated in the east, southeast and south of the plan area.

Many of the region's most exceptional landscape and townscapes benefit from protection through designations that will persist in the absence of the LTP. In general terms, modern design / landscaping principles and interested parties expectations are promoting a renewed focus on the quality of scheme design and this trend is likely to continue, though risks from increased urbanisation and infrastructure development remain.

Alternative 2 – To implement the proposed LTP

As with continuing under the present approach, new development promoted or enabled through LTP could have implications for heritage assets and the wider historic environment, as well as landscapes etc. Particular effects would be dependent upon the location of the development and could be beneficial or adverse. However, LTP contains a range of aspects that are anticipated to help minimise effects. For example, a reduction in traffic levels (encouraged by the shift to active and public transport) could potentially reduce disturbance to cultural heritage assets and their settings.

Similarly in relation to landscape, townscape and visual amenity, LTP will provide opportunities for protection and enhancement. For example, a general reduction in traffic levels (encouraged by the shift to active and public transport) could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. Note is also made there should be wide, segregated and well maintained pedestrian infrastructure with reduced street clutter, dropped kerbs, ramp access provision and other inclusive infrastructure such as well designed crossing points and this general 'decluttering' and improvement of design will help to improve visual amenity, particularly in townscapes.

Nevertheless, for both cultural heritage and landscape etc., LTP will result in new infrastructure. While there is a focus on good design, this would represent new features in the landscape – for example new park & ride sites in rural areas. As such, it is considered that LTP would represent a similar effect on heritage and landscape as the current approach i.e. it will continue to have protections that are in place and benefit from new approaches to landscaping and design.

Table 8-6 - Landscape and Heritage alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment; Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity	Neutral	Neutral

Grouped ISA Objectives: Objective 12 - Promote sustainable use of resources and natural assets; Objective 13 - Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all; Objective 14 - Support the wider coordination of land use and energy planning across the North East CA area

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

The transport sector can impact on and interact with a wide range of resources such as through energy (fuel) use, use of construction materials (aggregate, concrete, etc.), waste generation and disposal, etc.

New transport interventions' construction contributes to increase the levels of waste generated if building materials are not efficiently used / reused. With more waste being produced, trip kilometres to transport such waste is likely to increase, thus generating more traffic. A lack of proactive maintenance can ultimately cost more in terms of material use and resources – addressing issues in a timely manner can result in not having to replace or renew infrastructure.

Transport is the largest energy consuming sector in the UK, representing 38% of final energy consumption in 2022. However, in the absence of LTP it is anticipated new approaches are helping to shift towards greater efficiencies in resource use and adherence to the waste hierarchy. Energy usage within transport is falling and there will be an increase in the uptake of EVs (particularly as the EV charging network expands) which will contribute to falls in the use of hydrocarbons, though it is noted that for the North East there are limitations to the EV charging network and how accessible users find this.

In relation to economic development, the North East CAs economy is worth around £54 Billion and includes over 887,000 jobs. Some of the key employers within North East CA include the public sector alongside a growing education and health sector. Alongside this retail and hospitality also provide many entry level job opportunities. Manufacturing remains above the national average as an employer within the North East although jobs have been falling in recent years. There are significant challenges to the economy of the North East. These include low productivity (compared to national averages) and it is recognised that transport plays an important role in this issue. There are also significant economic inequalities across the region, with for example employment rates, skill levels and pay comparing badly to national rates. The North East is also considered to be underperforming in terms of number of visitors / the visitor economy. Again, transport is seen as a key factor in helping to address such issues.

Some of the most significant challenges facing North East CA is reminiscent of other rural areas across the country, these include an ageing population alongside challenges around accessing services and meeting housing demand. Deprivation is also a significant problem in the North East, with the most deprived areas found in urban centres and along the coast, though there would also be pockets of deprivation in rural areas. As with the rest of the UK, deprived areas tend to have the poorest life expectancy and general health outcomes and the North East performs badly in all such aspects compared to the national picture.

Overall North East CA is a largely rural area with an approximate density of 250 people/km^2 which is slightly lower than the UK density of 276 people/km^2. The density across North East CA ranges across the local authorities with the more rural regions like Northumberland at a density of only 65 people/km^2 while one of the major cities in the area, Newcastle, has a density of 2,711 people/km^2.

Strategic connections such as the electrified East Coast Rail connect Newcastle to Edinburgh and York and place it on a primary route between London and Edinburgh. Similarly, the A1 runs through the region, forming another strategic link between the English and Scottish capitals. Its location along the coast provides easy access to ports namely Port of Sunderland, Port of Tyne (including international ferry terminal) and Port of Blyth. North East CA also hosts the Newcastle international Airport providing a strategic international connection.

Nevertheless, it is considered that the North East will likely remain a relatively rural region with most of its population centred around urban areas like Newcastle, Sunderland and Durham. There is uncertainty how this may

change over time though due to a likely rise in homeworking and e-commerce and a consequent change in commuting patterns.

Alternative 2 – To implement the proposed LTP

While challenges to the use of materials and resources, economic development and general planning will remain, it is anticipated that LTP will provide a clear focus on helping to address some of these challenges. For example, a general reduction in congestion, as well as an uptake in EVs should reduce the use of hydrocarbons, while an emphasis on proactive maintenance should reduce the need to replace infrastructure. As such, implementing LTP is anticipated to have a positive effect in comparison to the current approach.

A clear note is also made that many of the challenges to the economy relate to the existing transport network and how this performs. It is the intention that LTP should result in a more efficient and seamless network with a focus on issues such as improving connectivity, locally, across the region and beyond. This increased connectivity will be in respect of both people and goods – for example, note is made of improving long distance rail links to help welcome new business and organisations to be based in the north east. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. An example of improved road freight movements to the airport and the five sea ports is given. Note is made of enhancing links by sustainable means to new employment sites and that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education and essential services. More generally, facilitating journeys by a range of modes will make it easier for people to access employment and economic opportunities more widely across the region. Note is also made of better facilitation for disabled travellers – this could help to make it easier for people with disabilities to access the job market and therefore increase the workforce. Similarly, an example of the Metro serving disadvantaged areas is given and this could help make people in those areas access jobs or training opportunities further afield.

It is also the case that LTP will set out to have a joined up and approach to transport infrastructure investment and spatial planning. Elements include the need for sustainable modes to serve new developments (employment and housing sites), along with enhanced infrastructure to serve freight and delivery services. Routes, services and infrastructure should also directly connect communities to large employment sites, urban centres, out of town business parks, rural coastal communities and village centres. Note is made of the need for North East CA to work with Local Authorities.

It is considered that implementing LTP will have a large positive effect on economic growth and job creation and improving access and connectivity to jobs and skills for all in comparison to continuing under the present approach.

Table 8-7 - Resource use, economy and planning alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Promote sustainable use of resources and natural assets; Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all; Support the wider coordination of land use and energy planning across the North East CA area	Neutral / positive	Positive

Grouped ISA Objectives: Objective 15 - Improve health and well-being for all citizens and reduce inequalities in health (HIA specific objective); Objective 16 - Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective); Objective 17 - Promote fairness and equity in rural connectivity

Alternative 1 – to continue under the present approach to planning and investment (Business as Usual)

As noted, the North East faces a wide range of challenges related to its population, their level of economic activity, how they interact with the transport network and how these ultimately result in poorer life expectancies and general health outcomes compared to national averages. Inequalities (including equality of opportunity) are also starker than in comparable regions or for England as a whole. For example, transport can play a significant role in poorer health outcomes, due to issues such as air pollution (linked to respiratory illness, asthma and premature death) and noise (linked to mental wellbeing issues).

The nature of the region of having large rural areas, or generally badly accessed coastal areas, as well as former manufacturing or mining centres also mean that transport related social exclusion (TRSE) is a significant issue and occurs when people are unable to access key services and opportunities for social interaction, or opportunities for employment, leisure, commercial activities and so on. The North East performs badly in this regard with 31% of residents at risk of TRSE compared to 21% across the north of England and 18% in England as a whole.

While there are some elements of the current approach that would have benefits in terms of health etc., for example there is a network of active travel routes serving the region, with 16 routes that are part of the National Cycle Network, as well as the English Coastal Path and the North Sea Cycle Route, it is generally recognised that the transport network is underperforming in how it can support better health outcomes, reduced inequalities and enhanced rural and coastal town connectivity.

Alternative 2 – To implement the proposed LTP

LTP has a clear focus on increasing the reach of the transport network and making this as seamless and as easy to use as possible. This increased accessibility would be facilitated via a range of modes, which would include active travel. Note is made that sustainable transport provision should be an integral part of any new development and that routes, services and infrastructure should also directly connect communities to employment sites, urban centres, out of town business parks, rural coastal communities and village centres – all the areas where essential services, facilities and amenities would be found.

It is anticipated that all groups would benefit, while some elements such as active travel may not be fully accessible to all, note is made that there will be a review of public transport accessibility to inform where there are gaps and improvements needed. An example is given of the need to ensure stops are accessible to disabled people and that staff are provided with Disability Equality Training. Note is also made that it is anticipated that people of all ages, especially those without access to a car should benefit from enhanced connectivity and reach.

The LTP also aims to ensure there is no 'one size fits all' and that it will be ensured that the needs of people living in rural areas are taken into account, helping to address transport related social exclusion – it is anticipated this would include coastal communities and other urban areas (villages, small towns) that would potentially feel 'left behind' as it is the intention that the reach of the network would extend into every community, including rural and coastal areas.

Indirect beneficial effects can also be anticipated through elements of LTP such as reducing congestion, or restricting car access which will improve air quality in local areas. Improved air quality will improve health outcomes across all sectors of society, with likelihood of being particularly beneficial to vulnerable groups such as children and adolescents, as well as the elderly, those with existing health conditions (particularly those related to lung and heart conditions), as well as those on low income (who tend to live in areas more heavily impacted by road traffic). In addition to zero emission vehicles and the promotion of public transport, a large element in reducing emissions will

be through the emphasis on walking and cycling which is noted throughout LTP by providing for a much greater level of opportunities to undertake active travel. This will directly help improve health outcomes and will also provide opportunities to improve health and wellbeing through providing opportunities for exercise and leisure.

Further indirect effects on health can also be anticipated through elements noted in LTP, which deals with increasing access to economic opportunities. This has noted benefits for health outcomes by providing jobs or opportunities for educational advancement and may have the indirect benefit of helping to reduce crime rates by reducing economic uncertainty.

While a key element of this policy area is concerned with ensuring rural and coastal communities have access to the wider transport network, it will also work in the other direction, with people in the urban communities ultimately having greater access to rural areas and allow people to better connect with nature. This could have beneficial effects on health and wellbeing.

It is considered that implementing LTP will have a large positive effect on equality of opportunity for all, improving health and wellbeing and reducing inequalities in health outcomes, as well as promoting rural connectivity.

Table 8-8 - Health, equality and rural proofing alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Improve health and well-being for all citizens and reduce inequalities in health (HIA specific objective); Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective); Promote fairness and equity in rural connectivity	Neutral	Large Positive

8.4 Conclusions to consideration of reasonable alternatives

It can be shown that implementation of the LTP represents a more favourable approach to transport planning across most ISA Objectives in comparison to continuing under the present approach. While it is to be recognised that the present approach does have some key elements, such as an active travel network in the region and provision of EV charging points, these elements of the existing transport network are not reaching full potential and there is continued challenges across a range of issues that ultimately result in poorer economic outcomes, poorer connectivity across the region, continued transport related social exclusion and poorer health outcomes. While these issues are multi-faceted and an improved transport network will not completely solve them, the intention is that the LTP will result in an efficiently designed, simple and easy to use network with extended reach. It can be reasonably expected that this should give people a much greater opportunity to access the services and facilities that they need, as well as to grow the economy.

9.   Compatibility between LTP Objectives and ISA Objectives

9.1   Introduction

To help ensure that the vision and commitments of the LTP are as closely aligned with the ISA objectives as possible, a test of their compatibility has been undertaken. This test helped to identify potential synergies and inconsistencies, as well as assisting in refining the elements of the LTP and identifying alternatives.

It is important to note that the LTP is considered a vital component of a wider set of portfolios that aim to deliver a set of ambitions for the North East. In addition to transport, these portfolios are:

- Finance and Investment
- Rural & Environment
- Culture, Creative, Tourism and Sport
- Economy
- Housing and Land
- Education, skills and inclusion

Vision

As the LTP forms a key component of wider ambitions in the North East, the Vision that was developed by the Combined Authority for the region, forms the foundation of the LTP. This vision is:

"*Our purpose is to champion the full potential of our region. Collaborating with our partners and local authorities, we'll create a better way of life by connecting communities, giving people the skills to succeed, and improving wellbeing for all, so that the North East is recognised as an outstanding place to live, work, visit and invest*".

As the above vision has been developed by the North East CA to cover broader ambitions in addition to transport, it is not possible to influence this through this ISA. Nevertheless, it was considered important to ensure understanding of the vision and how it might interact with the LTP and what implications there are for the ISA.

Commitments and cross cutting strategic themes

A series of five commitments underpin the vision. These commitments by North East CA are as follows:

- A fairer North East - We'll help people thrive with aspirational jobs, new skills, and better homes, improving quality of life for everyone. We'll create confidence in the North East by reducing inequalities and improving health.
- A greener North East - We'll take inspiration from our industrial heritage and unique mix of urban areas, countryside, coastline, and rivers, to nurture our natural resources - creating green jobs, sustainable industry, and clean energy.
- A connected North East - We'll get behind businesses so they can improve productivity and connectivity. With better local transport networks and digital infrastructures, the North East will have a global reach, becoming the go-to place for innovative ideas and real-world results.
- An international North East - Building on our economic strength, and championing our heritage, culture, arts, and sports, we'll drive our region's ambition to continually attract visitors and investment.

- A successful North East - Together, we'll speak with one voice, and define our own future, cultivating the talent, skills, and innovation that will help grow our existing economy, becoming green industry leaders and a cultural destination - making the North East one of the best places to live, work, visit, and invest.

It is to be noted that this LTP has been developed based on the above vision and five commitments of North East CA to reflect the cross-cutting approach that will be required. However, as the vision and five commitments are part of a wider approach by North East CA to the region, that reflects a range of priorities outside of just transport, it is not possible for the ISA to influence these.

In addition, North East CA recognised that transport is an enabler to delivering the vision and meeting all five commitments and as such it was considered that that there are three cross-cutting strategic themes for transport which underpin the delivery of the North East CA vision and commitments. It is the intention that these will help ensure the LTP contributes to the North East CA role in improving the economy, skills, health, and environment of the region. The strategic themes are:

1. A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity.
2. A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.
3. A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.

As these strategic themes are directly linked to the LTP and it is possible for these to be influenced by the ISA, these strategic themes were considered in more detail in this compatibility assessment and were tested for Compatibility with the following ISA Objectives:

1. Protect and Improve air quality

2. Reduce the impact on environmental noise from transportation sources

3. Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050

4. Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding

5. Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network

6. Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA)

7. Protect, enhance and promote geodiversity

8. Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment

9. Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity

10. Protect and enhance the water environment

11. Protect soil resources and avoid land contamination

12. Promote sustainable use of resources and natural assets

13. Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all

14. Support the wider coordination of land use and energy planning across the North East CA area

15. Improve health and well-being for all citizens and reduce inequalities in health (HIA specific objective)

16. Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)

17. Promote fairness and equity in rural connectivity

9.2   Compatibility Assessment findings

In this compatibility assessment, the following broad scoring system has been used to summarise compatibility:

Table 9-1 - Compatibility Assessment scoring scheme

√	Broadly Compatible
X	Potential Conflict
?	No sufficient detail provided to ascertain compatibility
NR	Not Relevant / No Relationship

The results of the assessment are summarised in Table 9-2 and a short discussion of the results then follows.

Table 9-2 - Compatibility Assessment of LTP Strategic Themes

LTP Element	Strategic Theme		
	A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity. **A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.** **A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.**		
ISA Objectives		**Compatible?**	**Commentary**
1	Protect and Improve air quality	✓	Note is made in the strategic themes that the LTP will help to protect the environment and tackle climate change, by providing an attractive, seamless and sustainable transport network for people and freight. A sustainable network can be anticipated to include measures to reduce dependence on private cars, as well as enhance public transport. The ambition for a healthier north east with better health outcomes notes active and sustainable travel – this will likely lead to an emphasis on active modes. All these elements can be anticipated to protect and improve air quality.
2	Reduce the impact on environmental noise from transportation sources	✓	It is likely that the LTP will lead to an emphasis on traffic reduction and more active modes. This would likely lead to an overall reduction in noise from transport, though an emphasis on increased public transport could lead to some greater noise levels at discrete locations. Broadly though it is considered this Objective to be compatible.
3	Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050	✓	Note is made in the strategic themes that the LTP will help to protect the environment and tackle climate change, by providing an attractive, seamless and sustainable transport network for people and freight. A sustainable network can be anticipated to include measures to reduce dependence on private cars, as well as enhance public transport. The ambition for a healthier north east with better health outcomes notes active and sustainable

LTP Element	Strategic Theme		
	A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity. **A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.** **A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.**		
		√	travel – this will likely lead to an emphasis on active modes. All these elements can be anticipated to reduce carbon emissions from transport and contribute to net zero targets.
4	Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding	√	Note is made to of the ambition to tackle climate change by providing and attractive, seamless and sustainable transport network. It is anticipated this would include for a resilient network, which would also result in better health outcomes.
5	Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	√	There is an ambition in the strategic themes to protect the environment and it is anticipated that this would include consideration of biodiversity. It can be reasonably anticipated that elements that help to tackle climate change, or the promotion of new active travel elements could help to provide opportunities to increase biodiversity etc. through planting etc. A general reduction in traffic through a more sustainable network would also likely result in less pollution deposition (through lower emissions for example), as well as less disturbance.
6	Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA)	√	There is an ambition in the strategic themes to protect the environment and it is anticipated that this would include protection for sites designated for nature conservation. It can be reasonably anticipated that elements that help to tackle climate change, or the promotion of new active travel elements could result in a general reduction in traffic through a more sustainable network. As such this would also likely result in less pollution deposition (through lower emissions for example), as well as less disturbance to designated sites.

LTP Element	Strategic Theme		
	A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity. **A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.** **A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.**		
7	Protect, enhance and promote geodiversity	✓	Clear note is made in the strategic themes of protecting the environment and it can be anticipated that the development of a sustainable network would necessitate consideration of all aspects of the environment, including geodiversity. As such, it is considered these themes are likely to be broadly compatible with this Objective.
8	Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment	✓	Clear note is made in the strategic themes of protecting the environment and it can be anticipated that the development of a sustainable network would necessitate consideration of all aspects of the environment, including cultural heritage assets and their settings. As such, it is considered these themes are likely to be broadly compatible with this Objective.
9	Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity	✓	Clear note is made in the strategic themes of protecting the environment and it can be anticipated that the development of a sustainable network would necessitate consideration of all aspects of the environment, including landscapes, townscapes and visual amenity. Note is also made of developing an attractive network and this is anticipated to include elements relating to design, upgraded facilities and so on – these would likely result in improved visual amenity, as would a general reduction in congestion levels. While some elements may have implications for landscape (such as new infrastructure), it is considered these themes are likely to be broadly compatible with this Objective.
10	Protect and enhance the water environment	✓	Clear note is made in the strategic themes of protecting the environment and it can be anticipated that the development of a sustainable network would necessitate consideration of all aspects of the environment, including the water environment. A general reduction in traffic levels (through development of a sustainable network) would also likely help to reduce

LTP Element	Strategic Theme		
	A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity. **A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.** **A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.**		
		✓	polluted runoff (hydrocarbons, tyre and brake detritus etc). As such, it is considered these themes are likely to be broadly compatible with this Objective.
11	Protect soil resources and avoid land contamination	✓	Clear note is made in the strategic themes of protecting the environment and it can be anticipated that the development of a sustainable network would necessitate consideration of all aspects of the environment, including soil resources and land contamination. As such, it is considered these themes are likely to be broadly compatible with this Objective.
12	Promote sustainable use of resources and natural assets	✓	A general reduction in traffic levels (through development of a sustainable network) would likely result in less use of resources such as hydrocarbons. There are also likely to be opportunities to promote natural assets through active travel schemes etc. As such it is anticipated that these themes are likely to be broadly compatible with this Objective.
13	Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all	✓	Note is made in these strategic themes of the ambition for a more inclusive economy, with an LTP that will enable inclusive economic growth across the North East and that will help to attract investment, boost job creation and enable access to opportunity. Note is also made of a sustainable transport network for people and freight. All these elements can be anticipated to promote economic growth, job creation, access to jobs etc.
14	Support the wider coordination of land use and energy planning across the North East CA area	✓	Consideration of these strategic themes and how the LTP will act to support their achievement will necessitate wider coordination across many sectors. As such it is anticipated that these themes are likely to be broadly compatible with this Objective.

LTP Element	Strategic Theme		
	A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity. **A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.** **A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.**		
15	Improve health and well-being for all citizens and reduce inequalities in health (HIA specific objective)	✓	Clear note is made in these strategic themes of the ambition for a Healthier North East with an LTP that will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks. All these elements can be anticipated to result in more active modes, reduced traffic levels, improved air quality and better climate resilience, with subsequent improved health and wellbeing.
16	Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)	✓	Note is made of the need for 'a more inclusive economy' and 'overcome inequality by enabling access to opportunity' and this can be anticipated to likely result in consideration of issues relating to equality of opportunity and the desired outcome of a fairer society.
17	Promote fairness and equity in rural connectivity	✓	Note is made in these strategic themes of the ambition for the LTP to apply 'across our region'. This can reasonably be anticipated to include rural areas. Note is also made of the need for 'a more inclusive economy' and 'overcome inequality' and this can be anticipated to likely result in consideration of issues relating to fairness and equity.

