LANCASHIRE
COMBINED COUNTY
AUTHORITY

Lancashire Local Transport Plan

Integrated Sustainability Appraisal | August 2025

Contents

1 Introduction

1.1 Purpose of this document

This is the Integrated Sustainability Appraisal (ISA) Report of the Lancashire Local Transport Plan (LTP) Core Strategy which has been produced by AtkinsRéalis Limited on behalf of Lancashire Combined County Authority (LCCA) in respect of fulfilling the requirements of Sustainability Appraisal / Strategic Environmental Assessment (SA/SEA), Health Impact Assessment (HIA), Equality Impact Assessment (EqIA) and Rural Needs Assessment. 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 Core Strategy and reports on the process of developing the LTP Core Strategy from a sustainability perspective. An overview of the LTP Core Strategy is presented in the following section.

Note that the "LTP" refers to the full suite of documents, including the Core Strategy and future Implementation Plans and Sub-strategies. This ISA Report covers the LTP Core Strategy only.

1.2 The background and need for the LTP

The Local Transport Authorities in Lancashire are working together to develop a new Local Transport Plan ('LTP') for the sub-region. This includes the area covered by:

- Blackburn with Darwen Borough Council;
- Blackpool Council; and
- Lancashire County Council (which extends over 12 districts).

The three Local Transport Authorities (Blackburn with Darwen, Blackpool, and Lancashire County Council) developed separate LTPs in 2011. The world has changed significantly over the last 13 years, with changes in the economy, heightened awareness of our climate emergency, and rapid changes in transport technologies. This LTP is the first to be produced by the new CCA and will support achievement of the ambitions set out in the Lancashire Growth Plan.

The Plan Area has the second largest economy in the North West after Greater Manchester, is a major part of the Northern Powerhouse, and is the UK's second largest manufacturing hub. The area also has a varied natural environment, with National Landscapes in the Forest of Bowland and Arnside and Silverdale. It is one of the UK's most important visitor destinations, with millions of visitors every year to Blackpool, Morecambe, and the surrounding countryside.

Transport is fundamental to the lives of those in Lancashire and will be an important part of achieving the ambitions of the area. However, underperforming transport networks are also one of the causes of the challenges. Poor connections are holding back economic potential. Transport is the largest

source of carbon emissions, and many people are highly car-dependent due to a lack of effective alternatives. High traffic volumes also have unwanted road safety, noise, pollution and severance impacts on communities.

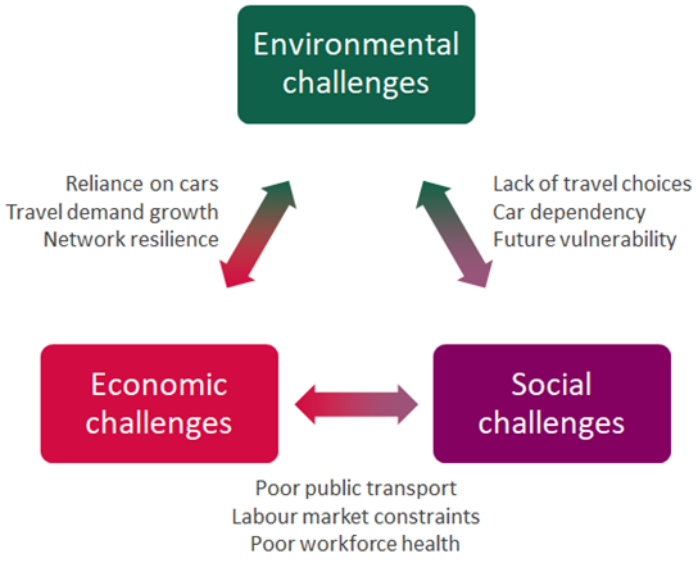
The new CCA gives Lancashire a stronger voice on the regional and national stage, ensuring that they do not miss out on vital funding and other opportunities. It would also allow the constituent authorities to operate more efficiently together and work more closely with transport operators to create better-connected infrastructure and services.

Lancashire faces many critical issues now and in the future. These are described in detail in their 'Green Paper' and summarised below. They are grouped under three 'big challenges':

- A large-scale productivity gap between our economy and the national average, equivalent to almost £10 billion per annum, due to a number of factors including our population structure, business performance, a skills deficit, ill-health, housing, low levels of innovation, and transport connectivity;
- Major social challenges including significant health inequalities and social exclusion, with inter-related causes from poor early years outcomes, education, poor quality work, low incomes, and poor housing, which are concentrated in many of our towns across Lancashire; and
- The need to rapidly reduce greenhouse gases and other pollutants, and support the wider recovery of nature and the environment across Lancashire, particularly through decarbonising transport and dramatically improving energy efficiency across our aging housing stock.

The challenges are strongly inter-related and they are all affected by the transport system. Figure 1-1 illustrates these inter-related challenges.

Figure 1-1 – Lancashire's inter-related challenges



Lancashire also notes the need to recognise that the region is very diverse, with significant differences in the characteristics of its towns, cities, and rural areas. This means that these big challenges manifest themselves in different ways across the region.

The LTP Core Strategy sets out its vision for Lancashire's transport network to support:

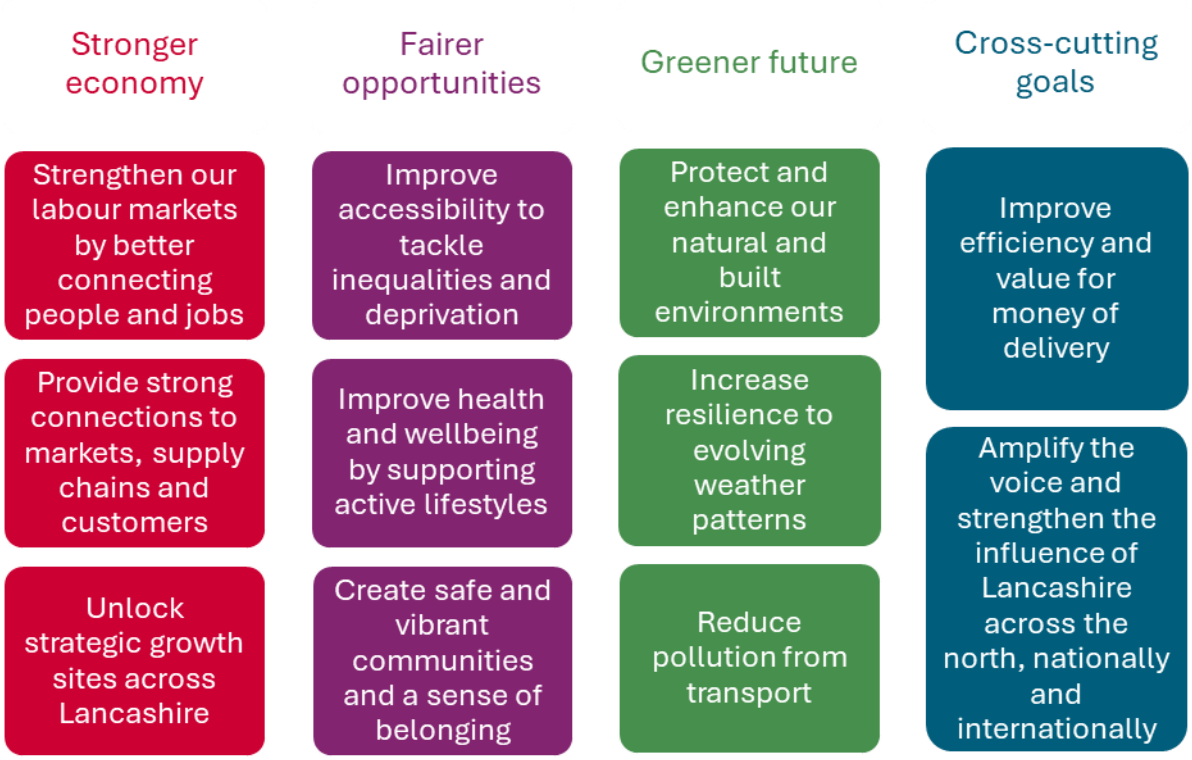
- A stronger economy
- With fairer opportunities
- And a sustainable future

These themes are inter-related, and transport can facilitate all three as part of cross sector solutions. The LTP's ambitions for the future are framed around these economic, social and environmental themes, all with the united purpose of delivering positive change for all those who live, work, visit and do business in Lancashire.

The LTP aims to improve the region's prosperity, empower everybody to achieve their potential, and to live healthier and more sustainable lives .

The LTP goals are as follows.

Figure 1-2 - LTP Goals



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 Lancashire 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 LCC 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; and
- 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 is an iterative assessment process informing the LTP as it develops, ensuring 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 Core Strategy 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; and
- 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 a 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 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 Lancashire 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 Lancashire as there are extensive rural areas, mainly in Ribble Valley and West Lancashire.

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. This took place between 7th March and 11th April 2025; and
- **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 Core Strategy. Please see Appendix A for further details.

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 into this ISA Report. Table 2.1 below sets out the way specific SEA requirements have been met.

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

	Information to be included in the Environmental Report under the SEA Regulations (Regulation 12 and Schedule 2)	Where covered in the ISA Report
3.	The environmental characteristics of areas likely to be significantly affected	Chapter 6 and Appendix C
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
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 6 and Appendix C
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 10
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 11
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

	Information to be included in the Environmental Report under the SEA Regulations (Regulation 12 and Schedule 2)	Where covered in the ISA Report
9.	A description of measures envisaged concerning monitoring in accordance with Regulation 17	Chapter 12
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 Core Strategy 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)[1] (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 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[2], 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,

[1] SI No. 2017/1012. Includes amendment by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).
[2] Ministry of Housing, Communities & Local Government (2023) National Planning Policy Framework. Paragraph 187.

potential SPAs, possible SACs and listed or proposed Ramsar sites[3]. 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 2.2 below. This includes five SACs, six SPAs and four Ramsar sites within the Plan Area.

[3] 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 are five SACs within the Plan Area: - South Pennine Moors - Calf Hill & Cragg Woods - Morecambe Bay Pavements - North Pennine Dales Meadows - Morecambe Bay	There are six SPAs within the Plan Area: - Bowland Fells - Leighton Moss - Martin Mere - Morecambe Bay and Duddon Estuary - Ribble & Alt Estuaries - South Pennine Moors Phase 2	There are four Ramsar sites within the Plan Area: - Leighton Moss - Martin Mere - Ribble & Alt Estuaries - Morecambe Bay
Within 15km of the LTP Area	There are 11 SACs within 15km of the Plan Area: - Craven Limestone Complex - Dee Estuary - Ingleborough Complex - Manchester Mosses - North Pennine Moors - River Kent - Rochdale Canal	Thera are five SPAs within 15km of the Plan Area: - Liverpool Bay - Mersey Estuary - Mersey Narrows & North Wirral Foreshore - North Pennine Moors - Peak District Moors (South Pennine Moors Phase 1)	There are three Ramsar sites within the Plan Area: - Malham Tarn - Mersey Estuary - Mersey Narrows & North Wirral Foreshore

	- Roudsea Wood & Mosses - Sefton Coast - Witherslack Mosses - Yewbarrow Woods		
Within 30km of the LTP Area for bat SACs	There are no SACs within 30km of the LTP 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 Core Strategy 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 should examine the impacts of the LTP Core Strategy against the conservation objectives of the international sites.

3 Scope of the ISA

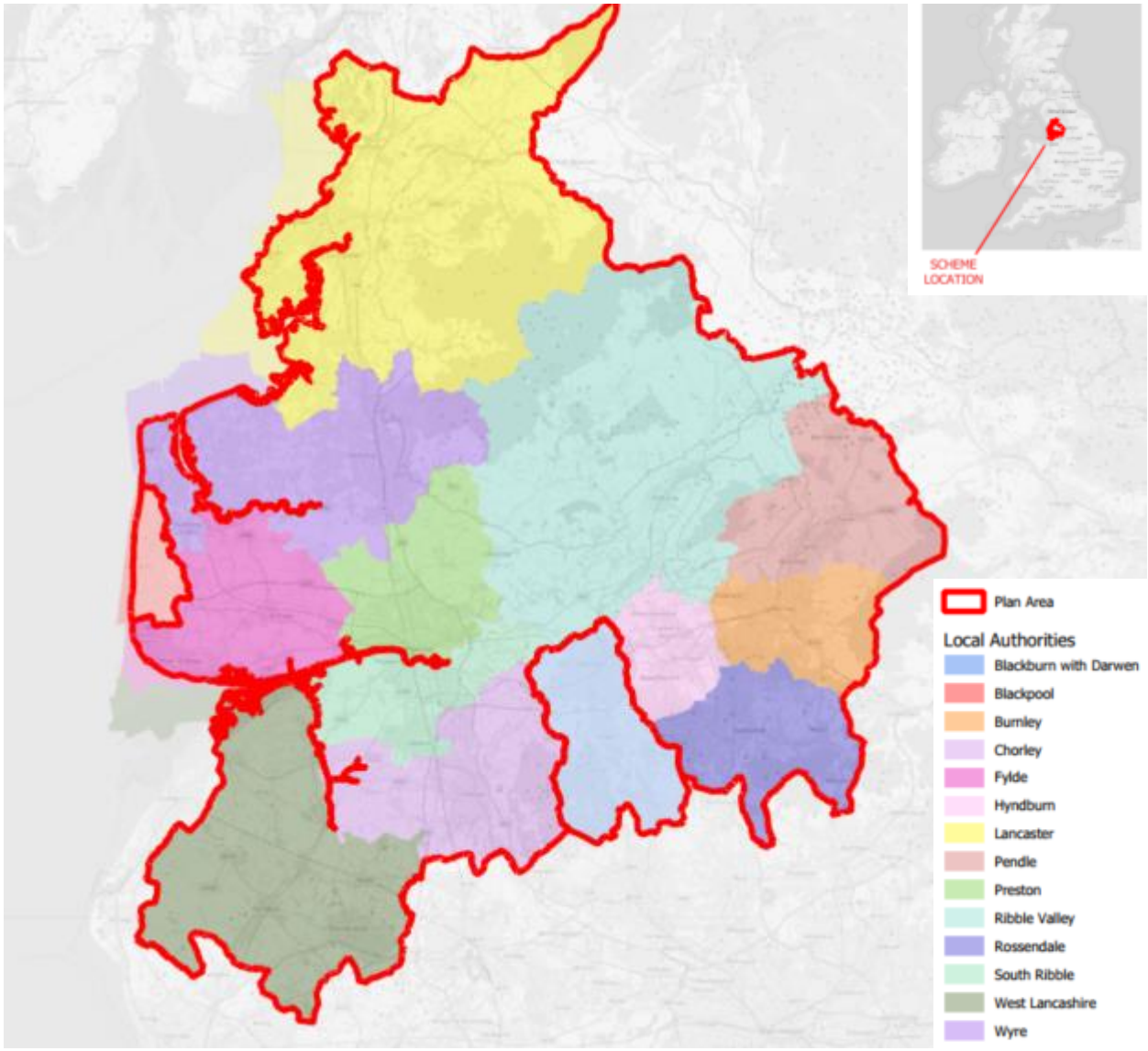
3.1 Geographical and temporal scope of the LTP

The Plan Area covers the Combined County Authority, a county council (Lancashire County Council) and two unitary authorities (Blackburn with Darwen Borough Council and Blackpool Council). Within Lancashire County Council there are 12 local authorities as follows:

- Burnley;
- Chorley;
- Fylde;
- Hyndburn;
- Lancaster;
- Pendle;
- Preston;
- Ribble Valley;
- Rossendale;
- South Ribble;
- West Lancashire; and
- Wyre.

The locations of these areas are shown on Figure 3-1 and Appendix D.

Figure 3-1 - Plan Area



The Plan Area covers approximately 3,075 km^2 and, with a large resident population, is one of the most populous and urbanised localities in Britain, but is still an area of great diversity: From the traditional townscapes, including the multitude of stone-built dwellings and mills, civic architecture, and the relics of early industrialisation, to the stretches and beaches along its approximately 123km coastline and the rural villages and unspoilt landscapes.[4]

It is also important to recognise that the implementation of the LTP Core Strategy may have effects outside of the Lancashire area.

The Local Authorities adjacent to the Plan Area are as follows:

[4] Lancashire County Council (2020) *Overview*. Available at: https://www.lancashire.gov.uk/lancashire-insight/environment/environment-overview/

- Westmorland and Furness;
- North Yorkshire;
- Bolton;
- Bury;
- Rochdale;
- Wigan;
- Knowsley;
- St. Helens;
- Sefton;
- Bradford; and
- Calderdale.

The temporal scope of the LTP will be 2025 – 2045.

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; and
- 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 and noise; and
- 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 social 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; and
- 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 Lancashire as a whole, along with the review of relevant Plans and Policies has shown that all of the above groups are present within the LTP area 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;
- Sex / Gender;
- Gender reassignment;
- Marriage and Civil Partnerships;
- Pregnancy and maternity;
- Race;
- Religion or belief; and
- 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 Lancashire as a whole, along with the review of relevant Plans and Policies has shown that all of the above groups are present within LTP area and likely to utilise the transport network.

Rural Proofing Assessment

It is noted that nearly 1 in 5 people in England live in rural areas, contributing significantly to the economy. Rural areas often face fuel poverty, poor connectivity, and limited access to services. Without rural proofing, LTPs risk exacerbating inequalities and failing to meet sustainability goals. The Rural Proofing component then specifically evaluates how proposed transport policies will affect rural communities and whether adjustments are needed to:

- Ensure equitable access to transport services
- Reflect higher costs of service delivery in sparsely populated areas
- Support economic and social inclusion
- Address environmental impacts unique to rural settings

4 ISA Methodology

The ISA has been used as a tool for improving the sustainability performance of the LTP Core Strategy. 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 Core Strategy.

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[5];
- 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;
- Health Impact Assessment in spatial planning, A guide for local authority public health and planning teams, Public Health England, 2020;
- Health Impact Assessment Guidance: A Manual, Standalone Health Impact Assessment and health in environmental assessment, Institute of Public Health, 2021; and
- National Planning Policy Framework, 2024 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).

[5] This document has been archived, however it has still been used to assist in developing the ISA methodology.

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	**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

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**
Generating options for the LTP to resolve these challenges; appraising the options and predicting their effects	**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.				
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.* *Review and confirm and if required, propose mitigation measures within SA/SEA*	*Predict and assess effects of new or revised preferred options to be undertaken within SA/SEA.* *Review and confirm and if required, propose mitigation measures within SA/SEA*	*Predict and assess effects of new or revised preferred options to be undertaken within SA/SEA.* *Review and confirm and if required, propose mitigation measures 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			
		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)*

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
Consultation on draft LTP (LCC 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 Lancashire 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 the LTP Core Strategy 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 the LTP Core Strategy. The questions have guided the LTP Core Strategy 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 Goals against the ISA Objectives

A compatibility assessment of LTP Goals 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 Goals. This assessment ensured that

consideration of the ISA Objectives informed the development and refinement of the LTP Goals 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 the LTP Core Strategy is an integral part of the plan development. Strategic alternatives were identified by LCC and have been assessed as part of the ISA process.

This task comprised the prediction of changes arising from the LTP Core Strategy'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 Core Strategy

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, for example 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 ISA (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 Core Strategy.

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 major beneficial and adverse effects (and combinations of these types of effect) have been considered of significance, whereas no effect and slight beneficial and slight adverse effects (and combinations of these types of effect) have been considered non-significant.

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

As part of the assessment of the Draft LTP Core Strategy, a number of mitigation measures (recommendations) are set out in Chapter 12. LCCA has given careful consideration to these recommendations and has addressed these as appropriate in the preparation of the Draft LTP Core Strategy 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 Core Strategy. 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; and
- Proposals for changing other plans and programmes.

The assessment also considered cumulative, indirect (secondary) and synergistic effects of the Draft LTP Core Strategy 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, for example 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; and
- 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 (for example 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; and
- Cumulative effects of LTP proposals have been assessed.

The results are presented in Chapter 13 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 LCC, 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 14 of this report.

Stage C – Preparing the ISA Report

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

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

Assessing significant changes

The ISA Report will be published for formal consultation with the Draft LTP Core Strategy. The results of the formal public consultation exercise may well result in changes to the Draft LTP Core Strategy 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 Core Strategy 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; and

- The measures that are to be taken to monitor the significant environmental effects of implementation of the LTP Core Strategy.

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 Core Strategy, mitigation and monitoring.

The HIA has identified actions that can enhance positive effects and reduce or eliminate negative effects of the LTP Core Strategy, 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 Core Strategy 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 Core Strategy, 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 Core Strategy on rural communities have been considered, a Rural Proofing Assessment (RPA) has been undertaken ~~in line with the HM Treasury's Green Book[6]~~ 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 Core Strategy, 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).

~~[6] HM Treasury (2022) The Green Book. Central Government Guidance On Appraisal And Evaluation. Available: https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government~~

5 Review of relevant legislation and other plans, policies and programmes

5.1 Introduction

The LTP will both influence and be influenced by other plans, policies and programmes (PPPs) produced by local authorities, statutory agencies (at a national, regional and local level) and other bodies with plan making responsibilities. Legislation is a further driver that sets the framework for the LTP, both directly and indirectly.

This interaction is reflected by the requirement of the SEA Regulations (2004) that information be provided on:

"The degree to which the plan or programme influences other plans and programmes including those in a hierarchy" (Schedule 1);

“Its relationship with other relevant plans and programmes” (Schedule 2);

and

"The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation." (Schedule 2)

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 NO2;
- 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; and
- 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; and
- 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; and
- 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; and
- Achievement of Biodiversity Net Gain.

Cultural Heritage

- Conserve and protect historic assets (designated and undesignated), including archaeology and historic landscapes as well as the settings of heritage assets;
- Improve access to historic assets, including buildings and landscapes where appropriate; and
- 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); and
- Make use of Sustainable Drainage Systems (SuDS).

Land Use, Soil and Agriculture

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

Landscapes and Townscapes

- Protect and enhance landscape, particularly those recognised of national importance) ; and
- 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; and
- 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 Lancashire 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; and
- 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 (for example 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;
- Reduce Transport Related Social Exclusion and address inequalities relating to this;
- 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; and
- 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 accessible, usable and inclusive facilities;
- Minimise isolation for vulnerable people;
- Protect human rights (for example the right to liberty and security of person) and fundamental freedoms (for example a right to freedom of thought, conscience and religion, freedom of expression, etc.);

- Eliminate discrimination, harassment and victimisation because of protected characteristics;
- Promote equality of opportunity in the way services are planned, promoted and delivered; and
- Treat everyone with dignity and respect.

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; and
- 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; and
- 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; and

- 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, including:

- Burnley's Local Plan 2012 – 2032;
- Chorley Local Plan 2012 – 2026;
- Central Lancashire Local Plan;
- Fylde Local Plan to 2032;
- Hyndburn 2037, The Local Plan;
- A Local Plan for Lancaster District 2020 – 2031;
- Pendle Local Plan 4th Edition (2021-2040);
- Preston Local Plan 2012 – 2026;
- Core Strategy 2008 – 2028. A Local Plan for Ribble Valley;
- Rossendale Local Plan 2019 to 2036;
- South Ribble Local Plan;
- West Lancashire Local Plan 2012 – 2027;
- Wyre Local Plan 2011 – 2031;
- Blackburn with Darwen Local Plan 2021-2037; and
- Blackpool Local Plan 2012-2027.

6 Baseline Information

In order to assess the potential sustainability effects of the LTP on Lancashire, 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).

Therefore, baseline information plays a fundamental role throughout the stages of the ISA as it provides the evidence base from which to predict and monitor effects of the LTP. As such, it is first important to understand its current state and then examine the likely evolution of the environment without the implementation of the plan.

6.1 Data Collection 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).

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.

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).

6.2 Data Analysis

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

Environmental Data

- CO2 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; and
- Waste and resources.

Economic Data

- Employment;
- Long term trends in Gross Value Added (GVA) per hour worked;
- Long term trends in population;
- Economic sectors, including those related to rural output;
- Performance gap and sub-regional performance; and
- 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; and
- 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 Lancashire area. These, together with implications and opportunities arising for LTP, have been summarised in Table 6.1.

6.3 Key Sustainability Issues

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. The key sustainability issues have been identified from the review of baseline information and other plans and programmes. These key issues are summarised in Table 6.1 below. This table also provides a discussion on the implications/opportunities of such issues to the LTP Core Strategy and provides clear links to the proposed ISA Objectives. The analysis of key sustainability issues has influenced the development of the ISA Framework (see Section 7), in particular in formulating decision making questions.