9.3 Compatibility Assessment overview

As noted, it is the purpose of the Compatibility Assessment to ascertain if the LTP is likely to be aligned with the ISA Objectives, or whether there are aspects where there is likely to be potential conflict. As the LTP is being based on a wider vision and commitments for the North East that apply across a range of sectors, it is not possible for the ISA to influence these wider elements. However, it was recognised that transport would act as an enabler to help deliver the wider vision and commitments and as such the LTP set out three cross cutting strategic themes for transport. These were then subject to the compatibility assessment. The cross cutting strategic themes were:

1.   A more inclusive economy - The LTP will enable inclusive economic growth across the North East, helping to attract investment, boost job creation, and overcome inequality by enabling access to opportunity.

2.   A better environment - The LTP will help to protect our environment and tackle climate change by providing an attractive, seamless, and sustainable transport network for people and freight across our region.

3.   A healthier North East - The LTP will help achieve better health outcomes for people in our region by encouraging active and sustainable travel and facilitating better transport access to healthcare and social networks.

Consideration of the three cross cutting strategic themes has shown that these can be anticipated to be broadly compatible with the aims of the ISA and will provide a firm underpinning, that will apply across the LTP and will help to ensure that the sustainability performance of the Plan can be maximised. Key elements of these strategic themes will be to develop an approach to the LTP that will include an approach to economic development that will enable access and overcome inequality, protect the environment, tackle issues relating to a changing climate and help to achieve better health outcomes by encouraging active and sustainable travel. These elements are in line with the general approach to sustainability that should aim for beneficial effects in respect of economy, environment and society.

10. Assessment of LTP focus areas

10.1 Introduction

The LTP sets out the concept of a fully integrated North East transport network against five areas of focus. These areas are:

1. Planning journeys/informing users/supporting customers.
2. Ticketing and fares.
3. Reach and resilience of infrastructure.
4. Safety, especially of women and girls, and other improvements in service quality.
5. Connections between different transport types.

It is the intention that application of these focus areas, will result in a single, cohesive network that is efficiently designed, simple, and easy to use will enable people and goods to make greener journeys. Developing this network will help the region to meet its challenges head on, providing sustainable, integrated links between communities, services, and opportunities, paving the way for growth and further inward investment.

It is also the intention that through these focus areas, a better transport network would be created that should also strengthen the regional economy, environment, and the health of its people, meeting the North East CA vision and five commitments.

These focus areas also set the framework for the interventions which are set out in the LTP's delivery plan and which have been considered by the ISA – see Chapter 11.

As with other elements of the LTP, the focus areas have been assessed against the ISA Framework and its associated Objectives and decision aid questions (see Chapter 7), using the significance scale shown in Table 10-1.

Table 10-1 - Criteria for assessing significance of effect

Assessment Scale	Assessment Category	Significance of Effect
+++	Major beneficial	Significant
++	Moderate beneficial	
+	Slight beneficial	Not Significant
0	Neutral or no obvious effect	
-	Slight adverse	
--	Moderate adverse	Significant
---	Major adverse	

10.2 Assessment overview

An overview of the results of this assessment is presented in Table 10-2 below, with a discussion of the results for each focus area following. Full details of the assessment of each focus area is provided in Appendix E.

Table 10-2 - Overview of assessment of focus areas

Focus Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Planning journeys	++	+	++	+	+	+	0	+/-	+/-	+	+	+	++	+	++	++	+
2 Ticketing and fares	++	+	++	0	+	+	0	+	+	+	+	+	++	0	++	++	++
3 Reach and resilience	++ --	+/-	++ --	++	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+++	++	++	++	++
4 Safety of women and girls	++	++	++	-	+	+/-	+/-	+/-	+/-	+/-	+/-	+/-	++	0	++	++	+
5 Connections between transport type	++ -	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	++	+	++	++	++

10.3 Assessment overview of 'Planning journeys' focus area

The focus area concerned with 'Planning journeys, informing users and supporting customers' sets out a series of key commitments as follows:

- Information, help, or assistance should be easily available and accessible to everyone before, during, and after a journey.
- Live journey information should be accurate and consistent wherever and however it is being accessed. It should be presented in a way which is understandable and trusted by people.
- The integrated network should have a strong identity to give confidence in the network and encourage people to make greener journeys.

Environmental issues

It is considered that this focus area will help to protect and improve air quality and reduce carbon emissions (Objectives 1 and 3) by helping people (or freight) to utilise more sustainable modes of transport. Information on availability of cycle parking, EV charging points etc. will encourage a shift to more sustainable modes. Similarly, clearer and enhanced levels of information that is accessible to all, along with better technology will help people to transition to public transport by making journeys easier to plan and complete. Live journey information that provides detail on congestion, road works, delays etc will also help to make the transport network more efficient, thereby reducing pollution and carbon emissions from stationary vehicles. It is considered benefits to air quality will be slight in the short term but become more significant as greater numbers of users are attracted to public transport, undertake active travel or uptake EVs.

It is considered this focus area will help to encourage people to utilise modes which would have a quieter footprint (Objective 2). For example, information on availability of cycle parking, EV charging points etc. will encourage a shift to quieter modes. A greater shift to public transport should also help to reduce the number of vehicles on the network and (along with enhanced information) reduce congestion. It is considered benefits will likely be slight in the short to long term, though there may potentially be more significant effects if there is a greater uptake of EVs and active modes over the long term.

Reduced pollution deposition (as outlined in respect of Objective 1), as well as less disturbance through noise (Objective 2) will help to reduce air pollution deposition and disturbance on sites designated for nature conservation, as well as more general habitats and species (Objectives 5 and 6). Effects are anticipated to be slight beneficial. A reduction in other aspects of pollution e.g. to the water environment (Objective 10) and soils (Objective 11) can also be anticipated through reduced traffic volumes leading to less pollution deposition and polluted runoff (hydrocarbons, tyre and brake detritus). A general reduction in hydrocarbon use can be anticipated (Objective 12).

Another beneficial effect driver of this focus area will be enhanced information being available, often in real time, to the travelling public. This will include information on extreme weather events (anticipated to include flooding) and how this is impacting the transport network. This will allow people to plan more effectively, or decide not to undertake journeys in the first place. Alternative routes / travel solutions etc will also be identified. This will increase the adaptability and resilience of the transport network to effects of a changing climate (Objective 4). Further adaptability will be realised through promotion of alternative, more flexible, modes such as cycling that may provide opportunities to undertake journeys if other modes are restricted by weather, though of course cycling could also be impacted.

These areas focus on providing more and enhanced joined up information – this covers all aspects of the transport network. For example, there will be information on EV charging facility availability. Data will be centrally handled, coordinated and consistent. It is anticipated that ensuring that information is up to date and robust will require an understanding of land use and energy planning (Objective 14), both long term and day to day – for example note is made of how interactively changing how the network performs will be possible.

More beneficially, there is a clear focus in these areas to provide enhanced levels of information to make it easier for residents and visitors to the region to travel to and from stations, tourism assets and employment centres by sustainable modes. This will enable economic growth and job creation (Objective 13), as well as improve connectivity – for example connections between and within communities will be enhanced by better information, increased mode options (such as better information on cycle facilities), increased network efficiency and so on. Effects are considered to be of moderate benefit in the longer term as people get used to new connections etc.

More mixed effects are anticipated on a number of other environmental objectives. For example, while a reduction in pollution deposition will be of beneficial effect to heritage assets (Objective 8), as will a reduction in congestion in respect of their setting (as well as benefitting the visual amenity of townscapes), care would need to be taken to ensure that aspects of this focus area such as signage or other information points / telemetry infrastructure (digital or otherwise) do not affect the setting of any heritage asset, or do not lead to 'cluttering' of historic centres, or have an adverse effect on townscapes through 'cluttering' (Objective 9).

Health, Equalities and rural proofing

As noted, it is the aim of this focus area to help improve accessibility by providing information (including signage) that is clear and accessible to all and which can be adapted to suit individual needs. Note is made that enhanced levels of information should make it easier for residents and visitors to travel to and from stations, tourism assets and employment centres by sustainable transport. This is anticipated to also include leisure services and amenities.

Note is made of the use of new technology – while this would benefit all groups, some groups such as older people, those with certain disabilities or those on low incomes (who may not be able to keep up with latest technology) may not be able to utilise this as much as others. There may also be language barriers for some groups to utilising new information sources – It is worth noting that Age and gender also influence languages spoken, meaning that older BAME women are much less likely to speak English as their first language.

It is also the case that some groups such as those with certain disabilities or the elderly may also not be able to avail of public transport or active travel modes as much as others, though this focus area does include measures which would make the wider transport network, more efficient, including information on car parking spaces and those who are more reliant on private cars should benefit in that respect.

Better planned journeys, with greater information on the network and its up to date condition should allow people to make the most efficient journey possible, likely reducing costs. There would also be greater confidence that journeys will not be wasted if people are aware of potential delays that could mean they miss appointments etc. Increased network efficiency e.g. by removing congestion will result in less wasted fuel and thereby reduce overall journey cost, particularly benefitting those on lower or fixed incomes. Encouragement is also made to allow people to utilise more active, low cost modes such as cycling. However, the need for new technology to utilise the latest apps etc may have cost implications for some groups or may not be able to be used by those with certain disabilities. Language of such apps

could also be a barrier to their uptake with potential implications for those of minority faith or ethnic groups.

It is anticipated this focus area will lead to reduced congestion and a more efficient transport network. This, along with better and more up to date information, would likely reduce the potential for accidents and will reduce stress in the travelling population – potentially reducing conflict among travellers. All groups are anticipated to benefit. More detailed, clear information etc. including disruptions caused by extreme weather will also allow people to plan journeys better, or avoid the need to undertake journeys. Greater consistency of journey length (including bus services running to timetable) will also provide reassurance to people of when their journey will be over – this can be of benefit to lone travellers or vulnerable people, for example children who may be met by a parent as they arrive at a bus stop.

Reduced congestion will lead to reduced severance. In addition, connections will be enhanced through better, more clear information that are anticipated to make travel to and from stations and other assets and centres easier. All groups should benefit but note that some groups may not be able to access information as readily as others due to language barriers or for reasons of disability.

Connections between and within communities will be enhanced by better information, increased mode options (such as better information on cycle facilities), increased network efficiency and so on. Access to public transport will be improved via greater and clearer information. Journey times will also become more reliable and quicker. Access to / from stations will also be enhanced. Better technology etc. will allow easier access to timetables, ticketing options and so on. All groups are anticipated to benefit.

It is considered this focus area will help to encourage people to utilise modes which would have a quieter footprint, as well as reduced emissions. This will help to improve health and reduce stress, with particular benefits for those in areas with poorer air quality (frequently those more deprived areas), as well as children, the elderly and those with certain health conditions. For example, information on availability of cycle parking, EV charging points etc. will encourage a shift to quieter modes. A greater shift to public transport should also help to reduce the number of vehicles on the network and (along with enhanced information) reduce congestion.

In addition, this focus area does provide encouragement for an uptake of active travel e.g. by providing information on cycling facilities (including cycle parking and hire) and this will allow for more active lifestyle opportunities (with consequent health and wellbeing benefits). Active travel will also be made easier through better signage, information on road works etc. Not all groups will benefit to the same degree, with perhaps less benefit for children, the elderly or those with certain disabilities or health conditions. It is also the case that those in rural areas with no access to a private vehicle could remain disadvantaged given the longer distances to services and facilities they need.

Greater information on journey length, journey options, issues such as congestion, roadworks etc., will help to improve people's confidence in the transport network, reduce traveller stress and help reduce perceived safety issues. For example, knowing a bus is going to be late means people can delay starting their journey in order to avoid waiting at a stop, perhaps on their own. Overall reduced congestion, or greater network efficiency should make actual safety greater.

It is anticipated that reduced congestion (through improvements to network efficiency and a shift to public or active modes) would help to improve the street environment, with beneficial effects on health and wellbeing. All groups would benefit.

Overall, it is anticipated that enhanced levels of information will make it easier for all groups to access transport facilities and infrastructure, though challenges are likely to remain, particularly for certain groups

such as the elderly, those with certain disabilities, ethnic and faith groups and those of certain sexuality and gender reassignment.

All users in rural areas will benefit from enhanced travel information. This will include up to date information on network conditions and may help people to decide not to undertake journeys if conditions will be challenging, or they will miss appointments etc. This could be particularly valuable to those in rural areas given greater journey length / time. However, given greater distances etc., there will be reduced opportunity for an uptake in active modes.

Greater network efficiency and improvements to real time travel information should help rural areas to grow their economy by making it easier to move goods across the region. Up to date traffic management may also allow for greater reliability in journey time planning, with benefits for 'just in time' deliveries or those businesses that require efficient movement of goods (such as foodstuffs) or livestock.

This focus area does encourage / enable an uptake in active modes, which would help connect people with nature. Given greater distances in rural areas, this is more likely to be on a recreational basis, with longer journeys less likely.

10.4 Assessment overview of 'Ticketing and Fares' focus area

The focus area concerned with 'Ticketing and Fares' sets out a series of key commitments as follows:

- Fares and tickets should be as simple and easy to use as possible.
- People should be able to travel across the whole region, between rural and urban areas, incorporating bus, Metro, rail, and the Shields Ferry without needing to buy multiple tickets and with payment methods that enable seamless travel.

Environmental issues

This focus area and its associated commitments are aimed at making ticketing and fares affordable, convenient and simple to use, shifting people away from private cars and into more sustainable modes of transport (bus, Metro, rail and Ferry) and will therefore contribute to the achievement of the Objectives 1 and 3 to protect and enhance air quality, as well as reduce carbon emissions. Simplifying payment, fare capping and a fully integrated transport system (single ticket payment) will help people to transition to public transport by making journeys easier to complete.

The integration of ticketing with wider transport services such as EV charging, Park and Ride, car clubs, and cycle and e-scooter hire, will result in less congestion on the roads which will help to make the transport network more efficient, thereby reducing pollution and carbon emissions from stationary / idling vehicles. It is considered benefits will be slight in the short term but become more significant as greater numbers of users are attracted to public transport.

Encouragement is made in this focus area for people to utilise modes which would have a quieter footprint. For example, the integration of ticketing with wider transport services such as EV charging, Park and Ride, car clubs, and cycle and e-scooter hire, enabling network users to plan and pay for their entire journey will encourage a shift to quieter modes. A more affordable, convenient and simple to use ticketing system will also promote a greater shift to public transport which should also help to reduce the number of vehicles on the network and reduce congestion. It is considered benefits will likely be slight but potentially become more significant as greater numbers of users are attracted to public transport, or uptake EVs.

Beneficial effects (slight) from this focus area are anticipated across a number of ISA Objectives. For example, it is anticipated that this policy, and its associated commitments, will help to reduce traffic volumes (by making ticketing and fares affordable, convenient and simple to use and thereby shifting people away from private cars and into more sustainable modes of transport) and make the transport network more efficient and as such will help to reduce air pollution deposition and disturbance to habitats and species, including those sites designated for nature conservation (Objective 5 and 6). Similarly, reduced air pollution deposition and disturbance are considered likely to have beneficial effects for heritage assets and their setting (Objective 8), while a general reduction in congestion will benefit townscapes and visual amenity (Objective 9). There will also likely be reduced water and soil pollution from reduced airborne deposition, as well as reduced runoff of tyre and brake detritus and less use of hydrocarbons (Objective 12) leading to a reduction in risk of hydrocarbon spillage, with beneficial effects in respect of Objectives 10 and 11.

This focus area and its commitments, has a specific focus on offering great value ticketing and fare products to help people reach education or new employment opportunities previously beyond their reach. In addition to this, note is made of the need to include specific initiatives to support people getting back

into work or training. The focus is on making ticketing affordable, convenient and simple to use, with a single ticket payment across different types of transport making journeys from door to door seamless across the entire region, including between rural and urban areas.

Note is also made that ticketing and fares initiatives should also support and promote the North East's tourism assets, making sustainable travel more convenient for tourists visiting the region. This would boost the tourism offering and therefore help this important economic sector.

As such, it is considered economic benefits (Objective 13) will likely be slight in the short term but become more significant as greater numbers of users are attracted to public transport.

Health, Equalities and rural proofing

This focus area and its commitments, will help make journeys easier by providing integrated ticketing that is more affordable, convenient and simple to use. Note is made that ticketing and payments will integrate with wider transport services such as EV charging, Park and Ride, car clubs, and cycle and e-scooter hire, enabling network users to plan and pay for their entire door to door journey through a single offer and platform. It is also noted that there will be ticketing and fares products which help people reach education or new employment opportunities previously beyond their reach. This could potentially be of particular benefit to those on low incomes, the disabled, older people and those generally who wish to upskill or enter the employment market – there will also be specific initiatives to support people getting back into work or training.

In addition, although not specifically stated, it can be anticipated that the ticketing measures will also increase access to health and leisure services and facilities.

Note is made that there should be simple fare bands which are affordable. This should include fare capping with a maximum daily, and weekly fare charge regardless of the number of journeys made – this will be of benefit to those making frequent or daily journeys such as employees or school children. This should also include initiatives for children and young people to ensure fares are affordable, helping to reduce child poverty in the region.

In addition, note is also made that there should be a specific focus on offering great value ticketing and fares products. It is also noted that there should be a range of payment methods that can be used to support people who don't use a smart phone or have access to online banking. This will be of use to younger children and older people, as well as to those on low incomes (some of whom may not have a bank account) or those with certain disabilities. It is also to be noted that some minority ethnic groups (particularly women from such groups) may have less access to bank facilities, or may struggle with Apps in the English language and as such would benefit from a wide range of ways to pay, including more traditional methods.

Making journeys cheaper and easier (including reducing unnecessary complexity) as well as providing affordable access to an extended public transport network, will improve connections between and within communities and reduce severance with benefits for all groups – this will help facilitate greater social interactions between families and friends, or to undertake hobbies or visits with beneficial effects on wellbeing for all, though with potentially more significance for those groups who may be more socially isolated such as older members of society.

It is considered this policy area will help to encourage people to utilise modes which would have a quieter footprint. For example, the integration of ticketing with wider transport services such as EV charging, Park and Ride, car clubs, and cycle and e-scooter hire, enabling network users to plan and pay for their entire journey will encourage a shift to quieter modes. A more affordable, convenient and simple to use ticketing

system will also promote a greater shift to public transport which should also help to reduce the number of vehicles on the network and reduce congestion.

Although the interaction of ticketing and active travel is limited, note is made that the hire of bike / e-scooters (to undertake part of a journey) will be facilitated through the seamless ticket offering.

Safety and security should be improved through a reduction in the need to use cash for payments to the transport network. Benefits are likely to be experienced by all users, though some groups may still be more likely to use cash payments – older people, those on low income or those from some minority ethnic groups (particularly women) for example and as such may be more vulnerable to crime or have a perception of vulnerability. Similarly, a reduction in cash handling could make drivers etc. less vulnerable to crime / perception of crime and reduce stress in the workforce. Their ability to continue to operate a reliable transport system will benefit all groups.

Overall, it is anticipated that this focus area, and its associated commitments, will help to reduce traffic volumes and reduce congestion (by making ticketing and fares affordable, convenient and simple to use and thereby shifting people away from private cars). In addition to the benefits noted above, this is anticipated to improve the street environment, with potentially greater benefit for those who find navigating streets more challenging such as the very young, the elderly, disabled people (for example through high numbers of parked cars etc).

In specific reference to rural issues, it is a key element of this focus area that people should be able to travel across the whole region, between rural and urban areas incorporating bus, Metro, rail, and the Shields Ferry without needing to buy multiple tickets and with payment methods that enable seamless travel. It is anticipated that this will be of benefit to all groups, particularly as it is clear from the policy area that there will be simple fare bands which are affordable. This should include fare capping with a maximum daily, and weekly fare charge regardless of the number of journeys made. This should also include initiatives for children and young people to ensure fares are affordable, helping to reduce child poverty in rural areas of the region.

Note is also made that there should be a specific focus on offering great value ticketing and fares products which help people reach education or new employment opportunities previously beyond their reach. In addition to this, there should be specific initiatives to support people getting back into work or training.

Better integrated ticketing and fares should mean easier journeys, which will be of benefit to both residents and visitors to the region – this should make travel easier and encourage people to visit different parts (with likely spend in those areas). The focus on value will also help enable people to take up employment or training opportunities, with consequential beneficial effects on the economy. It is also possible that reduced cost to travel and easier, quicker journeys, may encourage people to stay in rural areas (or coastal areas and small villages) and journey further for work. This could allow rural enterprises to develop to serve a greater residential population. On the other hand, making rural and coastal areas cheaper and more convenient to access may also encourage people from more urban centres to take up employment in such areas and therefore help rural businesses to attract staff with the right skills they need.

Ticketing and fares initiatives should also support and promote the North East's tourism assets, making sustainable travel more convenient for tourists visiting the region, with consequent benefits for the economy (including the rural economy).

Cheaper and easier ticketing may encourage people from urban areas to travel to more rural or coastal locations. While reasons for travel will vary, this would allow people opportunities to connect with nature through green spaces, rural landscapes, seascapes etc.

10.5 Assessment overview of 'Reach and Resilience' focus area

The focus area concerned with 'Reach and resilience of infrastructure' sets out a series of key commitments as follows:

- The geographical reach of the integrated transport network should extend into every community of the North East, including our rural and coastal areas.
- To support the development of the integrated network, there should be a joined-up approach to transport infrastructure investment and spatial planning
- Transport services should meet the demands of people, accommodating shift patterns for work and late evening social activities, enhancing the reach of the network
- There should be strong transport connectivity beyond our boundaries for both people and freight
- Infrastructure that enables people to walk, wheel, or cycle should be central to the transport network and should link to public transport for longer journeys
- The network should be able to deal with disruptions, accidents, and extreme weather more effectively
- Our highway network should provide essential access to all areas of the region, with particular emphasis on rural and coastal communities, who often bear the brunt of disruptive weather patterns
- Charging infrastructure for Zero Emission Vehicles (ZEVs) should be present across the whole network, including at key stations and interchanges and rapid charging hubs
- Capacity should be boosted on the East Coast Main Line and the Durham Coast Line to meet our need for more long-distance rail passenger and freight services, supporting strong connectivity beyond our boundaries

Environmental issues

There are many aspects of this focus area that should result in the protection of or improvements to air quality and a reduction in carbon emissions (Objectives 1 and 3). For example, note is made that active modes are to be central to the transport network – this will include expansion of the cycle network to cover more of the region. Note is also made of elements such as bike hire, car sharing, MAAS, sharing opportunities (pedestrian and freight). Park & Ride will also be expanded to facilitate use of more sustainable modes and this will also facilitate a reduction in town centre traffic levels. Note is made of connecting employment and residential areas with sustainable modes and sustainable links will be a requirement of any new development.

However, it is also to be noted that there are aspects such as highway capacity improvements, extended rail services / capacity, re-opening of rail lines and so on that could have adverse effects on air quality, particularly at a local level, as well as continued emission of carbon. Nevertheless, there is also an emphasis placed on the provision of infrastructure that will encourage and facilitate an uptake in EVs, or other zero emission fuels such as hydrogen, which could be utilised by heavier vehicles.

Effects are considered to be moderate beneficial, though with some moderate adverse effects, particularly in earlier years prior to an uptake in LZEVs (including for heavier vehicles).

Similarly there are mixed effects (slight) anticipated in respect of a range of environmental issues. For example, the noted need for new developments to be connected to sustainable modes will reduce noise (Objective 2) in residential areas. However, expanded highway capacity, expanded rail services, new park & ride sites and so on, which would have noise implications – both during construction and

operation, though these would likely be at a local level. Note is also made of public transport services starting earlier and finishing later – while this will benefit some travellers, it may have noise implications along transport routes.

A general reduction in traffic levels (encouraged by the shift to active and public transport) could potentially reduce disturbance to habitats and species (Objective 5), as well as designated sites (Objective 6). However, there is also a focus on road and rail upgrades where required. This would potentially adversely effect biodiversity, sites designated for nature conservation and geodiversity (Objective 7) through increased disturbance, loss of habitat and so on. HRA Screening notes that policy may lead to improvements in transport infrastructure, which, subject to location and design, attributes risk of likely significant effects. See HRA Stage 1 & Stage 2 Report for further details.

A reduction in disturbance would also benefit the setting of heritage assets (Objective 8), though the development of new infrastructure could lead to disturbance in discrete locations or the wider setting, as well as the destruction of unknown archaeological remains.

In relation to landscape, townscape and visual amenity (Objective 9), a general reduction in traffic levels (encouraged by the shift to active and public transport) could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. Note is also made there should be wide, segregated and well maintained pedestrian infrastructure with reduced street clutter, dropped kerbs, ramp access provision and other inclusive infrastructure such as well designed crossing points and this general 'decluttering' and improvement of design will help to improve visual amenity, particularly in townscapes. However, this policy area will also result in new infrastructure in the landscape, including in rural areas, with the potential for adverse effects. These are likely to be at a local scale and likely to be largely mitigable by careful consideration of scheme location and landscaping.

In respect of the water and soil environment (Objective 10 and 11), there would be a potential for pollution incidents from hydrocarbon spillages or reduce the level of polluted runoff of brake and tyre detritus. However, new Park & Ride sites or new physical road and rail links could represent new sources of polluted runoff or contamination, though careful design and implementation of pollution control measures would reduce this threat. New infrastructure would also require natural resources to develop, though would also provide an opportunity to reduce fuel use (Objective 12).

On a more positive note, it is anticipated that the network should be able to deal with disruptions and extreme weather more effectively (Objective 4). Specific note is made of the need for investment and maintenance requirements and that pothole and surface imperfections will be addressed swiftly and drainage should be regularly maintained to mitigate flooding. Further note is made of the development of a strategy to maintain and improve transport assets (Transport Asset Management Plan) and it is anticipated this would help long term asset performance that would require addressing effects of a changing climate.

It is also the case that there is a large focus on connectivity - locally, across the region and beyond. This increased connectivity will be in respect of both people and goods – for example, note is made of improving long distance rail links to help welcome new business and organisations to be based in the North East. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. An example of improved road freight movements to the airport and the five sea ports is given. Note is made of enhancing links by sustainable means to new employment sites and that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education and essential services. More generally, facilitating journeys by a range of modes will make it easier for people to access employment and economic opportunities more widely across the region. Note is also made of

better facilitation for disabled travellers – this could help to make it easier for people with disabilities to access the job market and therefore increase the workforce. Similarly, an example of the Metro serving disadvantaged areas is given and this could help make people in those areas access jobs or training opportunities further afield. It is anticipated that effects would be significantly beneficial for economic growth and job creation (Objective 13) across the longer term.

Clear note is also made of the need to have a joined up and approach to transport infrastructure investment and spatial planning (Objective 14). Elements include the need for sustainable modes to serve new developments (employment and housing sites), along with enhanced infrastructure to serve freight and delivery services. Routes, services and infrastructure should also directly connect communities to large employment sites, urban centres, out of town business parks, rural coastal communities and village centres. Note is made of the need for North East CA to work with Local Authorities and effects are considered to be moderately beneficial across the longer term.

Health, Equalities and rural proofing

There is a clear focus in this focus area on improving accessibility. Specific note is made that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education, housing growth and essential services. Of particular note, this focus area will extend the reach of public transport across the region, with a clear intention that all areas are well served. All groups will benefit. There is also an emphasis on active travel and access to green spaces. While there are clear direct health benefits to active travel and this is a safe way to travel (if separated adequately from other road users), it is worth noting that there are indirect benefits to be had to mental health and general wellbeing.

This increased accessibility would be facilitated via a range of modes, which would include active travel. Note is made that sustainable transport provision should be an integral part of any new development and that routes, services and infrastructure should also directly connect communities to employment sites, urban centres, out of town business parks, rural coastal communities and village centres – all the areas where essential services, facilities and amenities would be found. It is anticipated that all groups would benefit. While some elements such as active travel may not be fully accessible to all, note is made that there will be a review of public transport accessibility to inform where there are gaps and improvements needed. An example is given of the need to ensure stops are accessible to disabled people and that staff are provided with Disability Equality Training. Note is also made that it is anticipated that people of all ages, especially those without access to a car should benefit from enhanced connectivity and reach.

The focus area aims to ensure there is no 'one size fits all' and that it will be ensured that the needs of people living in rural areas are taken into account, helping to address transport related social exclusion – it is anticipated this would include coastal communities and other urban areas (villages, small towns) that would potentially feel 'left behind' as the focus area states that the reach of the network would extend into every community, including rural and coastal areas. In short, the 'one size fits all' approach means that connections will be enhanced across the region, including rural areas and coastal communities, with all groups benefitting via a range of transport choice that means journeys can be tailored to suit individual circumstances. Clear note is made that there will be engagement with communities to ensure that elements of the network properly meet local needs and circumstances.

In relation to affordability, across the region, there will be opportunities for all to avail of cheaper transport – this could be through active travel modes or approaches such as bike hire, car hire and sharing clubs. Note is made that bike hire will be affordable. MAAS also allows opportunities for savings on ticketing etc, or other ways of sharing costs for both people and freight. Note is made of linking employment areas etc. with sustainable modes – this would allow employees to access work safely with active travel modes that would be of zero cost (after initial purchase or hire of bicycle or scooter).

Note is made that public transport services will start earlier and finish later – this access to public transport and removal of the need for private cars / use of taxis will be of particular importance to those engaged in shift work (often of lower income) who may start / finish outside typical working hours.

Similarly, increased access to public transport through its increased reach, will provide better opportunities for people across the region in rural areas or other more isolated communities to access other forms of transport other than the private car or taxis. This approach of increased accessibility will also benefit disabled people, with note made of increasing access at stops and providing training to transport staff.

Note is also made that there will be provision of EV chargers in remote rural areas as well as urban areas with high deprivation and low car ownership to ensure comprehensive provision.

Overall safety for all groups should be improved through a general reduction in traffic due to a shift to more active or public transport modes. Nevertheless, there will still be a need for private vehicles and note is made that in relation to highways, safety enhancements and regular maintenance for all users will be prioritised. It is also noted that issues such as potholes and drains will be addressed swiftly and this, along with a greater resilience to extreme weather, should reduce the risk of accidents.

In relation to design, note is also made that there will be wide, segregated and well maintained pedestrian infrastructure, with reduced street clutter, dropped kerbs, ramp access provision where needed and other inclusive infrastructure such as well designed crossing points. This will be of particular importance to more vulnerable groups such as pedestrians, the elderly, those with disabilities and children.

Severance will be reduced across the region as the reach of the transport network expands – the focus area sets out the mechanisms through which this will be done, such as Demand Responsive Transport and so on. All groups can be expected to benefit.

A focus on sustainable modes (such as active travel) and moving people onto public transport, or freight onto rail, should reduce overall noise and pollution emissions from the road network. It is noted that new developments will need to be connected via sustainable modes and this will reduce noise and pollution levels in residential areas etc. An uptake in EVs could also reduce overall noise levels. Reduction in noise will benefit all groups and reduction in air pollution will be of particular benefit for children, the elderly and people with breathing related health issues.

However, note is also made of expanded highway capacity, expanded rail services, new park & ride sites and so on, which would have noise implications – both during construction and operation, though these would likely be at a local level. Note is also made of public transport services starting earlier and finishing later – while this will benefit some travellers, it may have noise implications along transport routes. It is worth noting that some individuals may also experience a greater reaction to increased noise than others, though this would be for the population as a whole, rather than unique to any vulnerable group.

Expansion of the transport network across the region, including rural and coastal areas, also includes for active travel modes. For example, clear note is made that the current cycle network will be expanded. Not all groups will benefit to the same degree, with perhaps less benefit for children, the elderly or those with certain disabilities or health conditions. Residents of rural areas will benefit, though this may be of less significance given relative distances to travel.

Clear note is made that the network should be able to deal with disruptions, accidents and extreme weather more effectively. This will include prioritising safety enhancements and regular maintenance (including of road surfaces), which can be anticipated to reduce the potential for accidents to occur.

While no specific note is made, it is anticipated that the aim to prioritise safety enhancements will require consideration of safety by design. All groups should benefit.

A transport network that is reflective of what communities want and need (as set out in this focus area) should result in less stressed and better catered for travellers, thereby reducing the potential for conflict with the transport workforce. This will help to enable them to remain healthy and resilient, with less stress or physical risk.

In specific reference to rural areas, the focus area notes that the geographical reach of the integrated transport network should extend into every community, including rural and coastal areas. It is the intention that 'routes, services and infrastructure should directly connect communities to large employment sites, urban centres, out of town business parks, village centres, rural and coastal communities. Examples are given of a range of modes for how this is to be done, including demand responsive transport, community transport, mobility hubs and services feeding interchanges and stations. Active travel will also feature, with an expanded cycle network to rural areas, though distances involved mean this is more likely to be used for recreational purposes rather than commuting and would not offer the same advantages to all in the community

Note is also made that public chargepoint infrastructure should cover remote rural communities where there are lower levels of utilisation of EVs. There will also be more park & ride provision in rural and coastal communities.

Increased linkages within rural communities, as well as to urban centres and further afield outside the region will help to enable economic growth. This will make it easier for people to travel to work, or for goods to be moved efficiently - note is made of improving long distance rail links to help welcome new business and organisations to be based in the north east. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. This will be of benefit for rural businesses moving perishable goods or livestock.

While a key element of this focus area is concerned with ensuring rural and coastal communities have access to the wider transport network, it will also work in the other direction, with people in the urban communities ultimately having greater access to rural areas and allow people to better connect with nature. Benefits could be expected across all groups in the community.

10.6 Assessment overview of 'Safety especially of Women and Girls and other improvements in service quality' focus area

The focus area concerned with 'Safety especially of Women and Girls and other improvements in service quality' sets out a series of key commitments as follows:

- There should be clear and effective channels through which to report harassment and violence against women and girls on the network
- Targeted action should be taken and resources should be assigned to prevent violence against women and girls on the region's transport network. This should cover preventing offences from happening but should also look to tackle the root causes of violence and prevent it from developing
- Women and girls should have increased trust, confidence, and perceptions of safety on the transport network
- Roads should be made safer, with a specific focus on the most vulnerable users
- Integrated public transport services on the network must comply with legal and policy accessibility requirements, including ensuring services are accessible for all. Drivers and staff should ensure that everyone feels welcome and safe at stations and on services, strengthening confidence in the network
- The customer experience should be transformed setting the highest service standards, where users can expect the provision of safe, reliable, clean, and efficient transport infrastructure
- The network should have consistent and cohesive branding such as colour schemes, signage, design standards, and quality of service, so that there is a clear 'look and feel' of the network on routes, stops, and stations
- The North East should set the highest standards for a fleet of green public transport vehicles which must meet premier standards of service quality
- People should feel a sense of pride in the network and be keen to use it again

Environmental issues

The key driver behind this focus area is the protection for vulnerable travellers, with particular reference to women and girls and improving service quality to ensure that all people feel safe as they travel around the north east.

It is anticipated that increased trust, confidence and perception of the transport network, alongside noted physical infrastructure improvements will result in the uptake of increased public transport choices by vulnerable people that will help to reduce congestion and the number of cars on the road, thereby improving air quality in the region. Note is made of the need to ensure that it should be safer and easier to walk, wheel, and cycle to and from key local destinations, for everyday journeys such as for work, healthcare, education, and leisure purposes, and to access other public transport. Again, this uptake of sustainable travel options will reduce the number of cars on the road. The need to have consistent and cohesive branding across the entire network, including in rural and coastal areas should lead to increased awareness of travel opportunities and help to increase the proportion of journeys made sustainably, assisting in protecting and improving air quality, as well as reducing carbon emissions (Objectives 1 and 3).

The policy specifically notes that communities should not be impacted negatively by vehicular traffic, with volumes, speeds, and any resultant air pollution being kept to a minimum. This includes ensuring heavy goods vehicles avoid residential areas where possible. The policy also notes that the North Easts two Urban Traffic Management Control (UTMC) centres will be used to improve the functionality and performance of the integrated transport network, which is assumed to improve the flow of traffic in towns and cities where AQMAs have been declared (within Durham, Gateshead, Newcastle and North Tyneside), thus improving air quality. The policy notes enhanced use of Intelligent Transport Systems (ITS) incorporating UTMC and live journey time control to improve journey time reliability and reduce congestion, improving air quality impacts.

It is however to be noted that some of the physical infrastructure improvements identified may have the potential to have short term, temporary adverse effects on air quality during construction e.g construction of taxi and car club infrastructure.

In particular reference to carbon emissions, this focus area specifically notes that the integrated network must help enable significant reduction in greenhouse gas emissions from transport. It further sets out that the North East should set the highest standards for a fleet of green, Zero Emission Buses operating as part of an integrated network. In addition, the policy sets out the need for high quality facilities for HGV drivers with alternative fuel infrastructure in place to support the decarbonisation of road freight. All of these initiatives will help reduce carbon emissions and contribute to meeting national carbon targets.

The focus on increasing active travel and sustainable transport choices for all, should also help reduce noise levels from the transport network (Objective 2). In addition, specific note is made of the need for communities not to be impacted negatively impacted by vehicular traffic, with volumes, speeds, and it is assumed by association noise pollution being kept to a minimum. This includes ensuring heavy goods vehicles avoid residential areas where possible. A specific focus is also made on making roads safer for the most vulnerable users, including pedestrians and cyclists, which should increase the number of active travellers on the network reducing noise from vehicles.

Improvements to physical infrastructure, such as well lit and high passing footfall locations for public electric vehicle charging infrastructure should result in an uptake of EVs which could also reduce overall noise levels.

It is however to be noted that some of the physical infrastructure improvements identified may have the potential to have short term, temporary effects on noise during construction e.g construction of taxi and car club infrastructure, especially if in the vicinity of sensitive individuals. Effects are not expected to continue into the operational phase

Clear note is made of ensuring that Asset Management Plans consider the effects of future weather patterns, assumed to include extreme weather events such as flooding, and that such patterns do not cause undue disruption (Objective 4). In addition, the focus area specifies that the North Easts two Urban Traffic Management Control (UTMC) centres should be used to improve the functionality and performance of the integrated transport network, which is anticipated to include during extreme events.

A general reduction in traffic levels and a greater use of public transport, as encouraged by this focus area should also result in less disturbance to habitats and species (Objective 5), as well as sites designated for nature conservation (Objective 6). However, it should be noted that to improve the perception of safety and allow women and girls to build confidence in using the transport network, obstructions such as vegetation will be removed from routes. This would adversely effect biodiversity through increased disturbance and loss of habitat. Further improvements to physical infrastructure noted in the policy e, g new bus stops or car club infrastructure, is also likely to have negative impacts on biodiversity, or potentially to designated sites (including those noted for geodiversity). HRA Screening

notes that policy may lead to development including improved lighting and infrastructure, which, subject to location and design, attributes risk of likely significant effects. See HRA Stage 1 & Stage 2 Report for further details.

Similarly, disturbance could be reduced at historic assets, or to their wider setting (Objective 8), though new infrastructure could lead to disturbance or destruction of unknown archaeological remains, or a deterioration in settings.

In relation to landscape, townscape and visual amenity (Objective 9), similar mixed effects can be anticipated. A general reduction in traffic levels (encouraged by increased trust, confidence and perception of the transport network, alongside noted physical infrastructure improvements, thereby shifting more people to active and public transport) could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. The policy notes that maintenance should be carried out promptly across the whole integrated transport network with assets required to be maintained in the best possible condition to ensure their continued efficiency of operation and to create a positive first impression. That, alongside comprehensive cleaning regimes should help to improve visual amenity, particularly in townscapes.

This policy area will also result in new physical infrastructure in the landscape, including in rural areas, with the potential for adverse effects. These are likely to be at a local scale and likely to be largely mitigable by careful consideration of scheme location and landscaping.

Pollution to both the water environment and soils (Objectives 10 and 11) can be anticipated to reduce due to this focus area, but again, new infrastructure could be expected to result in some adverse effects, particularly during construction. Construction would also lead to an increase in the use of materials (Objective 12).

Significantly, it can be anticipated that beneficial effects on economic development and job creation, as well as connectivity to jobs and skills for all (Objective 13) will occur through this focus area, as a focus will be to ensure that all people, especially women and girls, feel safe whilst travelling around the North East. The policy specifically notes that it should be safer and easier to walk, wheel, and cycle to and from key local destinations, for everyday journeys such as for work, healthcare, education, and leisure purposes, and to access other public transport. Improvements to physical infrastructure should play a significant role in this. The policy further notes that services should be accessible to all. More generally, increased trust and confidence in the safety of the network will encourage more people to access employment and economic opportunities more widely across the region.

Health, Equalities and rural proofing

Many aspects of this focus area, and its associated commitments, should result in the protection of, or improvements to human health. The policy is aimed at improving service quality to ensure people feel safe whilst travelling around the North East. Increased trust, confidence and perception of the transport network, alongside noted physical infrastructure improvements will, it is anticipated, result in the uptake of increased public transport choices by vulnerable people that will reduce congestion and the number of cars on the road, thereby improving air quality in the region for all. Whilst there is a particular focus on women and girls and other vulnerable / protected characteristic users, it is assumed it will increase uptake across all groups.

The focus area is centred around making travelling safer. The policy sets out clear initiatives for ensuring that people using the network have increased trust, confidence and perceptions of safety. The policy notes the need for clear and effective channels through which to report harassment and violence and a need for targeted action and resources assigned to prevent violence against women and girls on the

region's transport network. Whist this specifically notes women and girls, it is assumed this will benefit all vulnerable users and protected characteristic groups.

As such, this focus area and its commitments will help make journeys easier and thereby improve access to services by ensuring all users, especially women and girls, have increased trust, confidence and perceptions of safety when using the transport network. The focus area notes that all road users in the North East should feel safe when using the network, including pedestrians, cyclists, wheelers, car drivers, and heavy goods vehicle drivers, with there being a specific focus on making roads safer for the most vulnerable users (defined as pedestrians, cyclists, and motorcyclists).

The focus area notes that it should be safer and easier to walk, wheel, and cycle to and from key local destinations, for everyday journeys such as for work, healthcare, education, and leisure purposes, and to access other public transport.

The focus area notes that the North East's two Urban Traffic Management Control (UTMC) centres should be used to improve the functionality and performance of the integrated transport network. Public transport services should have timely arrivals and departures with minimal delays.

Note is made of the need for signage and wayfinding to be consistent across the entire network, regardless of the type of location, including rural and coastal areas leading to increased awareness and travel opportunities.

The focus area aims to reduce the amount of road casualties and fatalities year on year and aspires for zero road deaths and serious injuries. This will be done so by developing an action plan covering a holistic set of measures to reduce the number of North East road casualties.

A greater uptake of people on sustainable transport methods, will reduce the number of private vehicle users, further reducing the potential for road accidents and collisions.

Connections will be enhanced across the region, including rural areas and coastal communities, with all groups benefitting by providing a transport network that is safer and more reliable, that people have more trust and confidence in using. It is also anticipated that making people feel safer using the transport system will reduce severance across the region, with benefits for most groups.

The policy notes that active travel infrastructure should be well integrated with public transport to ensure there are not long distances that need to be travelled at night between transport options, and these facilities should also be well-lit. A prominent, unified transport network should lead to increased awareness of travel opportunities and help to increase the proportion of journeys made sustainably.

The focus area notes that the public travel infrastructure improvements it promotes, such as public transport stops and stations improvements, will make it safer and easier to use the public transport network.

Further accessibility improvements on public transport so it is a truly integrated service and people with additional needs should be supported by staff on the network.

A number of physical infrastructure improvements have been identified to build confidence in using the transport network, including better lighting, additional CCTV, new safe bus stops, secure car parks and cycle storage etc. Further accessibility improvements on public transport are noted so as to provide a truly integrated service, making clear that people with additional needs should be supported by staff on the network.

Designing systems and processes/procedures from the outset to minimise or eliminate potential hazards is inherent to this policy. The policy is centred on ensuring vulnerable users, specifically women and girls, feel safe using the public transport network. The policy notes that looking at the root causes of why women and girls can feel unsafe on the network, and taking targeted action to fix them, the North East CA can ensure that all people feel safe whilst travelling around the region.

It is anticipated that this focus area, and its associated commitments, will help to reduce traffic volumes and reduce congestion (by increasing peoples trust, confidence and perceptions of safety on the transport network and thereby shifting people away from private cars). This is anticipated to improve the street environment, with potentially greater benefit for those who find navigating streets more challenging such as the very young, the elderly, disabled people (for example through high numbers of parked cars etc).