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

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Biodiversity, Fauna and Flora and Geodiversity There are a wide range of sites designated for nature conservation within the Plan Area. There are four Ramsar sites; 'Leighton Moss' designated for its large reedbed habitat and range of breeding birds it supports; 'Martin Mere' designated due to its habitat supporting internationally important numbers of wintering waterfowl and various bird species in spring/autumn; 'Ribble & Alt Estuaries' designated due to its habitat supporting internationally important numbers of wintering waterbirds, various bird species in breeding season and its population of natterjack toads; and 'Morecambe Bay' designated due to its habitat supporting internationally important numbers of wintering waterbirds, various bird species in breeding season and being a staging area for migratory waterfowl. There are 90 Special Protection Areas (SPAs) in England classified for their presence of protected bird species. Six of these SPAs[7] are located within the Plan Area: • Bowland Fells classified for three species of birds; • Leighton Moss classified for one species of birds; • Martin Mere classified for six species of birds;	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 (including irreplaceable habitats) 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.	Protect and 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

[7] JNCC (2024) *Special Protection Areas (SPAs): List of Sites.* Available: https://jncc.gov.uk/our-work/list-of-spas/

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• Morecambe Bay and Duddon Estuary classified for 27 species of birds; • Ribble & Alt Estuaries classified for 22 species of birds; and • South Pennine Moors Phase 2 classified for three species of birds. • There are five SACs within the Plan Area as follows: • South Pennine Moors; • Calf Hill & Cragg Woods; • Morecambe Bay Pavements; • North Pennine Dales Meadows; and • Morecambe Bay. 70 Sites of Special Scientific Interest (SSSIs) are distributed across the Plan Area. Some of these are designated for their biological interest and some for their geological interest. The region has approximately 562 areas (approximately 3,053 ha) of Ancient Woodland. There are two NNRs recorded within the plan area, Gait Barrows and Ribbles Estuary. In addition, there are a range of sites designated at the local level including 31 Local Nature Reserves (LNRs) predominantly found around Preston. Key pressures and risks in respect of biodiversity and nature conservation that are particularly relevant have been identified from air	Opportunities for new habitat creation and enhancement associated with transport developments should be explored, for example 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 infrastructure, which contributes to	

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pollution and climate change, which can change distribution of species and habitats. A Local Nature Recovery (LNR) strategy is being developed across the Lancashire region in collaboration with Blackpool unitary and Blackburn and Darwen unitary authorities, 12 districts, Natural England and the Yorkshire Dales National Park Authority[8]. The primary purpose of the LNR is to find locations for the creation, connection or improvement of habitat, and locations that will most likely provide the greatest benefit for nature and the wider environment. In addition, there is a large presence of peat within the plan area as illustrated within the England Peat Status Greenhouse Gas and Carbon (GHG and C). Peatlands are England's largest terrestrial carbon store, containing hundreds or even thousands of tonnes of carbon per hectare. Excavating and draining peat leads to high emissions of greenhouse gases. Degraded state of peatlands has made them the largest source of emissions of greenhouse gases to the atmosphere from land use in the UK, exceeding carbon uptake in forests. 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 /	protecting natural habitats and biodiversity; • the need to conserve, protect and enhance peatland within the plan area including, where possible, rewetting of peat (nature based solutions); • the need for cohesive habitat networks to help habitats and species adapt to the consequences of climate change; and • enhancement of the green infrastructure through, for example, footpaths, cycle lanes and other public rights of ways. Increased accessibility to	

[8] Lancashire County Council (2023) *Lancashire's Local Nature Recovery Strategy.* Available: https://storymaps.arcgis.com/stories/c0543d0925db4dec952b530de99cd1bb

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
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 National Highways) relating to pollinators. **Likely evolution of baseline** Uncertain - The designated elements of the plan 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.	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.	
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	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.	Protect and improve air quality. Reduce the impact on environmental noise from

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
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 (PM_{10} and $PM_{2.5}$) (emissions, tyres and brake wear). Across the region air quality is generally good with a total of 18 AQMAs identified within the plan area, all of which have been designated for Nitrogen dioxide. Improving air quality is also a key objective in the Lancashire County Council's Environment and Climate Strategy. 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. 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. The most widespread	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 (for example 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.	transportation sources.

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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 369 Noise Action Important Areas within the plan area, located predominantly on the local road networks and a small number on the rail network. **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.		
Greenhouse gas emissions and a changing climate The release into the atmosphere of greenhouse gases (for example CO2, CH4, N2O, O3) resulting from fossil fuel usage, agriculture, land use change and other human activities has been linked with atmospheric warming and global climate change. Annual rainfall is expected to increase in all four UKCIP scenarios by between 3% and 5%, made up of rainfall increases in autumn and winter, decreases in summer and little change in spring. Winter rainfall increases over North West England by between 6% and 14% by the 2050s, whilst summer rainfall decreases by	LTP should seek to ensure that reducing CO2 emissions and achieving Net Zero carbon is a core component. Net Zero North West has published its plan for the regions net zero transition and low carbon recovery post-COVID-19,	Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target

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between 1% and 10% during the same period (cf. to 1961-1990). In terms of temperature, the summer of 1995 in the North West equates to the average summer to be expected by the 2050s under the UKCIP Medium-High scenario (i.e. 5 summers in the 2050s will be hotter than 1995). An extreme summer in the 2050s would be 4.70°C higher than the 1961-1990 average[9]. The region has collaborated with local business, regional leaders, local enterprise partnerships, regional industry bodies and academia to create 'Net Zero North West England' which commits to accelerating industrial decarbonisation and clean growth projects in the North West[10]. Their Cluster plan sets out a roadmap to decarbonisation for the UK's first net zero region by 2040, which is supported by various aims in the local authority's policies, including Blackpool Council's aim to reach net zero by 2030 and aims within Lancashire County Council's Environment and Climate Strategy 2023-2025. 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 2023 in the UK transport makes up 28%[11] of GHG emissions. In the Plan area transport was the highest emitting sector, although in both Blackburn with Darwen and Blackpool this was Domestic.	with the aim of net zero by 2040[14]. 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 CO2 from the atmosphere, for example through the use of street trees or planting in other areas of transport infrastructure. As with air quality, other examples of how CO2 emissions could be addressed include development and promotion of sustainable modes of transport including active	

[9] UKCIP (1998*) The Impacts of Climate Change in the North West of England.* Available: https://www.ukcip.org.uk/wp-content/PDFs/NW_tech.pdf
[10] Net Zero North West (2023) *Net Zero North West Cluster Plan 2023.* Available: https://www.netzeronw.co.uk/north-west-cluster
[11] Department for Business, Energy & Industrial Strategy (2024) *2022 UK Greenhouse Gas Emissions, Final Figures.* Available: 2020 UK Greenhouse Gas Emissions, Final Figures
[14] Net Zero North West (2023) *Net Zero North West Cluster Plan 2023.* Available: https://www.netzeronw.co.uk/north-west-cluster

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Fossil fuel generation decreased 19.8% in 2023, to a level last seen in the mid-1950s when electricity demand was a third of today's requirement and over 95% fuelled by coal and oil-fired generation. In 2023, most fossil fuel generation continued to come from gas, while coal generation ceased by October 2024. Renewable generation in 2023 was similar to 2022, narrowly reaching a record 135.8 TWh, 0.3% higher than 2022. Wind generation rose 2.2% to a record 82.3 TWh and solar generation rose 4.1% to a record 13.9 TWh. This was driven by increases in wind and solar generation capacity which offset slightly less favourable weather conditions[12]. In recent years there have also been marked improvements in vehicle efficiency and an increasing uptake of and provision for electric vehicles (EV). The Electricity North Wests Electric Vehicle Strategy acknowledges the impact that vehicles have on emissions and supports the transition to EVs in the North West. EVs already account for 18% of all new car sales nationwide and 7% of all vehicles registered in the UK are in the North West. It is estimated that by 2050 there will be over 3 million EVs in the North West. As a result it is predicted that peak time electricity demand could increase by 1.6-2.4 times by 2040 from today's peak. To meet this increase, significant investment in the network will therefore be required.[13] Nevertheless, some degree of climate change will occur, with the UK's Climate Projections showing that the UK as a whole is likely to	modes, encouraging uptake of EVs (for example 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.	

[12] DUKES 2024 Chapter 5
[13] electric-vehicle-strategy-2021.pdf

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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.		
Adaptation to a changing climate and flooding Current observations indicate that the UK is continuing to warm. In 2024, the UK annual mean temperature was 9.78°C, 0.64°C above the 1991-2020 long-term average and the fourth warmest year for the UK in the series from 1884, 2023 being the second warmest. The minimum temperature in particular was above average, with a mean of 6.32°C, 0.79°C above average for the UK and the equal-warmest annual minimum temperature on record. Eight of the 12 months of the year saw temperatures above average, with February the second warmest on record15. In the most recent 'State of the UK Climate' issued by the	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	Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through

[15] Met Office (2024) *Annual Assessment – 2024*. Available: https://www.metoffice.gov.uk/research/climate/maps-and-data/summaries/index

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Royal Meteorological Society for 2023, it states that the decade of 2014-2023 has been on average 0.42°C warmer than the 1991–2020 average and 1.25°C warmer than 1961–1990[16]. Annual precipitation has increased across the UK in the last few decades. For the decade of 2014–2023, UK winters have been 9% wetter than 1991–2020 and 24% wetter than 1961–1990, with smaller increases in summer and autumn and none in spring. Rainfall in 2023 was 113% of the 1991–2020 average. 2023 was the seventh wettest year on record for the UK in the series from 1836, with March, July, October and December all top-ten wettest months in the UK monthly rainfall series from 1836, the first year this has occurred for separate months. These general trends are expected to be similar in the plan 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 area, there are flood management plans 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 have been 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	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.	reducing the risk of flooding

[16] Royal Meteorological Society (2024) *State of the UK Climate 2023.* Available: https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.8553

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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 generally 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; and • Working with new developments to ensure effective flood management. It is reported that in the North West 9.5% of national properties are in areas at high flood risk. 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 works (such as increased run-off). In relation to transport infrastructure, there is a direct flood risk to the infrastructure itself, for example 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.		

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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; and • 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; and • Increased disruption to operations, for example lift of aircraft reduced through higher temperature. **Likely evolution of the baseline** 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.		

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Cultural Heritage Whilst there are no World Heritage sites within the Plan Area, there are three within the North West region: Frontiers of the Roman Empire (Hadrian's Wall); The English Lake District; and Jodrell Bank Observatory. Such landmarks are legally protected by an international convention administered by UNESCO for their cultural or historical significance. 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 within the Plan Area are as follows: • Listed Buildings – 5,540 • Registered Parks and Gardens – 38 • Scheduled Monuments – 142 • Registered Battlefields – 0 • Listed buildings on Heritage at Risk – 42 • Protected Wrecks – 0 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.	LTP should aim to protect and preserve designated and non-designated heritage assets and their contexts and settings. Transport related development / infrastructure should be sensitively designed to be sympathetic to its existing character and quality and opportunities 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.	Protect and enhance cultural heritage assets and their settings, and the wider historic environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings.

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Likely evolution of the baseline Stable / Declining - Designated heritage assets benefit from protection that will continue without the LTP. However, there is a risk of decline including through uncoordinated and piecemeal development resulting in the successive erosion of the number and integrity of the region's cultural heritage assets.		
Landscapes and townscapes The Plan Area covers a large area containing a wide variety of landscapes ranging from remote hills and forests to an extensive coastline forming its western border. It is an area of great contrasts with large urban centres with a legacy of historic industrial buildings juxtaposed with the exposed uplands of the West and South Pennine Moors and the vast, wild mudflats of Morecambe Bay. The Forest of Bowland is the most extensive upland area, remote from most urban settlements, surrounded by undulating farmland and bordered by the pastures and woodlands of the Ribble and Lune valleys. These valleys lead down to the coastal plain with its intensive grasslands, arable fields and the drained horticultural landscape of the mosslands.[17] The northeast of the Plan Area intersects with the Yorkshire Dales National park which has dozens of waterfalls and some great peaks including Yorkshire Three Peaks of Whernside, Ingleborough and Pen-y-Ghent. The National Park is also designated as an International Dark Sky Reserve (IDSR).	The LTP should seek to preserve and enhance the character of the Lancashire areas landscape and townscape by ensuring that its integrity and valuable 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,	Protect and enhance the character and quality of landscapes and townscapes and visual amenity.

[17] Landscape strategy - Lancashire County Council

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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 Lancaster, Burnley or Preston. There are 13 National Character Areas within and intersecting The Plan Area. 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); Forest of Bowland; and Arnside & Silverdale. There are approximately 160 Conservation Areas in 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.	for example 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 either 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 scheme should take account of relevant guidance for the Conservation Area / townscape character area.	

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Land use, soil and contaminated land Land uses across the North West is predominately rural with approximately 9% considered developed land[18] with a large portion of the region, 48%, classified as agriculture. The more urbanised areas include Preston, Blackpool, Blackburn and Burnley 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 West 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. 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	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	Protect, enhance and promote geodiversity Protect soil resources and avoid and contamination

[18] UK Government (2022) *Land use statistics: England 2022.* Available: https://www.gov.uk/government/statistics/land-use-in-england-2022/land-use-statistics-england-2022

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likely to be only a very small fraction of the overall number of potentially contaminated sites. In terms of the geology in the Plan Area, two major phases of earth movements, the Variscan and Alpine Orogenies (mountain-building periods) are largely responsible for producing the dominant fold and fault structures in Lancashire. The rocks exposed at the surface are of Carboniferous and Permo-Triassic age, and these are largely blanketed by post-glacial superficial deposits such as alluvium, peat and till. All these are underlain by older rocks that are only revealed by borehole and geophysical data. The structure of this older, Lower Palaeozoic basement was determined by the Caledonian Orogeny and is known to have influenced that of the overlying, younger rocks.[19] **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.	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. LTP should seek to avoid land that is covered by Mineral Safeguarding Area designations, to prevent the sterilisation of key mineral resources.	
Water Resources & Water Quality	The LTP should seek to prevent pollution of water bodies (including	Protect and enhance the

[19] The Geology and Landscapes of Lancashire | GeoLancashire

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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, are looking at a shortfall of nearly 5 billion litres of water per day between the sustainable water supplies available and the expected demand[20]. 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[21]. 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 two RBDs of relevance to the Plan Area are the North West and Humber 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 (217 for North West and 458 for Humber). Transport continues to be a polluter for each of these basins but is not a main polluter for any with 'physical modifications', pollution from waste water and pollution	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 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	water environment

[20] UK Government (2024) *A summary of England's revised draft regional and water resources management plans.* Available: https://www.gov.uk/government/publications/a-review-of-englands-draft-regional-and-water-resources-management-plans/a-summary-of-englands-draft-regional-and-water-resources-management-plans

[21] Environment Agency (2021) *Updating the determination of water stressed areas in England.* Available: https://assets.publishing.service.gov.uk/media/60def659d3bf7f7c33274649/Updating_the_determination_of_water_stressed_areas_in_England_-_consultation_response_document.pdf

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from 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)[22]. 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 plan area there are 17 Drinking Water Safeguard Zones for Surface Water. There are no Drinking Water Safeguard Zones for Groundwater located within the plan area. **Likely evolution of baseline** Declining – according to the Environment Agency, water quality in the UK is declining, with all groundwater and surface water in England being polluted. Urban and transport run off 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.	of the aims of the WFD and how this can realise these, as well as other wider, benefits and objectives.	

[22] New Civil Engineer (2024) *Road runoff pollution causing 'catastrophic damage' to UK's waterways*. Available: https://www.newcivilengineer.com/latest/road-runoff-pollution-causing-catastrophic-damage-to-uks-waterways-09-07-2024/#:~:text=The%20report%20states%20that%20there,per%20the%20Water%20Framework%20Directive.

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
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 42% of final energy consumption in 2023. Whilst this was the only sector to see a year-on-year increase, it was still lower than the energy consumption in transport in 2019, the last full year before the Covid-19 pandemic. Despite road and air consumption increasing 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's roads increased by 8.8% between 2021 and 2022. Traffic in 2022 was	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, for example 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). Appropriate management and maintenance of transport infrastructure can meet waste and resource goals as well as a range of other objectives.	Promote sustainable use of resources and natural assets including maximising the use of alternative, secondary and recycled materials, reducing the level of waste generated.

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
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 county 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 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 In 2022, the Plan Area had a provisional gross domestic product (GDP) total of £45.148 billion, which was the third largest of the five ITL2 sub-regions in the North West region, behind Greater Manchester (£99.714 billion) and Merseyside (£45,413 billion).	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	Promote economic growth and job creation, and improve access and connectivity to

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Lancashire County Council is by far the largest employer in the county, whilst of the various NHS organisations in the county the Lancashire Teaching Hospitals NHS Foundation Trust has the most staff. In the private sector, BAE Military Air Solutions is by a very large margin the biggest employer. Other large private sector employers in the county include Booths and Westinghouse Springfields. In the Plan Area, the median gross annual earnings for residents (all employees) was £29,431, 6.9% lower than the UK. This was an increase of 8.3% over the year between April 2023 and 2024. The GVA results show how Lancashire struggles to keep pace with national rates of change, and the employment figures emphasise how the county is under-represented in some of the high value financial and professional service sectors. Some of the most significant challenges facing the Plan Area is reminiscent of other rural areas across the country, these include an ageing population alongside challenges around accessing services and meeting housing demand. Between September 2024 and November 2024 76.9% of the population across the North West of England were economically active. In this period, 4.2% of the population of working age were unemployed, which is lower than the national rate (4.5%). North West region have a high proportion of residents working in high level occupations (50.5%) which is less than the England average (53.1%). Where professional occupation was the largest with 25.4% of the population classified as professional followed by 15.2% as	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 the Lancashire areas 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	jobs and skills for all

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
associate professional occupations. The proportion of residents with qualifications to Level 4 and above across the region is 44.4%, which is less than England (47.1%). **Likely evolution of the baseline** Uncertain – while Plan area will likely remain a good 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. The ongoing changes to working practices exacerbated by Covid-19 such as 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.	role in enhancing the visual appeal of transport infrastructure and help to encourage new inward investment, as well as help to retain high skilled labour.	
Patterns of land use and transport Overall Lancashire has significant urban areas with an approximate density of 512 people/km2 which is significantly higher than the UK density but lower than the regional (North West) levels. The density across Lancashire ranges across the local authorities with the more rural regions like Ribble Valley at a density of only 111 people/km2 while one of the major cities in the area, Blackpool, has a density of 4,092 people/km2. Lancashire covers 3,075km2. It is one of the most populous and urbanised areas in the UK but has some areas of rural land. Strategic rail connections exist within the plan area, connecting areas such as Lancaster, Preston and Wigan and Blackburn and Burnley. The M6, M55, M58 and M65 motorways run through the plan area and	The LTP should support a co-ordinated approach to land use (including development of housing) and transport planning across the county 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 Lancashire area. Promote fairness and equity in rural connectivity

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
there's a number of main roads in the plan area, including the A59, A646 and the A6. Within the plan area there are two active ports, Heysham and Lancaster. There are two airports within the plan area, the Warton Aerodrome in Preston and Blackpool airport. Car usage has risen in the region with the percentage of households with one or more cars or vans in Lancashire is 79.6%, in Blackburn with Darwen it is 73.1% and in Blackpool it's 66%. The 2021 census also indicates that 40.1% of people in Lancashire, 47.7% of people in Blackburn with Darwen and 53% of people in Blackpool of those working travel less than 10km to work. In Lancashire less than 20% of people walk or cycle to work whereas 59.9% use private vehicles. In Blackburn with Darwen less than 20% of people walk or cycle to work whereas 62.6% use private vehicles. In Blackpool less than 20% of people walk or cycle to work whereas 51.7% of people use private vehicles. **Likely evolution of the baseline** Stable / Uncertain – The plan area will likely remain a relatively urban region with most of its population centred around urban areas like Blackpool, Blackburn and Preston. 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.		
Population and Health	The LTP should seek to provide accessible and affordable	Improve health and well-being

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
The total population across the Plan Area is approximately 1,570,373 people with the largest settlements being Blackpool, Blackburn and Preston. Life expectancy in Lancashire, Blackburn with Darwen and Blackpool is lower than the national average for both men and women. The average life expectancy at birth in 2020 to 2022 in Lancashire was 77.8 years for males and 81.8 for females. The average life expectancy at birth in 2020 to 2022 in Blackburn with Darwen was 75.2 years for males and 80.0 for females. The average life expectancy at birth in 2020 to 2022 in Blackpool was 73.4 years for males and 79.0 for females. The national average is 78.6 years for males and 82.6 for females. The healthy life expectancy, which is 61.5 for women and 60.5 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 Lancashire 4.0% of people claimed out of work benefits, Blackburn with Darwen it was 6.4% and in Blackpool it was 6.1%. The national average is 4.1%. In 2023, the proportion of the population reported to have a long term Musculoskeletal (MSK) problem was 21.0% in Lancashire, 18.0% in Blackburn and Darwen and was 27.5% in Blackpool. Lancashire and Blackpool have both higher MSK rates than the national average of 18.4%, however Blackburn and Darwen's rate is lower. The proportion of people with a long-term illness or disability, categorised under the Equality Act in Lancashire it's 19.3%, in Blackburn with Darwen it's 18.5% and in Blackpool it's 25.1% which is greater than England (17.3%).	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.	for all citizens and reduce inequalities in health

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Across Lancashire 7.5% of the population has diabetes, in Blackburn with Darwen it's 9.3% and 9.0% in Blackpool which is on par with the national average. Lancashire has a higher rate of adult smokers at an average of 23.2%, Blackburn with Darwen has a rate of 28.7% and Blackpool has a rate of 20.6%, all higher than England at 11.6%. In the year ending the percentage of people who said they were physically inactive (less than 30 minutes of moderate physical activity a week) in Lancashire was 26.6%, in Blackburn with Darwen it was 31.3% and in Blackpool it was 33.3% The percentage of adults that are classified as overweight or obese in Lancashire is 65.7%, in Blackburn with Darwen it's 60.9%, and within Blackpool its 72.1% compared to the average of 64.0% for the country. Lancashire has a lower mortality rate from cancer in under 75-year olds compared to the national average whereas Blackburn with Darwen and Blackpool both have a higher mortality rate than the national average. The under 75 mortality rate from cancer (2022/2023) in Lancashire is 130.0 per 100,000 people, in Blackburn with Darwen it is 154.0 per 100,000 people and in Blackpool it is 182.4 per 100,000 people. The under 75 mortality rate from cardiovascular diseases (2022/2023) in Lancashire, Blackburn with Darwen and Blackpool is all higher than the national average of 77.4 per 100,000 people. In Lancashire the rate is 91.8 per 100,000 people, in Blackburn with Darwen it is 102.1 per 100,000 people and in Blackpool it is 136.2 per 100,000 people.		

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
Likely evolution of the baseline Population levels are likely to continue to rise. 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, though it is noted that there are uncertainties over life expectancy increases in recent years. Recent trends have shown a rapid increase in migration to the UK and is projected to be the main driver of population growth within the UK. It is unclear whether the county will be particularly affected by the rise of migration in comparison to the levels of the rest of the country.		
Population and Equalities In Lancashire under 15-year-olds make up approximately 16.8% of the population, whilst 15- to 64-year-olds make up approximately 62.3%. Older people (those aged 65 years and over), make up 20.7% of the county's 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 Lancashire, mirrors the English proportions. Gender-based violence in public space (for example 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.	The LTP should aim for all citizens the opportunity to access transport and related services that come with this. The Equality 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.	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
The Department for Transport undertook a Protected characteristics and public transport perceptions and safety study in 2024 which noted that more people felt safe than unsafe when travelling on public transport, although attitudes depend on whether journeys were made after dark or not. The research found that age played a key influence on views towards public transport, noting that older people felt more positive about personal safety on public transport than younger age groups. There was considerable variation about the risk of discrimination which was of greater concern to people from ethnic minority backgrounds, LGB+ respondents and those with health conditions[23]. Of note, the concern over personal safety more than doubles if people consider travelling on public transport after dark and a majority of the group surveyed had at least some concerns of harassment and violence. In 2021, 8.5% 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%. 88.9% of people in Lancashire identified their ethnic group within the "White" while 1.6% 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%. 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.	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 sex, 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.	

[23] https://assets.publishing.service.gov.uk/media/66e04df64dd910b7e335cdf9/perceptions-personal-safety-transport.pdf

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
In 2021, 31.5% of Lancashire residents reported having "no religion", while the largest supported religious group was Christianity at 54.7% of people. Deprivation is dispersed across England. 61% of local authority districts contain at least one of the most deprived neighbourhoods in England. Lancashire has 51.9% households deprived in one or more dimension, which is slightly higher than the national average of 51.6%. **Likely evolution of the baseline** Uncertain – it is unclear how economic uncertainties will impact on the diversity of the county, though it is considered that Lancashire will likely remain less diverse than the UK. It is anticipated that deprivation across the area will remain similar to UK, however on the whole it is anticipated that the county will improve in terms of wealth in relation to the rest of the UK, but increased deprivation could be manifested in pockets. Poverty levels in the UK were similar to pre-pandemic levels in 2023 but have increased in 2024. It is unclear whether the levels of poverty will continue increasing.		
Population and Crime Lancashire has a lower crime rate than England with 84.3 crimes recorded per 1,000 people in comparison to England which has 87.0 crimes per 1,000 people. The most common recorded crime across the plan area was classified as violence against the person at 35.3 per 1000 people, followed by theft offences at 25.0 per 1000 people. There were an estimated 9.5 million	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 /	Improve health and well-being for all citizens and reduce inequalities in health

Key sustainability Issue	Implications / Opportunities for LTP	ISA Objective
incidents of headline crime in the year ending September 2024 which is 12% higher than the year ending September 2023. In 2023, there were 2,762 reported road collisions across the region, of which 35 were fatal. In respect of hate crime, official data from 23/24 shows that there has been a decrease in hate crime of 2%. While variations in hate crime over the last 5 years from 2024 have been mainly driven by changes in crime recording, there are notable spikes in hate crime that follow certain events including the EU Referendum, Ukraine and Isreal wars and terrorist attacks. Of note race related hate crimes make up 65% of the total. Religious hate crimes have seen a slight increase in Lancashire. There were 445 hate crimes linked to sexual orientation, 310 linked to disability and 104 to transgender identity in 2023/24. **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. Crime against individuals and households has generally decreased over the last 10 years with some notable exceptions, such as sexual assault. Overall, it is anticipated that Lancashire will continue to have a lower crime rate relative to other parts of England. However, the LTP should still 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	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
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.		

6.4 Population and Health

As set out in Section 2.3, 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 B) for the Lancashire area 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.