Similarly, a number of physical infrastructure improvements have been identified in the policy which will create healthier, safer and more pleasant places for people to spend time in or travel through. This includes improvements to public transport stops and stations, and investment into placemaking around transport hubs, making them pleasant places to be, increasing footfall and reducing the likelihood of people having to wait by themselves. Note is made of streets being welcoming and safe spaces for all people, enabling more journeys to be made by active travel and public transport.

In specific reference to rural areas, it is anticipated that access will be enhanced across the region, including rural areas and coastal communities, with all groups benefitting by providing a transport network that is safer and more reliable, that people have more trust and confidence in using.

The focus of this policy area is to ensure that all people, especially women and girls, feel safe whilst travelling around the North East. The policy specifically notes that it should be safer and easier to walk, wheel, and cycle to and from key local destinations, for everyday journeys such as for work, healthcare, education, and leisure purposes, and to access other public transport. Increased trust and confidence in the safety of the network will encourage more people to access employment and economic opportunities more widely across the region, including in rural and coastal areas.

The focus on safety will also help enable people to take up employment or training opportunities, with consequential beneficial effects on the economy. It is also possible that safer travel opportunities may encourage people to stay in rural areas (or coastal areas and small villages) and journey further for work. This could allow rural enterprises to develop to serve a greater residential population.

The policy further notes that services should be accessible to all.

10.7 Assessment overview of 'Connections between transport type' focus area

Environmental issues

The focus area concerned with 'Connections between different transport types' sets out a series of key commitments as follows:

- Our region should no longer consider different forms of transport as separate networks and move to one integrated and highly interconnected network where people can make seamless door to door journeys.
- The integrated network should be based around making it easier to switch between different types of transport including public transport, active travel, taxis, and other transport options such as Park and Ride, micromobility and community transport
- There should be well co-ordinated public transport timetables and services which complement each other and enable seamless and smooth transfer from one type of transport to the next
- The Shields Ferry should continue to be a vital part of the integrated network, with even better linkages with other types of transport.
- Park and ride provision should be comprehensive, enabling people to seamlessly switch onto fast and frequent onward journeys

As can be seen, it is considered that these commitments aim to make more sustainable travel options possible by offering a more seamless experience across a range of modes. It is the intention that this will allow people to access modes such as bus and rail as well as active travel routes and a greater uptake of public transport would also be encouraged through better coordination of services and timetabling. It is anticipated that this should lead to air quality improvements, though there are also elements of this policy area with potential adverse effects. For example, note is made of a greater role for park & ride – while this will facilitate access to bus and rail services, it could lead to a deterioration of air quality in the local area in which the park & ride site is located. Note is also made of the continued use of private vehicles / taxis, though note is also made of provision of EV charging provision which would help to encourage uptake of EVs. As such, effects are considered to be mixed, with slight adverse but also moderately beneficial effects anticipated. In addition to air quality (Objective 1), similar mixed effects are anticipated in respect of the need to reduce carbon emissions and help meet net zero targets (Objective 3), though it should be noted that effects are considered slight and there would be ongoing carbon emissions through provision of park & ride sites (including embedded carbon in construction) and the continued role of the private car.

Utilising modes such as active travel and more public transport should lead to a general reduction in traffic levels, particularly in urban areas where uptake of such modes is more likely. This would be expected to lead to a reduction in noise levels (Objective 2), which may be compounded by an uptake in EVs, which is encouraged through this focus area. However, there is a potential for local noise impacts in the vicinity of new park & ride sites, or in the vicinity of other interchange types. Similarly, although outside the scope of the assessment, it is worth noting that increasing connections to airport could lead to a greater number of flights, with noise implications.

It is considered benefits will likely be slight in the short to long term, though there may potentially be more significant effects if there is a greater uptake of EVs and active modes over the long term. Adverse effects would be slight and very localised from the short to the long term, potentially declining as more EV vehicles are added to the network.

The construction of new infrastructure such as interchange hubs, new physical links or Park & Ride sites, as encouraged through this focus area are likely to have adverse effects, across a range of ISA Objectives particularly at the local level. For example, it is anticipated that these could result in adverse effects due to an increase in impermeable area (leading to increased runoff and potential flooding implications or water quality implications– Objectives 4, 10 and 11), loss of habitats or biodiversity (Objective 5), disturbance or direct loss to designated sites (Objective 6), potential loss of geodiversity (Objective 7), disturbance to setting or loss of / damage to heritage assets (Objective 8), impacts on landscape or townscape and visual amenity, particularly in rural areas, through new infrastructure in the landscape (Objective 9), loss of soil resources (Objective 11) and the use of natural resources (Objective 12). HRA Screening notes that policy may lead to improvements in transport infrastructure, which, subject to location and design, attributes risk of likely significant effects. See HRA Stage 1 & Stage 2 Report for further details.

Adverse effects are considered slight and likely to be greatest during the construction phase. As noted in Chapter 12, it is also considered that mitigation can be applied to these new infrastructure developments to reduce adverse effects. On the other hand, mitigation can help to maximise opportunities for beneficial effects. It is also the case that despite the potential for adverse effects from the development of new infrastructure, this focus area is anticipated to result in a series of beneficial effects across the ISA Objectives.

For example, it is anticipated that the overall focus area will help result in less traffic and less congestion on the road network (through an encouragement to uptake public transport and or active travel) and there will be increased coordination in planning matters. This will likely have beneficial effects (albeit slight) on reduced disturbance to habitats and species (Objective 5) reduced disturbance and pollution deposition on designated sites (Objective 6), reduced disturbance to the setting of heritage sites (Objective 8), improvements to townscape and visual amenity (objective 9), reduction in the potential for pollution incidents from hydrocarbon spillages or reduce the level of polluted runoff of brake and tyre detritus (Objective 10), reduced runoff to soil resources (Objective 11) and a reduced need for natural resources such as hydrocarbons (Objective 12).

Of particular note is that it is anticipated that this focus area will make travel more efficient and provide greater connectivity. This will allow easier access to employment or economic opportunities. New opportunities in construction will be provided through infrastructure development, although this would be of limited duration. Connectivity to wider markets will also be enhanced with more coordinated linkages to national or international gateways and linkages. Effects are anticipated to be moderately beneficial over the longer term.

Health, Equalities and rural proofing

As noted, it is the aim of this focus area to make more sustainable travel options possible by offering a more seamless experience across a range of modes. It is the intention that this will allow people to access modes such as bus and rail as well as active travel routes and a greater uptake of public transport would also be encouraged through better coordination of services and timetabling. This policy area will increase access to public transport, with a focus on making this as easy and seamless as possible. As such, it is intended that expanded and upgraded public transport infrastructure and provision will help communities to access a range of modes to individualise approaches to meeting their transport needs – allowing them to tailor journeys depending upon their personal circumstances.

It is therefore anticipated that this will improve access to employment, health, leisure services and facilities and will be of benefit to all groups in terms of health and wellbeing.

In addition to improved access to public transport services, it is anticipated that the reach of services will be expanded. Those who are unable to avail fully of public transport, perhaps due to mobility issues (for example some elderly people or those with certain disabilities) would be catered for through a recognition that private cars are still required and a focus on providing adequate drop off and pick up areas and car parks.

A more seamless and efficient transport network would also allow for the most efficient journey possible, likely reducing costs to the travelling public. Expanded / greater reach of public services also allows more people a greater choice in journey mode – allowing the most affordable choice to be made. There would also be greater confidence that journeys will not be wasted if people are aware of potential delays that could mean they miss appointments etc. Increased network efficiency e.g. by removing congestion will result in less wasted fuel and thereby reduce overall journey cost, particularly benefitting those on lower or fixed incomes. Provision of bike parking at interchange hubs means that at least part of the journey can be made for zero cost (after initial outlay of a bicycle), though this may not be suitable for all protected characteristic groups (e.g. the very young, elderly, disabled, those who are heavily pregnant).

Linking timetables will allow for greater reliability in journey time – this could provide reassurance to people of when journeys will be over – this, along with provision of good pick up / drop off points will be of benefit to lone travellers or vulnerable people, for example children who may be met by a parent as they arrive at a hub.

Reduced congestion will lead to reduced severance. In addition, connections will be enhanced through an enhanced and more seamless network, that will likely have a greater number of physical links and greater reach of services. It is also anticipated that reduced overall congestion and a more efficient and seamless transport network would likely reduce the potential for accidents and will reduce stress in the travelling population – potentially reducing conflict among travellers. All groups are anticipated to benefit. A better organised, more efficient and seamless transport network should also result in less stressed travellers, thereby reducing the potential for conflict with the transport workforce. This will help to enable them to remain healthy and resilient, with less stress or physical risk.

Specific note is made of active travel routes and how these will feed into key stations, mobility hubs and interchanges, with safe and secure bike storage / parking provided. Not all groups will benefit to the same degree, with perhaps less benefit for children, the elderly or those with certain disabilities or health conditions. Residents of rural areas will benefit, though this may be of less significance given relative distances to travel.

Note is made of the need for safe and secure bike parking this will help to improve security of peoples property. Continued facilitation of private cars will also be made e.g. to allow easy drop off / pick ups and this will allow for reassurance of security for more vulnerable users of the network. Similarly, efficient timetabling provides reassurance on journey times – allowing people to be met by friends / family, without having to wait on their own. While no direct reference to design is made in the Policy area, it is anticipated that new / upgraded transport hubs etc. would provide opportunities to develop healthier, safer and more pleasant places, which would be of benefit to all groups.

While for the most part it is anticipated that this focus area will result in beneficial effects on health and wellbeing, it is also anticipated that there is potential for some adverse effects. For example, while a general reduction in traffic (through better and more seamless public transport) would reduce air, noise and odour pollution, this focus area results in new infrastructure (new links, interchange hubs, park & ride etc.) that could lead to a deterioration of air quality, increased noise etc in the local area in which the new infrastructure is located. This could potentially affect some groups to a greater degree. For example, it is known that children are particularly prone to the effects of poor air quality, as are those with certain

medical conditions. Some individuals may also experience a greater reaction to increased noise than others, though this would be for the population as a whole, rather than unique to any vulnerable group.

In specific reference to rural areas, there is a clear focus in this policy area to improve the provision and reach of public transport across the region and this is set out in detail. For example, specific note is made of the need to ensure that services from rural areas link to transport interchanges (rail, bus / coach, Metro, taxis, mobility hubs and car parks / cycle storage) to ensure that joined up journeys are possible. Journey times and wait times will be reduced (by coordinating services and timetables etc). This will increase access for all groups within rural areas. Access will also be increased via greater provision of park and ride sites in rural areas, to help link communities to the public transport network – this recognises that private car / van may be the only option for some, though this will be of less use to those in the community with no access to private vehicles or who may not be able to afford taxis.

Economic growth and employment opportunities in rural areas will be enhanced by the greater connectivity this policy area will engender. Connectivity to wider markets will also be enhanced with more coordinated linkages to national or international gateways and linkages. Ultimately, if the economy grows and employment opportunities increased, all groups should benefit.

While a focus of the policy areas is concerned with ensuring rural communities have access to the wider transport network, it will also work in the wider direction, with people in the urban communities ultimately having greater access to rural areas and allow people to better connect with nature. Benefits could be expected across all groups in the community.

10.8 Recommendations made and how these were addressed

As part of the assessment of the focus areas, a series of recommendations were made to ensure that the LTP was comprehensive and as robust as possible in its approach to sustainability. It should be noted that the Plan making team have to balance the ISA recommendations across a number of considerations and not all recommendations may be addressed in detail at this level of strategic plan e.g. some elements may be considered best addressed through the design and planning process. These recommendations and the consideration of the Plan making team are set out in Table 10-3 below (with full detail provided in the focus area assessment tables in Appendix E):

Table 10-3 - ISA Recommendations and how these were addressed

ISA recommendation	Consideration by Plan making team
Focus area: Planning journeys, informing users and supporting customers	
Clarity should be provided that apps will be made available for free and should be available in different languages if possible.	LTP text has been amended to clarify that the integrated network should provide a new, free to use, app so that users can better plan journeys.
	In relation to language, being precise as to languages to be used is difficult at this stage of planning. It is considered that wider transport information would be provided in a range of languages and formats, particularly any messaging relating to emergency conditions / safety related. Note is made that the current LTP wording states that 'it should also be able to be adapted to suit the individual needs, meeting the varied requirements of people'.

ISA recommendation	Consideration by Plan making team
There is an opportunity to provide wider safety / health related messaging – it is recommended that in addition to providing travel information, opportunities should also be taken to provide travellers with information on where they can find help should they be suffering a mental health crises – this could include providing emergency services details should they be suffering an acute crises.	LTP text has been amended to note 'Customer support for an integrated network should include everything users need to support them in making a journey, such as information, ticketing, the ability to raise a concern, including who to contact in an emergency, make complaints and to report and retrieve lost property'.
In addition to direct travel information, messaging could be developed in conjunction with health partners to encourage the use of more active modes or where general health information can be found	It is acknowledged that messaging could well be in conjunction with health partners to encourage the use of more active modes or where general health information can be found as part of closer partnership working between transport and health policy. It is also noted that the LTP states 'The integrated network should be a quality product which should help people to make greener journeys. A range of impactful education, campaigning, marketing, and other tools should be used to promote the network'.
It is recommended that note is made of the requirement for information to be provided in a range of languages and formats, particularly any messaging relating to emergency conditions / safety related.	In relation to language, being precise as to languages to be used is difficult at this stage of planning. It is considered that wider transport information would be provided in a range of languages and formats, particularly any messaging relating to emergency conditions / safety related. Note is made that the current LTP wording states that 'it should also be able to be adapted to suit the individual needs, meeting the varied requirements of people'. LTP text has also been amended to note 'Customer support for an integrated network should include everything users need to support them in making a journey, such as information, ticketing, the ability to raise a concern, including who to contact in an emergency, make complaints and to report and retrieve lost property'.
It is recommended that in addition to noting the availability of car park spaces, the new information should also provide information on the number of disabled spaces that are available and their location.	The LTP has been amended to note 'Information provision should include comprehensive detail informing users of services and facilities which are available on the network. For example, there should be live information showing the number of available car park spaces, including disabled parking bays, park and ride spaces, the number of available cycle hires docked, cycle storage spaces, as well as the number of available chargepoints for electric vehicles'.
Focus area: Ticketing and fares	
It is recommended that further clarification is provided that cash will remain a viable payment method.	It was considered by the Plan making team that it was worth emphasising that cash will remain a viable option to use to pay. This is important as a lot of older people will still use cash, as will many of those on low incomes and many in

ISA recommendation	Consideration by Plan making team
	minority ethnic communities (particularly women) and this would be reassuring in that regard. As such, the LTP has been amended to note 'There should be a range of payment methods that can be used to support people who don't use a smart phone or have access to online banking such as cash'.

Focus area: Reach and resilience of infrastructure	
Specific note is made that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education, housing growth and essential services – it is anticipated this would include health and leisure services and amenities but it is recommended that this is clarified.	The LTP has been amended to note 'The reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education, housing growth, health and leisure facilities and other essential services'.
Note is also made that there will be provision of EV chargers in remote rural areas as well as urban areas with high deprivation and low car ownership to ensure comprehensive provision – the implication is that charging would be low cost in these locations but this would need to be clarified.	This recommendation was made based on a misunderstanding of this policy intent. It is to be emphasised that North East CA cannot intervene on EV charging, which is a similar approach to more traditional fuels. Nevertheless, North East CA do ensure that price across a contract is the same regardless of location and is aligned to the market average. It is considered that this is beneficial in terms of equity for travellers across the region.

Focus area: Safety, especially of women and girls and service quality (punctuality, cleanliness and safety)	
Requirement for contractors to produce a CEMP, including Construction Dust Assessment, Noise Impact Assessment, specification that vegetation removal is done outside of bird breeding season, as required by IAQM Guidance	This issue has been addressed in the LTP Delivery Plan
Ensure that UTMC centres improve the flow of traffic in towns and cities where there are designated AQMAs.	The LTP has been amended to note 'Our two Urban Traffic Management Control (UTMC) centres should be used to improve the functionality and performance of the integrated transport network, including improving the flow of traffic in designated Air Quality Management Areas (AQMAs)'.
Consideration should be given to specifying the provision of better lighting and CCTV should be from renewable sources.	It was considered that this issue is outside the scope of the LTP, but North East CA confirmed that in contracts such as those relating to EV charging, this could be included as a stipulation where possible.
Ensure any new physical infrastructure schemes e.g car club infrastructure, do not have a direct / indirect effect on sites designated for nature	This issue has been addressed in the LTP Delivery Plan

ISA recommendation	Consideration by Plan making team
conservation. Undertake project level HRA.	
Ensure scheme design includes for appropriate landscaping should it be required.	The LTP has been amended to note 'Better lighting, routes segregated from traffic and improved CCTV should also be present across the active travel network. Obstructions such as vegetation should be removed from routes, landscaping should be undertaken where appropriate, and blind bends should be avoided. Additionally, routes should be planned around areas with higher footfall to ensure safe journeys'.
Ensure scheme design includes for pollution control – this could include the use of Sustainable Drainage (SuDS)	This issue has been addressed in the LTP Delivery Plan
Focus area: Connections between different transport types	
Small number of recommendations all relating to the need to make direct reference to the need for all transport hubs to be designed to a high standard – ideally to help create a 'sense of place' in local areas and help to become a focal point of local areas. It was also recommended that note should be made that any new / upgraded transport hub considers security issues in design. Note should also be made of the need to make transport hubs etc. and public transport vehicles as welcoming as possible to all groups – it is known that some groups such as those related to ethnicity, faith or sexual preference can be subject to (or have a perception of) a higher level of anti-social behaviour or risk.	The LTP text was amended to note 'Transport interchanges and hubs should prioritise high standards in terms of safety and security while being welcoming and inclusive spaces, to help them become a focal point of local areas and enhancing quality of place'.
It is recommended that in addition to rural areas, specific note is made of other areas currently poorly served such as coastal communities.	The LTP has been amended to note 'This is especially vital for services from rural and coastal areas where we need to ensure buses meet trains and vice versa for return journeys to reduce journey times and prevent lengthy wait times'.
Cross Cutting Recommendations	
During assessment, it was recognised that the LTP could enhance its anticipated sustainability performance through the addition of a general section that would apply across the LTP, particularly in respect of the development of any interventions that arise from the Plan. In particular, it was recommended that clear commitment would be made for further	The LTP has been amended to include in the Delivery Plan a series of actions which will be undertaken in respect of all interventions described in the Delivery Plan. Key elements include (but are not limited to) a commitment to the following: • Engagement with statutory bodies – Environment Agency, Natural England and Historic England. • Undertaking Environmental Impact Assessment, Habitats Regulation Assessment, Health Impact Assessment, Equalities Impact Assessment.

ISA recommendation	Consideration by Plan making team
environmental and social assessments to be made at the appropriate stage of scheme design and development. This would include, but not be limited to, the undertaking of assessments such as Environmental Impact Assessment, Habitats Regulation Assessment, Health Impact Assessment, Equalities Impact assessment. In addition, it was recognised that effects were most likely to be experienced at construction phase and therefore it was recommended that commitment was made to developing Construction Environmental Management Plans and other plans such as Carbon Management Plans to ensure the reduction of embodied and operational carbon where possible.	• Development of Carbon Management Plans and Construction Environmental Management Plans • Design of infrastructure to be adaptive, responsive and resilient, for example, to mitigate against the impacts of climate change. • Design to include where possible for reducing flood risk and incorporating SuDS. • Enhancement to the natural environment including Biodiversity Net Gain and green infrastructure. • Mitigations to address issues relating to noise. • Key habitat sites, protected landscapes and historic features will be preserved in the delivery of this plan through early engagement and design, where possible scheme promoters will seek to undertake enhancements. • The region's cultural heritage sites will be protected and enhanced with sustainable access prioritised, bolstering the visitor and tourism sector and the economy of the region. • Schemes will consider opportunities to improve healthier places and spaces in their design such as opportunities to enhance public realm, implementing planting and providing safe convenient and accessible walking routes, enacted through the application of Active Travel England's design tools. • Best practice relating to traffic management will be shared by the North East CA to ensure accessibility throughout construction works with viable alternative routes identified. • Monitoring will take place on an annual basis as to how the plan addresses Transport Related Social Exclusion. • Measures within scheme design will be incorporated wherever possible to improve mobility, limit severance and initiate green infrastructure enhancements. A general commitment is also given to providing consideration to issues relating to the environment (air, carbon / climate adaptation, biodiversity, protected areas, cultural heritage, landscape, water environment, natural resources and materials, waste and noise/tranquillity), inclusion and health.

10.9 Overview of focus area assessment findings

The ISA examined each of the following focus areas in turn:

• Planning journeys/informing users/supporting customers.

- Ticketing and fares.
- Reach and resilience of infrastructure.
- Safety, especially of women and girls, and other improvements in service quality.
- Connections between different transport types.

These focus areas set out a series of standards, which it is intended will collectively make up the improved transport network and set the framework for interventions which follow in the Delivery Plan.

A common thread running through the focus areas is the overall need to encourage and facilitate a shift to more sustainable modes such as public transport (bus and rail), as well as active travel (walking and wheeling). It is also the intention to make the transport network operate as efficiently as possible. This shift in mode and increased efficiency will be enabled through a variety of mechanisms set out for each focus area such as:

- better, more up to date information that is easier to access,
- a stronger identity for and pride in the network,
- a more resilient network,
- easier, simpler and more affordable fares, better ticketing options and higher service standards,
- better integration of the transport network to make travel as seamless as possible,
- increased reach of the transport network to all areas of the region,
- increased service provision and capacity on the network,
- increased EV charging provision or use of new low or zero emission fuels,
- clear and effective ways to report crime or anti-social behaviour,
- tackling root causes of crime and anti-social behaviour and targeted actions to prevent these,
- increasing trust and perceptions of safety in the transport network,
- a focus on safety and accessibility, particularly for vulnerable users
- a joined up approach to investment and spatial planning

While the focus is on sustainable modes and increased transport efficiency, the LTP does recognise that this may not be suitable for all and as such, there are elements of the LTP which still provide mechanisms for more efficient use of private vehicles

Overall, it is considered that the LTP, through shifting travellers to more sustainable and active modes, will be beneficial in respect of reducing air pollution and carbon emissions. It is also likely that noise, associated with the transport network will reduce through reduced volumes of traffic and congestion, as well as increased uptake of EVs. A reduction in disturbance and pollution emissions / deposition would also likely have slight beneficial effects on biodiversity (including those areas designated for nature conservation), the water environment, heritage assets, soils, landscape and townscape and reduce the use of hydrocarbons.

The LTP is also anticipated to result in a more robust and resilient transport network to the effects of a changing climate. As well as more proactive maintenance of drains, or fixing aspects of infrastructure, better information will allow travellers to plan more effectively, or decide not to undertake journeys in the first place. Alternative routes / travel solutions etc will also be identified.

The LTP is considered to be particularly beneficial in terms of economic growth and access to jobs. This will be realised through a focus on connectivity - locally, across the region and beyond. This increased

connectivity will be in respect of both people and goods – for example, note is made of improving long distance rail links to help welcome new business and organisations to be based in the North East. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. Note is also made of enhancing links by sustainable means to new employment sites and that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education and essential services. More generally, facilitating journeys by a range of modes will make it easier for people to access employment and economic opportunities more widely across the region. This will also include better facilitation for disabled travellers – this could help to make it easier for people with disabilities to access the job market and therefore increase the workforce. Similarly, an example of the Metro serving disadvantaged areas is given and this could help people in those areas access jobs or training opportunities further afield.

In relation to health, equalities and the effect on rural or coastal communities it is anticipated that the LTP will also bring significant benefits. As noted, employment or training opportunities will increase, alongside better accessibility and connectivity and more affordable fares across the whole of the region. This can be expected to have benefits for wellbeing. Health benefits can also be anticipated from a reduction in pollution, particularly for those more vulnerable members of the community such as children, the elderly and those with certain health conditions. Increased active travel will provide opportunities for people to incorporate more activity into their daily routine, with better access to green spaces.

There will also be better designed and quieter public realm, with potentially a greater 'sense of place' and with safety (particularly for vulnerable travellers) a key focus. For example, note is made there should be wide, segregated and well maintained pedestrian infrastructure with reduced street clutter, dropped kerbs, ramp access provision and other inclusive infrastructure such as well designed crossing points and this general 'decluttering' and improvement of design will help those with visual or physical disabilities to move through the townscape. Signage, lighting and other such aspects will also improve. This will increase safety for all groups and improve wellbeing. Safety and security will be further improved through reduced potential for accidents.

There will also be clear initiatives for ensuring that people using the network have increased trust, confidence and perceptions of safety. Note is made of the need for clear and effective channels through which to report harassment and violence and a need for targeted action and resources assigned to prevent violence and anti-social behaviour on the region's transport network. It is anticipated this will benefit all vulnerable users.

However, it is also the case that there are aspects of the LTP which not all groups may be able to take full advantage of. For example, an emphasis on active travel may not work well for the elderly, those with certain health conditions, those with young children and so on. The distances in rural areas may mean that active travel routes would be more likely to be used for recreation, rather than the full connectivity they can bring. Similarly, an emphasis on new technology to better disseminate information may not work well for all groups due to language barriers, reading ability, cost, access to technology etc.

However, the LTP recognises these challenges. For example, provision is still made for improving the network for the use of private vehicles – the elderly, or those in rural areas may still need to rely on this mode for some journeys.

It is inherent in the nature of the LTP that it will result in a series of transport infrastructure Interventions, which in some cases will require heavy civil engineering works across large areas, though it is recognised that for the most part this will be in limited areas to address specific issues such as congestion hotspots or providing connections to new developments. Nevertheless, it is in the nature of these works that there

will be environmental implications in particular. For example, new infrastructure such as roads (or road widening and junction improvements), as well as interchange hubs and park & ride sites could involve a direct loss of habitat, or soils. There could also be an adverse effect on the water environment through pollution incidents during construction, or through polluted runoff during operation, and would also result in a new feature in the landscape. Increased disturbance could have adverse effects in terms of noise or the setting of heritage assets and so on.

Where it was considered that performance could be improved, a series of recommendations were made to strengthen the focus area wording in order to address those areas identified as adverse or to accentuate those areas of the LTP which have been identified as being beneficial to sustainability. These recommendations resulted in a series of amendments to the LTP which provide greater clarity on how sustainability would be considered during design, construction, maintenance and operation of any intervention / scheme. Of particular note, it is recognised that there will still be work to do in terms of ensuring adverse environmental or social effects are minimised as much as possible, while beneficial effects are maximised. To this end, North East CA have committed to working with partner organisations, including engagement with the statutory bodies of Environment Agency, Natural England and Historic England; undertaking Environmental Impact Assessment, Habitats Regulation Assessment, Health Impact Assessment and Equalities Impact Assessment, as well as the development of Carbon Management Plans and Construction Environmental Management Plans. There are also a series of more specific actions to increase resilience in the transport network and address specific environmental, health or equality related issues.

In conclusion therefore, notwithstanding that the nature of LTP will result in some adverse sustainability effects that will require mitigation, it is considered that the focus areas provide a robust base for an overall good sustainability performance.

11. Assessment of Interventions

11.1 Introduction

The North East CA LTP sets out over 300 interventions that act to support the five Focus Areas Policies and sub-objectives, which have been assessed and reported in Chapter 9. Priority interventions that set out to deliver on the commitments of the LTP (alongside the Mayoral Manifesto and Devolution Deal) have been aligned with funding timescales as follows:

Delivery by 2027

- **Expanding and Improving our Network** - Infrastructure improvements including a new North Shields Ferry landing and a package of maintenance and renewals of the network
- **Making Transport Safe for Women and Girls** - Safety and Security improvements on Public Transport including more Metro Gatelines, safer stops and shelters and an accessibility review.
- **Starting the delivery of the largest electric vehicle charging network in the country** - Expansion of the Electric Vehicle Charging Network with home based and key destination and station charging.
- **A joined-up walking and cycling network** - including a new bike and e-bike hire network, active travel hubs, bike parking at key stations and interchanges and the first phase of active travel network improvements.
- **Improving stations and connecting rail to public transport** - Stations will be upgraded and integrated with the wider public transport and active travel network. The Pop card will be brought to local rail services, and we will investigate bringing stations into public ownership.
- **Setting the standards for Green buses** – with new Zero Emission Buses rolled out.
- **Working towards a fully integrated public transport network** – including enhanced and supported fares, ticketing and information including account based and contactless ticketing.

Delivery by 2032

- **Bus reform**
- **Washington connected by Metro**.
- **Free travel for all under-18s**
- **Expanding and Improving our Network** - the network will continue to be maintained including critical structures and renewals and re-signalling of the Metro.
- **A joined-up walking and cycling network** – the next phase of active travel investment filling gaps in the network to create a cohesive joined up network.
- **Improved rail and road arteries that we need to power our economy** - including continuing investment in network improvements to facilitate housing growth through local network schemes and working with National Highways to deliver upgrades to the A66, A1 dualling to Ellingham and Junction upgrades on the A19 at Moor Farm / Seaton Burn
- **The delivery of a fully integrated public transport network** - a comprehensive customer experience approach to make it easy and safe to plan and make journeys, continuing to focus on safety for women and girls on public transport and a programme of public transport station improvements.
- **Setting the standards for green transport** – by decarbonising our public transport network

Delivery by 2040

- **Improved rail and road arteries we need to power our economy** Including Rail, Metro and Road enhancements, upgrades to the East Coast Mainline, working with Government to deliver Northern Powerhouse Rail in full, structural renewals and new river crossings.
- **The best connected and greenest network** – A decarbonised public transport network with network enhancements and new routes delivering patronage enhancements.
- **The delivery of a fully integrated public transport network** Transport and digital tools rolled out to improve service quality and new and improved rail and metro stations.

For the purposes of the ISA it is considered practical to assess the parent Intervention Type which has been identified in the LTP as follows:

- New infrastructure projects
- Service improvements (ticketing and fares, vehicles, stations)
- Regulation (land use, vehicle type, financial, planning policy)
- Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships[33]
- Innovation development (planning for the future, trialling ideas, working with other organisations across the North East

By providing an assessment of intervention types this mitigates against the variation in detail available for each scheme, and acts to provide a consistent, proportionate level of assessment. Intervention types are then assessed against the ISA Objectives using the following scale of significance:

Table 11-1 - Scoring System

Assessment Scale	Assessment Category	Significance of Effect
+++	Major beneficial	Significant
++	Moderate beneficial	
+	Slight beneficial	Not Significant
0	Neutral or no obvious effect	
-	Slight adverse	
--	Moderate adverse	Significant
---	Major adverse	

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[33] The ISA combines 'Promotion and sharing information' with 'Creation of Partnerships' Intervention Types into one category owing to the overlapping characteristics of schemes supporting these respective Intervention Types and therefore similarities in respect ISA assessment.

11.2 Intervention Type Assessment Findings

11.2.1 New Infrastructure Projects

It is to be noted that the potential for significant effects to arise from interventions falling under this intervention type is expected to vary significantly depending on the nature of the new infrastructure projects and a wide range of variables including the location and proximity to sensitive features.

During construction, the potential for significant adverse effects cannot be ruled out across ISA Objectives 1 – 12 which reflect both natural and built environment receptors. Effects are likely to arise as a result of direct land take as well as through construction activities that give rise to noise, dust / air pollution, light and visual pollution that may impact on natural and built environment receptors including biodiversity, the water environment, heritage features, local populations.

It is important to note that impacts arising from construction activities may disproportionately impact on vulnerable population groups such as children, the elderly, disabled, those on low income and those in more economically deprived areas. Larger infrastructure projects are also increasingly likely to result in disruption to access to services and facilities. This may disproportionately impact on vulnerable groups who may not have access to private cars.

During operation, while new infrastructure projects may introduce new pressures on the local environment such as air, noise and visual pollution associated with new road schemes, significant beneficial effects are likely across a range of objectives, and for a majority of interventions. Where some infrastructure projects may reduce congestion, others may encourage modal shift towards active and public transport methods therefore reducing pressures on air quality and on the transport network. Health and wellbeing improvements associated with improved connectivity, reduced journey length, new and improved active travel networks are also likely to give rise to beneficial effects. In respect of economic growth, it is anticipated that some new infrastructure projects may afford increased connectivity to the job market including for those in rural communities.

11.2.2 Service Improvements (ticketing and fares, vehicles, stations)

During construction, no significant effects have been identified across any of the ISA objectives. Interventions under this type are largely centred around policy, pricing and soft measures that have little or no impact on natural and built receptors during the construction phase. There may be slight adverse effects in terms of air quality and noise during any construction associated with the interventions under this type, but they are not expected to be significant.

During operation of service improvement type interventions, significant beneficial effects are anticipated across a number of objectives largely in relation to improvements encouraging a mode shift to public transport and increased connectivity.

Improvements to ticketing, fares and public transport vehicles and stations would encourage a modal shift away from private vehicles and towards public transport and active travel, reducing air quality pressures and whilst not expected to be significant, similar benefits are anticipated in relation to reduced noise pollution. Additionally, a mode shift and reduced car use will reduce carbon emissions as the Operational Carbon Assessment notes that easier ticketing, cheaper fares, improved vehicles and stations will all improve the attractiveness of public transport options, although these will be focused in areas where services already exist. Resulting improvements to accessibility and connectivity of public transport will open up opportunities for employment and economic growth, as well as benefits to health and wellbeing

for deprived and / or vulnerable groups and reducing inequalities in health. Whilst not expected to be significant, there may be beneficial effects in terms of improved rural offering and connectivity.

11.2.3 Regulation (land use, vehicle type, financial, planning policy)

As interventions of this type relate to regulation there is not anticipated to be construction involved and therefore no significant effects have been identified across any of the ISA objectives.

During operation, regulation type interventions in relation to land use, vehicle type, financial and planning policy are anticipated to have significant beneficial effects across a range of objectives.

Regulation in relation to both land use and vehicle type will act to support air quality goals, through for example the prioritisation of low and zero emission vehicles and electrification of network. Whilst not significant, similar benefits are expected in relation to improvements in the noise environment. Similarly, significant beneficial effects are anticipated in relation to carbon emissions, with the Operational Carbon Assessment noting that effective land use policy will promote strategic growth close to existing settlements with good travel choices, helping to reduce car dependency in new development. There will also be potential support for zero emission buses and trains, a shift to ZEV cars and freight through traffic management and demand management policies and policies to balance-up the costs of driving versus more sustainable travel options. Effective land use and planning policy is expected to include consideration of biodiversity and cognisant of new legislation in respect of Biodiversity Net Gain and pressures will consequently be reduced on biodiversity, including sites of international importance. Effective land use planning and policy should also afford greater connectivity and access to jobs in relation to economic growth, and support wider coordination of land use. A coordinated approach to regulation in respect of land use and financial planning policy in relation to improving accessibility and provision of public transport for deprived communities and those in low income groups should afford opportunities to reduce inequalities including in relation to health and wellbeing.

11.2.4 Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships

As interventions of this type relate to information there is not anticipated to be construction involved and therefore no significant effects have been identified across any of the ISA objectives.

During operation, significant beneficial effects are anticipated in relation to promoting economic growth and job creation, and supporting the wider coordination of land use and energy planning. This is as a result of interventions aiming to promote sharing of information which may support or increase accessibility of public transport and therefore open up opportunities for employment and economic growth, as well as and encourage workplace engagement which would support the wider coordination of land use and energy planning across the North East CA area.

Whilst not significant interventions of this type that aim to promote sharing of information data and encourage workplace engagement are considered positive steps in respect of reducing inequalities including in health and wellbeing. Additionally, where promotion and information sharing encourages uptake of public transport for example, there may be slight beneficial impacts in terms of air quality.

11.2.5 Innovation development (planning for the future, trialling ideas, working with other organisations across the North East

As interventions of this type relate to innovation development there is not anticipated to be construction involved and therefore no significant effects have been identified across any of the ISA objectives.

Activity is likely to be focused on research and development, planning, and small-scale trials, which will have limited impacts on the ISA objectives during operation. Interventions would be more likely to be mainstreamed through the other intervention types.

However, slight beneficial effects have been identified in terms of a number of ISA Objectives including air quality from improvements on active and public transport and reaching net zero carbon targets through exploration of new ideas to improve the attractiveness of alternatives to owning a car and driving. It is likely that planning for the future would take adequate consideration of climate change risks and hazards. Slight beneficial effects are also anticipated in terms of biodiversity, economic growth and job creation, land use and energy planning and rural connectivity.

Table 11-2 – Assessment of Intervention Types

Intervention Type	ISA Objective																																	
	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
New Infrastructure Projects	--	++	--	++	--	++	--	++	--	++	--	++	--	0	--	+	--	+	--	+	--	+	--	+	0	++	0	++	-	++	-	++	0	++
Service improvements (ticketing and fares, vehicles, stations)	-	++	-	+	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	0	0	++	0	++	0	+
Regulation (land use, vehicle type, financial, planning policy)	0	++	0	+	0	++	0	+	0	++	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	++	-	++	-	++	0	0
Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	++	0	+	0	+	0	0
Innovation development (planning for the future, trialling ideas, working with other organisations across the North East)	0	+	0	0	0	+	0	+	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	0	0	0	0	0	+

ISA Objectives:
1 - Protect and improve air quality
2 - Reduce the impact on environmental noise from transportation sources
3 - Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050
4 - Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding
5 - Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of 6 Biodiversity Net Gain and the delivery of the Nature Recovery Network
6 - Protect and enhance sites designated for their international importance for nature conservation purposes (linked to HRA)
7 - Protect, enhance and promote geodiversity
8 - Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment
9 - Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity
10 - Protect and enhance the water environment
11 - Protect soil resources and avoid land contamination
12 - Promote sustainable use of resources and natural assets
13 - Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all
14 - Support the wider coordination of land use and energy planning across the North East CA area
15 - Improve health and well-being for all citizens and reduce inequalities in health (HIA specific objective)
16 - Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)
17 - Promote fairness and equity in rural connectivity

11.3 Individual Scheme Assessments

Of the 317 interventions promoted by the LTP, 62 have been identified as having Mayoral Commitment. Where approximately half of these interventions will be subject to assessment in future iterations of the LTP, 27 of those are expected to be delivered within the next three years.

Screening of the 27 interventions finds that 24 are considered softer 'plan wide' interventions that support Service Improvements (e.g. Metro Gateline Upgrades, Contactless payments to Metro and Measures to enhance Bus passenger experience), Innovation development (e.g. National Highways Partnership) and Promotion and sharing information (e.g. Active Travel Champion and Integrated timetabling) Intervention Types. It is considered that such interventions are then captured under the respective Intervention Type assessments, summarised in Section 11.2.

A small number (three) are however spatially distinct New Infrastructure Projects that will be delivered within in this Plan cycle, in the next three years. It is then considered useful to include a summary of those New Infrastructure Projects and likely effects arising. Associated figures are included in Appendix F.

11.3.1 Bowburn Relief Road

J61 of the A1(M) is operating at capacity following the junction upgrades in 2020. Given the additional demand to be generated by Integra 61 Phase 1, this is due to increase in the future situation. There is no additional capacity on the network for future development, with transport issues preventing economic growth through restricted access to employment opportunities that could otherwise come forward locally.

11.3.1.1 Summary of Environmental Assessment

During construction of the new relief road, significant adverse effects are anticipated in terms of reducing carbon emissions due to emissions from plant and machinery use. Significant adverse effects are also anticipated for biodiversity due to the intersection of priority habitat and its subsequent loss. Whilst not anticipated to significant the construction of a new relief road is likely to result in adverse effects on air quality and noise, resilience to climate change, geodiversity, cultural heritage assets, landscape, water, soil, use of resources, health and wellbeing and equality of opportunity

During operation, significant beneficial effects are anticipated for promoting economic growth through improved access and connectivity to jobs and skills, reduced congestion and supporting opportunities for future growth. Operation of the relief road is also expected to have significant benefits in supporting land use and energy planning. Whilst not anticipated to be significant, slight beneficial effects are anticipated during operation for air quality and noise, health and wellbeing and equality of opportunity largely relating to reduced congestion and increased access.

Slight adverse effects are anticipated for air quality and noise, resilience to climate change, biodiversity, cultural heritage assets, landscape and water during operation of the relief road.

11.3.2 Blyth Relief Road

Delivery of a relief road for Blyth which will create additional radial capacity for Blyth, reducing congestion, improving bus journey time reliability, and creating the space for high quality segregated cycle corridors identified through the Local Cycling and Walking Infrastructure Plan for the town.

The scheme requires the upgrading of the existing A1061 Laverock Hall Road to provide a new 4.5km dual carriageway connection between the A189 Three Horseshoes roundabout to the A193/A1061 roundabout at South Beach. The scheme will also include a single carriageway connection between Chase Farm Drive and Ogle Drive to ensure benefits to the A193 Cowpen Road are maximised[34].

11.3.2.1 Summary of Environmental Assessment

During construction, significant adverse scores are anticipated terms of reducing carbon emissions due to emissions from plant and machinery use. Significant adverse effects are also anticipated for biodiversity due to the intersection of priority habitat and its subsequent loss and disturbance. Blyth estuary which is part of Northumberland Shore SSSI identified in proximity to the scheme, provides wintering grounds for shore birds. Blyth Pier and the estuarine areas of the site are regularly supporting over 250 bird species including international and national significant redshank and golden plover[35]. These sites are likely to be affected during construction. Whilst not anticipated to be significant, slight adverse effects are anticipated for air quality and noise, resilience to climate change, geodiversity, cultural heritage assets, landscape, water, soil, use of resources, health and wellbeing and equality of opportunity.

During operation, significant beneficial effects are anticipated for air quality and noise, reducing carbon emissions, promoting economic growth and greater access and connectivity to jobs, supporting land use and energy planning, health and wellbeing, promoting greater equality of opportunity and promoting fairness and equity in rural connectivity. This is due to the new and improved road links reducing congestion and bus journey times in the area, as well as a segregated cycle corridor promoting a shift towards active travel, improving access and connectivity to the local area and public transport. However it is noted that some groups including disabled, elderly and pregnant women may not benefit from the intervention. Whilst not anticipated to be significant, slight beneficial effects are anticipated during operation for biodiversity, water and use of resources.

Slight adverse effects are anticipated for air quality and noise, cultural heritage assets, biodiversity, landscape, health and wellbeing and equality of opportunity during operation of the relief road.

11.3.3 North Shields Ferry Landing

Relocation of the Ferry landing on the north bank of the Tyne to tie in with the regeneration of the fish quay area. The scheme includes[36]:

- new ferry landing at North Shields Fish Quay;
- pedestrian and cycle links between the ferry landing and nearby connecting bus links, and
- improved infrastructure for fishing boats that will also provide wave protection for the ferry operation.

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[34] Northumberland County Council (2023) *Blyth Relief Road – Public Consultation.* Available: Blyth Relief Road - Public Consultation - Have Your Say Northumberland - Citizen Space
[35] Northumbeland County Council (2017) *Feasability Report – Blyth Relief Road*. Available: Blyth-Relief-Road-Options-Appraisal-Report.pdf
[36] NORTH SHIELDS FERRY LANDING REPLACEMENT – OUTLINE BUSINESS CASE 2023

11.3.3.1 Summary of Environmental Assessment

During construction, significant adverse are anticipated in terms of reducing carbon emissions due to emissions from plant and machinery use, and the historic environment due to the intersection with Fish Quay Conservation Area. Significant adverse effects are also anticipated in relation of the water environment due to the proximity to River Tyne. Whilst not anticipated to be significant, slight adverse effects are anticipated for air quality and noise, resilience to climate change, biodiversity, geodiversity, landscape, soil, use of resources, health and wellbeing and equality of opportunity. Slight beneficial effects are anticipated for soils as there may be potential to remediate contaminated land.