Consideration of wider and vulnerable groups holds particular merit for transport planning owing to the compounding impacts associated with transport related social exclusion (TRSE). TRSE is particularly likely to impact those on low incomes and in insecure work, those with disabilities and long term health conditions, and those with caring or childcare responsibilities[24]. These population groups face greater constraints on their transport choices, greater consequences from transport issues, and greater needs to travel in ways that are not well served by transport systems.

[24] https://data.transportforthenorth.com/portal/apps/storymaps/stories/f9763ffd85544332b84fc48aa0e9b0b4

Table 6-2 - Lancashire Vulnerable Groups

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan 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 isolation, 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 Plan Area had an estimated population of 1,570,373 in 2023. 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, including the older age groups with 20.4% of the population being aged 65 years and over, slightly higher than the England average of 18.3%.
Sensitive Group - Families with children and adolescents, (pregnant women, babies,	Residential houses, community services and facilities, open space, greenspace and recreational facilities, PRoW, local footpaths and cycleways,	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[25] and when	Yes – within the population of the Plan Area children within the ages of 0 – 15 make up 18.3% of the population, similar to the English average of 18.5%.

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

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan area
children and adolescents)	Schools nurseries, day care centres, residential houses	using public transport and related infrastructure. Hence, children and adolescents as pedestrians[26] and cyclists are at elevated risk from danger distributed by motorised transport. Furthermore, children are more sensitive than adults to air pollution[27], noise[28], odour[29] and other environmental factors and their bodies and minds are less able to deal with them. Particularly susceptible children are those from low-income[30] and/or black, Asian and minority ethnic backgrounds[31] and/or living in deprived areas.	
Sensitive Group – People who are physically or	Residential houses, retirement / Care homes, community services and	Elderly people constitute a sensitive group as they are more sensitive than young and middle-aged adults. Generally, the older people are, the	Yes – the population in Plan Area in the age range 65+ is currently 20.4%. Numbers in

[26] Child Accident Prevention Trust (2013) Child death from road traffic accidents (http://makingthelink.net/child-deaths-road-traffic-accidents)
[27] World Health Organisation (2018) Air pollution and child health: prescribing clean air (https://www.who.int/ceh/publications/air-pollution-child-health/en/)
[28] World Health Organisation Data and statistics (http://www.euro.who.int/en/health-topics/environment-and-health/noise/data-and-statistics)
[29] Agency for Toxic Substances and Disease Registry (2015, October) (https://www.atsdr.cdc.gov/odors/faqs.html)
[30] 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)
[31] Parliamentary Office of Science and Technology (2007, January) (https://www.parliament.uk/documents/post/postpn276.pdf)

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan area
mentally disadvantaged (elderly people, people with physical disabilities, people with other health conditions or impairments such as those with sensory impairment)	facilities (including health centres / clinics and hospitals), open space, PRoW and local footpaths	slower their movement and reactions and the poorer their hearing[32] and sight. 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[33]. 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. Elderly people can also feel more sensitive when using public transport[34,35]. 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.	this age group are 320,194 and could grow over the coming year as the age range with the most individuals in it is 56 year old age group and in each of the 49 to 59 single year age groups there were more than 21,000 people. 10.3% of the population in the Plan Area are considered to experience normal day to day activities that are limited a lot by a long term disability or health condition, which is

[32] Transport for London (2013, April) Older Pedestrians and Road Safety, Research Debrief (http://content.tfl.gov.uk/older-pedestrians-research-report.pdf)
[33] 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)
[34] 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/)
[35] 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)

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan area
		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 specific arrangements and/or support to access these[36]. 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[37]. The same is true of hypersensitive individuals such as those with asthma[38].	higher than the England and Wales average of 8.5%[40].

[36] 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)
[37] DEFRA UK AIR, Air Information Resource, Effects of air pollution (https://uk-air.defra.gov.uk/air-pollution/effects)
[38] Asthma UK (https://www.asthma.org.uk/advice/triggers/pollution/)
[40] Limiting long-term illness - Lancashire County Council

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan area
		Noise can cause hypertension and cardio-vascular conditions[39]. 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. 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	Yes – the Plan Area is ranked 9/38 on the IMD, which puts it in the 3rd decile. It is ranked 8/38 on the employment domain, with 105,200 people considered to be employment deprived. It is ranked 10/38 on the income domain, with 223,287 people considered to be income deprived. 17 (6%) out of 285 wards in the Lancashire are in the 1% most deprived in England.

[39] 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)

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan area
		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. 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.	In 2022/2023 the number of children in low income families in Lancashire has increased by 19,500 (24.8%) since 2020/21.[41]
Sensitive Group – People from black, Asian 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[42]. 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.	Yes – 10.4% of Plan Area residents identify as Asian, Asian British or Asian Welsh making it the second most common ethnicity. The population of 'Other than white' ethnicities in the Plan Area has risen by 46.0% from 2011 to 2021.[44]

[41] Children in low income families - Lancashire County Council
[42] BME_needs_assessment_final.pdf (derbyshire.gov.uk)
[44] Population by ethnicity and change 2011-21 - Lancashire County Council

Groups	Relevant receptor / medium	Explanation	Are these groups present within the Lancashire / Plan area
		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[43].	

[43] The health of people from ethnic minority groups in England | The King's Fund

6.5 Population and Equalities

As discussed in Section 2.4, in accordance with the Equality Act (2010) Act, EqIA considers there to be nine relevant 'protected characteristics' as follows:

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

The Public Sector Equality Duty (as set out in the Equality Act 2010) is required to produce an annual Equality Information document. Relevant data for protected characteristic groups in the plan area has been summarised in Table 6.3 below.

Table 6-3 - Lancashire Presence

Protected Characteristic	Lancashire / Plan area presence
Age	**Plan Area** The Plan Area 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: 5.3% (English Average 5.4%) Population aged 5 – 15 years: 13.2% (English Average 13.1%) Population aged 16 – 24 years: 10.7% (English Average 10.6%) Population aged 25 – 64 years: 50.8% (English Average 52.4%) Population aged 65 years and over: 20.1% (English Average 18.3%) **Blackburn with Darwen** Blackburn with Darwen 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: 6.5% Population aged 5 – 15 years: 16.3% Population aged 16 – 24 years: 11.6%

Protected Characteristic	Lancashire / Plan area presence
	Population aged 25 – 64 years: 51.1% Population aged 65 years and over: 14.5% **Blackpool** Blackpool 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: 5.2 % Population aged 5 – 15 years: 12.3% Population aged 16 – 24 years: 9.4% Population aged 25 – 64 years: 52.3% Population aged 65 years and over: 20.7% **Lancashire** Lancashire 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: 5.2 % Population aged 5 – 15 years: 12.8% Population aged 16 – 24 years: 10.7% Population aged 25 – 64 years: 50.5% Population aged 65 years and over: 20.8%
Disability	In 2021, 10.4 million people (17.8%) were limited by their daily activities in England and Wales in the UK[45]. The 2021 Census asked a question about whether day-to-day activities were limited by a long-term health condition or disability. **Plan Area** A slightly higher proportion of people living in Plan Area (19.8%) 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%). **Blackburn with Darwen** A slightly higher proportion of people living in Blackburn with Darwen (18.4%) say their day-to-day activities are limited a lot or a

45 https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/disabilityenglandandwales/census2021

Protected Characteristic	Lancashire / Plan area presence
	little by long term health conditions than in England as a whole (17.3%). **Blackpool** A higher proportion of people living in Blackpool (25.1%) 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%) **Lancashire** A slightly higher proportion of people living in Lancashire (19.3%) 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%)
Sex/Gender	Sex/Gender-based violence in public space (for example 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. **Plan Area** Based on ONS Mid-2023 Population Estimates, the Plan Area ratio of males (49%) and females is (51%) is equal to the national average (Males 49% and females 51%). In the Plan Area, males outnumber females from ages 0 to 24. Females outnumber males from 25 to 85+. This is similar to England as a whole where males outnumber females each age group from 0 to 24 and females outnumber males from age 25 upwards. **Blackburn with Darwen** The Blackburn with Darwen ratio of males (49.6%) and females (50.4%) of all ages is moving towards one of equality, which is similar to the national average (Males 49% and females 51%). In Blackburn with Darwen, males outnumber females for each age group from 5 to 24 and 50-64. Females outnumber males in the age groups 0-4,and from 35 to 85+, with the exception of 50-64. This is largely similar to the trend in England as a whole where males outnumber females each age group from 0 to 24 and females outnumber males from age 25 upwards.

Protected Characteristic	Lancashire / Plan area presence
	Blackpool The Blackpool ratio of males (49.4%) and females (50.6%) of all ages is moving towards one of equality, which is equal to the national average (Males 49% and females 51%). In Blackpool, males outnumber females for each year from 0 to 19. Females outnumber males for each age group from 20 to 85+, apart from ages 50 to 64. This is generally similar to England as a whole where males outnumber females each age group from 0 to 24 and females outnumber males from age 25 upwards. **Lancashire** The Lancashire ratio of males (49.1%) and females (50.9%) of all ages is moving towards one of equality, which is equal to the national average (Males 49% and females 51%). In Lancashire, males outnumber females for each age group from 0 to 24. Females outnumber males from ages 25 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.
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. **Plan Area** In the Plan Area, 0.4% of the population has a gender identity different from sex registered at birth but no specific identity given, trans woman or trans man according to the 2021 census. This was the same as the proportion in England as a whole (0.4%). **Blackburn with Darwen** In Blackburn with Darwen, 0.5% of the population has a gender identity different from sex registered at birth but no specific identity given, trans woman or trans man according to the 2021 census.

Protected Characteristic	Lancashire / Plan area presence
	Blackpool In Blackpool, 0.5% of the population has a gender identity different from sex registered at birth but no specific identity given, trans woman or trans man according to the 2021 census. **Lancashire** In Lancashire, 0.4% of the population has a gender identity different from sex registered at birth but no specific identity given, trans woman or trans man according to the 2021 census.
Marriage and Civil Partnership	**Plan Area** In 2021, under half of the people (44.5%) in the Plan Area said they were married or in a registered civil partnership, compared with 47.1% in 2011. The percentage of adults in the Plan Area that had divorced or dissolved a civil partnership increased slightly from 9.9% to 10.0%. In the Plan Area in 2021 36.3% 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. **Blackburn with Darwen** In 2021, under half of the people (45.4%) in Blackburn with Darwen said they were married or in a registered civil partnership, compared with 47.8% in 2011. The percentage of adults in Blackburn with Darwen that had divorced or dissolved a civil partnership had decreased from 9.0% to 8.5%. In Blackburn with Darwen in 2021 37.8% of those aged 16 and over had never been married or in civil partnership. This was similar to the figure in England (37.9%). These figures include same-sex marriages and opposite-sex civil partnerships. **Blackpool** In 2021, under half the people (39.0%) in Blackpool said they were married or in a registered civil partnership, compared with 39.5% in 2011. The percentage of adults in Blackpool that had divorced or dissolved a civil partnership had decreased from 13.1% to 12.5%. In Blackpool in 2021 40.9% of those aged 16 and over had never been married or in civil partnership. This was higher than in the Plan Area (36.3%) and England (37.9%). These figures include same-sex marriages and opposite-sex civil partnerships. **Lancashire**

Protected Characteristic	Lancashire / Plan area presence
	In 2021, under half of the people (45.4%) in Lancashire said they were married or in a registered civil partnership, compared with 50.0% in 2011. The percentage of adults in Lancashire that had divorced or dissolved a civil partnership had increased slightly from 9.7% to 9.8%. In Lancashire in 2021 35.6% of those aged 16 and over had never married or in civil partnership. This was lower than in the Plan Area (36.3%) and England (37.9%). These figures include same-sex marriages and opposite-sex civil partnerships.
Pregnancy and maternity	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 West of England recorded the second most conceptions of 15- to 17-year-olds per 1,000 women – 18.0 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. The prevalence of breastfeeding at 6 to 8 weeks in England increased to 52.7% in 2023 to 2024 compared with 49.2% in 2022 to 2023. In the North West region this figure was lower at 45.9%. **Plan Area** Data for 2022 shows the number of live births in the Plan Area to be 15,109 and for England as a whole it was 577,046. **Blackburn with Darwen** Data for 2022 shows the number of live births in Blackburn with Darwen to be 1,856 and for England as a whole it was 577,046. Blackburn with Darwen has a higher proportion of teenage mothers (1.1%) than in England as a whole (0.7%). **Blackpool**

Protected Characteristic	Lancashire / Plan area presence
	Data for 2022 shows the number of live births in Blackpool to be 1,499 and for England as a whole it was 577,046. Blackpool has a higher proportion of teenage mothers (1.4%) than in England as a whole (0.7%). **Lancashire** Data for 2022 shows the number of live births in Lancashire to be 11,754 and for England as a whole it was 577,046. Lancashire has a similar proportion of teenage mothers (0.7%) 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'. **Plan Area** In 2021, 31.3% of the Plan Area residents reported having 'No religion', up from 19.1% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, higher than the Plan Area. In 2021, 52.6% of people in the Plan Area described themselves as Christian (down from 67.0%) and while 5.4% did not state their religion. While the number of Muslims in the Lancashire-12 area rose by almost 30000 or 53%, the increase was greater in Lancashire at 44,726 from 96600 in 2011 to 141326 in 2021. There were increases in the number of Muslims in all 14 of the Lancashire authorities. In the Lancashire-12 area there are 216 wards where the majority of people identify as 'Christian'. In ten wards there is a majority identifying as 'Muslim'. These are Daneshouse with Stoneyholme and Queensgate in Burnley, Central and Spring Hill in Hyndburn, Bradley, Brierfield East & Clover Hill, Brierfield West & Reedley plus Whitefield & Walverden in Pendle and Deepdale and Fishwick & Frenchwood in Preston. There are seven wards where the majority identify with 'No religion'. Four are in Lancaster: Bulk, Castle, Marsh and University & Scotforth Rural, two in Pendle: Vivary Bridge and Waterside & Horsfield with just one in Preston, this being the City Centre ward.

Protected Characteristic	Lancashire / Plan area presence
	In Blackburn with Darwen there are nine wards where the majority identify as 'Christian', and eight where they identify as 'Muslim'. Of Blackpool's 21 wards 18 have a 'Christian' majority while three, Bloomfield, Brunswick and Claremont mostly identify as having 'No religion'. Hence the total wards identifying as 'Christian' in Lancashire are 243 with 18 as 'Muslim' and ten as 'No religion'. **Blackburn with Darwen** In 2021, 21.1% of Blackburn with Darwen residents reported having 'No religion', up from 13.8% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, higher than Blackburn with Darwen. In 2021 38.0% of people in Blackburn with Darwen described themselves as Christian (down from 52.6%) and while 5.0% did not state their religion. **Blackpool** In 2021, 41.0% of Blackpool residents reported having 'No religion', up from 24.5% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, lower than Blackpool. In 2021 50.8% of people in Blackpool described themselves as Christian (down from 67.2%) and while 5.3% did not state their religion. **Lancashire** In 2021, 31.5% of Lancashire residents reported having 'No religion', up from 19.2% in 2011. In England in 2021 36.7% of the population described themselves as having no religion, higher than Lancashire. In 2021 54.7% of people in Lancashire described themselves as Christian (down from 68.8%) and while 5.4% did not state their religion.
Race	**Plan Area** In 2021, 10.4% of the Plan Area residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 7.9% in 2011. This is higher than the English average of 9.6%. 86.6% of people in the Plan Area identified their ethnic group within the 'White' category (compared with 90.4% in 2011), while 1.6% 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. **Blackburn with Darwen** In 2021, 35.7% of Blackburn with Darwen residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh'

Protected Characteristic	Lancashire / Plan area presence
	category, up from 28.1% in 2011. This is significantly higher than the English average of 9.6%. 60.4% of people in Blackburn with Darwen identified their ethnic group within the 'White' category (compared with 69.2% in 2011), while 1.7% identified their ethnic group within the 'Mixed or Multiple' category. The proportion identifying as 'Black, Black British, Black Welsh, Caribbean or African was 0.9%. According to the 2021 Census, the total population of England and Wales was 59.6 million, and 81.7% of the population was white. **Blackpool** In 2021, 2.6% of Blackpool residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 1.6% in 2011. This is lower than the English average of 9.6%. 94.7% of people in Blackpool identified their ethnic group within the 'White' category (compared with 96.7% in 2011), while 1.6% 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. **Lancashire** In 2021, 8.1% of Lancashire residents identified their ethnic group within the 'Asian, Asian British or Asian Welsh' category, up from 6.1% in 2011. This is lower than the English average of 9.6%. 88.9% of people in Lancashire identified their ethnic group within the 'White' category (compared with 92.3% in 2011), while 1.6% 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.
Sexual Orientation	**Plan Area** 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 Plan Area found that 1,125,736 people (90.1%) identified as straight or heterosexual and 36,612 (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')

Protected Characteristic	Lancashire / Plan area presence
	Blackburn with Darwen The 2021 census for Blackburn with Darwen found that 107,093 people (89.6%) identified as straight or heterosexual and 2,523 (2.0%) identify as gay or lesbian, bisexual, or other (LGB+). **Blackpool** The 2021 census for Blackpool found that 102,898 people (88.4%) identified as straight or heterosexual and 5,692 (5.0%) identify as gay or lesbian, bisexual or other (LGB+). **Lancashire** The 2021 census for Lancashire found that 915,742 people (90.4%) identified as straight or heterosexual and 36,612 (3.0%) identify as gay or lesbian, bisexual, or other (LGB+).

6.6 Rural Population

As discussed in Section 3.6, the term 'rural' for the purposes of this assessment aligns with that of the official Rural-Urban Classification for England[46]. This 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.

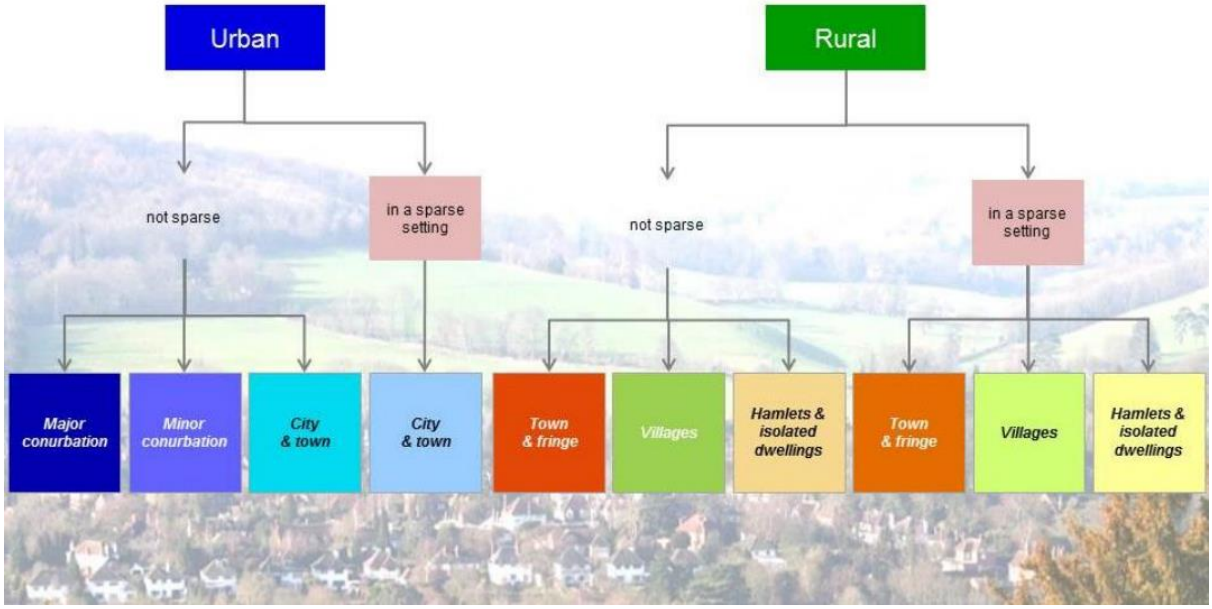
For the purposes of this report the 2011 Rural-Urban Classification for output areas in England has been used[47].

Spatial pattern of Rural and Urban areas

Appendix C contains a figure displaying the 'rurality' of the Plan Area. This is shown at the Lower Super Output Area (LSOA) scale and has been split into urban and rural areas, both sparse and not sparse. The hierarchal structure of this classification is based on the categories defined in the Statistical Digest of Rural England[48], which is presented as Figure 6-1 below.

[46] Defra / Government Statistical Service (2013) Rural Urban Classification - GOV.UK (www.gov.uk)
[47] 2011 Local Authority Rural Urban Classification - GOV.UK (www.gov.uk)
[48] 07_Statistical_Digest_of_Rural_England_2022_August_edition.pdf (publishing.service.gov.uk)

Figure 6-1 - Hierarchy of the 2011 Rural-Urban Classification



Rural areas in Lancashire face a variety of challenges that impact development and quality of life. These issues range from economic and social disparities to infrastructure and service provision.

Several rural areas are noted to face significant deprivation challenges. They include rural communities across Pendle and Hyndburn which suffer in respect of health, income and employment[49]. The surrounding rural areas of Skelmersdale face deprivation challenges, particularly in terms of access to services and employment opportunities and some rural parts of Chorley experience deprivation, especially in terms of access to healthcare and education. In North Lancashire, rural parts of the Lune Valley face deprivation issues, particularly related to income and employment. In South Ribble, the rural outskirts of Leyland also experience deprivation, with challenges in accessing essential services and employment.

Addressing these issues requires targeted interventions to improve infrastructure, enhance access to services, and support economic development in these rural communities.

A review of Indices of Multiple Deprivation (IMD) 2019 statistics notes that Lancashire ranks 78th out of 151 upper-tier local authorities in England for overall deprivation. Within Lancashire, several rural areas fall into the 10% most deprived localities in England

Summary of Specific Deprivation Indicators

- **Income Deprivation**: Many rural areas in East Lancashire, such as parts of Pendle and Hyndburn, experience high levels of income deprivation;

[49] 2019 deprivation analysis - Lancashire County Council

- **Health Deprivation**: Rural communities in areas surrounding Chorley and Lancaster face significant health deprivation, with limited access to healthcare services;
- **Employment Deprivation**: Rural parts of West Lancashire, including areas around Skelmersdale, have higher unemployment rates compared to urban centres;
- **Education and Skills Deprivation**: Some rural areas in South Ribble struggle with lower educational attainment and limited access to educational resources;
- **Fuel Poverty**: A significant number of households in rural Lancashire are affected by fuel poverty, which is defined as spending a high proportion of income on energy costs; and
- **Social Mobility**: Rural areas in Lancashire generally have lower social mobility compared to urban areas, meaning residents from disadvantaged backgrounds have fewer opportunities to improve their socio-economic status.

Table 6-4 - Population Density for Plan Area

Local Authority	Area (km²)	Population	Population Density (people per km²)
Blackburn with Darwen	137	157,500	1,149
Blackpool	35	142,710	4,092
Burnley	111	96,440	871
Chorley	203	119,350	589
Fylde	166	83,850	506
Hyndburn	73	84,260	1,154
Lancaster	567	145,560	257
Pendle	169	97,040	573
Preston	142	156,410	1,099
Ribble Valley	583	64,470	111
Rossendale	138	71,540	518
South Ribble	113	113,550	1,004
West Lancashire	347	120,700	348
Wyre	282	116,990	415

Local Authority	Area (km²)	Population	Population Density (people per km²)
Lancashire	3,066	1,570,370	512
North West	14,108	7,600,130	539
England	130,310	57,690,320	443

Source: Lancashire County Council

Table 6.4 shows the population density of each local authority within the LTP. Blackpool has the highest population density within the LTP, due the authority's small total area which is predominantly urban. Other authorities with high densities are Blackburn with Darwen, Hyndburn, Preston and South Ribble. Ribble Valley has the lowest density, due to the largely rural area and sparse population. Lancaster, West Lancashire and Wyre are other authorities with low population densities.

Table 6-5 - Rural Urban Classification for Local Authorities within the LTP

Local Authority	Rural Urban Classification (6 Fold)	Rural Urban Classification (3 Fold)
Blackburn with Darwen	Urban with City and Town	Predominantly Urban
Blackpool	Urban with City and Town	Predominantly Urban
Burnley	Urban with City and Town	Predominantly Urban
Chorley	Urban with Significant Rural	Urban with Significant Rural
Fylde	Urban with City and Town	Predominantly Urban
Hyndburn	Urban with City and Town	Predominantly Urban
Lancaster	Urban with Significant Rural	Urban with Significant Rual
Pendle	Urban with City and Town	Predominantly Urban
Preston	Urban with City and Town	Predominantly Urban
Ribble Valley	Mainly Rural	Predominantly Rural
Rossendale	Urban with City and Town	Predominantly Urban
South Ribble	Urban with City and Town	Predominantly Urban
West Lancashire	Urban with Significant Rural	Urban with Significant Rural
Wyre	Largely Rural	Predominantly Rural

Source: Office of National Statistics

Table 6.5 shows local authorities are generally classified as more urban with nine authorities within the LTP area being classified as predominantly urban (≥74% of population lives in urban areas). Only Ribble Valley and Wyre are considered to be rural local authorities (≥50% of the resident population lives in rural areas or rural-related hub towns). Chorley, Lancaster and West Lancashire are neither completely urban or rural, comprising of large areas of both (26% to 49% rural including hub towns).