During operation, significant beneficial effects are anticipated towards promoting economic growth, supporting land use and energy planning, health and wellbeing and promoting greater equality and opportunity. This is as a result of the provision of pedestrian and cycle link improving access and connectivity to connecting bus links, promoting a shift to more active travel and public transport and associated access to employment opportunities, housing and public services / recreational facilities. Slight beneficial effects are also anticipated in terms of promoting fairness and equity in rural connectivity.

Significant adverse effects are anticipated during operation in relation to the historic environment due to the new location being within Fish Quay Conservation Area.

Slight adverse effects are anticipated for air quality and noise, resilience to climate change, biodiversity, landscape, water and equality of opportunity during operation of the relocated ferry landing.

12. Mitigation

12.1 Introduction

The term mitigation encompasses any approach that is aimed at preventing, reducing or offsetting any significant adverse environmental effects that have been identified. In practice, a range of measures applying one or more of these approaches is likely to be considered in mitigating any significant adverse effects predicted as a result of implementing the LTP. In addition, it is also important to consider measures aimed at enhancing positive effects. All such measures are generally referred to as mitigation measures.

However, the emphasis should be in the first instance on proactive avoidance of adverse effects. Only once alternative options or approaches to avoiding an adverse effect have been examined, should mitigation then examine ways of reducing the scale / importance of the effect.

Mitigation can take a wide range of forms, including:

- Refining Intervention measures in order to improve the likelihood of positive effects and to minimise adverse effects.
- Technical measures (such as setting guidelines) to be applied during the implementation phase.
- Identifying issues to be addressed in project assessment (including but not limited to WebTAG, Environmental Impact Assessment, Health Impact Assessment, Equality Impact Assessment and the development of Environmental Management Plans) for certain projects or types of project.
- Proposals for changing other plans and programmes.
- Contingency arrangements for dealing with possible adverse effects – these could include for example pollution management plans, use of spill kits etc.

12.2 Mitigation approaches applied through ISA

A number of mitigation approaches have been used through development of the LTP in order to mitigate potential adverse effects. These have included the following:

Table 12-1 - How mitigation has been incorporated into the LTP

Approach to mitigation	How has this been incorporated into the LTP?
Refining the LTP in order to better reflect the ISA Objectives and improve the likelihood of positive effects and to minimise adverse effects	Assessment was made of a draft LTP and recommendations were made in relation to clarifying and bolstering aspects of sustainability. Ongoing iterative discussion also took place with the Plan making team. New elements relating to Sustainability was added to the LTP Delivery Plan and this sets out approaches to addressing sustainability issues going forward. Of particular note, clear commitment is made to undertaking as required, Health Impact Assessment, Equalities Impact Assessment, Habitats Regulation Assessment and Environmental Impact Assessment. Carbon Management Plans will also be prepared. During construction phase, a Construction Environmental Management Plan will also be developed as

Approach to mitigation	How has this been incorporated into the LTP?
	required. The focus areas for delivering the LTP also include many aspects of sustainability and clear linkages can be made to the ISA Objectives.
Refining Interventions / Measures in order to improve the likelihood of positive effects and to minimise adverse effects	High level interventions have been set out at this stage of LTP development and have been assessed in the ISA, with appropriate mitigation considered – see Chapter 12. The detailed mitigation for each intervention and how it will be applied will be clarified through further work that is yet to take place. Note that LTP sets out clear commitments by North East CA to undertake the required assessments at appropriate stages and this will inform consideration of mitigation through the design and planning phases.
Technical measures (such as requiring adherence to appropriate guidelines) to be applied during the implementation phase	Clear commitment is made within LTP and its associated Delivery Plan to undertake the required assessments at appropriate stages as set out above. This will require adherence to guidance etc as required. For example, clear reference is made within LTP that North East Combined Authority will ensure to use the latest inclusive design standards across the transport network for any new or improved infrastructure.
Identifying issues to be addressed in Scheme / Intervention assessment (i.e. at Project level), including but not limited to WebTAG, Environmental Impact Assessment and the development of Environmental Management Plans, for certain projects types of project	The LTP clearly sets out a process of how environmental issues will be considered in future scheme development. LTP sets out that dependent on the scheme, assessment will include as required, Health Impact Assessment, Equalities Impact Assessment, Habitats Regulation Assessment and Environmental Impact Assessment. Where these statutory assessments are undertaken, they will be guided by the HM Treasury Green Book and DfT Transport Appraisal Guidance (or equivalents prevailing at the time) throughout the life of LTP.

Note typical specific mitigation that may arise from interventions promoted under respective Intervention Types have been outlined in Table 12-2. |
| Proposals for changing other plans and programmes | No proposals have been made to change other plans and programmes as the LTP will act in accordance with a range of other Plans and Programmes e.g. local development plans and there are clear commitments made within the LTP to work closely with partner organisations, including the relevant Local Authorities in the North East, to ensure that consideration of sustainability, including health and equality, is made at the earliest possible planning stage for schemes. This is in line with the North East CA Vision to 'collaborate with our partners and local authorities… create a better way of life by connecting communities, giving people the skills to succeed, and improving wellbeing for all…' |
| Contingency arrangements for dealing with possible adverse effects | The ISA has proposed a series of monitoring indicators. It is anticipated that the monitoring programme will cover significant social, environmental and economic effects and which will involve measuring indicators that will enable the establishment of a causal link between the implementation of the LTP and the likely significant effects (both positive and negative) being monitored. This will allow identification at an early stage of unforeseen adverse effects and allow appropriate remedial action to be undertaken.

Note is also made that North East CA has a statutory duty to monitor the performance of the LTP and its Delivery Plan against their strategic objectives and policies. Feedback from the monitoring process allows the |

Approach to mitigation	How has this been incorporated into the LTP?
	Delivery Plan to be adjusted according to the actual performance against objectives. As noted in the LTP, this monitoring and evaluation will take place on a yearly basis and be publicly accessible via the North East CA website. This provides a level of accountability, informs whether strategies and policies are working, and highlights if KPIs are moving in the desired direction.

Note typical mitigation that may apply to interventions promoted under respective Intervention Types have been outlined for information in Table 12-2, as follows. **Note that mitigation for individual schemes would be developed further and expanded upon as part of the planning and design process and would be informed by any additional assessment such as EIA, HIA, HRA, EqIA and so on. The mitigation would then be detailed in a Construction Environmental Management Plan that would be enacted during the construction phase. North East CA have set out a commitment within the Delivery Plan to ensure that such further assessment is undertaken.**

Table 12-2 - Intervention Mitigation

Mitigation	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
ISA Objective 1: Improve Air Quality															
High Occupancy Lanes and Cycle Lanes	✓														
Increase distances between traffic and sensitive receptors	✓														
Consideration of the impact of the scheme on Air Quality Management Areas and potential scheme realignment if necessary.	✓														
Identify the potential for schemes that may have a beneficial impact on Air Quality Management Areas	✓														
Low or zero emission public transport vehicles				✓											
Stations and facilities to use clean energy						✓									
Consideration of air quality in Construction Environmental Management Plans (CEMPs).		✓													
Use of best practice construction techniques to minimise the impact on air quality, e.g. ensuring all plant and machinery are well maintained and not emitting excessive fumes. Use of zero emitting or low emitting vehicles/plant.		✓													
Consultation with operators of facilities used by vulnerable groups such as schools, hospitals and care homes.		✓													
Management of vehicle speed			✓												
Encourage use of Low Emission Vehicles			✓												
Regulation to prioritise air quality improvements									✓						
ISA Objective 2: Reduce the impact on environmental noise from transportation sources															
Increase distances between traffic and sensitive receptors	✓														
Encourage modal shift toward active travel	✓														
Integrate noise suppression/barriers where appropriate	✓														

	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Mitigation															
Methods to reduce noise during construction, e.g. use of electric vehicle/plant.		✓													
Consideration of noise in Construction Environmental Management Plans (CEMPs)		✓													
Use of construction noise barriers		✓													
Management of vehicle speed			✓												
Encourage use of Low Emission Vehicles			✓												
Development and regular monitoring of KPIs			✓												
Low or zero emission public transport vehicles				✓											
Stations and facilities to use clean energy						✓									
Regulation to consider noise impacts on wider and vulnerable groups									✓						
ISA Objective 3: Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050															
Encourage shift towards active travel	✓														
Consideration of carbon emissions, including embodied carbon in design.	✓														
Design for reuse where possible	✓														
Consideration of carbon emissions in Construction Environmental Management Plans (CEMPs).		✓													
Use of best practice construction techniques to minimise carbon emissions. Use of zero emitting or low emitting vehicles/plant.		✓													
Use of local sources for materials		✓													
Encourage use of Low Emission Vehicles			✓												
ISA Objective 4: Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding															

Mitigation	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Careful route selection – avoid flood areas if possible	✓														
Design to consider flood protection measures, flow routes and flood storage capacity	✓														
Consideration of storm water runoff and dewatering operations in Construction Environmental Management Plans (CEMPs).		✓													
Use of best practice construction techniques to minimise the impact on flooding, e.g. use of temporary SuDs features to control site runoff		✓													
Use of SuDS (sized to allow for a changing climate)			✓												

ISA Objective 5: Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network

	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Avoidance of designated sites	✓														
Consideration of the potential for ecological enhancement / Design to achieve Biodiversity Net Gain	✓														
Compensatory green infrastructure, including development of 'Green Streets'	✓														
Screening with native species	✓														
Development of wildflower meadows along route alignment or at junction islands, etc.	✓														
Animal under / over passes	✓														
Installation of bird / bat boxes	✓														
Scheme realignment, particularly if designated areas may be affected	✓														
Consideration of the timing of construction works in relation to ecological windows and legislative requirements		✓													
Consideration of biodiversity and designated sites and habitats in Construction Environmental Management Plans (CEMPs)		✓													
Appropriate management of invasive species where applicable		✓													
Scheduled control of invasive species where necessary			✓												

	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Mitigation															
Maintenance of BNG areas.			✓												
ISA Objective 6: Protect and enhance sites designated for their international importance for nature conservation purposes															
Avoidance of designated sites	✓														
Consideration of the potential for ecological enhancement / Design to achieve Biodiversity Net Gain	✓														
Compensatory green infrastructure, including development of 'Green Streets'	✓														
Screening with native species	✓														
Development of wildflower meadows along route alignment or at junction islands, etc.	✓														
Animal under / over passes	✓														
Installation of bird / bat boxes	✓														
Scheme realignment, particularly if designated areas may be affected	✓														
Consideration of the timing of construction works in relation to ecological windows and legislative requirements		✓													
Consideration of biodiversity and designated sites and habitats in Construction Environmental Management Plans (CEMPs)		✓													
Appropriate management of invasive species where applicable		✓													
Scheduled control of invasive species where necessary			✓												
Maintenance of BNG areas.			✓												
ISA Objective 7: Protect, enhance and promote geodiversity															
Avoidance of designated geodiversity sites	✓														
Consideration of the potential for geodiversity enhancement	✓														

	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Mitigation															
Consideration of geodiversity and designated sites and habitats in Construction Environmental Management Plans (CEMPs)		✓													
ISA Objective 8: Conserve and enhance the significance cultural heritage assets and their settings, and the wider historic environment															
Consideration of character, setting, level of protection and potential need for conservation during planning and design	✓														
Consideration of opportunities for enhancement of known features of industrial and cultural heritage significance	✓														
Precautions for unexpected heritage discovery during construction		✓													
Potential need for archaeological watching brief during construction, particularly in areas not previously developed		✓													
Consideration of unexpected heritage discovery in Construction Environmental Management Plans (CEMPs)		✓													
ISA Objective 9: Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity.															
Careful route selection, especially in rural areas. Particular protection to nationally designated areas required, with avoidance if possible	✓														
Consideration during planning / design to landscaping and screening, with care taken in choice of materials and species used	✓														
Consideration of potential opportunities for landscape enhancement	✓														
Use of best practice construction techniques and Construction Environmental Management Plan (CEMP) to ensure that the character and quality of landscapes and townscapes are maintained as far as practicable during construction		✓													
ISA Objective 10: Protect and enhance the water environment															
Explore opportunities for use of SuDS	✓														
Consideration of water quality and pollution in Construction Environmental Management Plans (CEMPs)		✓													
Use of best practice construction techniques to minimise the likelihood of a pollution incident occurring		✓													
Use of SuDS and / or conventional pollution control techniques such as petrol interceptors			✓												
ISA Objective 11: Protect soil resources and avoid land contamination															

Mitigation	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Avoidance of best and most versatile agricultural land	✓														
Remediation of land contamination if in existence	✓														
Consideration of soil quality and pollution in Construction Environmental Management Plans (CEMPs)		✓													
Use of best practice construction techniques to minimise the likelihood of a pollution incident occurring		✓													
Use of SuDS and / or conventional pollution control techniques such as petrol interceptors to prevent soil pollution			✓												
Prioritise regeneration of previously developed land							✓								
ISA Objective 12: Promote sustainable use of resources and natural assets															
Sustainable design measures	✓														
Consideration of waste hierarchy and use of recycled or re-used materials in a Site Waste Management Plan (SWMP)		✓													
Encourage the use of electric vehicles			✓												
Prioritise regeneration of previously developed land							✓								
ISA Objective 13 Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all															
Consideration of economic growth at route option selection stage	✓														
Provide employment opportunities to unskilled / apprentices at construction stage		✓													
Implement a plan of maintenance and improvement to ensure that the connectivity to commercial / economic centres is maintained			✓												
ISA Objective 14: Support the wider coordination of land use and energy planning across the North East CA area															
Consideration of economic growth at route option selection stage	✓														
Provide employment opportunities to unskilled / apprentices at construction stage		✓													

Mitigation	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Implement a plan of maintenance and improvement to ensure that the connectivity to commercial / economic centres is maintained			✓												
ISA Objective 15: Improve health and well-being for all citizens and reduce inequalities in health (HIA specific objective)															
Consider opportunities to improve access	✓														
Introduction of footpaths and cycle lanes (if nature of carriageway allows)	✓														
Consider potential for severance from key public services, or opportunities to improve access	✓														
Ensure consideration of access to key public services is maintained		✓													
Implement a plan of maintenance and improvement to ensure that footpaths and cycle lanes remain an attractive option			✓												
Regular reviews of ticket pricing / consideration of affordability			✓												
Interventions should include consideration of vulnerable groups such as those on low income, disabled and elderly groups.						✓									
Careful consideration of impacts on vulnerable groups, those on low income and deprived communities in respect of vehicle type regulations in urban areas.									✓						
ISA Objective 16: Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society (EqIA specific objective)															
Consider opportunities to improve access	✓														
Introduction of footpaths and cycle lanes (if nature of carriageway allows)	✓														
Consider potential for severance from key public services, or opportunities to improve access	✓														
Ensure consideration of access to key public services is maintained		✓													
Implement a plan of maintenance and improvement to ensure that footpaths and cycle lanes remain an attractive option			✓												
Regular reviews of ticket pricing / consideration of affordability			✓												
Interventions should include consideration of vulnerable groups such as those on low income, disabled and elderly groups.						✓									

	New Infrastructure Projects			Service Improvements (ticketing and fares, vehicles, stations)			Regulation (land use, vehicle type, financial, planning policy)			Promotion and sharing information (marketing, data sharing, workplace engagement) and Creation of Partnerships			Innovation development (planning for the future, trialling ideas, working with organisations across the North East)		
	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation	Design	Construction	Operation
Mitigation															
Careful consideration of impacts on vulnerable groups, those on low income and deprived communities in respect of vehicle type regulations in urban areas.									✓						
ISA Objective 17: Promote fairness and equity in rural connectivity															
Opportunities to improve connectivity with rural communities should be integrated in design	✓														
Opportunities to improve connectivity with rural communities should be integrated in design				✓											
Promote fairness and equity in rural communities through targeting ticketing campaigns						✓									
Measures to improve equality of opportunity with respect to rural communities should be incorporated. This may be reflected in financial planning and implementation spatially sensitive regulation									✓						

13. Cumulative, synergistic and indirect effects

13.1 Introduction

Under the SEA Regulations, there is a requirement to consider cumulative, synergistic and indirect effects of implementation of the NE LTP. Secondary and indirect effects are effects that are not a direct result of the LTP, but which occur away from the original effect or as the result of a complex pathway. Cumulative effects arise where several proposals or elements individually may or may not have significant effect but in-combination have a significant effect due to spatial crowding or temporal overlap. Synergistic effects are when two or more effects act together to create an effect greater than the simple sum of the effects when acting alone.

13.2 Likely cumulative effects

ISA Objectives which have the potential for cumulative effects have been identified from the analysis of plans and programmes, the baseline data, consultation responses and an examination of the identified key issues and cumulative, synergistic and indirect effects have also been considered during the ISA. These relate to air quality, carbon emissions, biodiversity, landscapes and townscapes, climate resilience, soil, agricultural resources and contaminated land, economic growth and health and well-being and equalities.

13.2.1 In plan cumulative effects

The results of the direct effects of the NE LTP proposals are discussed in Chapters 10 (policy) and 11 (interventions). It is considered that the policy proposals can interact cumulatively across sustainability issues as shown in Table 13-1. The identification of these effects already takes into account the fact that recommendations to improve the sustainability performance of the NE LTP have been incorporated through iterative development between ISA team and Plan making team.

Table 13-1 - Anticipated cumulative, synergistic and indirect effects for NE LTP

Effects	Causes	Significance
Air pollution emissions	It is considered that the NE LTP will act to improve air quality in the region and will have an overall cumulative beneficial effect. This beneficial effect will be derived through application of a number of policy focus areas and commitments that seek to make it easier to use sustainable forms of transport (including walking, wheeling and cycling) with an improved, integrated network. Emphasis is placed on making greener journeys easier, more affordable and more attractive, in addition to encouraging the switch away from petrol/diesel cars and vans to zero emission cars/vans which will improve air quality across the region. In respect of new infrastructure projects, where construction periods overlap there is potential for cumulative adverse effects on air quality. This potential for significant adverse cumulative effects is dependant on overlapping construction	Anticipated short to long term moderate beneficial effects. There will be likely some continuing emissions due to residual reliance on private cars (for example for those who are dependent upon due to not being able to adapt to other modes due to mobility issues) and enhanced services (including increased frequency) of road / rail.

Effects	Causes	Significance
	periods, proximity between respective project construction sites and presence of receptors sensitive to air quality changes, such as those within AQMAs. Where schemes introduce new air pollution sources (e.g. new road schemes), such adverse cumulative effects may persist through the operational phase. The Intervention Type assessment has identified potential beneficial effects on air quality during operation for New Infrastructure Projects, Service Improvements and Regulation intervention types. As such, cumulative beneficial effects are anticipated across the plan area during operation as a result of interventions falling under these categories.	
Carbon emissions	It is considered that the NE LTP have a positive contribution towards reducing transport emissions across the North East and will have an overall cumulative beneficial effect. This beneficial effect will be derived through application of a number of policy focus areas and commitments, alongside intervention types. The largest policy contribution is likely to be from measures that improve travel choices, enable mode shift and help to enable traffic reduction in parts of the region where travel choices are currently poor. Measures to support journey planning, ticketing and fares interventions, and measures to improve service quality will have the greatest impacts in places where there are already viable alternatives to the car. Emphasis on the promotion of EV uptake, including high quality facilities for HGV drivers, with alternative fuel infrastructure in place to support the decarbonisation of road freight will support the positive contribution. Most intervention types are also likely to have a positive contribution towards reducing transport emissions across the North East. Innovation measures are likely to have a more minor impact, because these are likely to be focused on Research and Development and relatively small scale trials, which are unlikely to directly impact on the quality of travel choices for large numbers of transport users. Regulation measures and service improvements both have the potential to deliver a moderate positive impact through encouraging effective spatial planning, reducing car dependency, and supporting zero emissions buses and trains, alongside improving the attractiveness of bus, metro and train services, enabling mode shift and traffic reduction, particularly where public transport services already exist. The largest impacts are however likely to be delivered by new infrastructure projects, particularly those projects that significantly improve travel choices where these are currently limited. Potentially transformational impacts could be delivered through new rail stations, rail corridors and metro extensions. However, the LTP also identifies a number of major road improvements across the region	Anticipated short to long term moderate beneficial effects. There will be likely some continuing emissions due to residual reliance on private cars (for example for those who are dependent upon due to not being able to adapt to other modes due to mobility issues) and enhanced services (including increased frequency) of road / rail. Negative emissions from new infrastructure projects which create induced demand also noted.

Effects	Causes	Significance
	which can result in new road journeys being made, through unlocking new economic activity, but also risking a shift from other more sustainable modes of travel which may work against carbon reduction objectives.	
Biodiversity	Cumulative beneficial effects can be anticipated through Policy areas and their associated commitments, which put an emphasis on reducing emissions and thereby reducing pollution deposition. In addition, disturbance to habitats (as well as 'road kill') would also be reduced through a general reduction in journeys and traffic congestion promoted by the policy. Reduced traffic levels (encouraged by the shift to active and public transport) will likely reduce disturbance to habitats and species as well as designated sites.	While effects in the short terms are likely to be a mix of slight adverse and slight beneficial, ultimately, if net biodiversity gain is achieved, then a more substantial beneficial effect can be anticipated.
	In respect of new infrastructure projects, there is potential for direct cumulative adverse effects on biodiversity through, for example land take and removal of habitat, fragmentation. Indirect effects associated with construction and operation of new infrastructure projects may also be realised where there are overlapping construction periods, reduced proximity between respective project construction sites and presence of ecological receptors. Where schemes introduce new pressures on biodiversity (e.g. new road schemes introducing air, noise and light pollution), such adverse cumulative effects may persist through the operational phase.	
	The Intervention Type assessment has identified potential beneficial effects on biodiversity during operation for New Infrastructure Projects and Regulation intervention types. As such, cumulative beneficial effects are anticipated across the plan area during operation as a result of interventions falling under these categories noting many would be expected to achieve Biodiversity Net Gain under recent legislation.	
	In respect of the HRA Stage 1 and Stage 2 Report, an in-combination assessment will need to be considered at a lower level of plan-making, once more details are available and particularly at the project-stage when more specific information about proposed development can be obtained.	
Resilience to climate change, including Flooding	The NE LTP acknowledges that with new weather patterns emerging, maintaining the current transport network against the impacts of climate change is becoming increasingly challenging. Impacts noted include flood risk, extreme heat, increased winds, and land instability. It is considered that the policy contained in the LTP will act to improve the resilience of the North East's transport network against climate change recognising that maintenance needs in some rural and coastal locations can be different to other areas due to climate impacts which have negative impacts on the safety of the network and leave communities isolated. Policy will require maintenance to be carried out	Overall a mix of slight beneficial and adverse over the medium to long term as schemes are developed / implemented.