Table 6-6 - Rural Urban Classification for LSOAs within Plan Area

Local Authority	% of LSOAs classified as Urban major conurbation (Urban)	% of LSOAs classified as Urban City and Town (Urban)	% of LSOAs classified as Rural Town and Fringe (Rural)	% of LSOAs classified as Rural Village and Dispersed (Rural)
Blackburn with Darwen	0.0%	97.8%	1.1%	1.1%
Blackpool	0.0%	100.0%	0.0%	0.0%
Burnley	0.0%	96.7%	1.7%	1.7%
Chorley	0.0%	69.7%	19.7%	10.6%
Fylde	0.0%	82.4%	13.7%	3.9%
Hyndburn	0.0%	90.2%	9.8%	0.0%
Lancaster	0.0%	73.3%	18.6%	8.1%
Pendle	0.0%	87.7%	8.8%	3.5%
Preston	0.0%	94.0%	1.2%	4.8%
Ribble Valley	0.0%	35.0%	37.5%	27.5%
Rossendale	2.4%	95.2%	2.4%	0.0%
South Ribble	0.0%	98.5%	0.0%	1.5%
West Lancashire	38.4%	24.7%	21.9%	15.1%
Wyre	0.0%	73.9%	17.4%	8.7%

Source: DEFRA

Ribble Valley shows the highest land proportion that is rural, as the majority of LSOAs are classified as 'rural', with rural areas and comprising of the majority of the Local Authority. Ribble Valley has the highest proportion of LSOAs classified as 'Rural Town and Fringe' and 'Rural Village and Dispersed'. West Lancashire has the next highest proportion of 'rural' LSOAs, despite having the highest proportion classified as 'Urban major conurbation' and has the most spread

distribution of 'rural' and 'urban' LSOAs. Blackpool is the only authority entirely 'urban', while the majority of Blackburn with Darwen, Burnley and Preston are majority urban, with small pockets of rural town and fringe and rural village and dispersed areas. Hyndburn and Rossendale are majorly urban with small pockets of only rural town and fringe, whereas South Ribble is majorly urban with small pockets of areas only classified as rural village and dispersed.

Table 6-7 - Population Density and Rural Urban Split by Population (based on 2011 rural/urban classification, using population figures from mid-2022 estimates)

Local Authority	Population	Population Density (people per km²)	% Urban	% Rural
Blackburn with Darwen	157,500	1,149	95%	5%
Blackpool	142,710	4,092	100%	0%
Burnley	96,440	871	95%	5%
Chorley	119,350	589	69%	31%
Fylde	83,850	506	78%	22%
Hyndburn	84,260	1,154	90%	10%
Lancaster	145,560	257	70%	30%
Pendle	97,040	573	86%	14%
Preston	156,410	1,099	94%	6%
Ribble Valley	64,470	111	33%	67%
Rossendale	71,540	518	95%	5%
South Ribble	113,550	1,004	98%	2%
West Lancashire	120,700	348	62%	38%
Wyre	116,990	415	71%	29%

Source: Office of National Statistics

Ribble Vally is the only Local Authority within the LTP to have a higher percentage of its residents living in a rural area. The authority with the second highest percentage of its population living in a rural area is West Lancashire. Blackpool is the only authority to have 100% of its residents living in an urban area. Other Local Authorities to have a large percentage of urban residents are Blackburn with Darwen, Burnley, Rossendale and South Ribble.

Method of travel to work

Current trends and predictions gathered in respect of transport modes to work across the Lancashire region and across the UK more generally via traditional methods (i.e. Census 2011 and 2021 data) may neglect or fail to fully capture the impacts the COVID-19 pandemic has had on working and travel patterns. A 2024 Review of COVID-19 implications on transport behaviour[50] highlights that remote working has significantly reduced the frequency of commuting trips and alleviated peak-hour congestion. It notes that people have embraced private modes of transportation, hybrid working has increased and online activities have coexisted with traditional in-person interactions. The review does however note a 'rebound' in public transport utilisation, signifying a stable recovery in this mode of travel

Lancashire County Council summarise methods of travel to work across the area from 2011 census data[51]. The summary notes that motorised forms of transport, usually car or vans, are by far the most frequently used means of travel to work. Of all usual residents aged 16-74 whether in work or not, an average of 38.6% commuted by driving a car or a van to work across the whole of Lancashire. A further 4% were car/van passengers. South Ribble ranked 12th highest nationally with around 47% for car or van commute.

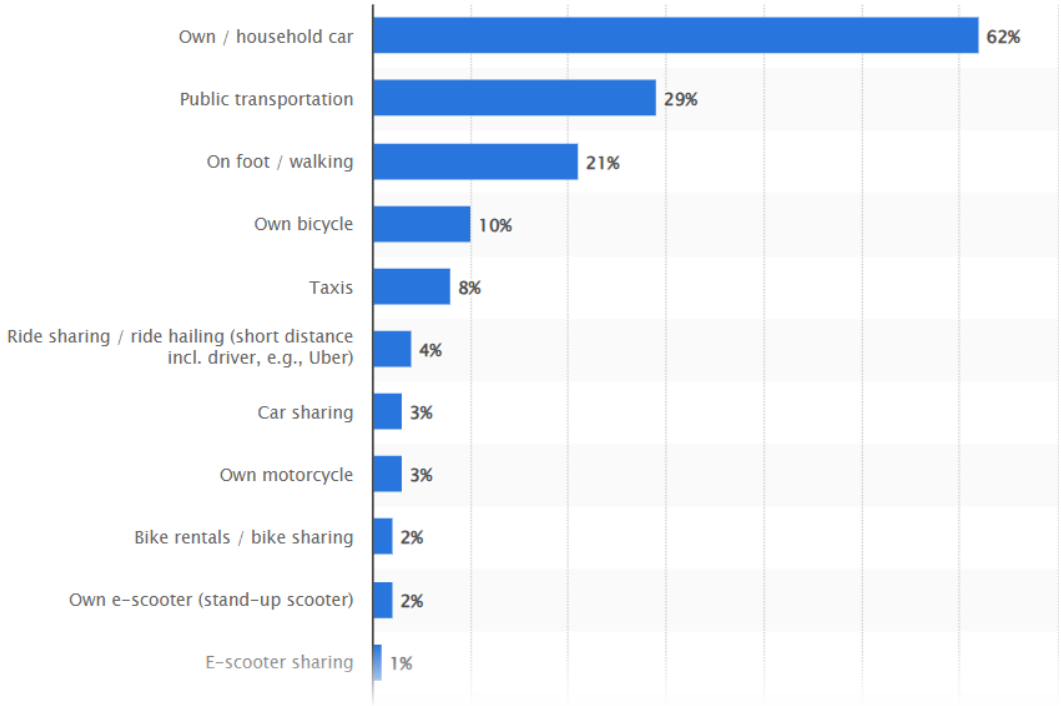
From 2011 census data, around 6.4% of the usual residents in the Lancashire work at or mainly from home. As of January 2025, approximately 16% of workers in Great Britain worked from home exclusively, with a further 25% working from home and travelling to work and 41% travelling to work exclusively[52].

Public transport travel modes were the normal means of travel to work for just 5.0% usual residents in Lancashire. This was significantly lower than the England equivalent of 10.6%, or North West at 7.1%. Commuting by bicycle or on-foot accounted for 7.9% in Lancashire, which was lower than the England average of 8.1%.

As of December 2024 statista[53] reports the following most common modes of transportation for commuting in the UK.

[50] https://www.gov.uk/government/publications/transport-behaviours-traffic-forecasting-and-long-term-impacts-of-covid-19
[51] https://www.lancashire.gov.uk/lancashire-insight/transport/transport-articles-2011-census/method-of-travel-to-work/#:~:text=Summary,%25%20were%20car%2Fvan%20passengers.
[52] https://www.statista.com/statistics/1207746/coronavirus-working-location-trends-britain/
[53] https://www.statista.com/forecasts/997849/most-common-modes-of-transportation-for-commuting-in-the-uk

Figure 6-2 - Most common modes of transportation for commuting in the UK



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 LTP Core Strategy should be aiming to achieve and the areas of sustainability that the LTP Core Strategy is expected to impact upon or have an influence on. The expectation is that even though some objectives may not be within the LTP Core Strategy's direct remit, the LTP Core Strategy should be able to influence the direction of change through setting out clear policies and approaches which could inform the work of the Combined County Authority, the three Local Transport Authorities, 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 LTP Core Strategy.

The ISA objectives for the LTP Core Strategy 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 Core Strategy. It should be noted that, from an assessment perspective, all ISA objectives are considered equally important to be achieved by the LTP Core Strategy and that there is no inherent prioritisation of objectives. The ultimate aim is for the LTP Core Strategy 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 Core Strategy 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 Core Strategy, as it is unlikely that every relevant question can be known at this stage. 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 Core Strategy have been undertaken.

An ISA Framework of 17 objectives and associated decision-making questions has been drawn up. The framework builds upon the framework used to assess the LTP Core Strategy in light of analysis of up-to-date 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 proposed ISA objectives and associated Assessment Aid Questions are presented in Table 7.1. Table 7.2, Table 7.3 and Table 7.4 show proposed EqIA, HIA 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 assessment Sub-Objectives will be considered 'in the round' and a judgement made as to how well that aspect of the LTP Core Strategy being considered performs. This will result in a summary score that will be reported in the main ISA Framework Assessment against the related ISA objective, with appropriate commentary – see below for detail of the application of the ISA Framework.

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 for the LTP

Topic	ISA Objective	Assessment aid questions
Environmental		
Biodiversity	Protect and 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 West's ecological networks (the Nature Recovery Network)? • Protect and enhance priority habitats, and the habitat of priority species?

Topic	ISA Objective	Assessment aid questions
		• 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 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?
Biodiversity	Protect and enhance sites designated for their international importance for	*Will the LTP:*

Topic	ISA Objective	Assessment aid questions
	nature conservation purposes	• 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?
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 Lancashire and the North West? • 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?

Topic	ISA Objective	Assessment aid questions
		• Contribute to meeting relevant statutory targets in the Environment Act 2021?
Air Quality & Noise Pollution	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 Planning Important Areas? • Protect and enhance tranquillity?
Climate	Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	*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?

Topic	ISA Objective	Assessment aid questions
		• 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?
Climate	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?

Topic	ISA Objective	Assessment aid questions
		• 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?
Historic Environment	Protect and enhance cultural heritage assets and their settings, and the wider historic environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings.	*Will the LTP:* • Affect the integrity of designated heritage assets and their settings (such as Scheduled Monuments, Listed Buildings and structures, Registered Parks and Gardens and Registered Battlefields • Harms the character and appearance of a Conservation Area and its setting? • Harm the significance of non-designated heritage assets (for example locally important buildings and archaeological remains, including newly discovered heritage assets) and their settings? • Harm to the significance of heritage assets, for example from the generation of noise, pollutants and visual intrusion? • Maintain or improve access to heritage assets? • Promote transport schemes which tackle traffic congestion in the regions historic villages, towns and cities? • Maintain or allow opportunities to be taken to improve the interpretation, understanding and appreciation of the significance of heritage assets?
Landscape and Visual	Protect and enhance the character and quality of landscapes and townscapes	*Will the LTP:* • Protect or enhance nationally and locally designated landscapes and townscapes and seascapes, plus their settings?

Topic	ISA Objective	Assessment aid questions
	and visual amenity.	• Safeguard areas of 'dark sky' from excessive artificial light at night? • Protect where possible areas noted for tranquillity? • Support the purposes and duty of the Yorkshire Dales National Park? • Conserve, protect and enhance natural environmental assets (for example 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 i.e., 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?
Geodiversity	Protect, enhance and promote geodiversity	*Will the LTP:* • Protect and enhance geodiversity resource? • Protect or enhance SSSIs designated for their geological interest?

Topic	ISA Objective	Assessment aid questions
		• 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)?
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 and / or prevent new areas of contamination? • 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?
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 physical alterations to water bodies?

Topic	ISA Objective	Assessment aid questions
		• Minimise the use of water resources / water consumption? • Protect and enhance 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?
Natural Resources	Promote sustainable use of resources and natural assets including maximising the use of alternative, secondary and recycled materials, reducing the level of waste generated.	*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?

Topic	ISA Objective	Assessment aid questions
		• 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 Plan Areas 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		
	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 or coastal areas? • Support improved availability and accessibility to good quality education, training and employment opportunities, particularly in high unemployment areas?

Topic	ISA Objective	Assessment aid questions
		• 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?
	Support the wider coordination of land use and energy planning across the Lancashire 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? • Minimise cumulative and synergistic effects resulting from the in-combination effects of transport proposals and new development areas?
Social		

Topic	ISA Objective	Assessment aid questions
	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 vulnerable groups? • Promote Access to Greenspace and Green Infrastructure Standards?
	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		
	Promote fairness and equity in rural connectivity	*Will the LTP:*

Topic	ISA Objective	Assessment aid questions
		• Promote sustainable development and rejuvenation of rural and coastal areas? • Increase connectivity via a range of transport modes for rural and coastal communities? • Connect people with nature?

Table 7-2 - HIA Objectives for the LTP

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 (for example 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 (for example playing fields, sports facilities, footpaths etc), particularly for vulnerable groups?

HIA Objective	HIA sub-objectives	Assessment aid questions
		• 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?
Improve health and well-being for all and reduce health inequalities	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 for example 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 (i.e. avoiding digital exclusion)? • Provide transport services that provide appropriate and/or statutory fare structures (for example concessionary fares on public transport services) to ensure the most vulnerable groups in terms of health (children, older), can

HIA Objective	HIA sub-objectives	Assessment aid questions
		afford to use transport options to access healthcare and other key facilities?
Improve health and well-being for all and reduce health inequalities	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 risk for those with hearing or visual impairment when interacting with the transport network?
Improve health and well-being for all and reduce health inequalities	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 health and well-being for all and reduce health inequalities	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?
Improve health and well-being	Protect health by reducing air, noise, odour	*Will the LTP...*

HIA Objective	HIA sub-objectives	Assessment aid questions
for all and reduce health inequalities	and light pollution from transport	• 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 health and well-being for all and reduce health inequalities	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 health and well-being for all and reduce health	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

HIA Objective	HIA sub-objectives	Assessment aid questions
inequalities		community, as well as those who may have difficulty using 'walk, wheel or cycle' (active travel) modes? • Improve facilities at public transport hubs to allow more groups to undertake journeys with confidence and in comfort for example provision of toilet facilities?

Table 7-3 - EqIA Objectives for the LTP

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?

EqIA Objective	EqIA sub-objectives	Assessment aid questions
		• 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, or those with other needs, for example older 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?
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	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 (for example concessionary fares on public transport services)? • Promote use of technology to reduce transport costs for users, for example MaaS, integrated ticketing and smart cards?
Promote greater equality of opportunity for	Improve safety of the transport network (including roads) and	*Will the LTP...* • Ensure safe paths for walking and cycling?

EqIA Objective	EqIA sub-objectives	Assessment aid questions
all citizens, with the desired outcome of achieving a fairer society	reduce the number of accidents and other incidents	• 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 of slight casualties? • Improve the safety of vulnerable road users such as pedestrians, motorcyclists and cyclists?
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	Improve provision of public transport in rural or coastal 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?
Promote greater equality of opportunity for all citizens, with the desired	Reduce severance	*Will the LTP...* • Improve access to essential facilities to reduce any existing severance issues? • Improve accessibility between and within communities?

EqIA Objective	EqIA sub-objectives	Assessment aid questions
outcome of achieving a fairer society		• 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)
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	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 (for example 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
Promote fairness and equity in rural connectivity	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?
Promote fairness and equity in rural connectivity	Enable economic growth, and employment diversification in rural and coastal areas.	*Will the LTP...* • Support diversified economic activities in rural and coastal areas? • Enhance access to employment opportunities? • Improve people's ability to work or run a business from home?
Promote fairness and equity in rural connectivity	Connecting people with nature	*Will the LTP....* • Impact those wishing to visit the countryside or coast 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 alternatives

Two alternative 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); and
- Alternative 2: To implement the proposed LTP. This includes a package of four workstreams and associated policy that aligns with the vision and which represents the desirable improvements to the active travel, public transport and highway networks across Lancashire that will help to realise economic, environmental and social ambitions for the Plan Area. It is to be noted that the mix of schemes required to implement the plan is still being developed and therefore the exact balance of trip lengths, number of trips and proportion etc is not fully known at this stage.

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; and
- New infrastructure, for example road schemes.

It is anticipated that implementing LTP (Alternative 2), compared to BAU, will lead to:

- Fewer trips per person on average through improved digital connectivity/better travel planning but improved connections across the county may lead to an increase in trips per person – these could be made via a range of different modes;
- Shorter average trip lengths within urban areas but longer average trip lengths in interurban journeys as a result of focus on improved connections between areas of LCCA and beyond;
- A higher proportion of trips by walking/cycling/micromobility focused in certain urban areas, however a mode shift from private cars may be limited as car ownership likely to remain high and car use likely to remain a convenient first choice;
- A higher proportion of trips by public transport/shared transport focused in certain urban areas, however a mode shift from private cars may be limited as car ownership likely to remain high and car use likely to remain a convenient first choice;
- A further increase in the proportion of trips by EVs driven by additional charging infrastructure, although the increase is expected to be slight; and
- Additional new infrastructure to support the changes (for example, rail and road schemes, cycle lanes, bus lanes, highway improvements).

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

8.3 Assessing 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 10.

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 Positive	A significantly positive outcome is anticipated
Positive	Minor positive outcome is anticipated
Neutral	This alternative is anticipated to have the same outcome

Negative	Minor adverse outcome is anticipated
Largely Negative	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: Protect and improve air quality; Reduce the impact on environmental noise from transportation sources; and Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target

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. The fraction of mortality attributable to particulate air pollution in 2023 was 4.8% for Blackburn with Darwen, 4.7% for Blackpool and 4.6% for Lancashire, lower than both the North West Region (4.9%) and England (5.2%). While at the national level air quality is generally improving as industrial practices, energy sources and tighter environmental legislation have contributed to reductions in pollutants. Nevertheless, it remains a significant issue in many discrete areas (particularly along roads and in major urban centres) and has significant ongoing issues in respect of health.

As indicated, 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 (AQMAs), many of which have been designated due to high Nitrogen Dioxide (NO_2) and Particulate Matter 10 (PM_{10}) levels. 18 AQMAs have been identified within the Plan Area, all of which have been designated for NO_2. Improving air quality is also a key objective in the Lancashire County Council's Environment and Climate Strategy[54], which specifically identifies the need to reduce emissions from transport by promoting active travel, supporting the transition to EVs and encouraging the use of public transport. At a national level, the UK has adopted ambitious, legally-binding targets to reduce significantly emissions of NOx and four other damaging air pollutants.

[54] https://www.lancashire.gov.uk/media/940761/environment-strategy.pdf

It is also the case that it is anticipated that there will be a steady uptake in low and zero emission vehicles (LZEVs), which will help to improve air quality and slow / reduce the increase in carbon emissions from the transport sector. As of May 2025, there are over 1.5 million fully electric cars in the UK making up approximately 4.5% of all vehicles[55]. Lancashire currently has fewer charge points per capita than the UK average, however the sub-region is actively scaling up infrastructure to meet future demand with a Strategy in place[56]. Congested and slow moving traffic will also still likely be experienced more frequently in this alternative, 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.

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 369 Noise Action Important Areas within the plan area, located predominantly on the local road networks and a small number on the rail network.

As noted by the Committee for Climate Change, domestic transport emissions of road transport account for around a quarter of UK greenhouse gas emissions. Transport is Lancashire's largest single source of greenhouse gas emissions, estimated to represent around 36 per cent of the county's total emissions[57], However, unlike the other high emitting sectors of energy use and industry & commercial sectors, which continue to decrease (reflecting improved energy efficiency and insulation, and cleaner technologies and possibly reduced industrial activity), unsurprisingly, transport emissions have increased since 2015 base levels (with the exception of a dip reflecting reduced travel during COVID-19 lockdowns). Critical to tackling emissions in transport in Lancashire is addressing Lancashire's car dependency, where approximately 70 – 75% of all journeys are made by private car[58], higher than the national average, reflecting the county's mix of rural and semi-urban areas where public transport options are more limited.

With a growth in population and vehicle numbers, as expected with Alternative 1 (BAU), 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 and noise emissions, especially when including the likely diversion of traffic due to congestion onto less appropriate

[55] https://www.zap-map.com/ev-stats/ev-market
[56] the-lancashire-and-blackburn-with-darwen-electric-vehicle-infrastructure-strategy.pdf
[57] https://www.lancashire.gov.uk/council/strategies-policies-plans/roads-parking-and-travel/highways-and-transport-strategy-2023-2025/
[58] Road traffic statistics - Local authority: Lancashire

roads with adjacent housing. Alternative 1 (BAU) is also anticipated to result in new infrastructure such as roads, with no clear focus on new 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 and more rural areas experiencing poor connectivity and low frequency of bus service.

Alternative 2: To implement the proposed LTP

Whilst the LTP Core Strategy includes a wide range of possible measures that would reduce carbon emissions through the Avoid, Shift and Improve approaches, it also includes some measures to support the Stronger Economy and Fairer Opportunities objectives that could increase emissions by increasing road travel. At this stage, the net impact of the LCCA LTP on carbon emissions is uncertain as measures have not been developed in sufficient detail to enable a full assessment of impacts. Impacts on noise and air are also unclear at this stage, with similar potential for positive and negative effects dependant on the measures to be implemented.

It is anticipated that where measures result in the increased use of active travel and public transport, or involve parking and traffic management, integrated planning policy, behavioural change and fleet upgrade, including the uptake of LZEV's, there would be fewer and shorter car trips along with lower emissions per vehicle kilometre. This would also be expected to reduce noise from transportation sources. However, where measures involve improved road conditions and routing options, additional trips generated by growth sites, and increased emphasis on longer-distance connections (for instance inter-regional) rather than local connections there is potential to increase user emissions and associated noise.

It must be noted that despite the proposed policies and measures of the LTP Core Strategy, alternatives often do not provide the motivation for car drivers to change mode. Once they have paid the high upfront costs to own, insure and maintain a car, driving is likely to be the lowest cost and most convenient option for most journeys on a per trip basis, even where attractive alternatives exist, particularly if parking is convenient and low cost. To fully address the air quality and carbon emission challenges in Lancashire, measures that seek to rebalance the cost and convenience of driving could be introduced to bring about significant mode shift and contribute to decarbonisation. However, this would have to be considered to prevent negative impacts on wellbeing and accessibility.

This is summarised in Table 8.2

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

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Protect and improve air quality Reduce the impact on environmental noise from transportation sources Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	Negative	Positive / Negative

Grouped ISA Objectives: 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 LTP area and the UK as a whole is changing. This has profound implications for the transport network, with adverse effects likely from extreme weather events. Examples include the potential for extreme heat / cold to damage rail tracks or rail infrastructure such as electric lines, as well as road surfaces. 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.

It is noted that at present, some communities in the plan area, such as those in more exposed coastal locations (particularly from Silverdale to Birkdale Sands) can be more negatively affected by extreme weather events and in the absence of increased resilience, this isolation would continue or increase. Areas like Fleetwood, Morecambe, and parts of Blackpool are at risk of annual coastal flooding by 2050[59]. Sea level rise is also expected to submerge low lying areas, particularly around the Wyre and Ribble estuaries.

[59] The parts of Lancashire that could be underwater by 2050 | Lancashire Telegraph

In relation to the plan area, the North West River Basin District Flood Risk Management Plan covers the relevant river basin. This flood management plan is at the river basin level, but Lancashire Local Flood Risk Management Strategy has also been developed and identifies key risks in the area. 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 county.

It is therefore considered that continuing with BAU (Alternative 1) will have a negative effect on maximising adaptation and resilience of the transport network to the effects of a changing climate.

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 Core Strategy goes beyond the present approach by more specifically recognising the need to adapt to extreme weather events. This is noted under the policy to deliver sustainable, resilient infrastructure for example through designing spaces to help people and infrastructure cope with higher rainfall and heat. LTP Core Strategy notes the need for 'resilient' infrastructure and ensuring that 'any new schemes and developments are designed to minimise current and future flood and heat risks'. The Plan further encourages 'Green infrastructure' like rain gardens, parks, green roofs, nature corridors and urban planting, and 'blue infrastructure' like wetlands, water storage ponds and coastal infrastructure, which can help manage flooding and reduce heat stress.

However, it is noted LTP Core Strategy may not act towards reducing the driver of climate change i.e. it may not ultimately reduce carbon emissions from transport. Whilst the plan may result in fewer and shorter trips per person through improved digital connectivity / better travel planning, a higher proportion of trips by walking/cycling/micromobility and increased uptake of public transport, the plan recognises that the improved connections may also lead to an increase in trips and length of trips as well as private cars remaining the most convenient first choice. At this stage, the net impact of the LCCA LTP Core Strategy on carbon emissions is uncertain as measures have not been developed in sufficient detail to enable a full assessment of impacts.

On balance, is considered that implementing LTP will have a positive effect on addressing the effects of a changing climate in comparison to continuing under the present approach.

This is summarised in Table 8.3.

Table 8-3 - Resilience alternatives assessment

ISA Objective	Alternative – 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: Protect and 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; and Protect, enhance and promote geodiversity.

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

Across Lancashire there are a wide range of sites designated for nature conservation, as well as valuable ecological networks. The designated sites include those designated for their importance at the very highest levels, including six SPAs, five SACs, four Ramsar sites and 70 SSSIs. 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. 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. Nevertheless key pressures such as habitat loss, air pollution and climate change will continue.

Alternative 2 – To implement the proposed LTP

LTP Core Strategy has a range of implications for biodiversity and potentially sites designated for nature conservation. There will continue to be impacts from transport infrastructure, both during operation but also through development. New infrastructure schemes have the potential to result in the loss of or disturbance to biodiversity and designated sites.

Measures in the LTP Core Strategy which lead to a reduction in traffic levels, for example through digital connectivity and increased active travel in certain areas will minimise effects on biodiversity. This focus away from the use of private vehicles to more sustainable modes should reduce disturbance to designated sites and habitats and reduce the potential for direct strike / road kill. Additionally, where there are reductions in air pollution emissions this may also reduce pollution deposition on valuable habitats. It is however noted that private car use is anticipated to continue to be the most convenient first choice of travel for many, and increased connections within and beyond Lancashire may increase the number of car journeys, ultimately having negative effects on biodiversity and designated sites.

LTP Core Strategy emphasises the need to protect designated sites and a commitment is also made to support Nature Recovery Networks and deliver wider biodiversity net gain across the transport network. There is for example, a focus on 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.

It is considered that implementing LTP will have positive and negative effects on biodiversity through its mixed results in terms of increasing and decreasing car journeys in different areas across Lancashire.

This is summarised in Table 8.4.

Table 8-4 - Habitats, conservation and geodiversity alternatives assessment

ISA Objective	Alternative 1 - Continue under present approach	Alternative 2 – Implement LTP
Protect and enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	Negative	Positive / Negative

ISA Objective	Alternative 1 - Continue under present approach	Alternative 2 – Implement LTP
Protect and enhance sites designated for their international importance for nature conservation purposes Protect, enhance and promote geodiversity.		

Grouped ISA Objectives: Protect and enhance cultural heritage assets and their settings, and the wider historic environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings; and Protect and enhance the character and quality of landscapes, townscapes and visual amenity

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

Lancashire has a wide range of heritage assets that are of international importance. 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 County'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, for example through archaeological discovery, or new interpretations of existing sites. In relation to landscapes, there are a number of national importance in the county and a large number of conservation areas covering a range of building characters and reflecting a diverse array of architectural styles. Many of the county's most exceptional landscape and townscapes benefit from protection through designations that will persist in the absence of the LTP, such as the designation of National Landscape. 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 Core

Strategy contains aspects that are anticipated to help minimise effects. For example, commitment is made to protect the historic environment throughout the design and development of schemes.

In respect of landscapes, LTP Core Strategy notes that measures will be taken to ensure interventions avoid particular landscape or townscape settings, explore opportunities for landscape enhancement where possible and follow appropriate guidance and advice where a scheme would involve physical development within either of the two National Landscapes.

In addition, measures within LTP Core Strategy to reduce the amount of congestion and provide for greater sustainable modes, as well as a focus on place making / public realm etc. will provide a range of opportunities to improve townscapes, the general landscape and the setting of heritage assets. It is however noted that where connections are improved and the number of journeys increase and new infrastructure such as rail or road schemes are introduced there will be potential loss of or disturbance to heritage assets and landscape.

It is considered that implementing LTP will have both positive and negative effect on the protection and enhancement of heritage assets and the wider historic environment, as well as landscapes, townscapes and visual amenity.

This is summarised in Table 8.5.

Table 8-5 - Historic environment and landscape alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Protect and enhance cultural heritage assets and their settings, and the wider historic environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings Protect and enhance the character and quality of landscapes, townscapes and visual amenity	Negative	Positive / Negative

Grouped ISA Objectives: Protect and enhance the water environment; and 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 to maintaining a healthy water environment in the UK at present due to a range of issues such as discharges to water courses from the water supply or agricultural sectors. Transport is also recognised across the UK as being a key source of water pollution, for example through accidental spillage, as well as contaminated road runoff and this would be anticipated to continue in the absence of LTP. 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.

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. Additionally, if the number and length of journeys increase, with private cars remaining a convenient first choice for travel for many, impacts through pollution to water and soils will increase.

However, there are some measures within LTP Core Strategy that can help address these issues and minimise adverse effects. For example, LTP may reduce overall traffic volumes in some areas through reducing the need to travel and promoting more sustainable modes. This should reduce the risk of pollution incidents through accidents and will reduce road and other runoff containing residue of tyre and brake wear. LTP Core Strategy also specifically notes that consideration will be made of potential water impacts throughout the design process, prevention of pollution of water bodies during construction and operation and identify opportunities to meet objectives of the Water Framework Directive.

The focus in LTP Core Strategy on public realm and place making will also provide opportunities to generate / redevelop some areas. This will also provide opportunities to remediate contaminated land. There are still though some effects from LTP though that could lead to a loss of agricultural land.

On the whole though it is considered that implementing LTP will have both positive and negative effects on the protection of the water environment and soil and agricultural resources.

This is summarised in Table 8.6.

Table 8-6 - Water and soil alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Protect and enhance the water environment Protect soil resources and avoid land contamination	Negative	Positive/Negative

Grouped ISA Objectives: Promote sustainable use of resources and natural assets including maximising the use of alternative, secondary and recycled materials, reducing the level of waste generated

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.

Transport is the largest energy consuming sector in the UK, representing 42% of final energy consumption in 2023. 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.

Alternative 2 – To implement the proposed LTP

It is anticipated that LTP will lead to a reduced need to travel in some areas (for example through digital connectivity), as well as a range of more sustainable modes for those who do wish to travel, including both active travel and public transport. This should lead to a reduction in the use of natural resources such as hydrocarbons. However, it is noted that where connections are improved within Lancashire and beyond and journeys by private car increase, the use of natural resources may increase. Additionally, where new infrastructure schemes are implemented, there may be increased demand for raw materials and energy during construction, which could result in higher levels of waste and resource consumption. It is noted that use of alternative, secondary, and recycled materials will be maximised.

Facilitating an increased EV charging network is also anticipated to be implemented through the LTP. Specific note is made in LTP Core Strategy of promoting a circular economy, promoting the use of recycled and renewable materials, resource efficiency and minimising waste. In addition, there will be an emphasis on management and maintenance of transport infrastructure to meet waste and resource goals.

As such, it is considered that implementing LTP will have both a positive and negative effect on the promotion and prudent use of finite natural resources. The positive impact will be relating to the use of alternative, secondary and recycled materials will be maximised, as well as reducing the level of waste generated due to the move towards sustainable transport in some areas. In other areas, improved connections may lead to continued or increased private car use .

This is summarised in Table 8-7.

Table 8-7 - Natural resources alternatives assessment

ISA Objective	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
Promote sustainable use of resources and natural assets including maximising the use of alternative, secondary and recycled materials, reducing the level of waste generated	Neutral / Positive	Positive / Negative

Grouped ISA Objectives: Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all; and Support the wider coordination of land use and energy planning across the Lancashire area

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

Lancashire supports around 670,000 jobs, in an economy worth over £34 billion. It is the second largest economy of the North West, and a major part of the Northern Powerhouse. Lancashire is home to nationally significant economic assets: including the world's fourth largest aerospace cluster and strategically important specialised manufacturing sectors.

Lancashire County Council is by far the largest employer in the county, whilst of the various NHS organisations in the county the Lancashire Teaching Hospitals NHS Foundation Trust has the most staff. In the private sector, BAE Military Air

Solutions is by a very large margin the biggest employer. Other large private sector employers in the county include Booths and Westinghouse Springfields.

In the Plan Area, the median gross annual earnings for residents (all employees) was £29,431, 6.9% lower than the UK. This was an increase of 8.3% over the year between April 2023 and 2024. The GVA results show how Lancashire struggles to keep pace with national rates of change, and the employment figures emphasise how the county is under-represented in some of the high value financial and professional service sectors.

While Lancashire is anticipated to remain a major part of the Northern Powerhouse, it does face some challenges. For example, some of the most significant challenges facing Lancashire are reminiscent of other rural areas across the country, these include an ageing population alongside challenges around accessing services and meeting housing demand. There are also areas of deprivation within Lancashire, with Blackpool local authority being the most deprived in England.

Alternative 2 – To implement the proposed LTP

LTP has a clear focus on supporting the economic development of Lancashire. For example, LTP Core Strategy sets out how it intends to close the productivity gap between Lancashire and the rest of the country which could boost the UK economy by up to £10bn per annum. It sets out that it will better connect residents with jobs, education and training; businesses to markets and supply chains; and unlock strategic development across the sub-region to work towards its economic potential.

Improved accessibility and affordability to public transport modes along with new infrastructure improving connectivity across the region and beyond will improve access to jobs and training and lead to benefits for the economy. Making strategic growth sites appropriately located, accessible and supported by suitable transport evidence will also help to facilitate economic benefits. Other measures include improving the health and wellbeing of residents by enabling people to get back to work and training, addressing road safety to reduce the burden of health services and providing accessible and affordable public transport. It is also anticipated that the LTP will support its growing visitor economy by providing sustainable transport options between major destinations. Improved high-speed broadband and digital connectivity will also make jobs and services more accessible particularly benefitting those in rural areas or who are unable to travel.

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.

This is summarised in Table 8.8.

Table 8-8 - Economic growth alternatives assessment

ISA Objectives	Alternative 1 – Continue under present approach	Alternative 2 – Implement LTP
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 Lancashire area	Neutral / Positive	Large Positive

Grouped ISA Objectives: Improve health and well-being for all citizens and reduce inequalities in health; Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and Promote fairness and equity in rural connectivity

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

The Plan Area has a population over 1,570,300 people, with some notable urban centres including Blackpool, Blackburn and Preston, though also a highly rural population scattered across the county. The Plan Area has a higher percentage of people aged over 65 than the national average (20.7%, compared to 18.6% in England as a whole). Life expectancy and the number of years lived in good health for Lancashire, Blackburn with Darwen and Blackpool were all lower for both males and females than for England and the UK. The Plan Area also preforms worse than the national average on other health parameters including under 75 mortality rate from cardiovascular diseases, rate of adult smokers and the proportion of people with a long-term illness or disability. This demonstrates that there are individuals with significant health challenges across the Plan Area and there are also pockets of worse health outcomes – these are often linked to deprivation. Transport can also 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), though it also provides opportunity for active travel and of course provides links to services and facilities such as health and recreation.

As well as health outcomes, the specific nature of the county are also reflected in issues relating to equalities and rural connectivity. For example, the rural nature of much of the county means that many people in Lancashire have to rely on their cars, and presents challenges around connectivity by other modes,

which can also lead to social isolation. Access to the services and facilities that people need is also an issue for large parts of the county.

Alternative 2 – To implement the proposed LTP

LTP Core Strategy notes a range of policies and measures that seek to address many of the health, equalities and rural needs issues that affect the county. For example, LTP Core Strategy places a focus on providing services and facilities in local areas. Note is also made of increasing public transport services and of the need to increase accessibility to rail and bus stations and stops, in addition to improve accessibility in rural areas such as through affordable taxi services. There will also be affordable, accessible and safe vehicles and public transport infrastructure including in terms of bus network. This will result in improvements to bus stops etc. and will include providing better real time information in accessible forms, enhancements to on-board and waiting facilities and simple signage. Better provision of information will also benefit non-disabled people, helping those who are travelling on an unfamiliar bus route, and giving passengers confidence that they will not be left stranded at the wrong stop late at night. A focus on traveling safely and securely will be particularly beneficial for the elderly or for children or those with mobility issues. Severance would be reduced by reducing the need for some vehicle travel and improvements to public realm.

Indirect beneficial effects can also be anticipated through elements of LTP Core Strategy such as reducing congestion, and encouraging the use of sustainable modes of travel 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 improved facilities for EVs 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 the LTP Core Strategy by providing a much greater level of opportunity 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. Well-being will be further boosted by alleviating the adverse impacts of transport on local communities, providing a cleaner, quieter local environment with improved quality of life. This will make communities more attractive places for residents to live, work, play and socialise.

Provision of a range of services which improve access such as digital connections to help with healthcare appointments, within local areas will also make accessing these easier and will likely improve health outcomes. Further indirect effects on health can also be anticipated through elements noted in LTP Core Strategy, which deals with increasing access and affordable transport to

economic opportunities. This has noted benefits for health outcomes by providing jobs or opportunities for educational advancement.

Of particular note is that LTP Core Strategy sets out a clear approach to making sure health and equalities issues are considered. Acommitment is made to proactively consider health and equalities issues from the earliest stage in designing and specifying LTP measures. Account will be made for the findings of any HIA or EqIA undertaken and, wherever possible, design of LTP measures are to have a positive impact on health and equality for all members of society. Use will be made of the latest inclusive design standards for any new or improved infrastructure, including guidance published by the DfT.

Issues in rural areas will also be improved through measures such as broader travel choices and improved high-speed broadband in such areas.

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 improving rural connectivity in comparison to continuing under the present approach.

This is summarised in Table 8.9.

Table 8-9 - Health, equality and rural needs 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 Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society Promote fairness and equity in rural connectivity	Neutral / Positive	Large Positive

8.4 Conclusions on Alternatives

It has been shown that implementing LTP is favoured across a number of ISA Objectives, in comparison to maintaining the present approach to transport planning in Lancashire. Of particular note are the anticipated benefits to the

economy, health, wellbeing, equalities and rural needs, which are anticipated to have both direct and indirect effects. Although, there are a number of areas in which the effects are currently unknown due to the level of detail available for the measures to be implemented at this stage. Positive and negative effects can be expected across many of the environmental areas due to the potential for shorter and fewer car trips alongside the potential new infrastructure and improved connectivity and convenience of private car use and the associated mixed effects these outcomes would have on the environment. The exact effects are currently unknown and will depend on the balance, scale, intensity and timescales of potential measures implemented.

9 Compatibility between LTP Goals and ISA Objectives

9.1 Introduction

To help ensure that the draft vision and objectives 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 Core Strategy and identifying alternatives.

The vision and objectives of the LTP Core Strategy that have been subject to this Compatibility Assessment are outlined as follows:

9.1.1 Vision

The LTP vision is:

“Our vision for the LTP is for our transport network to support:

A stronger economy,

With fairer opportunities,

And a sustainable future.”

9.1.2 LTP Goals

The vision is described in more detail in the following goals:

- Goal 1: Strengthen our labour markets by connecting people and jobs;
- Goal 2: Provide strong connections to markets and supply chains;
- Goal 3: Unlock strategic growth across Lancashire;
- Goal 4: Improve accessibility to tackle inequalities and deprivation;
- Goal 5: Improve health and wellbeing by supporting active lifestyles;
- Goal 6: Create safe and vibrant communities and a sense of belonging;
- Goal 7: Increase resilience to evolving weather patterns;
- Goal 8: Protect and enhance our natural and built environment;
- Goal 9: Reduce pollution from transport;
- Goal 10: Improve efficiency and value for money of delivery; and
- Goal 11: Amplify the voice and strengthen the influence of Lancashire across the north, nationally and internationally.

All of the above elements have been tested for Compatibility with the ISA Objectives as set out in Table 7.1.

4.

9.2 Compatibility Assessment findings

In this compatibility assessment, the following scoring scheme in Table 9.1 is 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 discussion of the results then follows. Full assessment tables are provided in Appendix F.

Table 9-2 - Compatibility Assessment Overview (ISA Objectives Summarised)

Elements of LTP Subject to Compatibility Assessment	**Environmental** Protect and enhance biodiversity	**Environmental** Protect and enhance designated sites	**Environmental** Protect and improve air quality	**Environmental** Reduce the impact on environmental noise	**Environmental** Reduce carbon emissions from transport	**Environmental** Maximise adaptation and resilience of the transport network	**Environmental** Protect and enhance cultural heritage assets	**Environmental** Protect and enhance the character and quality of landscapes and townscapes	**Environmental** Protect, enhance and promote geodiversity	**Environmental** Protect soil resources and avoid land contamination	**Environmental** Protect and enhance the water environment	**Environmental** Promote sustainable use of resources and natural assets	**Economic** Promote economic growth and job creation	**Economic** Support the wider coordination of land use and energy planning	**Social** Improve health and well-being for all citizens	**Social** Promote greater equality of opportunity for all citizens	**Rural** Promote fairness and equity in rural connectivity
Vision	√	√	√	√	√	√	√	√	√	√	√	√	√	?	√	√	√
Goal 1	?	?	√	?	√	?	?	?	?	?	?	?	√	√	?	√	?
Goal 2	?	?	?	?	?	?	?	?	?	?	?	?	√	√	?	√	?
Goal 3	?	?	?	?	?	?	?	?	?	?	?	?	√	√	√	√	?
Goal 4	?	?	?	?	?	NR	?	?	NR	NR	?	?	√	√	√	√	√
Goal 5	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	?
Goal 6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	√	√	√	NR
Goal 7	√	√	√	NR	√	√	?	?	NR	NR	?	NR	NR	NR	√	√	NR
Goal 8	√	√	√	√	√	√	√	√	√	√	√	√	NR	√	√	NR	NR
Goal 9	√	√	√	√	√	NR	√	NR	NR	NR	√	√	NR	?	√	?	NR
Goal 10	?	?	?	?	?	?	?	?	?	?	?	?	√	√	?	NR	NR
Goal 11	?	?	?	?	?	?	?	?	?	?	?	?	√	√	√	?	√

Overall, the results of the assessment indicate that there is variable compatibility in a number of key elements between the LTP Goals.

Vision

By making specific reference to supporting a sustainable future, the vision is considered to be broadly aligned with ISA Objectives 1 – 13 that seek to ensure protection of key environmental topics of biodiversity, air quality, carbon dioxide, climate change, geodiversity, heritage, landscape, geodiversity soil, water and waste.

In respect of the social, equalities and economic objectives it is considered that the vision is broadly aligned with ISA Objectives 13, 15 - 17. Clear note is made within the objective in regard to building a stronger economy and providing fairer opportunities. It is anticipated that fairer opportunities in the transport network will lead to improved accessibility to health services for all.

Uncertainty has been identified in respect of ISA Objective 14, as coordination and planning are not explicitly noted and will rely on implementation.

LTP GOAL 1: Strengthen our labour markets by connecting people and jobs

This LTP Goal is broadly compatible with ISA Objectives 3, 5, 13, 14 and 16. It is anticipated that the promotion of public transport will encourage use of this sustainable mode and may reduce overall car use which will likely improve air quality and reduce carbon emissions. Meeting this LTP Goal will lead to easier movement of goods and improve economic growth, require coordination of different planning sectors, and increased accessibility for all by different travel modes, promoting greater equality of opportunity for all citizens.

Uncertainty has been identified in respect of ISA Objectives 1, 2, 4, 6-12, 15 and 17. The overall effects of reduced car use, the potential creation of new road and rail infrastructure and increased public transport use remain unclear.

LTP GOAL 2: Provide strong connections to markets and supply chains.

This LTP Goal shows limited compatibility with the ISA Objectives. Broad compatibility has been identified in respect of ISA Objectives 13,14 and 16 as ensuring transport conditions are reliable and accessible for people and freight is anticipated to promote economic growth, require the coordination of different sectors of planning and promote greater equality of opportunity.

Uncertainty has been identified in respect of ISA Objectives 1-12, 15 and 17 due to unclear effects of potential new rail and road infrastructure and its effect on the environment, health and well-being and rural connectivity.

LTP GOAL 3: Unlock strategic growth across Lancashire.

This LTP Goal shows limited compatibility with the ISA Objectives. Broad compatibility has been identified in respect of ISA Objective 13-16 as the goal will support an upskilled labour market, attract new talent, and deliver new, attractive residential and employment space as well as supporting regeneration and creating thriving, attractive and sustainable local communities.

The compatibility assessment considers there to be uncertainty in respect of ISA Objectives 1-12 and 17. In supporting the strategic sites with spatial planning and transport there is potential for upgrades to or construction of new elements of the transport network under the LTP Goal which may lead to habitat loss, increased emissions and noise, and reduced air quality. There also is potential for effects on resilience to climate change, heritage assets, landscape , geodiversity, soils, water environment and resource use. However, where the approach to spatial planning and transport increases the sustainability of sites and associated transport and if the use of private cars is reduced through improved public transport or active travel options there may be benefits for these environmental aspects. It is also unclear if these strategic growth sites will include rural areas and improve their connectivity.

LTP GOAL 4: Improve accessibility to tackle inequalities and deprivation.
This LTP Goal is broadly compatible with ISA Objectives 13 - 17. Improving local bus services, community transport and other travel options, and tackling transport-related social exclusion is expected to help people access job, education and training opportunities as well as services, providing greater equality and opportunities for all citizens and require the coordination of different sectors of planning. It is also anticipated that tackling transport-related social exclusion would include rural areas.

Uncertainty has been identified in respect of ISA Objectives 1-5, 7, 8, 11 and 12. The effects of improving local bus services on biodiversity, air and carbon emissions, noise, heritage, landscape, water and waste remain unclear, as it is not known what the travel options may involve.

In respect of ISA Objectives 6, 9 and 10, this LTP Goal is considered not relevant.

LTP GOAL 5: Improve health and wellbeing by supporting active lifestyles.

This LTP Goal is broadly compatible with ISA Objectives 1-16. A modal shift to active travel and reduced heavy road traffic is anticipated to reduce pressures on biodiversity and designated sites, air and carbon emissions, noise, resilience to climate change and natural resources. Heritage assets, landscapes, geodiversity, soils and water will benefit from reduced reliance on private transport. The goal is expected to improve access to jobs, education, services and support active lifestyles, with benefits to the economy and health, wellbeing and equality of opportunity of citizens.

Uncertainty has been identified in respect of ISA Objective 17. The effects of the LTP Goal on rural connectivity remain unclear.

LTP GOAL 6: Create safe and vibrant communities and a sense of belonging.

This LTP Goal is broadly compatible with ISA Objective 14, 15 and 16 relating to coordination of land use and energy planning , health and wellbeing of all citizens and equality of opportunity. Creation of safe and vibrant communities along with reducing road collisions, is expected to require coordination of various sectors and a reduction in road traffic accidents and safe communities is expected to improve overall health and wellbeing. Through developing tailored

approaches to the needs of different areas there may be greater equality of opportunity for all.

In respect of ISA Objectives 1-13 and 17, this LTP Goal is considered not relevant.

LTP GOAL 7: Increase resilience to evolving weather patterns.

This LTP Goal is broadly compatible with ISA Objective 1-3, 5, 6, 15 and 16. Increasing resilience to evolving weather patterns could indirectly protect biodiversity and designated sites from extreme flooding and heat as well as benefits from the introduction of natural solutions and green infrastructure. Creating resilience measures such as natural solutions and green infrastructure will indirectly contribute to protecting and improving air quality and reducing carbon emissions. This goal is anticipated to increase overall resilience to evolving weather patterns, which will likely maximise the resilience of the transport network to extreme weather events and reduce the risk of flooding. This will also have benefits for the health and well-being and equality of opportunity for citizens.

Uncertainty has been identified in respect of ISA Objectives 7, 8 and 11. The effects of the LTP Goal on heritage, landscape, and water remain unclear.

In respect of ISA Objectives 4, 9, 10, 12-14 and 17, this LTP Goal is considered not relevant.

LTP GOAL 8: Protect and enhance our natural and built environment.

This LTP Goal is broadly compatible with ISA Objectives 1-12, 14 and 15. Clear reference is made to protecting the natural and built environment, which is expected to include key environmental topics along with wider coordination of land use and health and well-being of citizens.

In respect of ISA Objectives 13, 16 and 17, this LTP Goal is considered not relevant.

LTP GOAL 9: Reduce pollution from transport.

This LTP Goal is broadly compatible with ISA Objectives 1 – 5, 7, 11, 12 and 15. It is anticipated that reducing overall pollution from transport will reduce pressures on biodiversity and designated sites, improve air quality, reduce noise from transport and carbon emissions, protect heritage assets and the water environment and reduce pressures on finite resources and improve health and wellbeing of citizens.

Uncertainty has been identified in respect of ISA Objectives 14 and 16. The effects of the reducing pollution from transport and encouraging the use of vehicles which utilise sustainable fuels on the wider coordination of land use and energy planning and equality of opportunity for all citizens remain unclear.

In respect of ISA Objectives 6, 8-10, 13, 15 and 17, this LTP Goal is considered not relevant.

LTP GOAL 10: Improve efficiency and value for money of delivery

This LTP Goal is broadly compatible with ISA Objectives 13 and 14. Improving efficiency and value for money of delivery would promote economic growth and delivering transport programmes will likely require the wider coordination of land use and energy planning.

Uncertainty has been identified in respect of ISA Objectives 1-12 and 15. The effects of the yet unknown new infrastructure, maintenance and asset management on the environmental topics and health and well-being of citizens remains unclear.

In respect of ISA Objectives 16 , this LTP Goal is considered not relevant.

LTP GOAL 11: Amplify the voice and strengthen the influence of Lancashire across the north, nationally and internationally.

This LTP Goal is broadly compatible with ISA Objectives 13-15 and 17. The objective aims to drive international and interregional trade, leading to economic growth and job creation, improved connectivity to services and facilities, as well as rural areas and requiring coordination between different planning sectors. Clear reference is made to improving travel choices in deeper rural areas.

Uncertainty has been identified in respect of ISA Objectives 1-12 and 16 as the effects from yet unknown new infrastructure to improve strategic rail, road and bus connectivity, remain unclear.

In many cases, the uncertainty of outcome is driven by the nature of the LTP itself. It is likely, and to be expected, that the nature of LTP and its Goals will potentially result in heavy engineering and construction, or schemes with a large footprint, along with the spatial and planning context in which these will take place. These types of activities have the potential for both negative and positive outcomes. In general areas of uncertainty of compatibility relate for the most part to the environmental issues as follows:

- Resilience of the transport network to a changing climate;
- Biodiversity and geodiversity, as well as sites designated for nature conservation;
- Air quality, noise and carbon emissions;
- Landscapes and townscapes;
- Cultural heritage and its settings;
- The water environment;
- Soil, agricultural resource and contaminated land;
- The use of natural resources, maximising recycling and use of secondary materials and reducing waste; and
- Rural connectivity.