Effects	Causes	Significance
	promptly across the whole integrated transport network. Assets should be maintained in the best possible condition to ensure their continued efficiency of operation. It is considered that the NE LTP interventions would likely result in the development of new roads / rail and infrastructure such as Park & Ride sites which may result in an increase in impermeable surfacing, with a consequent increase in risk of flooding. However, note is made of the North East Strategic and Key Route Network (KRN) having a built in resilience with high standards of drainage, lighting, highway surfacing materials and road conditions allowing the region's road network to serve the needs of the region, with particular emphasis on rural and coastal communities who often bear the brunt of disruptive weather patterns. New routes, together with a shift to a greater range of modes and elements such as digital infrastructure would also increase resilience. Overall, the cumulative effect will be a mix of beneficial and adverse.	
Landscapes / townscapes	It is anticipated that policy from the NE LTP will result in a mix of adverse and beneficial effects on landscapes and townscapes across the North East. Beneficial effects could be derived from reduction in congestion (as a result of a shift of more people to active and public transport), which could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. Benefits from regular maintenance and cleaning regimes across the whole integrated transport network to create a positive first impression will also help to improve visual amenity, particularly in townscapes. In respect of new infrastructure projects, there is potential for direct cumulative adverse effects on landscape where new features are introduced (such as new roads, bridges and other infrastructure). Indirect effects associated with construction and operation of new infrastructure projects may also be realised where there are overlapping construction periods, reduced proximity between respective project construction sites and presence of sensitive landscape receptors. Where schemes introduce new pressures on landscape (e.g. on amenity as a result of new road schemes), such adverse cumulative effects may persist through the operational phase.	Anticipated slight beneficial and adverse effects over the medium to long term as schemes are implemented.
Soil, agricultural resources and contaminated land	There will be a range of cumulative beneficial and adverse effects on soil, agricultural resources and contaminated land. Beneficial effects from the LTP policy could be derived from a reduction in congestion (as a result of a shift of more people to active and public transport), which could help to avoid contamination by reducing the amount of polluted runoff to surrounding areas or reduce airborne pollution deposition.	Anticipated slight beneficial and adverse effects over the medium to long term as schemes are implemented.

Effects	Causes	Significance
	At the intervention level, the development of road upgrade / junction improvements provides an opportunity for positive effects relating to the remediation of potentially contaminated land, but it may also provide an opportunity for further land to become contaminated and could potentially lead to the loss of soil / agricultural resources.	
Economic growth	Policy, driving the development of an affordable, safe integrated transport network that is accessible to all will, increase access to employment and educational opportunities, enhancing the economic inclusivity of the region. Economic benefits are also considered likely due to efficient network management and removal or alleviation of congestion hotspots via the North East's two Urban Traffic Management Control (UTMC) centres as this will make travel across the region and to surrounding areas more efficient, with more reliable timings and minimal delays. Making town centres more attractive via reducing congestion and improvements to public realm can help increase footfall and make these more attractive places to do business in. An affordable, convenient and simple to use integrated ticketing system, will also result in reduced congestion and will therefore help to make business more efficient and will also provide businesses with new (and potentially cheaper) ways to connect with consumers.	Anticipated beneficial effects over the short and medium to long term as policy and schemes are implemented.
	It is also anticipated that simplified pricing will make it easier for tourists to use the existing network and support the North East's economy, while specific elements such as establishing train servicing facilities or enhancing digital connectivity can help grow the local skills base and help to diversify the economy with skilled employment opportunities.	
	The Intervention Type assessment has identified potential beneficial effects on economic growth during the construction and operation of New Infrastructure Projects within the Plan area. Cumulative beneficial effects may also arise within the Plan area as a result of synergies with interventions falling under Service Improvements, Regulation, and Promotion and information sharing intervention types. These interventions have the potential to result in direct job creation as well as improved connectivity and access to the labour market. As such, cumulative beneficial effects are anticipated across the plan area during operation as a result of interventions falling under these categories.	
Health and wellbeing, equalities and safety.	On the whole, cumulatively, the North East LTP will act to promote health and well-being and equalities through providing greater access to services and employment opportunities, as well as greater opportunities for active travel. There is also a clear emphasis on reducing vehicle numbers and vehicle speeds resulting in improvements to	Anticipated moderate beneficial effects over the medium to long term as schemes and policy are implemented. Significant cumulative adverse effects

Effects	Causes	Significance
	air quality and a reduction in noise levels which will also benefit health.	identified in the short term (construction period).
	Improved access to more efficient public transport services, alongside expanded reach of services will reduce the potential for accidents and will reduce stress in the travelling population due to reduced congestion.	
	In respect of new infrastructure projects, there is potential for cumulative adverse effects on health and wellbeing during the construction and operational phases of projects including new roads, bridges and other infrastructure. Significant adverse effects associated with construction and operation of new infrastructure projects may increasingly be realised where there are overlapping construction periods, reduced proximity between respective project construction sites and operational footprints and presence of sensitive receptors such as schools, care homes and hospitals.	
	Conversely, cumulative beneficial effects may also arise within the Plan area as a result of synergies with interventions falling under New Infrastructure Projects, Service Improvements and Regulation intervention types. These interventions have the potential to result in improved connectivity and access to services and facilities and may also promote health and wellbeing through the creation of new or improved active travel networks. As such, cumulative beneficial effects are anticipated across the plan area during operation as a result of interventions falling under these categories.	

13.2.2 In combination cumulative effects with other plans and projects

The ISA has also considered other plans and projects that might lead to cumulative effects when combined with the NE LTP. Please also see Table 6-1 of the HRA Stage 1 and Stage 2 Report for assessment of in-combination effects in respect of European Sites.

Table 13-2 - Cumulative effects with other plans

Plan	Overview	Potential for cumulative effects with NE LTP
County Durham Plan 2020 - 2035	The Plan was sets out a vision for housing, jobs and the environment until 2035, as well as the transport, schools and healthcare to support it. The plan aims to: ▪ Continue the economic growth and investment in the county ▪ Secure more and better jobs in County Durham	The NE LTP sets out focus areas and interventions to support these that will interact with the aims of the Plan. It is anticipated that cumulative effects will be a mix of beneficial and adverse depending upon the type / precise situation. For example, as a whole the NE LTP is anticipated to benefit the economy (Plan Aim - Continue

Plan	Overview	Potential for cumulative effects with NE LTP
	- Address the causes of climate change and adapt to its affects - Create and enhance vibrant communities for all of our towns and villages - Provide a wide choice of quality homes to meet everyone's needs and ensure they're built where people want to live, reducing the need to travel - Secure the infrastructure to support new development and to relieve congestion and improve air quality - Protect the natural and historic environment	the economic growth and investment in the county), but as it will require new infrastructure there is a potential to adversely effect elements of the environment (Plan Aim - Protect the natural and historic environment). It is to be noted that the LTP sets out an approach to further assessment that will address environmental effects.
Gateshead & Newcastle Upon Tyne Core Strategy and Urban Core Plan 2015 - 2030	The current adopted local plan is the 'core strategy and urban core plan for Gateshead and Newcastle Upon Tyne'. This plan was adopted in March 2015 and sets out the spatial planning framework to deliver economic prosperity up to 2030. The Plan includes 12 strategic objectives relating to: - Encourage population growth in order to underpin sustainable economic growth. - To increase our economic performance, resilience, levels of entrepreneurship, skills and business formation. - To increase our competitiveness by improving and expanding the role of the Urban Core. - To strengthen Newcastle's position as the regional retail centre. - Expand leisure, culture and tourism providing for all age groups and diversifying the evening economy. - Ensure that our residential offer provides a choice of quality accommodation in sustainable - Manage and develop our transport system to support growth and provide sustainable access for all to housing, jobs, services and shops. - Improve sustainable access to, within and around the Urban Core by promoting fast and direct public transport - Ensure the development and use of land protects, sustains and enhances the	The LTP sets out focus areas and interventions to support these that will interact with the strategic objectives of the Strategy and Plan. It is anticipated that cumulative effects will be a mix of beneficial and adverse depending upon the type / precise situation. For example, as a whole the LTP is anticipated to benefit the economy (Strategic Objective - To increase our economic performance, resilience, levels of entrepreneurship, skills and business formation), but as it will require new infrastructure there is a potential to adversely effect elements of the environment (Plan Aim - Ensure the development and use of land protects, sustains and enhances the quality of the natural, built and historic environment). It is to be noted that the LTP sets out an approach that will address environmental effects.

Plan	Overview	Potential for cumulative effects with NE LTP
	quality of the natural, built and historic environment. • Provide the opportunity for a high quality of life for everyone and enhance the wellbeing of people to reduce all inequalities. • To reduce CO_2 emission from development and future growth. • Improve the function, usability and provision of our green infrastructure and public spaces.	
Our North Tyneside Plan 2021 - 2025	The plan sets out the Council's approach towards shaping future sustainable development in the Borough up to 2032. The plan sets out 11 objectives to deliver the vision of the plan: • Ensure a sustainable future for North Tyneside with communities and infrastructure that are well placed to mitigate climate change • Diversify, strengthen and grow the local economy providing excellent job opportunities for everyone • Give all residents the opportunity to live free from crime and enjoy a healthy lifestyle, achieving their potential in work and education • Provide an appropriate range and choice of housing to meet current and future evidence based needs for market and affordable housing • Revitalise the town centres • Regenerate the Borough • Manage waste as a resource and minimise the amount produced and sent to landfill • Protect and enhance the natural environment • Protect and enhance the built and historic environment • Ensure sustainable access throughout the Borough, with the wider region and beyond • Enhance the image of the Borough	The LTP sets out focus areas and interventions to support these that will interact with the objectives of the Plan. It is anticipated that cumulative effects will be a mix of beneficial and adverse depending upon the type / precise situation. For example, as a whole the LTP is anticipated to benefit the economy (Objective - Diversify, strengthen and grow the local economy providing excellent job opportunities for everyone), but as it will require new infrastructure there is a potential to adversely effect elements of the environment (Objectives - Protect and enhance the natural environment and Protect and enhance the built and historic environment). It is to be noted that the LTP sets out an approach that will address environmental effects.

Plan	Overview	Potential for cumulative effects with NE LTP
Northumberland Local Plan 2016 – 2036	The Plan contains eight strategic objectives to help deliver the vision for Northumberland, which given the importance of Northumberland's environment, the overarching aim is to deliver sustainable economic growth whilst conserving and enhancing Northumberland's distinctive and valued natural, historic and built environment. The strategic objectives are: ▪ Economy and jobs ▪ Homes ▪ Environment ▪ Connections ▪ Community health and wellbeing ▪ Climate change ▪ Resources ▪ Quality of place	The LTP sets out focus areas and interventions to support these that will interact with the objectives of the Plan. It is anticipated that cumulative effects will be a mix of beneficial and adverse depending upon the type / precise situation. For example, as a whole the LTP is anticipated to benefit the economy (Strategic objective – Economy and jobs), but as it will require new infrastructure there is a potential to adversely effect elements of the environment (Strategic objective - Environment). It is to be noted that the LTP sets out an approach that will address environmental effects.
South Tyneside Local Development Framework June 2007	The vision which seeks to 'concentrate development on key regeneration / development areas, but ensuring this is not at the expense of maintaining communities and providing full access to the major facilities and developments' ensures: ▪ development meets the needs of our residents and businesses without compromising the ability of future generations; ▪ delivers the regeneration of the Borough. ▪ proposals are of sufficient scale can deliver a major change in the perception of the Borough and have the greatest impact on the economy, opportunity for new housing, quality of life and cultural facilities; ▪ all residents have a choice of good quality and affordable housing; ▪ natural and built environment that is valued, protected, enhanced and capitalised on for the benefit of all; ▪ all those within the Borough can access the opportunities that are available, with reliable public transport, efficient road network and above all, focusing on	The LTP sets out focus areas and interventions to support these that will interact with the vision of the Local Development Framework. It is anticipated that cumulative effects will be a mix of beneficial and adverse depending upon the type / precise situation. For example, as a whole the LTP is anticipated to benefit the economy ('have the greatest impact on the economy'), but as it will require new infrastructure there is a potential to adversely effect elements of the environment ('natural and built environment that is valued, protected, enhanced and capitalised on for the benefit of all'). It is to be noted that the LTP sets out an approach that will address environmental effects.

Plan	Overview	Potential for cumulative effects with NE LTP
	delivering accessibility rather than relying on mobility; and ▪ the suburban areas and villages outside of the key regeneration hot-spots must not be ignored – ensuring appropriate levels of essential services are provided and that any local needs for development are met.	
Sunderland Core Strategy and Development Plan (2015 – 2033)	The Plans strategic priorities include: ▪ To deliver sustainable economic growth and to meet objectively assessed needs for employment and housing, ▪ To identify land we need for development in the right locations. ▪ To promote healthy lifestyles and ensuring the development of safe and inclusive communities. ▪ To provide a range and choice of accommodation, house types and tenures. ▪ To provide a wide portfolio of employment sites to support the development of key employment sectors and expand the opportunities for new office development. ▪ To support and improve the vitality and economic performance of the Urban Core and designated centres. ▪ To protect, sustain and enhance the quality of the built and historic environment. ▪ To protect and enhance the city's biodiversity, geological resource, countryside and landscapes whilst ensuring that all homes have good access to a range of interlinked green infrastructure. ▪ To adapt to and minimise the impact of climate change ▪ To manage waste as a resource and minimise the amount produced and sent to landfill. ▪ To promote sustainable and active travel and seek to improve transport infrastructure to ensure efficient, sustainable access. ▪ To manage the city's mineral resources.	The LTP sets out focus areas and interventions to support these that will interact with the Strategic Priorities of the Strategy and Plan. It is anticipated that cumulative effects will be a mix of beneficial and adverse depending upon the type / precise situation. For example, as a whole the LTP is anticipated to benefit the economy Strategic Priority - To deliver sustainable economic growth), but as it will require new infrastructure there is a potential to adversely effect elements of the environment (Strategic Priorities - To protect and enhance the city's biodiversity, geological resource, countryside and landscapes). It is to be noted that the LTP sets out an approach that will address environmental effects.

Plan	Overview	Potential for cumulative effects with NE LTP
	▪ To ensure that the city has the infrastructure in place to support its future growth and prosperity	
Northumberland National Park Management Plan 2022	The Northumberland National Park Management Plan sets out a shared, long-term vision for the Park as a place. The Plan has a number of strategic themes to secure the National Park's future as a key asset to deliver on some of the biggest challenges that face society, including biodiversity loss, climate change and our health and wellbeing.	It is anticipated that policy from the LTP will result in a mix of adverse and beneficial effects on landscapes and townscapes across the North East. Beneficial effects could be derived from reduction in congestion (as a result of a shift of more people to active and public transport), which could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. Benefits from regular maintenance and cleaning regimes across the whole integrated transport network to create a positive first impression will also help to improve visual amenity, particularly in townscapes. In respect of new infrastructure projects, there is potential for direct adverse effects on landscape where new features are introduced (such as new roads, bridges and other infrastructure).
The North Pennines AONB Management Plan 2019-2024	The North Pennines AONB management Plan sets out a vision for the future which recognizes the range of benefits and services gained from conserving the North Pennines and acknowledges the improvements that have happened in the area already due to climate change adaption, ecological protection and other actions and partnerships which have focused on improving the area. The plan has put forward a framework with a set of actions and outcomes falling under three main categories: ▪ Nurturing a natural economy ▪ Looking after natural and cultural heritage ▪ Valuing and sharing what's special.	It is anticipated that policy from the LTP will result in a mix of adverse and beneficial effects on landscapes and townscapes across the North East. Beneficial effects could be derived from reduction in congestion (as a result of a shift of more people to active and public transport), which could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. Benefits from regular maintenance and cleaning regimes across the whole integrated transport network to create a positive first impression will also help to

Plan	Overview	Potential for cumulative effects with NE LTP
		improve visual amenity, particularly in townscapes. In respect of new infrastructure projects, there is potential for direct adverse effects on landscape where new features are introduced (such as new roads, bridges and other infrastructure).
The Northumberland Coast AONB Management Plan 2020 - 2024	This plan is under the statutory duty of the Northumberland County Council and is formed of two parts. The first focuses on recording the qualities of the area which make it an AONB while the second outlines the councils aims and proposed actions for the area.	It is anticipated that policy from the LTP will result in a mix of adverse and beneficial effects on landscapes and townscapes across the North East. Beneficial effects could be derived from reduction in congestion (as a result of a shift of more people to active and public transport), which could potentially enhance landscapes and townscapes etc. by removing traffic and improving overall visual amenity. Benefits from regular maintenance and cleaning regimes across the whole integrated transport network to create a positive first impression will also help to improve visual amenity, particularly in townscapes. In respect of new infrastructure projects, there is potential for direct adverse effects on landscape where new features are introduced (such as new roads, bridges and other infrastructure).
Clean Air Zones	Based on their levels of NO_2 concentrates Gateshead Council, Newcastle City Council and North Tyneside Council were all required to investigate and consider introducing clean air zones/low emissions zones. After this direction several options were developed and consulted on in 2019. This resulted in the introduction of a charging Clean Air Zone covering parts of Newcastle and Gateshead affecting non-compliant buses, coaches, taxis (both Hackney Carriages and private hire	It is considered that the LTP will act to improve air quality in the region. This beneficial effect will be derived through application of a number of policy focus areas and commitments that seek to make it easier to use sustainable forms of transport (including walking, wheeling and cycling) with an improved, integrated network. Emphasis is placed on making greener journeys easier,

Plan	Overview	Potential for cumulative effects with NE LTP
	vehicles), heavy goods vehicles and vans, to be enforced from 2021.	more affordable and more attractive, in addition to encouraging the switch away from petrol/diesel cars and vans to zero emission cars/vans which will improve air quality across the region. Where new infrastructure projects introduce new air pollution sources (e.g. new road schemes), such adverse effects may persist through the operational phase. Overall, cumulative beneficial effects are anticipated.
Carbon Neutral	After the national government declared a climate emergency in May 2019 all of the local authorities within North East CA followed suit declaring their goals around carbon neutrality as follows: ▪ Newcastle City Council: Declared a climate emergency in April 2019, with the aim of making the city carbon neutral by 2030. ▪ North Tyneside Council: Declared a climate emergency in June 2019, with the aim of reducing the council's carbon footprint by 50% by 2027. ▪ Northumberland County Council: Declared a climate emergency in June 2019, with the aim of becoming carbon neutral by 2030 ▪ Durham County Council: Declared a climate emergency in February 2019 including aim to reduce emissions from Durham County Council's operations by 80% from 2008/09 levels by 2030 and is investigating what further actions are necessary to make County Durham carbon neutral by 2050. ▪ Gateshead Council: Declared a climate emergency in May 2019, with the aim of becoming carbon neutral by 2030. ▪ South Tyneside Council: Declared a climate emergency in July 2019, with the aim of becoming carbon neutral by 2030. ▪ Sunderland City Council: Declared a climate emergency in March 2019, with	The LTP provides a number of key elements that will help to achieve net zero. For example in respect of the policies measures include that improved travel choices, enable mode shift and help to enable traffic reduction in parts of the region where travel choices are currently poor. Measures to support journey planning, ticketing and fares interventions, and measures to improve service quality will have the greatest impacts in places where there are already viable alternatives to the car. Emphasis on the promotion of EV uptake, including high quality facilities for HGV drivers, with alternative fuel infrastructure in place to support the decarbonisation of road freight will support the positive contribution. Most intervention types are also likely to have a positive contribution towards reducing transport emissions across the North East. However, the LTP also identifies a number of major road improvements across the region which can result in new road journeys being made, through unlocking new economic activity, but also risking a shift from other more sustainable modes of travel

Plan	Overview	Potential for cumulative effects with NE LTP
	the aim of becoming carbon neutral by 2030	which may work against carbon reduction objectives. Cumulative effects are anticipated to be beneficial.
Northumbria River Basin Flood Risk Management Plan 2022	This plan closely links with the National Flood and Coastal Erosion Risk Management Plan and it is a plan to manage any significant flood risks in the identified Flood Risk Area within the Northumbria River Basin District. This aims to address the main flood risk issues in the region including from rivers, coastal flooding, surface water flooding, groundwater, sewer flooding or reservoir flooding. This plan works in conjunction with various Local Flood Risk Areas (LLFA) plans including but not limited to: ▪ Northumberland County Council Local Flood Risk Managaement Strategy, ▪ Newcastle City Council Local Flood Risk Managaement Strategy, ▪ North Tyneside Council Local Flood Risk Managaement Strategy, ▪ South Tyneside Council Local Flood Risk Managaement Strategy, ▪ Gateshead Council Local Flood Risk Managaement Strategy, ▪ Sunderland Council Local Flood Risk Managaement Strategy	The LTP acknowledges that with new weather patterns emerging, maintaining the current transport network against the impacts of climate change is becoming increasingly challenging. It is considered that the policy contained in the LTP will act to improve the resilience of the North East's transport network against climate change recognising that maintenance needs in some rural and coastal locations can be different to other areas due to climate impacts which have negative impacts on the safety of the network and leave communities isolated. It is considered that the LTP interventions would likely result in the development of new roads / rail and infrastructure such as Park & Ride sites which may result in an increase in impermeable surfacing, with a consequent increase in risk of flooding. However, note is made of the North East Strategic and Key Route Network (KRN) having a built in resilience with high standards of drainage, lighting, highway surfacing materials and road conditions allowing the region's road network to serve the needs of the region, with particular emphasis on rural and coastal communities who often bear the brunt of disruptive weather patterns. New routes, together with a shift to a greater range of modes and elements such as digital infrastructure would also increase resilience. Effects are anticipated to be cumulatively beneficial.