Outcomes to these areas will depend upon the policy framework and approach to mitigation that the LTP sets for implementation. The following recommendations in Table 9-3 are made to ensure more 'complete coverage' of ISA Objectives. These recommendations were made early in the development process and were considered and addressed as appropriate through policy development. For example, flood protection measures are referenced in Policy FN4.

Table 9-3 - Recommendations to strengthen and improve compatibility

LTP element	Recommendations
Vision	No recommendations are made.
LTP Goal 1: Strengthen our labour markets by connecting people and jobs.	It is recommended that the LTP considers the effects on the natural and built environment and consider measures to be resilient to the effects of climate change through, for example, incorporating SUDS and flood protection measures.
LTP Goal 2: Provide strong connections to markets and supply chains.	It is recommended that the LTP makes specific note of the need to for the movement of freight and people to be done sustainably. To improve compatibility with social aspects of sustainability, it is recommended that the objective is clarified to recognise the importance of community safety and low emission transport options and include the importance of fairness and equity in rural connectivity.
LTP Goal 3: Unlock strategic growth across Lancashire.	It is recommended that the LTP considers the effects on the natural and built environment and consider measures to be resilient to the effects of climate change through, for example, incorporating SUDS and flood protection measures.
LTP Goal 4: Improve accessibility to tackle inequalities and deprivation.	It is recommended that the LTP outlines the need for travel options to be sustainable. Specific note should be made in the objective of the need for development of new infrastructure to be carried out using resources sustainably and to the inclusion of rural areas.
LTP Goal 5: Improve health and wellbeing by supporting active lifestyles.	It is recommended that specific note is made of active travel links in rural areas.
LTP Goal 6: Create safe and vibrant	No recommendations are made.

LTP element	Recommendations
communities and a sense of belonging.	
LTP Goal 7: Increase resilience to evolving weather patterns.	No recommendations are made.
LTP Goal 8: Protect and enhance our natural and built environment.	No recommendations are made.
LTP Goal 9: Reduce pollution from transport.	The LTP could be strengthened through specific mention of reducing noise pollution.
LTP Goal 10: Improve efficiency and value for money of delivery.	Text could be incorporated to recognise the importance of community safety in transport infrastructure.
LTP Goal 11: Amplify the voice and strengthen the influence of Lancashire across the north, nationally and internationally.	No recommendations are made.

As noted above, it is considered that additional elements could be added to the Goals to address the full range of sustainability – this would help ensure that considerations of sustainability are fully embedded in all aspects of the LTP. It is also noted that many of the areas where uncertainty has been identified are dependent on the interventions that are implemented and for example the amount of new infrastructure they would require. It is noted that there is potential for conflict however where the above recommendations are implemented it will ensure no significant effects.

However, it is noted that the LTP has since been updated to include commitments in respect of approach to sustainability. Where this approach is implemented it is anticipated that any potential conflicts and significant effects would be minimised.

9.3 Conclusion

In conclusion, the results of the compatibility assessment indicate that the LTP Core Strategy Vision and Goals provided a generally firm underpinning to help ensure that the sustainability performance of the plan can be maximised. However, some areas of potential uncertainty were identified, in particular relating to the environment and rural connectivity. These have since been addressed through incorporation into the developing LTP policies, ensuring that these elements are in alignment with sustainability requirements.

10 Assessment of LTP policy, measures and sub-strategy proposals

10.1 Introduction

The LTP Core Strategy sets out to work toward a transport network that supports a stronger economy, with fairer opportunities and a sustainable future through four LTP **policy and delivery workstreams** – the LTP policies are organised under these workstreams. These are as follows:

Connecting Lancashire: it is the aim of this workstream to unleash economic potential through better connecting residents with jobs, businesses to markets and supply chains, and unlocking strategic development across the sub-region. This workstream will deliver the Connected Lancashire ambition in the Growth Plan;

Transforming travel choices: it is the aim of this workstream to revolutionise the travel options available for those who live and work across Lancashire, broadening travel horizons and providing genuine choices. It is the intention that these measures will increase access to new opportunities, bring benefits to communities and reduce carbon emissions;

Safe and vibrant communities: it is the aim of this workstream to tackle the root causes of deprivation, poor health and social isolation. It is the intention that this will connect people with new opportunities, regenerate communities and help build healthy living into day-to-day activities; and

Future-ready networks: it is the aim of this workstream to transform Lancashire into a sub-region that is fit for the future. It is the intention that this will integrate new technologies and innovative solutions to ensure networks are green, resilient, efficient and ready for growth.

These workstreams have been identified to recognise the spatial challenges to transport in Lancashire, reflecting the population patterns and typical transport movements of the sub-region.

During assessment, it was recognised that the LTP Core Strategy could enhance its anticipated sustainability performance through the addition of a dedicated chapter outlining core principles 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 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.

As such, it was considered important that the LTP Core Strategy sets out the need to embed sustainability considerations into how the LTP is delivered. Therefore, a series of design principles are set out in the LTP Core Strategy Appendices to demonstrate how it is intended that delivery be underpinned by a holistic approach to sustainability – this would include considerations of health, equalities and environment. As noted, this approach was developed through discussion between the LTP team and the ISA team and notes that LCC will:

Proactively consider health and equalities issues from the earliest stages of scheme development;

Enhance our designated sites;

Improve air quality;

Reduce greenhouse gas emissions and minimise embodied carbon, including carbon management through scheme design and delivery;

Build-in resilience to extreme weather;

Avoid and protect areas that are recognised at the highest levels for their importance to nature conservation and biodiversity;

Protect Lancashire's ecology, landscape and townscape;

Protect the historic environment;

Protect the water environment; and

Protect natural resources and promote circular economy principles.

Appendix B of the LTP Core Strategy sets out that environmental and sustainability considerations have been fundamental in developing the LTP Core Strategy and will play a key role in delivered as part of it.

10.2 Assessment of Workstreams

Each individual workstream has been assessed against the ISA Objectives 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	

Assessment Scale	Assessment Category	Significance of Effect
-	Slight adverse	
--	Moderate adverse	Significant
---	Major adverse	

The workstreams have been assessed against the ISA Objectives as set out in Table 7.1 to Table 7.4.

Table 10.2 provides an overview of results from the assessment of policies and the assessments are summarised in Sections 10.2.1 – 10.2.4. Full details are provided in Appendix E.

Table 10-2 - Assessment Score Summary (ISA Objectives 1-17)

Connecting Lancashire

Plan Element	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
CL1: Enable the delivery of strategic growth sites CL2: Transform east / west public transport through the Central Belt CL3: Improve public transport connections with neighbouring regions CL4: Improve reliability of strategic and major roads for all modes of transport CL5: Explore new or expanded heavy rail and mass transit networks CL6: Improve high-speed broadband, especially in rural areas	+ --	+ --	+ --	+ --	+ --	+/-	+/-	+ --	-	+/-	+/-	+	+++	++	+	+	++

Transforming Travel Choices

Plan Element	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

TC1: Improve and modernise bus journeys TC2: Revolutionise rail travel so it is reliable and affordable TC3: Establish convenient and safe active travel options TC4: Enable increased use of bus, rail and active travel TC5: Broaden travel choices in rural areas TC6: Ensure taxis offer a reliable and safe service TC7: Transform sustainable travel choices for tourists TC8: Reimagine public transport ticketing	+	+	++	+	++	+	+	+/-	0	+	+	+	+++	+	+++	+++	++

Safe and Vibrant Communities

Plan Element	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
SV1: Empower everyone to travel safely and securely, wherever they go SV2: Deliver accessible and affordable public transport SV3: Develop accessible, high-quality spaces and infrastructure SV4: Embed placemaking in new developments	++	+/-	++	++	+	+	+	+	0	+	+	+	++	++	+++	+++	+

SV5: Alleviate adverse impacts of travel on communities																

Future-ready networks

Plan Element	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FN1: Embrace new transport data and technologies FN2: Accelerate the uptake of electric vehicles FN3: Improve journey time reliability FN4: Deliver sustainable, resilient infrastructure FN5: Embed whole-life approaches to asset management FN6: Implement smarter public parking strategies that meet evolving needs FN7: Support sustainable first and last mile freight	++	+	++	+	++	++	+	+	+	+	+/-	+	++	+	++	+	+

10.2.1 Assessment overview of 'Connecting Lancashire' workstream

The workstream concerned with 'Connecting Lancashire' sets out a series of key policies that aim to realise Lancashire's economic potential through better connecting residents with jobs, education and training; businesses to markets and supply chains; and unlocking strategic development across the sub-region.

Outlined in the LTP Core strategy are the following policies which set the context of the overarching Workstream:

- CL1: Enable the delivery of strategic growth sites
- CL2: Transform east / west public transport through the Central Belt
- CL3: Improve public transport connections with neighbouring regions
- CL4: Improve reliability of strategic and major roads for all modes of transport
- CL5: Explore new or expanded heavy rail and mass transit networks
- CL6: Improve high-speed broadband, especially in rural areas

The Core Strategy notes that through improving connectivity, it is the intention that the CCA can reduce costs to businesses, increase businesses' ability to attract talent, and accelerate the spread of innovations between businesses. Investing in transport infrastructure is noted to support growth in business space, housing, and improve access to job opportunities, unlocking the delivery of growth sites.

The Core Strategy recognises that by improving connections across the area, particularly through public transport, the CCA will increase productivity across Lancashire through more reliable journeys for businesses and widening labour markets for skilled workers. Investment in wider pan-north transport links with neighbouring regions will also support growth across the wider region.

Environmental issues

It is considered that this workstream has a focus on improving connectivity across the county and improving efficiency of the transport network. A key element to this will be new infrastructure, including for road and rail, though there will also be increased digital connectivity. In respect of Objective 1 and 2 (Biodiversity and Designated Sites) enabling the delivery of strategic growth sites can be aligned with biodiversity goals if these sites incorporate green spaces, wildlife corridors, and sustainable development practices that enhance local ecosystems. Transforming east/west public transport and improving connections with neighbouring regions can reduce reliance on private vehicles, thereby lowering emissions, and reducing deposition of pollutants on sensitive habitats. However, new infrastructure development nevertheless has, depending upon the location, the potential to result in the loss of biodiversity, introduce fragmentation and encroachment onto habitats or designated sites

and increase pressures and disturbance on vulnerable species and habitats. Adverse effects could be potentially significant and long term.

Note is made in this workstream of targeted infrastructure improvements to help deliver key development sites and to improve road and rail infrastructure. While this can help to relieve congestion, or facilitate new development, it can also contribute to continued (or increased) noise and air pollution from road and rail vehicles (Objectives 3 and 4), during construction and operation. Effects are likely to be local. It is also the case that new (or improved / upgraded) road and rail links could result in increased carbon emissions (Objective 5). However, elements of this workstream such as more sustainable modes and enabling active travel would also act to improve air, noise and carbon emissions, particularly at a local level.

Elements such as new road and rail infrastructure would also result in new areas of hard standing that could increase flood risk, particularly at a local level. It would be vital that sustainable drainage is integrated into design of any new infrastructure. It is anticipated though that new infrastructure would be designed with flood risk in mind, thereby ensuring resilience of new transport provisions (Objective 6).

Increased digital connectivity and making a shift to more sustainable modes easier and more attractive for people may potentially reduce overall traffic levels and improve townscapes and the setting of heritage features (Objective 7). However, as well as providing opportunities to redevelop / refurbish historic town centres or individual buildings etc, development of new infrastructure also has the potential to affect the historic environment (including archaeological remains), particularly during the construction phase.

Similarly, a shift to more sustainable or active modes may help improve townscapes and visual amenity by reducing overall congestion, as well as providing opportunities to redevelop town centres or individual buildings. Development of new infrastructure such as highway improvements, light and heavy rail, also has the potential to affect landscapes, townscapes and visual amenity (Objective 8), particularly during construction prior to landscaping becoming established.

In respect of Objective 10, new infrastructure development such as road upgrades / junction improvements has the potential to result in the loss or damage of soil or agricultural resources (as well as encroachment onto areas of geodiversity importance – Objective 9), though opportunities could be provided to remediate contaminated land, as well as remove invasive species, or regenerate areas previously developed.

Road upgrades / junction improvements also have the potential to result in greater volumes of runoff, which could allow pollutants to enter watercourses (with construction periods being particularly risky), though potential for reductions in traffic volumes would reduce pollution load from tyre and brake degradation, spillage of hydrocarbons etc. Increased digital connectivity could

also help avoid the need to travel and reduce the risk of accidents and help protect water quality (Objective 11).

Development of new infrastructure will require the use of natural resources (including hydrocarbons) and will generate waste during the construction phase particularly (Objective 12). Nevertheless, a shift to more sustainable modes will help to reduce hydrocarbon use. Improving high-speed broadband / digital connectivity, especially in rural areas, can support remote work and reduce the need for travel, indirectly promoting the sustainable use of resources by minimising transportation related hydrocarbon use.

Policies within this workstream are anticipated to bring significant benefit to the local economy (Objective 13) including those aimed at enabling the delivery of strategic growth sites. Improving public transport, the reliability of strategic and major roads will also stimulate construction opportunities as well as improve resilience in respect of access and connectivity during operation. This workstream is aimed at reducing costs to businesses, increase businesses' ability to attract talent, and accelerate the spread of innovations between businesses.

In addition, it is anticipated that this workstream will directly support the wider coordination of land use planning (Objective 14) where implementation enables the delivery of strategic growth sites.

Health, Equalities and Rural proofing

While this Workstream aims to improve public transport connections and the reliability of strategic and major roads for all modes of transport, targeted policy to reduce inequalities in health are not specifically referenced. Therefore, while policy may support reduction in equalities for some groups (for example through improvements across a wide range of transport modes including public transport and through improved broadband for rural (more isolated) communities, some groups such as those on low income may not benefit where interventions do not aim to reduce cost of public transport.

Nevertheless, enhanced public transport can improve connectivity to education, health and leisure facilities for all groups, though it is to be noted that some groups do have greater difficulty / challenges accessing public transport – for example some ethnic groups, those with mobility issues, those with certain disabilities such as loss of sight etc. Such groups may benefit from improvements for private vehicles through the noted highway improvements set out in this Workstream.

Junction and highway improvements to the latest design standards are anticipated to lead to safer infrastructure which can reduce the risk of accidents tochildren and adolescents, as well as those with mobility or sensory issues who would benefit from improved safety and a reduced risk of accidents. New roads though could increase severance for such groups, particularly at a local level. Improved network efficiency could also help to reduce fuel costs, with benefits for all, but particularly those on low incomes.

This Workstream also notes connected footpaths and cycleways. This would promote active travel and help to increase fitness, reduce obesity and improve overall mental and physical wellbeing for all groups, though those with mobility issues may not be able to avail of this to the same degree as others.

Increased digital connectivity may allow for a reduced need to travel and allow some groups to increase their independence, or reduce social isolation, particularly for those with mobility issues. For example, better access to services such as video calling could enable online medical or keeping in touch with friends and family, reducing the need to travel, with benefits for health and wellbeing. Note not all would be able to benefit from such technology due to cost or issues with using the technology – the elderly and those on low incomes may be particularly unlikely to benefit to the same extent.

Overall, it is considered highway improvements, digital connectivity etc will lead to reduced severance (and improved community interactions), there remains a risk that new infrastructure can increase this on a local basis for all groups.

New infrastructure and enabling delivery of growth sites may also increase issues in respect of air, noise, odour and light from transport. Where these are sensitively designed, for example to include noise barriers, green buffers and light mitigation this encourages a shift towards active travel and use of public transport meaning residents and vulnerable groups could benefit from overall health and well-being, reduced respiratory and cardiovascular issues and enhanced quality of life.

However, it is to be stressed that new infrastructure such as road and rail links can reduce air quality and increase noise in local areas, with potential for adverse effects on all groups. Effects would be experienced during construction and operation and may particularly impact children and those with certain health conditions.

The Workstream supports economic growth through improved public transport, strategic road reliability, and inter-regional connections, which can help rural businesses access wider markets and talent pools.

Broadband investment in rural areas is a strong enabler of employment diversification, particularly for remote work, digital services, and entrepreneurship.

Enabling the delivery of strategic growth sites may stimulate rural economies if these sites are located in or near rural areas, potentially creating new employment opportunities.

While the policy area should help ensure rural communities have access to the wider transport network, it will also work in the opposite direction, with people in the urban communities ultimately having greater access to rural areas and allow people to better connect with nature. Slight benefits could be expected across all groups in the community.

10.2.2 Assessment overview of 'Transforming travel choices' workstream

The workstream concerned with 'transforming travel choices' sets out a series of key policies that aim to address transport-related inequality and social exclusion for individuals and creating new opportunities to access work, education or services.

The policies are as follows:

- TC1: Improve and modernise bus journeys
- TC2: Revolutionise rail travel so it is reliable and affordable
- TC3: Establish convenient and safe active travel options
- TC4: Enable increased use of bus, rail and active travel
- TC5: Broaden travel choices in rural areas
- TC6: Ensure taxis offer a reliable and safe service
- TC7: Transform sustainable travel choices for tourists
- TC8: Reimagine public transport ticketing

The Core Strategy recognises that it is vital that populations get the best use out of the transport networks, so that they can carry more people, more reliably, quickly and affordably. Encouraging sustainable travel can free up some road space for new journeys by car (where they are needed) and for freight movements. While there is a need for targeted infrastructure and service improvements across all transport modes, the principle of maximising the value of the assets that the CCA have underpins this LTP Core Strategy. Policies under the 'transforming travel choices' workstream then will primarily deliver on the vision for fairer opportunities and a sustainable future, and will also be essential in supporting a stronger economy.

Environmental issues

In relation to biodiversity (Objective 1) it is considered that this workstream would potentially reduce disturbance, vehicle emissions and pollution, benefiting local ecosystems and biodiversity. There would also be less potential for habitat fragmentation. Similar slight benefits would be potentially experienced by sites designated for nature conservation (Objective 2). These benefits would be enabled by policies such as improving bus journeys, encouraging people onto public transport through better information, revolutionising rail travel, and establishing active travel options that promote the use of public and non-motorised transport.

Such policies would also have the potential to reduce overall vehicle emissions, leading to better air quality (Objective 3), with enabling increased use of sustainable travel options directly supporting air quality improvement, most likely at the local level. Reduced reliance on cars can decrease emissions of

pollutants like nitrogen oxides (NOx) and particulate matter (PM), though it is noted that there will still be a requirement for private cars, taxis and buses in certain areas and to serve particular populations such as rural and dispersed communities. In addition, noise levels (Objective 4) are also likely to decrease – again most notably at the local level. Beneficial effects for air and noise pollution are likely to increase over the longer term as more people shift to more sustainable modes.

A shift to more sustainable transport options is likely to contribute to reducing carbon emissions (Objective 5) and UK net zero targets, with beneficial effects more likely over the longer term.

This Workstream will result in enhanced information being available, often in real time, to the travelling public. This would help people to better plan journeys and take account of extreme weather events (anticipated to include flooding), with people perhaps deciding not to travel (Objective 6). Alternative routes / travel solutions etc will also be able to be identified by this approach. This will increase the adaptability and resilience of the transport network to effects of a changing climate. 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.

Policies such as improving bus journeys, revolutionising rail travel, and establishing active travel options to promote the use of public and non-motorised transport can be anticipated to reduce traffic congestion and pollution, which can help preserve the integrity and setting of historic assets and the wider heritage environment (Objective 7).

The noted promotion of sustainable travel choices for tourists can help minimise the environmental impact on cultural heritage sites, ensuring that these areas remain accessible and well-preserved for future generations. Care will need to be taken in respect of signage or other information displays to not clutter historic areas.

Similarly, it is anticipated that this Workstream, by helping to reduce traffic volumes and by making the transport network more efficient, will help to reduce congestion, thereby enhancing townscapes and visual amenity (Objective 8). Such policies may also help to reduce the need for more intrusive infrastructure such as new or widened roads, thereby helping to protect wider landscapes (as well as reduce the need for material and reduce waste – Objective 12). New active travel routes (if across country such as the proposed county network) could have implications for landscape, though these can usually be well screened / landscaped. Care will need to be taken that signage or other information points / telemetry infrastructure (digital or otherwise) do not affect the visual amenity of townscapes etc. by leading to cluttering.

A reduction in the need for new infrastructure through promoting the use of public and non-motorised transport, would also reduce risk of the loss / damage to soils and reduce the risk of contamination (Objective 10). Enabling increased

use of sustainable travel options can also reduce the reliance on private vehicles, which in turn can decrease the risk of soil contamination from vehicle emissions and runoff, as well as reduce the risk of accidents that could result in discharge of pollutants.

Similarly, a reduction in the reliance on private vehicles can in turn decrease the risk of water pollution from oil, fuel, and other contaminants (Objective 11). A reduction in traffic volume can also reduce the risk of accidents that could result in discharge of pollutants.

Enabling increased use of sustainable travel options can reduce reliance on private vehicles, which in turn can decrease the consumption of fossil fuels and other non-renewable resources (Objective 12).

Enhancing bus services can improve access to employment and education, particularly for individuals without private vehicles. Reliable and efficient bus services can connect people to job opportunities and educational institutions, supporting economic growth.

Making rail travel more reliable and affordable can significantly enhance connectivity between urban and rural areas. This can facilitate access to a wider range of job opportunities and skills development programs, also contributing to economic growth. Promoting walking and cycling can improve local connectivity and provide affordable travel options. This can help people access jobs and services more easily, particularly in urban areas.

Expanding travel options in rural areas can reduce social exclusion and provide residents with better access to employment, education, and services. This can stimulate economic activity and job creation in these regions.

Simplifying and modernising ticketing systems can make public transport more user-friendly and accessible. This can encourage more people to use public transport, improving connectivity and supporting economic growth. Improving affordability will mean people can retain more disposable income that can be used in other areas of the economy (Objective 13). As such, it is considered that this workstream has the potential to be significantly beneficial over the medium to long term in respect of economic growth. It will also act to help coordinate transport and land use planning (Objective 14).

Health, Equalities and Rural proofing

The Workstream demonstrates a strong commitment to tackling transport-related inequality and social exclusion, which aligns well with improving access to health and leisure services. The LTP Core Strategy includes several policies that support safer travel, particularly through active travel and public transport improvements. All groups will benefit.

Of particular note, enhancing bus services and active travel routes can significantly improve access to local health centres, leisure facilities, and community amenities—especially for those without private vehicles. Reliable

and affordable rail services can connect rural and suburban populations to regional hospitals, specialist care, and urban leisure opportunities.

Safe and convenient walking and cycling infrastructure supports access to local amenities and can help reduce obesity and promote wider physical and mental health, particularly for younger and older people. However, some groups may not be able to avail of active travel as well as others – those with mobility issues may not be able to take full advantage, for example. This Workstream also directly supports reducing severance by improving walkability and cycle connectivity, especially across busy roads or between fragmented communities. Cyclists and pedestrians will particularly benefit.

A focus in this Workstream of enhancing bus services can reconnect areas cut off by poor public transport, particularly for those without access to a car (typically the young, the elderly and those on low incomes).

Simplified, integrated, and potentially more affordable ticketing systems can reduce barriers for low-income users and those with complex travel needs (for example, carers, parents with children). The noted remaining need for the use of private cars, taxis and buses will also help such groups.

In respect of safe and reliable taxis (as noted in the Workstream), these are often considered a lifeline for disabled people, older adults, and those needing urgent or flexible access to healthcare. Taxis are also often used by people with mobility issues, women (or other vulnerable travellers) at night, and those without access to other transport.

The Workstream shows intent to improve affordability through rail reform and ticketing innovation, but lacks specific, inclusive, and measurable actions to ensure affordability for all, especially for those most reliant on public transport. Nevertheless, the workstream outlines several policies that support affordability in principle. For example, in respect of rail, it is the intent to revolutionise rail travel to be reliable and offer good value for money. Better access to affordable public transport can reduce travel costs and improve access to opportunities. This directly supports the objective and could benefit long-distance commuters, employees, and rural residents. Enhancing bus journeys and revolutionising rail travel can also provide reliable and affordable transport options that can reduce stress associated with commuting, improve access to healthcare services, and support mental health.

The Workstream also promotes simplified, integrated, or capped fare systems that can reduce costs for regular users, including students, workers, and families. While not directly about safety, contactless and digital ticketing can reduce queuing, and crowding which improves wellbeing and reduces the risk of conflict.

It is also the intention to improve and modernise bus journeys. While not explicitly about cost, modernisation often includes fare reform and service efficiency, which can lead to more affordable services.

In addition, expanding options in underserved areas (with the specific intention to broaden travel choice in rural areas) may reduce reliance on expensive alternatives like taxis or private vehicles. Expanding travel options in rural areas can reduce social isolation and improve access to essential services, including healthcare and education. This can help address health inequalities between urban and rural populations.

Greater travel choices in rural areas will help improve accessibility to employment opportunities and support economic growth. Whilst this will be beneficial for all groups those with low incomes and no access to private vehicles may benefit more significantly with a greater opportunity to access more employment opportunities. Greater support for transport to / from tourist areas / attractions across the county would also help to facilitate economic growth for rural areas. A general improvement in network efficiency would also help those rural businesses that require efficient movement of goods, for example foodstuffs or livestock.

Note is also made of provision of up to date real time travel information. 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. Greater consistency of journey length (including bus services running to timetable such as enabled by bus priority measures) will also provide reassurance to people of when they will arrive at their destination – 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.

Increased network efficiency, for example 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.

Promoting sustainable travel choices for tourists can reduce traffic congestion and pollution in tourist areas, contributing to a healthier environment for both residents and visitors.

This workstream encourages an uptake in active modes such as through a county wide network of footpaths and cycleways. This is likely to be utilised on a recreational basis (given the distances involved) but can help connect people with nature, even on short stretches. Benefits could be experienced by all groups.

10.2.3 Assessment overview of ‘Safe and vibrant communities’ workstream

The Workstream of ‘safe and vibrant communities’ is concerned with the delivery of accessible, high-quality spaces and infrastructure, where everyone feels safe and able to travel, benefitting the health and well-being of Lancashire’s residents. Through improving transport connections and enhancing

places, the Workstream aims to tackle some of the root causes of deprivation, poor health and social isolation and the Core Strategy sets out the aim to connect people with new opportunities, regenerate communities and help build healthy living into day-to-day activities.

The policies are as follows:

- SV1: Empower everyone to travel safely and securely, wherever they go
- SV2: Deliver accessible and affordable public transport
- SV3: Develop accessible, high-quality spaces and infrastructure
- SV4: Embed placemaking in new developments
- SV5: Alleviate adverse impacts of travel on communities

The Core Strategy recognises that the economy will benefit from improving the health and wellbeing of Lancashire's residents by enabling more people to get back into work and training. Furthermore, it is anticipated that addressing road safety will help reduce the burden on health services and provide an economic benefit.

The Workstream aims to create places that people can feel proud of and fully integrated within. By creating safer, more welcoming streets, the CCA will help build more active, engaged communities and a greater sense of belonging. Ensuring that new developments are well connected and sustainable gives opportunities to reduce existing issues such as isolation, creates the conditions for sustainable and inclusive growth, and attracts inward investment. Improving the accessibility and affordability of public transport is critical to ensuring broader and more equitable access to employment, services and centres.

Environmental issues

In relation to biodiversity (Objective 1) it is considered that this workstream would offer opportunities to improve biodiversity and make green spaces much more accessible. A clear focus is placed on placemaking, including greener streets which are anticipated to support urban biodiversity and provide opportunity to create habitats for various species. Specific note is made of the Local Nature Recovery Strategy and improving green spaces and taking opportunities to provide richer habitats, as well as providing better access to these areas. High-quality spaces as promoted in this workstream can incorporate green infrastructure, such as parks and green corridors, which enhance biodiversity and ecosystem functionality. An example of reedbed enhancement on an existing scheme is provided as a case study in this workstream.

While no specific note is made of designated sites (Objective 2), reference is made to the Local Nature Recovery Strategy, as well as to providing richer habitats which could have indirect benefits on designated sites by providing additional / adjacent habitat. However, note is also made of increasing access to

open / greenspace and this could lead to increased disturbance to designated areas or to adjacent supporting areas.

Promoting public transport, for example through making it more accessible and affordable, and encouraging active travel are anticipated likely to reduce the number of private vehicles on the road, leading to overall lower emissions and improved air quality (Objective 3). It would also be anticipated that these approaches may result in lower carbon emissions (Objective 5). Placemaking and provision of richer habitats may allow for planting of native species that can sequester carbon, though it is acknowledged that this would be of relatively small amounts.

Nevertheless, greener streets can also include more trees and vegetation, which could help absorb pollutants and improve air quality at the local level. Note is made of taking proactive measures to address air quality, as well as noise levels (Objective 4). It is anticipated that this proactive approach will help ensure significant benefits in air quality and noise levels at the local level over the long term – reflecting the workstream aim to designing out the potential adverse impacts that transport can have on communities.

Redevelopment and placemaking allows for design of urban areas and associated transport network that can be made more resilient (Objective 6) to the effects of climate change – for example note is made of greener streets that would be anticipated to include planting of trees (as noted at Preston Fishergate) – these can provide shade in hot weather. Greener streets can also include permeable surfaces and vegetation that help manage stormwater and reduce flooding risks – an example is given of reedbed enhancements on an existing scheme which had a degree of flooding mitigation. Overall, high-quality infrastructure can be designed to withstand extreme weather events, enhancing the resilience of the transport network.

Placemaking, with a vision led design requirement, is anticipated to include considerations for cultural heritage (Objective 7), ensuring that new developments respect and enhance the historic environment. A greater emphasis on the needs of people first, open spaces and sustainable transport is likely to result in fewer cars in urban centres and would help to enhance the setting of heritage assets / wider historic environment.

Similarly, placemaking can ensure that new developments are designed to complement and enhance the existing townscape and landscape character (Objective 8). Note is made that placemaking and regeneration will be foundational in developing more inclusive and attractive places across the county. Schemes such as the redevelopment of Fishergate in Preston exemplify the transformational impact that regeneration schemes can have. It is also noted that by creating safer, more welcoming streets, the Workstream will help build more active, engaged communities and a greater sense of belonging. Greener streets can enhance the visual amenity and character of urban landscapes by incorporating more vegetation and green spaces. This could also

help to protect soil resources and allow for remediation of contaminated land (Objective 10).

Good quality placemaking can also incorporate sustainable water management practices, such as rain gardens and green roofs, which help protect and enhance the water environment (Objective 11). An example is given of how reedbed enhancements were introduced in order to address polluted motorway runoff. In addition, placemaking can provide opportunities for sustainable design principles that prioritise the use of alternative and recycled materials, reducing waste and conserving natural resources (Objective 12).

Improving public transport accessibility and affordability can enhance connectivity to job opportunities and educational institutions, supporting economic growth and job creation. High-quality infrastructure, with effective and attractive places, can attract businesses and investors, creating new job opportunities and stimulating economic growth.

Reducing travel-related issues, as well as effective placemaking, can also improve the quality of life for residents, making the area more attractive for businesses and workers. The strategy Workstream explicitly aims to connect people with new opportunities, regenerate communities, and integrate healthy living into daily activities, which can enhance workforce participation and productivity and as such help to promote economic growth and job creation (Objective 13).

Note is made of supporting a vision lead approach to new development. Note is also made of engaging with local communities to understand their needs – this will help to understand land use challenges and how transport can address these. In addition, reference is made to a clear policy definition of vision-led approaches in Local Plans, with sustainable, place-based principles having greater influence over site selection. Note is made of best practice and relevant design guides. It is noted that this will ensure that new developments put the needs of people and communities first and prioritise access to amenities and services, nature, and public spaces. Placemaking can ensure that new developments are designed with coordinated land use and energy planning, promoting sustainable growth and efficient resource use (Objective 14).

Health, Equalities and Rural proofing

The Workstream explicitly aims to benefit the health and well-being of residents. It supports active lifestyles by embedding healthy living into daily activities and creating safer, more welcoming streets. A strong commitment to delivering accessible public transport for all will also improve access to health and leisure services and amenities. Public transport will also be made safer, with particular benefits for those on low incomes.

There is also a clear focus on wider safety, with a policy to apply a ‘vision zero’ approach to road safety – an ambition for there to be no fatalities or serious injuries on the Lancashire road network. The Workstream sets out that the LCCA will take a holistic, safe systems approach to road safety, considering the

locations of collision hotspots, road user behaviour, and personal security. Children and the elderly should particularly benefit. A safer road network will encourage active travel and remove barriers which prevent people from travelling by these modes. This may be of particular benefit for younger people and cyclists, pedestrians and commuters.

The Workstream includes several policies that support reducing severance, particularly through improved accessibility to pedestrian areas and improved public transport. New developments will also be well connected and sustainable, with onward connections to wider services. Effective placemaking, including removing clutter from footways and providing safer crossing points, rest stops etc, will make it easier and safer for those with mobility issues to access and navigate the streetscape, with a consequent reduction in severance.

This Workstream and linked policies will work to enable use of and provide more accessible and affordable public transport and safer more easily accessed pedestrian areas across Lancashire, and therefore improve connections between and within communities, benefiting all groups. Older people, or those with certain disabilities may also be able to better reduce social isolation. There will also be easier and more accessible commuting and access to job or training opportunities with benefits for those on low incomes and other employees.

Improving the coverage of bus services can reconnect areas cut off by poor public transport, particularly for those without access to a car, while planning for new developments will ensure that walking, cycling, wheeling and bus are a natural choice for most local journeys, improving access to active travel for all groups.

Importantly, note is made in the Workstream that LCCA will ensure proactive consideration of health and equality issues by applying inclusive design standards from the outset of all new infrastructure projects. It is stated that LCCA will engage with communities, including those who are often not heard, to ensure better understanding of their needs. Note is also made of the need for designing spaces which feel safe and discourage antisocial behaviour, and ensuring scheme design and development processes assess and minimise the potential negative impacts on different groups of people.

Accessibility to public transport will be improved for all groups through the Policy to deliver accessible and affordable public transport. This policy sets out that it will progress towards a system which are truly accessible and affordable for all. This will include pre-journey information in formats that all people can use and understand as well as seating at bus stops which may improve accessibility for groups such as older people who otherwise may have difficulties. Wider coverage of bus services would also improve access to those in areas of limited public transport coverage.

Note is made that there is an ambition that all rail stations are ‘accessible for all’ and for all bus stop infrastructure and buses to be fully accessible wherever possible. For example, buses would provide level boarding.

It is noted that measures could include pre-journey information in formats that all people can use and understand. This would be beneficial to those with sight or hearing loss, as well as those (it is anticipated) who may have language difficulties, though specific reference could be made of that issue.

While this workstream has a focus on urban areas it was considered that it lacked targeted, inclusive, and rural-specific transport policies that address the diverse needs of these groups. Without such measures, it was considered there was a risk of deepening transport-related inequalities in rural areas, though it was noted that progress will be made towards a public transport system that is truly accessible and affordable for all residents, ensuring access to education, services and employment and it was also considered that overall improvements in connectivity across the county may also benefit rural areas. Clarification with the Plan making team has led to revised text that makes it clear that rural areas will also be considered in this Workstream.

10.2.4 Assessment overview of 'Future-ready networks' workstream

The Workstream of 'future ready networks' is concerned with transforming Lancashire into a sub-region that is fit for the future, integrating new technologies and innovative solutions to ensure LCCA networks are green, resilient, efficient and ready for growth.

Outlined in the LTP Core strategy are the following policies which set the context of the overarching Workstream:

- FN1: Embrace new transport data and technologies
- FN2: Accelerate the uptake of electric vehicles
- FN3: Improve journey time reliability
- FN4: Deliver sustainable, resilient infrastructure
- FN5: Embed whole-life approaches to asset management
- FN6: Implement smarter public parking strategies that meet evolving needs
- FN7: Support sustainable first and last mile freight

The Core Strategy commits to drawing on growing industries to bring new ideas into LCCA's transport networks and prepare for upcoming changes. For example, the LCCA will use their cross-sector capabilities from the aerospace industry to explore using drones for transport, and will get ready for a widespread rollout of connected and autonomous vehicles.

The Workstream recognises that impacts of more extreme weather patterns are becoming more apparent, with wetter winters and warmer summers. The Workstream then aims to plan for the future to keep Lancashire moving, making sure the transport networks are sustainable now and prepared for future changes.

The Core Strategy sets out that it will work with cross-sector partners to proactively maintain transport assets and other infrastructure to ensure smooth journeys now and into the future.

Environmental issues

The commitment to "deliver sustainable, resilient infrastructure" and "plan for the future to keep Lancashire moving" suggests a recognition of climate change impacts, which is foundational for ecosystem resilience (Objective 1). Promoting electric vehicles and sustainable freight can reduce air and noise pollution, indirectly benefiting biodiversity and ecosystem health. Note is also made of the implementation of natural elements into transport networks and communities. It is noted 'Green infrastructure' like rain gardens, parks, green roofs, nature corridors and urban planting, and 'blue infrastructure' like wetlands, water storage ponds and coastal infrastructure, can help support biodiversity, and support the overall quality of our local environments. It is anticipated effects could be significantly beneficial in the medium to long term as green infrastructure is developed and matures. This approach to biodiversity could indirectly benefit sites designated for nature conservation (Objective 2).

Promoting electric vehicles and sustainable freight can reduce air pollution (Objective 3). Note is also made of electric car sharing schemes which will encourage uptake, as well as the encouragement to replace older vehicles with modern, efficient and low or zero emission vehicles. There would also be an increase in the EV charging network. Further, delivering sustainable, resilient infrastructure suggests consideration of air quality in the design, construction and operation of new infrastructure. Smart transport systems (use of new transport data and technologies), along with the noted more efficient and coordinated management of roadworks, service planning and event planning through collaboration and information sharing between highways authorities, National Highways, event organisers, utilities companies and public transport operators can optimise traffic flow, reduce idling, and improve fuel efficiency, indirectly lowering emissions.

It is anticipated effects could be significantly beneficial in the medium to long term as the uptake of the EV fleet increases and transport networks become more efficient.

Noise reduction (Objective 4) can also be anticipated through a greater uptake of EVs, alongside greater transport network efficiency.

This workstream should result in a direct and significant contribution to reducing tailpipe emissions from private vehicles, aligning well with the UK's net zero goals (Objective 5) through for example the focus on accelerated uptake of electric vehicles and reduced inner city parking provisions (which increase attractiveness of other more sustainable modes of transport). An emphasis has also been placed on logistics with support for a shift from LGVs to low-emissions deliveries (for example electric vans or cargo bikes) through smaller, local distribution centres, known as micro-consolidation. Smart transport systems can optimise traffic flow, reduce idling, and improve fuel efficiency, indirectly

lowering emissions. While not explicitly carbon-focused, sustainable infrastructure can include low-carbon materials (as noted in the workstream) and designs that reduce lifecycle emissions. Use would also be made of carbon calculators to understand whole life carbon. An emphasis has also been placed on embedding whole life approaches to asset management, with a data-driven approach that will help to take proactive steps and target the areas most in need of maintenance and renewal. This should mean that assets do not need to be replaced as often and embedded carbon will not be 'wasted' or replaced. Planting of green infrastructure would provide opportunities to sequester carbon, though it is acknowledged that amounts would be relatively limited. Significant beneficial effects can be anticipated in the medium to long term.

The Workstream explicitly acknowledges more extreme weather patterns, including wetter winters and warmer summers, which is a strong foundation for climate adaptation planning. The policy to "deliver sustainable, resilient infrastructure" directly supports the objective of climate adaptation (Objective 6). This suggests an intention to design and maintain transport systems that can withstand climate-related stresses. Specific note is made of designing spaces to help people and infrastructure cope with higher rainfall and heat, such as through shelters, trees and plants, sustainable drainage solutions, green and blue infrastructure, and using more resilient, lower carbon materials.

It is anticipated benefits would be significant from the short through to the long term.

While the workstream does not reference cultural heritage, historic buildings, landscapes, or archaeological assets, the policy to deliver sustainable, resilient infrastructure suggests consideration of the full range of environmental receptors, including the historic environment (Objective 7). Pro-active maintenance of bridges and other transport infrastructure may allow for retention of historic assets. Green infrastructure could also help to improve the setting of the historic environment.

Similarly, while the workstream does not reference landscapes and townscapes and visual amenity, the policy to deliver sustainable, resilient infrastructure suggests consideration of the full range of environmental receptors, including landscape. As noted, "green infrastructure" and "blue infrastructure" can help manage flooding, reduce heat stress, support biodiversity, and support the overall quality of our local environments. This would be anticipated to improve townscapes and wider landscapes (Objective 8). Increased uptake of EV's could reduce pollution deposition on buildings etc. and help improve the overall townscape.

A focus on the increased uptake of EVs may also allow for a reduction in pollution, while the development of green infrastructure may allow for better protection / utilisation of soils (Objective 10). The emphasis on the uptake of EVs would also reduce the potential for hydrocarbon spillages entering local watercourses, though there could potentially be increased deposition of detritus from brake and tyre wear due to their generally heavier weight. Development of

"green infrastructure" and "blue infrastructure" would help protect and enhance the water environment (Objective 11).

The Workstream's aim to "deliver sustainable, resilient infrastructure" includes for more efficient use of materials and longer asset lifespans - key to reducing resource consumption and waste. Note is also made of using more resilient materials (Objective 12). Promoting sustainable first and last mile freight may reduce reliance on resource-intensive logistics systems and encourage more efficient, lower-impact delivery models. The use of innovative transport technologies (for example, drones, connected vehicles) could lead to more efficient use of materials and energy, especially if paired with circular design principles.

The Workstream aims to transform Lancashire into a sub-region fit for the future, explicitly linking transport improvements with economic development. It highlights the role of new technologies and cross-sector innovation (for example, aerospace, drones, autonomous vehicles), which can stimulate new industries and job creation.

Policies to improve journey time reliability and deliver resilient infrastructure directly support better access to employment and training opportunities, particularly in areas with poor connectivity. Supporting sustainable first and last mile freight can enhance the efficiency of local supply chains, benefiting businesses and creating logistics-related jobs. Effects are anticipated to be significantly beneficial in the medium to long term.

The Workstream's aim to make Lancashire "fit for the future" and "ready for growth" implies a strategic approach to infrastructure that could support integrated land use and energy planning, especially as it relates to accommodating new development and technologies. Accelerating EV uptake has implications for energy infrastructure planning, particularly in terms of grid capacity, charging infrastructure, and renewable energy integration. Note is also made of reducing costs by using more energy efficient lighting, generating more of their own energy.

Health, Equalities and Rural proofing

The Workstream's overarching aim to ensure "sustainable, resilient infrastructure" and "keep Lancashire moving" supports long-term public health by aiming to reduce congestion, improve air quality, and maintain access to essential services, including those related to health.

Promoting electric vehicles and low-emission freight can reduce air pollution, which is a major contributor to respiratory and cardiovascular diseases, especially in urban and deprived areas. Improvements to air quality, even at a local level, would benefit all but particularly children, the elderly and those with certain health conditions.

Recognising and planning for extreme weather (for example, wetter winters, warmer summers) helps protect communities from climate-related health risks such as flooding, heatwaves, and transport disruption that can affect access to

healthcare and services. Delivering sustainable resilient infrastructure will ensure that the road, rail and active travel networks are protected against more extreme weather such as higher rainfall and heat. This will improve the safety of the network and help to avoid accidents as a result of extreme weather events. Well maintained infrastructure, as set out in this workstream, would also improve safety for all.

The Workstream does not directly target financial changes, incentives or subsidies to public transport, since they are included elsewhere, and it is therefore considered that there would be limited affordability changes as part of this Workstream. However, improving journey time reliability and efficiency could reduce overall fuel costs.

The Workstream acknowledges that although costs are gradually decreasing, buying an electric car remains prohibitively expensive for many; electric car sharing schemes could allow residents to access an electric car without the need to purchase one, or to try before buying. Note that care needs to be taken to ensure that the increase in EVs does not cause issues for those with sensory impairments such as hearing loss, though this is largely outside the scope of the LTP.

Note is also made in the workstream to have consideration of the right charges and payment methods for parking and notes unifying and modernising payment methods. Care would need to be taken to ensure this does not discriminate against those who are reliant on cash or who are on low incomes. Groups that are particularly sensitive to any such changes include those on low-income, elderly and children/youth dependant.

Measures noted in the workstream could also include a further review of parking supply such as encouraging higher turnover for on-street retail parking, longer stay for residential areas, a review of resident permit zones, or new bus and rail park and ride. Other measures could include improving enforcement and design to reduce inappropriate parking (such as blocking pavements), Such measures would help to reduce severance for those with limited mobility.

Improving journey time reliability through reducing delays and disruption will help to improve connections within and between communities, including in rural areas.

Supporting sustainable first and last mile freight will increase delivery options for residents and improve commercial connections between communities.

New energy efficient lighting would also be implemented which it can be anticipated would be to the latest design standards, though it is to be noted that some individuals experience issues with newer light types.

Embracing new transport technologies (for example, drones, autonomous vehicles) has the potential to improve access in rural or underserved areas, which could benefit older people, disabled individuals, and low-income groups – though this depends on inclusive implementation.

Note is also made of the need for sufficient charging facilities, including at key locations and this would be particularly beneficial to those in rural areas who may have to travel greater distances. Whilst the workstream recognises the importance of transport networks for growing the economy it does not directly target rural areas. However, improving journey time reliability and network efficiency, along with a resilient network, would benefit the rural economy as it would allow a more reliable and efficient access to markets for rural enterprises. Such aspects would be particularly important for sensitive freight such as foodstuffs and livestock

11 Assessment of Intervention types

As noted in the LTP Core Strategy, development of an overarching Implementation Plan has not been finalised. Ultimately it is the intention that this will sit as a separate document alongside the Core Strategy, in order that it remains flexible and able to respond quickly to change. Once finalised, this Implementation Plan will set out the transport schemes which LCCA considers are:

- Committed – fully funded and contractually agreed schemes;
- In early delivery – schemes progressing through business case development; and
- In option development stage – schemes requiring further feasibility and options appraisal.

In order to help the development of the Implementation Plan, a high level assessment of broad transport Intervention types was included in the ISA. Elements of these broad intervention types will be included in the anticipated Investment Programmes set out in the LTP Core Strategy.

The broad intervention types considered are as follows:

- New highway links – to include new roads and new road links;
- Highway Infrastructure improvements – to include road widening and junction improvements;
- New rail links – to include new rail links, as well as light rail and mass transit expansion;
- Rail infrastructure improvements – to include of upgrades to rail facilities;
- New / improved bus infrastructure – to include new and improved bus stations / travel hubs, as well as general bus infrastructure;
- Active travel routes – to include cycleways, footpaths and similar. These could be new routes or upgrades to existing;
- Public realm improvements;
- Digital connectivity and enhanced information; and
- Ticketing, promotion and education programmes.

The assessments have been undertaken per type of intervention, rather than individual schemes as the information available for each scheme is not known at this stage and this level of assessment is proportionate to the ISA being undertaken. Please see Appendix G which details the assessment of intervention types.

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 effect have been examined, should mitigation 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 TAG, Environmental Impact Assessment and the development of Environmental Management Plans) for certain projects or types of project;
- Proposals for changing other plans and programmes; and
- Contingency arrangements for dealing with possible adverse effects.

12.2 Mitigation approaches applied through ISA

A number of mitigation approaches have been used through development of the LTP Core Strategy in order to mitigate potential adverse effects. These have included the following shown in Table 12.1.

Table 12-1 - How mitigation has been incorporated into the LTP Core Strategy

Approach to mitigation	How has this been incorporated into the LTP Core Strategy?
Refining policies in order to better reflect the ISA Objectives and improve the likelihood of positive effects and to	Assessment was made of a draft LTP and recommendations were made in relation to clarifying and bolstering aspects of sustainability. Ongoing iterative discussions also took place with the Plan making team. A new section relating to sustainability was added to LTP Core Strategy and this sets out approaches to addressing sustainability issues going forward. Clear commitment is made to undertaking as required, Health Impact Assessment, Equalities Impact

Approach to mitigation	How has this been incorporated into the LTP Core Strategy?
minimise adverse effects	Assessment, Habitats Regulations Assessment and Environmental Impact Assessment. During any future construction phases, a Construction Environmental Management Plan will also be developed as required. The policies for delivering LTP Core Strategy 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	No Interventions have been set out at this stage of LTP development – these aspects will be clarified through further work that is yet to take place. Nevertheless, LTP Core Strategy sets out clear commitments by the LCCA to undertake the required assessments at appropriate stages as set out above.
Technical measures (such as setting guidelines) to be applied during the implementation phase	Clear commitment is made within LTP Core Strategy 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 Core Strategy that the LCCA will ensure to use the latest inclusive design standards including DfT guidance, to mitigate adverse effects and maximize beneficial ones.
Identifying issues to be addressed in Scheme / Intervention assessment (i.e. at Project level), including but not limited to TAG, Environmental Impact Assessment and the development of Environmental Management Plans, for certain projects types of project	The LTP Core Strategy clearly sets out a process of how environmental issues will be considered in future scheme development. LTP Core Strategy sets out that, dependent on the scheme, assessment will include Health Impact Assessment, Equalities Impact Assessment, Habitats Regulation Assessment and Environmental Impact Assessment as required. ~~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.~~
Proposals for changing other plans and programmes	No proposals have been made to change other plans and programmes as LTP will act in accordance with a range of other plans and programmes for example, local development

Approach to mitigation	How has this been incorporated into the LTP Core Strategy?
	plan documents. There are also clear commitments made within LTP Core Strategy to work closely with partner organisations and other stakeholders including district council officers and neighbouring authorities, to ensure that consideration of sustainability, including health and equality, is made at an early stage for schemes. LCCA will also work in partnership with external stakeholders, including government bodies, to improve transport in Lancashire for all. LCCA will identify the types of assessment that are appropriate for the scale and nature of the scheme at each stage of development and which organisation has responsibility for the assessment process. This will allow for full consideration of requirements in development plan documents and required statutory processes as necessary.
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 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 LCCA has a statutory duty to monitor the performance of the LTP Core Strategy and its Implementation Plan against their strategic objectives and workstreams. Feedback from the monitoring process allows the Implementation Plan to be adjusted according to the actual performance against objectives. LCCA will monitor progress against the LTP Goals over its lifespan and report this.

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 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 LTP proposals are discussed in Chapter 10. 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 LTP have been incorporated through iterative development between ISA team and plan making team.