Plan	Overview	Potential for cumulative effects with NE LTP
Northumbria River Basin Management Plan 2022	The aim of this plan is to enhance the environment and water assets in the region and describes a framework used to protect and improve water quality in the Northumbria River Basin. The management plan is intended to be used to make water management decisions. It informs the planning and implementation of interventions that help protect and improve the quality of the water environment	It is considered that the LTP will improve water quality where a general reduction in traffic levels (through development of a sustainable network) would also likely help to reduce polluted runoff (hydrocarbons, tyre and brake detritus etc). However, new Park & Ride sites or new physical road and rail links could represent new sources of polluted runoff or contamination, though careful design and implementation of pollution control measures would reduce this threat. It anticipated to be beneficial cumulative effects on water quality in the Northumbria River Basin, as well as potential adverse cumulative effects dependant on the details and locations of the interventions in both the LTP and the River Basin Management Plan.
Air Quality Strategy	Each of the local authorities as well as the Newcastle International Airport have their own Air Quality Strategy (AQS) aimed at tackling the (Air Quality Management Areas) AQMAs in their areas and improving general air quality in the region (Northumberland and Sunderland are the exception as they are not required to produce AQSs). These strategies focus on reducing the current levels of pollutants in the region by promoting modal shift to more sustainable modes such as active travel, public transport and electric vehicles.	It is considered that the LTP will act to improve air quality in the region. This beneficial effect will be derived through application of a number of policy focus areas and commitments that seek to make it easier to use sustainable forms of transport (including walking, wheeling and cycling) with an improved, integrated network. Emphasis is placed on making greener journeys easier, more affordable and more attractive, in addition to encouraging the switch away from petrol/diesel cars and vans to zero emission cars/vans which will improve air quality across the region. Where new infrastructure projects introduce new air pollution sources (e.g. new road schemes), such adverse effects may persist through the operational phase.

Plan	Overview	Potential for cumulative effects with NE LTP
		Overall, cumulative beneficial effects are anticipated.
As noted by the Infrastructure and Projects Authority[37], over the next 10 years (from 2023) total infrastructure investment across the UK is expected to be £700-775 billion. As such, there are a range of major developments or infrastructure projects underway or expected to commence within the North East of England, across a range of sectors.	These developments will require significant construction activities, with potential implications for the environment.	While locationally spread across the North East of England and likely to be constructed at varying periods, such schemes have the potential to interact with Interventions derived from the LTP and have a cumulative effect on the environment (beneficial or adverse). However, no significant cumulative effects are identified. Construction works associated with the LTP, are for the most part anticipated to be relatively small scale or confined to relatively localised areas and as such with localised effects. While the location of schemes is not known at present, it is also likely that such schemes would for the most part likely to be spatially and temporally isolated from most major infrastructure developments and will be subject to a series of further assessment as set out in LTP. While separate to the LTP, it is also the case that any major infrastructure project will be subject to its own environmental assessment process and development of mitigation e.g. through EIA and Environmental Management Plans. Mitigation measures will be developed to minimise adverse effects and maximise beneficial effects.
A1 Birtley to Coal House Improvement Scheme	Traffic on this busy section of the A1 is congested, especially during peak hours – making journeys unreliable. The number of vehicles using the road will increase with new housing and employment developments planned for the area, so road improvements are needed.	The potential environmental impact of the improvement scheme was considered through a significant number and range of environmental assessments. While it is not known at this stage the full details of interventions be derived from the

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[37] Analysis of the National Infrastructure and Construction Pipeline 2023

Plan	Overview	Potential for cumulative effects with NE LTP
	The project will improve approximately four miles of the A1 between junctions 65 (Birtley) and 67 (Coal House). The existing road will be widened between the junctions to help manage traffic joining and leaving the A1.[38]	LTP and their precise locations, there is a potential for cumulative effects with such a road upgrade, should it take place. It is anticipated that there would be a mix of both beneficial and adverse effects across the full range of environmental topics but it is not possible to determine the extent or significance of these at this stage and as such these would need to be explored in a much greater level of detail when precise scheme details are known, along with consideration of the prevailing environmental baseline at that time.
A1 in Northumberland - Morpeth to Ellingham	The scheme will involve upgrading eight miles of the A1 to a dual carriageway between Morpeth and Felton, including construction of a new dual carriageway bypassing the existing A1 between Priests Bridge and Burgham Park. The old section of the A1 carriageway will be de-trunked and become a local road – meaning this section of road will be owned and maintained by Northumberland County Council. Between Alnwick and Ellingham a further five miles of the existing A1 will be upgraded to dual carriageway. This will be done along the existing single carriageway road.[39]	The potential environmental impact of the improvement scheme was considered through a significant number and range of environmental assessments. While it is not known at this stage the full details of interventions to be derived from the LTP and their precise locations, there is a potential for cumulative effects with such a road upgrade, should it take place. It is anticipated that there would be a mix of both beneficial and adverse effects across the full range of environmental topics but it is not possible to determine the extent or significance of these at this stage and as such these would need to be explored in a much greater level of detail when precise scheme details are known, along with consideration of the prevailing environmental baseline at that time.

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[38] A1 Birtley to Coal House - National Highways
[39] A1 Morpeth to Ellingham dualling - National Highways

14. Monitoring

14.1 Introduction

Monitoring helps to examine the effects predicted through the SEA process against the actual effects of the options outlined in the LTP when they are implemented. It is also a requirement of the SEA Regulations (The Environmental Assessment of Plans and Programmes Regulations 2004) to describe the measures envisaged concerning how significant effects of implementing the LTP will be monitored. Section 17 (1) notes "*the responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action*". As ODPM Guidance advises, it is not necessary to monitor everything, or monitor an effect indefinitely, but rather monitoring needs to be focused on significant environmental effects.

Monitoring should therefore focus upon significant effects (adverse or beneficial) that are likely to breach international, national or local legislation, recognised guidelines or standards or that may give rise to irreversible damage, with a view to identifying trends before such damage is caused, and significant effects where there was uncertainty in the assessment and where monitoring would enable preventative or mitigation measures to be undertaken.

Monitoring can be integral to compiling baseline information for future plans and programmes (or in this instance to future iterations of the LTP or to help inform decision making in terms of the LTP Delivery Plan), as well as to preparing information which will be needed for further assessment such as EIA's, HRA's, HIA's, EqIA's etc. of projects. As such, it is the intention that this ISA monitoring will complement the monitoring plan set out in the LTP (see section on Measuring success / key performance indicators). Monitoring and evaluation of progress towards objectives and targets can form a crucial part of the feedback mechanism. Feedback from the monitoring process helps to provide more relevant information that can be used to pinpoint specific performance issues and significant effects, and ultimately lead to more informed decision-making. Note that any further assessment process such as EIA may also identify further monitoring that may be important to undertake at an appropriate time.

It is to be further noted that monitoring does not necessarily need to be undertaken by the responsible authority, rather information used in monitoring can be provided by other bodies. Indeed, due to typical budgetary or resource issues, it is often considered that the most effective monitoring programme utilises information that is already being collected, either by the responsible authority itself or by other bodies with whom information can be shared, rather than proposing the collection of new datasets. The LTP recognises this and notes that North East CA will monitor their KPI's by continuing to collaborate and effectively share data with both regional and national organisations. These include but are not limited to:

- Nexus
- The Transport Accident and Data Unit (TADU)
- Our two Urban Traffic Management Control Centres (UTMCs)
- Transport for the North
- Central Government Sources:
- Department for Transport
- The Department for Energy Security and Net Zero
- The Office of National Statistics
- UK Health Security Agency

- Office for Health Improvement and Disparities
- Government Office for Science
- Public Transport Operators

14.2 Proposed monitoring programme

At this stage, as the LTP is a high-level strategic document, the following therefore outlines a potential series of monitoring indicators that will be kept under review going forward. As such, it is to be noted that the following is not intended as an exhaustive list – it is likely that this list will be amended as further understanding of the LTP and Delivery Plan is gained as it is implemented.

Table 14-1 - Potential monitoring indicators

ISA Objective	Indicators to be used	Direction of change	Suggested frequency
Protect and improve air quality	Area covered by AQMAs declared due to transport emissions	Reduce	Annual
	Levels / Concentration of transport related pollutants	Reduce	Annual
	LZEVs as a proportion of total fleet	Increase	Annual
	Development of active travel routes (measured in KM)	Increase	Annual
Reduce the impact on environmental noise from transportation sources	Number and area of Noise Important Areas	Reduce	Annual
Reduce carbon emissions from transport and contribute to meeting the UKs and North East CA's net zero carbon targets by 2050	CO_2 emissions from road transport	Reduce	Annual
	Per capita transport carbon emissions	Reduce	Annual
	Uptake of active travel modes	Increase	Annual
	Number of EV charging points across the North East (by rural / urban split)	Increase	Annual
	Number of rail passengers utilising rail stations in the North East region	Increase	Annual
	Number of bus passengers in the North East region	Increase	Annual
Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding	Number of transport schemes (new or improved) incorporating SuDS or upstream Natural Flood Management	Increase	Annual
	Number of transport schemes (new or improved) that include as part of design measures to adapt to climate change	Increase	Annual
	Area of flood risk / floodplain constructed upon by transport schemes	Minimise / Reduce	Annual
	Number of gully pots / culverts cleaned / maintained	Increase	Annual
Enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of	Net gain in Biodiversity (using Defra metric) due to transport schemes	Increase – target of minimum 10% BNG, where applicable	Annual

ISA Objective	Indicators to be used	Direction of change	Suggested frequency
Biodiversity Net Gain and the delivery of the Nature Recovery Network	Area of green infrastructure developed as part of transport scheme / improved public realm	Increase	Annual
Protect and enhance sites designated for their international importance for nature conservation purposes	Number of transport schemes with recognised adverse effect on sites designated for nature conservation	Reduce	Annual
Protect, enhance and promote geodiversity	Number of transport schemes with recognised adverse effect on sites designated for geodiversity	Reduce	Annual
Protect and enhance the significance cultural heritage assets and their settings, and the wider historic environment	Number of historic assets and historic landscapes negatively impacted by transport schemes after all design solutions have been identified	Reduce	Annual
Conserve and enhance the natural beauty the North East's protected landscapes, seascapes and townscapes, protect wider landscapes, seascapes and townscapes and enhance visual amenity	Area covered by transport schemes within or in close proximity to National Landscapes (formerly AONB) designated areas	Reduce	Annual
	% area of transport schemes that incorporate improvements to public realm and sympathetic design	Increase	Annual
Protect and enhance the water environment	Number of transport schemes (new or improved) incorporating SuDS or upstream Natural Flood Management	Increase	Annual
	Number of pollution incidents attributable to transport	Reduce	Annual
Protect soil resources and avoid land contamination	Area (in hectares) of previously contaminated land included within or impacted by transport schemes that have been treated to remediate contamination	Increase	Annual
Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all	Transport improvements (e.g. service provision) in rural areas	Increase	Annual
	Provision of digital connectivity improvements	Increase	Annual

ISA Objective	Indicators to be used	Direction of change	Suggested frequency
Support the wider coordination of land use and energy planning across the North East CA area	Number of new compact, higher density mixed use developments supported by sustainable transport modes	Increase	Annual
Improve health and well-being for all citizens and reduce inequalities in health	Population within AQMAs	Reduce	Annual
	Population within Noise Important Areas	Reduce	Annual
	No. and length (Km) of Active travel schemes	Increase	Annual
	Crime / anti-social incidents associated with transport network	Reduce	Annual
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	Affordability of public transport	Increase	Annual
	Accessibility and public realm improvements in most deprived areas	Increase	Annual
	Accessibility improvements in public transport schemes	Increase	Annual
Promote fairness and equity in rural connectivity	Public transport passenger numbers in rural areas	Increase	Annual
	No. and length (Km) of Active travel schemes in rural or coastal areas	Increase	Annual

15. Summary and Conclusions

North East CA have developed a new LTP to set out the aspirations for the region's transport network up to 2040. It is the intention that this will result in a green, integrated transport network that works for all. North East CA believe this will make sustainable travel options more attractive, convenient, and safer, enabling more people and freight to make greener journeys.

In order to assess the sustainability performance of the LTP, an ISA has been carried out during its development. This ISA process has been thorough and comprehensive, with iterations of the LTP being subject to review by an experienced ISA team who are independent of the plan making team. Close liaison between the ISA team and the Plan making team (North East CA) has taken place throughout this process. It is considered that this approach resulted in an enhanced and more robust incorporation of sustainability considerations to the LTP, in terms of policy approach but also particularly in terms of clarity of actions to be taken as any intervention (scheme) derived from the LTP will be developed.

Based on the findings of the ISA, it is possible to draw a number of key conclusions with regards to the LTP and its implications for sustainability.

In the first instance, it was shown that implementation of LTP represents a more favourable approach to transport planning across most ISA Objectives in comparison to continuing under the present approach. While it is to be recognised that the present approach does have some key elements, such as an active travel network in the region and provision of EV charging points, these elements of the existing transport network are not reaching full potential and there is continued challenges across a range of issues that ultimately result in poorer economic outcomes, poorer connectivity across the region, continued transport related social exclusion and poorer health outcomes. While these issues are multi-faceted and an improved transport network will not completely solve them, the intention is that LTP will result in an efficiently designed, simple and easy to use network with extended reach. It can be reasonably expected that this should give people a much greater opportunity to access the services and facilities that they need, as well as to grow the economy.

Early consideration of the key elements to the LTP (in particular the three cross cutting strategic themes) also showed that it could be anticipated that the LTP would be broadly compatible with the aims of the ISA and provide a firm underpinning, that will apply across the LTP and will help to ensure that the sustainability performance of the Plan could be maximised. Key elements of these strategic themes were shown to potentially develop an approach to the LTP that will include an approach to economic development and enable access and overcome inequality, protect the environment, tackle issues relating to a changing climate and help to achieve better health outcomes by encouraging active and sustainable travel. These elements were considered to be in line with the general approach to sustainability that should aim for beneficial effects in respect of economy, environment and society.

The ISA then examined each of the following LTP focus areas in turn:

- Planning journeys/informing users/supporting customers.
- Ticketing and fares.
- Reach and resilience of infrastructure.
- Safety, especially of women and girls, and other improvements in service quality.
- Connections between different transport types.

These focus areas set out a series of standards, which it is intended will collectively make up the improved transport network and set the framework for interventions which follow in the Delivery Plan.

A common thread running through the focus areas is the overall need to encourage and facilitate a shift to more sustainable modes such as public transport (bus and rail), as well as active travel (walking and wheeling). It is also the intention to make the transport network operate as efficiently as possible. This shift in mode and increased efficiency will be enabled through a variety of mechanisms set out for each focus area such as:

- better, more up to date information that is easier to access,
- a stronger identity for and pride in the network,
- a more resilient network,
- easier, simpler and more affordable fares, better ticketing options and higher service standards,
- better integration of the transport network to make travel as seamless as possible,
- increased reach of the transport network to all areas of the region,
- increased service provision and capacity on the network,
- increased EV charging provision or use of new low or zero emission fuels,
- clear and effective ways to report crime or anti-social behaviour,
- tackling root causes of crime and anti-social behaviour and targeted actions to prevent these,
- increasing trust and perceptions of safety in the transport network,
- a focus on safety and accessibility, particularly for vulnerable users
- a joined up approach to investment and spatial planning

While the focus is on sustainable modes and increased transport efficiency, the LTP does recognise that this may not be suitable for all and as such, there are elements of the LTP which still provide mechanisms for more efficient use of private vehicles

Overall, it is considered that the LTP, through shifting travellers to more sustainable and active modes, will be beneficial in respect of reducing air pollution and carbon emissions. It is also likely that noise, associated with the transport network will reduce through reduced volumes of traffic and congestion, as well as increased uptake of EVs. A reduction in disturbance and pollution emissions / deposition would also likely have slight beneficial effects on biodiversity (including those areas designated for nature conservation), the water environment, heritage assets, soils, landscape and townscape and reduce the use of hydrocarbons.

The LTP is also anticipated to result in a more robust and resilient transport network to the effects of a changing climate. As well as more proactive maintenance of drains, or fixing aspects of infrastructure, better information will allow travellers to plan more effectively, or decide not to undertake journeys in the first place. Alternative routes / travel solutions etc will also be identified.

The LTP is considered to be particularly beneficial in terms of economic growth and access to jobs. This will be realised through a focus on connectivity - locally, across the region and beyond. This increased connectivity will be in respect of both people and goods – for example, note is made of improving long distance rail links to help welcome new business and organisations to be based in the North East. Similarly, note is made of enhanced infrastructure to improve freight connectivity and delivery services and it is noted that it is anticipated that there will be reduced journey times for the movement of people, and goods between freight centres in the region, across the UK and internationally. Note is also made of enhancing links by sustainable means to new employment sites and that the reach of the integrated transport network should be expanded, connecting people to towns, cities, employment, education and essential services. More generally, facilitating journeys by a range of modes will make it easier for people to access employment and economic opportunities more widely across the region. This will also include better facilitation for disabled travellers – this could help to make it easier for people with disabilities to

access the job market and therefore increase the workforce. Similarly, an example of the Metro serving disadvantaged areas is given and this could help people in those areas access jobs or training opportunities further afield.

In relation to health, equalities and the effect on rural or coastal communities it is anticipated that the LTP will also bring significant benefits. As noted, employment or training opportunities will increase, alongside better accessibility and connectivity and more affordable fares across the whole of the region. This can be expected to have benefits for wellbeing. Health benefits can also be anticipated from a reduction in pollution, particularly for those more vulnerable members of the community such as children, the elderly and those with certain health conditions. Increased active travel will provide opportunities for people to incorporate more activity into their daily routine, with better access to green spaces.

There will also be better designed and quieter public realm, with potentially a greater 'sense of place' and with safety (particularly for vulnerable travellers) a key focus. For example, note is made there should be wide, segregated and well maintained pedestrian infrastructure with reduced street clutter, dropped kerbs, ramp access provision and other inclusive infrastructure such as well designed crossing points and this general 'decluttering' and improvement of design will help those with visual or physical disabilities to move through the townscape. Signage, lighting and other such aspects will also improve. This will increase safety for all groups and improve wellbeing. Safety and security will be further improved through reduced potential for accidents.

There will also be clear initiatives for ensuring that people using the network have increased trust, confidence and perceptions of safety. Note is made of the need for clear and effective channels through which to report harassment and violence and a need for targeted action and resources assigned to prevent violence and anti-social behaviour on the region's transport network. It is anticipated this will benefit all vulnerable users.

However, it is also the case that there are aspects of the LTP which not all groups may be able to take full advantage of. For example, an emphasis on active travel may not work well for the elderly, those with certain health conditions, those with young children and so on. The distances in rural areas may mean that active travel routes would be more likely to be used for recreation, rather than the full connectivity they can bring. Similarly, an emphasis on new technology to better disseminate information may not work well for all groups due to language barriers, reading ability, cost, access to technology etc.

However, the LTP recognises these challenges. For example, provision is still made for improving the network for the use of private vehicles – the elderly, or those in rural areas may still need to rely on this mode for some journeys.

It is inherent in the nature of the LTP that it will result in a series of transport infrastructure Interventions, which in some cases will require heavy civil engineering works across large areas, though it is recognised that for the most part this will be in limited areas to address specific issues such as congestion hotspots or providing connections to new developments. Nevertheless, it is in the nature of these works that there will be environmental implications in particular. For example, new infrastructure such as roads (or road widening and junction improvements), as well as interchange hubs and park & ride sites could involve a direct loss of habitat, or soils. There could also be an adverse effect on the water environment through pollution incidents during construction, or through polluted runoff during operation, and would also result in a new feature in the landscape. Increased disturbance could have adverse effects in terms of noise or the setting of heritage assets and so on.

Where it was considered that performance could be improved, a series of recommendations were made to strengthen the focus area wording in order to address those areas identified as adverse or to accentuate those areas of the LTP which have been identified as being beneficial to sustainability. These recommendations resulted in a series of amendments to the LTP which provide greater clarity on how

sustainability would be considered during design, construction, maintenance and operation of any intervention / scheme. Of particular note, it is recognised that there will still be work to do in terms of ensuring adverse environmental or social effects are minimised as much as possible, while beneficial effects are maximised. To this end, North East CA have committed to working with partner organisations, including engagement with the statutory bodies of Environment Agency, Natural England and Historic England; undertaking Environmental Impact Assessment, Habitats Regulation Assessment, Health Impact Assessment and Equalities Impact Assessment, as well as the development of Carbon Management Plans and Construction Environmental Management Plans. There are also a series of more specific actions to increase resilience in the transport network and address specific environmental, health or equality related issues.

It is also the case that a series of mitigation measures for different intervention types have been identified through this ISA. At a strategic level, this included refining the LTP itself, refining aspects of the Interventions and noting specific mitigation, ensuring adherence to technical measures, addressing the need for further assessment, working with partner organisations, as well as contingency arrangements for dealing with possible adverse effects.

It is recognised that LTP will not act or be delivered in isolation and will influence and be influenced by, other Plans and Policies or developments across and beyond the North East. It is anticipated that the LTP will act to benefit those other Plans and Policies, though there is a potential for some adverse effects. Nevertheless, it is considered that the LTP sets out an approach to further assessment that will address any cumulative effects arising.

It is important that North East CA understand the effect of the implementation of their LTP and the ISA set out a potential series of monitoring indicators that will be considered and finalised alongside development of the Delivery Plan. These will also complement those KPIs which North East have identified in the LTP for measurement. It is the intention that monitoring will cover social, environmental and economic effects and it will involve measuring indicators that will enable the establishment of a causal link between the implementation of the LTP and the likely effects (both positive and negative) being monitored. This will be of particular benefit to those involved with the next iteration of the LTP and if required, will allow early remediation to be undertaken of any identified adverse effects.

Overall, it is considered that the LTP represents a well-balanced approach in terms of sustainability performance across the full range of potential key effects delineated in the ISA Framework. It is anticipated that this should help ensure that the need for a connected North East, as set out in relation to the vision for the North East can be achieved in a sustainable and integrated fashion.

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