Table 13-1 - Anticipated cumulative, synergistic and indirect effects for LTP

Effects	Causes	Significance
Air pollution emissions	It is considered that the LTP will act to protect and enhance air quality and will have an overall cumulative beneficial effect. This beneficial effect will be derived through application of a number of workstreams and policies, that seek to reduce congestion, establish affordable, convenient and safer sustainable modes (including active travel and public transport) and accelerate EV uptake.	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)

Effects	Causes	Significance
		and enhanced services (including increased frequency) of road / rail
Carbon emissions	It is anticipated that schemes derived from the LTP will result in a mix of adverse and beneficial effects on carbon emissions from transport and meeting net zero targets.. Beneficial effects could be derived from reduction in congestion, as well as establishing affordable, convenient and safer sustainable modes (including active travel and public transport) and accelerate EV uptake, while adverse effects could be through the development of new infrastructure such as road upgrades / junction works and railway works and improving connections which facilitate private car journeys across greater distances.	Anticipated short to long term moderate beneficial and adverse effects. There will be continuing emissions due to reliance on private cars and enhanced services (including increased frequency) of road / rail, whilst there will be beneficial effects from increased uptake of active travel, public transport and LZEV.
Biodiversity	Cumulative beneficial effects can be anticipated through workstreams and policies which put an emphasis on reducing emissions (thereby reducing pollution deposition), as well as place making in new developments and the development of active travel routes and 'green infrastructure', that allows opportunities for planting (ideally of native species). Disturbance to habitats (as well as 'road kill') would also be reduced through a general reduction in journeys and traffic congestion. However, adverse effects could also occur through development of infrastructure. 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.	Anticipated moderate adverse (significant) effects through short term as new infrastructure projects are brought through construction phase into operation. Medium to long term moderate beneficial effects on biodiversity where interventions lead to greater uptake of active and sustainable transport modes. Moderate beneficial effects also anticipated on biodiversity where interventions deliver green infrastructure and, for example, BNG which will reach maturity over the medium to long term.

Effects	Causes	Significance
Resilience to climate change, including flooding	It is recognised that weather patterns are evolving and the workstreams and policies would likely result in the development of new active travel routes and new infrastructure which may result in an increase in impermeable surfacing, with a consequent increase in risk of flooding. However, note is also made of the development of public realm and this may allow for the use of SuDS. Beneficial effects would result from more resilient infrastructure, protecting the transport infrastructure against extreme weather events including flooding. Overall, the cumulative effect will be a mix of beneficial and adverse.	Overall a mix of slight beneficial and adverse over the medium to long term as schemes are developed / implemented.
Landscapes / townscapes	It is anticipated that schemes derived from the LTP will result in a mix of adverse and beneficial effects on landscapes and townscapes across Lancashire. Beneficial effects could be derived from reduction in congestion, for example in town and village centres, as well as an emphasis on elements such as place making as well as development of local facilities within development proposals, while adverse effects could be through the development of new infrastructure such as road upgrades / junction works and railway works.	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. For example, the development of public realm or road upgrade / junction improvements provides an opportunity for positive effects relating to 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.	Anticipated slight beneficial and adverse effects over the medium to long term as schemes are implemented.

Effects	Causes	Significance
Economic growth	Making town centres more attractive via reducing congestion and enhancing public realm can help increase footfall and make these more attractive places to do business in. Economic benefits are also considered likely due to efficient network management and removal or alleviation of congestion hotspots etc. as this will make travel across the county and to surrounding areas more efficient, with more reliable timings. This will likely provide better and more efficient access to jobs (by allowing the same journey time to reach a greater distance). This can be facilitated by Park & Ride services, highway improvements and better connections and public transport services. LTP 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. It is also anticipated that sustainable choices for tourists may improve their access to major destinations and support the county's economy, while remaining public transport and improving public transport connections with neighbouring regions can help create stronger economic links, facilitating access to new opportunities, attracting tourism and investment, and reducing economic isolation for communities and towns.	Anticipated major beneficial effects over the medium to long term as schemes are implemented.
Health and wellbeing, equalities and rural needs.	On the whole, cumulatively, the 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 ensuring safe and secure travel as well as accessible high-quality spaces. Improvements to air quality and a reduction in traffic noise will	Anticipated moderate beneficial effects over the medium to long term as schemes are implemented. Note though, that not all in society will benefit to the same extent and while recognition is made in LTP to help

Effects	Causes	Significance
	also benefit health. Connections within and between communities will also be enhanced including rural areas. This will be achieved by a range of mechanisms that will work together such as enhanced services, enhanced routes, better public and shared transport on rural and remote communities, reduced congestion, better provision of information, a new approach to ticketing, including simpler and lower fares and ticketing incentives and so on.	such groups / individuals, there remains an uncertainty of effect on elements of the population.

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 LTP as shown in Table 13.2.

Table 13-2 - Cumulative effects with other adopted plans

Plan	Overview	Potential for cumulative effects with LTP
Local Plans	Local Plans have been prepared for each of the Lancashire council areas, including: Burnley's Local Plan 2012 – 2032; Chorley Local Plan 2012 – 2026; Central Lancashire Local Plan; Fyle Local Plan to 2032; Hyndburn 2037, The Local Plan; A Local Plan for Lancaster District 2020 – 203; Pendle Local Plan 4th Edition (2021-2040); Preston Local Plan 2012 – 2026; Core Strategy 2008 – 2028. A Local Plan for Ribble Valley; Rossendale Local Plan 2019 to 2036; South Ribble Local Plan; West Lancashire Local Plan 2012 – 2027; Wyre Local Plan 2011 – 2031; Blackburn with Darwen Local Plan 2021-2037; and	LTP sets out a range of Policies and measures that align with the aims of the Local Plans. By improving connections to jobs, markets and supply chains, LTP will support the economic objectives in each Local Plan. Environmental safeguarding objectives are supported through LTP policies aiming to increase climate resilience and reduce pollution from transport. Sustainable growth

Plan	Overview	Potential for cumulative effects with LTP
	Blackpool Local Plan 2012-2027. Generally, these Local Plans aim to guide the future development of their respective areas by promoting sustainable growth, delivering homes and employment opportunities, and enhancing infrastructure and connectivity. They prioritise protecting the natural, historic, and built environment, tackling climate change, improving health and wellbeing, and ensuring development reflects local character. The plans share common principles of economic vitality, environmental responsibility, and social inclusion, while addressing local priorities such as Green Belt protection, regeneration, or climate neutrality. The plans provide a strategic framework for decision-making that balances long-term resilience with place-specific objectives.	will be enhanced through improved infrastructure and transport options, while social objectives align with LTP policies supporting safe and vibrant communities and reduced inequalities and deprivation. Effects are anticipated to be cumulatively beneficial.
Environment and Climate Strategy 2023-2025 – Lancashire County Council	This strategy aims to spearhead major reductions in waste and emissions and provide for the recovery of nature in Lancashire. It also aims that the strategy for Environment and Climate can contribute to wider strategic objectives. There are three areas of activity with ten objectives: Reducing waste and pollution • Reducing waste and increasing reuse and recycling; • Improving air quality; and • Improving water quality. Climate change • Reducing greenhouse gas emissions to lessen the impacts of climate change; • Ensuring our infrastructure, assets and services are resilient	LTP provides emphasis on elements such as reducing pollution from transport, protecting the natural and built environment and increasing resilience to evolving weather patterns. Cumulative effects with the Environment and Climate Strategy are expected to deliver environmental and social benefits for Lancashire. However, the development of new infrastructure through LTP has the potential to result in adverse

Plan	Overview	Potential for cumulative effects with LTP
	to the impacts of climate change; and • Managing flood risk and water resources. Natural and historic environment • Conserving, restoring and re-establishing habitat quality and species diversity; • Ensuring our residents have access to high quality, natural spaces; • Conserving and enhancing our historic environment and outstanding landscapes; and • Using nature-based solutions to tackle climate change.	effects on the environment. Therefore, there may be a mix of adverse and beneficial cumulative effects.
Economic strategies	Lancashire's and the wider North West's economic strategies collectively aim to drive long-term, inclusive and sustainable economic growth across the region. The North West Regional Strategy (2008) and the Northwest Regional Economic Strategy (2006) provide foundational objectives for improving productivity, promoting sustainable economic development and increasing accessibility. The Net Zero North West Cluster Plan (2023) provides a deliverable investment, technology and infrastructure blueprint for the North West's net zero transition. The plan outlines the opportunities which the North West has; to increase job provision, promote economic investment and establishing domestic supply chains in green technologies.	LTP includes policies and measures that align with the aims of the economic strategies. The LTP's focus on accessibility, sustainability, and resilience complements the economic strategies' aims to attract investment, develop net zero technologies, and support business growth. Together, LTP and the economic strategies support improved physical and digital connectivity, increased productivity and

Plan	Overview	Potential for cumulative effects with LTP
	The Lancashire County Council Economic Strategy (2023–2025) translates these broader ambitions into local action. It focuses on strategic development and connectivity, business support and skills and talent. The Digital Strategy (2025–2029) focuses on accelerating digital inclusion, infrastructure, and innovation to support new business models and enhance productivity across the economy. The Lancashire Growth Plan (2025 – 2035) outlines Lancashire's economic priorities and will ensure targeted investment in key technology sectors, maximising national impact and local transformation.	improved access to jobs and skills. Effects are anticipated to be cumulatively beneficial.
Environmental Protection Plans	Environmental protection plans aim to safeguard and enhance Lancashire's natural capital. A Landscape Strategy for Lancashire identifies actions to manage and guide landscape change. The Local Nature Recovery Strategies for Lancashire focus on restoring habitats and species at the county level, while the Lancashire Woodland Vision promotes tree cover expansion and sustainable woodland management. National-level strategies such as Site Improvement Plans for Natura 2000 sites, National Landscape (or AONB) Management Plans, National Park Management Plans, and National Character Areas bring regulatory and conservation frameworks that ensure alignment with national biodiversity and landscape goals.	LTP includes policies and measures that aim to reduce pollution from transport and encourage a shift towards active travel. Disturbance to protected areas and habitats may be reduced through a reduction in congestion. However, there is potential for adverse effects on the landscape and protected sites where new infrastructure is required. Therefore, there may be a mix of adverse and beneficial cumulative effects.

Plan	Overview	Potential for cumulative effects with LTP
Water and Flood Risk Management Plans	These plans protect Lancashire's communities, infrastructure, and environment from the impacts of flooding and water-related risks. The North West England and North Wales Shoreline Management Plan 2 (2011) provides an overview of coastal geography, erosion and flooding risk and Shoreline Management Plan (SMP) policy. The Lancashire Local Flood Risk Management Strategy sets out a framework for managing local flood risks. It coordinates the responsibilities of various risk management authorities and prioritises investment and community resilience. Catchment Flood Management Plans (2016) assess flood risk across entire river catchments and identify long-term policies for sustainable flood risk reduction. River Basin Management Plans (2015) focus on improving and protecting water quality across rivers, lakes, and groundwater systems. The Ordinary Watercourse Regulation for Lancashire provides guidance on the maintenance and management of ordinary watercourses.	LTP includes policies and measures that aim to increase resilience to evolving weather patterns and tackle flooding. LTP aims to reduce pollution from transport, aligning with the objectives of the water and flood risk management plans. However, there is potential for adverse effects. New transport infrastructure could increase surface runoff, disrupt natural drainage and increase flood risk. Therefore, there may be a mix of adverse and beneficial cumulative effects.
Transport and Infrastructure Plans	Various plans related to transport and infrastructure form a cohesive framework to improve Lancashire's mobility network, increase safety, and support a low-carbon future.	There are clear linkages between Lancashire's transport and infrastructure plans and elements of LTP. By improving transport

Plan	Overview	Potential for cumulative effects with LTP
	The Lancashire County Council Highways and Transport Strategy (2023–2025) focus is on developing better transport links, improving journey times and reliability, between areas of economic opportunity and their workforce, with the provision of sustainable forms of transport a priority. The Lancashire Highways and Transport Masterplan details five highway and transport masterplans to cover the twelve districts of Lancashire. Supporting these are the Transport Asset Management Plan and Highways Asset Management Framework, which guide the maintenance and lifecycle planning of Lancashire's transport assets, ensuring cost-effective and resilient management of roads, bridges, and related infrastructure. The Highway Decarbonisation Strategy provides a roadmap for reducing transport-related emissions, encouraging a shift to public transport and active travel. Complementing this, the Joint Bus Service Improvement Plan aims to enhance local bus services, while the Road Safety Strategy (2025–2027) provides an account of the actions taken to improve road safety. Lastly, the Public Rights of Way Improvement Plan details proposals for improving rights of way and wider access in Lancashire.	infrastructure, enhancing connectivity and promoting active travel and public transport, LTP aligns with the overall aims of the transport plans to enhance the efficiency, safety, and sustainability of the Lancashire's transport network. However, large-scale investment in infrastructure has the potential for adverse effects on the environment through noise and air pollution, habitat fragmentation and land-use change. Therefore, there may be a mix of adverse and beneficial cumulative effects.
Health, Wellbeing and Culture Strategies	The strategies related to health, wellbeing and culture shape Lancashire's approach to improving population wellbeing, tackling health inequalities and promoting culture.	LTP includes policies and measures that promote health, wellbeing and culture. Cumulative

Plan	Overview	Potential for cumulative effects with LTP
	The Lancashire Joint Strategic Needs Assessment (JSNA) is produced annually bringing together key findings around health, wellbeing and social care for issues for Lancashire. Building on that evidence, Our Public Health Strategy (2024–2030) aims to promote wellbeing for all, protect lives and the economy and prevent disease, disability and demand. The Culture Services Strategy (2024–2028) recognises the role of cultural participation in improving standard of living.	effects with the health strategies include promoting healthier lifestyles through encouraging active travel, improving access to health services and reducing pollution from transport. Enhanced connectivity supports social inclusion, while safer streets reduce the risk of accidents. Effects are anticipated to be cumulatively beneficial.
Waste Strategies	Waste strategies in Lancashire focus on sustainable waste management. The Municipal Waste Management Strategy for Lancashire provides a framework to establish policies to guide development of sustainable waste management. The Local Planning Policy for Minerals and Waste aims to safeguard Lancashire's mineral resources and manage waste as a resource.	Shared objectives between LTP and Lancashire's waste strategies include improving air quality, resource efficiency and climate resilience. However, the development of new infrastructure through LTP is likely to generate waste. Therefore, there may be a mix of adverse and beneficial cumulative effects.

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 Core Strategy 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 Core Strategy or to help inform decision making in terms of the LTP implementation plan), as well as to preparing information which will be needed for further assessment such as EIAs, HRAs, HIAs, EqIAs etc. of projects. As such, it is the intention that this ISA monitoring will complement the monitoring and evaluation plan set out in LTP Core Strategy. 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.

14.2 Proposed monitoring programme

At this stage, as the LTP Core Strategy is a high-level strategic document, the following therefore outlines a potential series of monitoring indicators that will be considered and finalised alongside development of the LTP detailed plans and documents going forward. It is to be noted that Table 14.1 is not intended as an exhaustive list – it is likely that this list will be amended as further understanding of the LTP details and implementation plan is gained.

Table 14-1 - Potential monitoring indicators

ISA Objective	Indicators to be used	Direction of change
Protect and enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	Net gain in Biodiversity (using Defra metric) due to transport schemes	Increase – target of minimum 10% BNG
Protect and enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	Area of green infrastructure and/or green/blue infrastructure developed as part of transport scheme / improved public realm	Increase
Protect and enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	Number of transport schemes with recognised adverse effect on sites designated for nature conservation	Reduce

Protect and enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	Hectares of trees planted and enhanced	Increase
Protect and enhance biodiversity, promote ecosystem resilience and functionality and contribute to the achievement of Biodiversity Net Gain and the delivery of the Nature Recovery Network	Hectares of peat engaged in restoration efforts	Increase
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
Protect and improve air quality	Area covered by AQMAs declared due to transport emissions	Reduce
Protect and improve air quality	Levels / Concentration of transport related pollutants	Reduce
Protect and improve air quality	LZEVs as a proportion of total fleet	Increase

Protect and improve air quality	Development of active travel routes (measured in KM)	Increase
Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	CO2 emissions from road transport	Reduce
Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	Per capita transport carbon emissions	Reduce
Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	Uptake of active travel modes	Increase
Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	Number of EV charging points in the county	Increase
Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	Number of rail passengers utilising rail stations in the county	Increase
Reduce carbon emissions from transport and contribute to	Number of bus passengers in the county	Increase

meeting the UKs net zero carbon target		
Reduce carbon emissions from transport and contribute to meeting the UKs net zero carbon target	CO2 emissions from road transport	Reduce
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
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) that include as part of design measures to adapt to climate change	Increase
Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding	Area of flood risk / floodplain constructed upon by transport schemes	Minimise / Reduce

Maximise adaptation and resilience of the transport network to the effects of a changing climate, including through reducing the risk of flooding	Number of gully pots / culverts cleaned / maintained	Increase
Protect and enhance cultural heritage assets and their settings, and the wider historic environment including buildings, structures, landscapes, townscapes and archaeological remains and their settings.	Number of historic assets and historic landscapes negatively impacted by transport schemes after all design solutions have been identified	Reduce
Protect and enhance the character and quality of landscapes and townscapes and visual amenity.	Area covered by transport schemes within or in close proximity to National Landscapes (formerly AONB) designated areas	Reduce
Protect and enhance the character and quality of landscapes and townscapes and visual amenity.	% area of transport schemes that incorporate improvements to public realm and sympathetic design	Increase
Protect, enhance and promote geodiversity	Number of transport schemes with recognised adverse effect on sites designated for geodiversity	Reduce

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
Protect and enhance the water environment	Number of transport schemes (new or improved) incorporating SuDS or upstream Natural Flood Management	Increase
Protect and enhance the water environment	Number of pollution incidents attributable to transport	Reduce
Promote sustainable use of resources and natural assets including maximising the use of alternative, secondary and recycled materials, reducing the level of waste generated.	Amount of waste produced during construction of transport schemes	Increase
Promote sustainable use of resources and natural assets including maximising the use of alternative, secondary and recycled materials, reducing the level of waste generated.	Amount of recycled / secondary material used in Construction of transport schemes	Increase
Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all	Transport improvements (for example service provision) in rural areas	Increase

Promote economic growth and job creation, and improve access and connectivity to jobs and skills for all	Provision of digital connectivity improvements	Increase
Support the wider coordination of land use and energy planning across the Lancashire area	Number of new compact, higher density mixed use developments supported by sustainable transport modes	Increase
Improve health and well-being for all citizens and reduce inequalities in health *(HIA specific objective)*	Population within AQMAs	Reduce
Improve health and well-being for all citizens and reduce inequalities in health *(HIA specific objective)*	Population within Noise Important Areas	Reduce
Improve health and well-being for all citizens and reduce inequalities in health *(HIA specific objective)*	No. and length (Km) of Active travel schemes	Increase
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society *(EqIA specific objective)*	Affordability of public transport	Increase

Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society *(EqIA specific objective)*	Accessibility and public realm improvements in most deprived areas	Increase
Promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society *(EqIA specific objective)*	Accessibility improvements in public transport schemes	Increase
Promote fairness and equity in rural connectivity	Indicators as set out in TfN TRSE Database	Increase

15 Summary and Conclusions

Lancashire Combined County Authority have developed a new LTP for the county. This is the first LTP to be produced by the LCCA, providing a single, united voice to champion Lancashire's interests and sets out its transport priorities and the policy foundation for transport investment in Lancashire between 2025 and 2045.

It is the intention that the LTP and by extension the transport network in the county, will support a stronger economy, with fairer opportunities and a sustainable future, with the single purpose of delivering positive change for all those who live, work and do business in Lancashire.

In order to assess the sustainability performance of the LTP, an ISA has been carried out throughout its development. This ISA was undertaken by a team independent of the plan making team, though with both teams working in close liaison with each other. The approach taken follows guidance developed with the purpose of embedding environmental, economic and social considerations into Plans as they develop, through a series of recommendations made by the ISA team to the plan making team. It is considered that this approach resulted in a comprehensive inclusion of sustainability considerations to the LTP.

Of particular note, it was recognised early in the process that the LTP needed to set out how it can interact with the environment and people of the county and provide for an approach that would allow such issues to be addressed as any transport interventions that are ultimately derived from the LTP are implemented. Early key recommendations included emphasising sustainable infrastructure development, consideration of key environmental aspects, highlighting equity and inclusion with particular emphasis on rural connectivity and vulnerable groups, and emphasising decarbonisation.

On that basis, an assessment was undertaken of the draft LTP and it is possible to draw a number of conclusions in respect of the draft LTP and its approach to sustainability.

In respect of the question of whether implementing the draft LTP was more favourable in sustainability terms than continuing with the present approach to planning and investment in transport in Lancashire, it was shown that across a number of the ISA Objectives, it was clearly positive to develop and implement a new Plan. Of particular note are the anticipated benefits to the economy, health, wellbeing, equalities and rural needs, which are anticipated to be both direct and indirect effects. Although, there are a number of areas in which the effects are currently unknown due to the level of detail available for the measures to be implemented at this stage. Positive and negative effects can be expected across many of the environmental areas due to the potential for shorter and fewer car trips alongside the potential new infrastructure and improved connectivity and convenience of private car use and the associated mixed effects these outcomes would have on the environment.

Assessment was undertaken to ensure that the Vision and Goals of the LTP were broadly compatible with the ISA Objectives. This compatibility assessment made a number of recommendations for enhancement but it was shown that both sets of objectives were broadly compatible and provided reassurance that the sustainability performance of the plan could be maximised. While areas of uncertainty remained, in particular relating to the environment, this was not considered to be unusual in respect of a transport plan and the likely issues that would arise in respect of the environment. It was therefore considered that the developing LTP should include greater clarity on how environmental issues will be addressed. This would help ensure alignment with the requirement to fully integrate sustainability into the LTP, and provide reassurance that environmental considerations will be a cornerstone of future scheme development.

In the absence of a Delivery Plan, a series of high-level intervention types have been identified as likely to form part of the LTP. While no locational, timing or design detail is known for any options that might fall under these categories, the ISA has provided an indicative assessment of these intervention types against the suite of ISA objectives, outlining likely effects related to the type of intervention. In doing so, the ISA helps to steer the development of the Delivery Plan and selection of options.

The ISA then examined each of the proposed 'Policy and Delivery Workstreams' detailed within the draft LTP in turn. These Workstreams were:

Connecting Lancashire: it is the aim of this workstream to unleash economic potential through better connecting residents with jobs, businesses to markets and supply chains, and unlocking strategic development across the sub-region. This workstream will deliver the Connected Lancashire ambition in the Growth Plan;

Transforming travel choices: it is the aim of this workstream to revolutionise the travel options available for those who live and work across Lancashire, broadening travel horizons and providing genuine choices. It is the intention that these measures will increase access to new opportunities, bring benefits to communities and reduce carbon emissions;

Safe and vibrant communities: it is the aim of this workstream to tackle the root causes of deprivation, poor health and social isolation. It is the intention that this will connect people with new opportunities, regenerate communities and help build healthy living into day-to-day activities; and

Future-ready networks: it is the aim of this workstream to transform Lancashire into a sub-region that is fit for the future. It is the intention that this will integrate new technologies and innovative solutions to ensure networks are sustainable, resilient, efficient and ready for growth.

These Workstreams set out a series of measures across various timescales that will enable the Vision for transport in Lancashire to be delivered. These Workstreams will be delivered in the context of design principles that seek to holistically embed sustainability into Interventions as they develop. Importantly,

commitment is made in the LTP that, dependent upon the scheme, assessment will include, as required, Health Impact Assessment (HIA), Equalities Impact Assessment (EqIA), Habitats Regulations Assessment (HRA) and Environmental Impact Assessment (EIA). ~~Where these statutory assessments are undertaken, they will be guided by the HM Treasury Green Book and DfT Transport Appraisal Guidance where relevant (or equivalents prevailing at the time) throughout the life of the LTP.~~

The LTP provides detail on what is expected in terms of embedding sustainability in design but it includes:

Proactively consider health and equalities issues from the earliest stages of scheme development;

Enhance our designated sites;

Improve air quality;

Reduce greenhouse gas emissions and minimise embodied carbon, including carbon management through scheme design and delivery;

Build-in resilience to extreme weather;

Avoid and protect areas that are recognised at the highest levels for their importance to nature conservation and biodiversity;

Protect Lancashire's ecology, landscape and townscape;

Protect the historic environment;

Protect the water environment; and

Protect natural resources and promote circular economy principles.

The policies set out in the Workstreams covered the following:

Workstream	Policies
Connecting Lancashire	• CL1: Enable the delivery of strategic growth sites • CL2: Transform east / west public transport through the Central Belt • CL3: Improve public transport connections with neighbouring regions • CL4: Improve reliability of strategic and major roads for all modes of transport • CL5: Explore new or expanded heavy rail and mass transit networks • CL6: Improve high-speed broadband, especially in rural areas
Transforming travel choices	• TC1: Improve and modernise bus journeys • TC2: Revolutionise rail travel so it is reliable and affordable

	• TC3: Establish convenient and safe active travel options • TC4: Enable increased use of bus, rail and active travel • TC5: Broaden travel choices in rural areas • TC6: Ensure taxis offer a reliable and safe service • TC7: Transform sustainable travel choices for tourists • TC8: Reimagine public transport ticketing
Safe and vibrant communities	• SV1: Empower everyone to travel safely and securely, wherever they go • SV2: Deliver accessible and affordable public transport • SV3: Develop accessible, high-quality spaces and infrastructure • SV4: Embed placemaking in new developments • SV5: Alleviate adverse impacts of travel on communities
Future ready networks	• FN1: Embrace new transport data and technologies • FN2: Accelerate the uptake of electric vehicles • FN3: Improve journey time reliability • FN4: Deliver sustainable, resilient infrastructure • FN5: Embed whole-life approaches to asset management • FN6: Implement smarter public parking strategies that meet evolving needs • FN7: Support sustainable first and last mile freight

The LTP clearly has a focus on sustainable modes, including active travel, however, there is also a recognition that there will remain a reliance on elements which could be considered more 'traditional' (in transport planning terms), with upgrades to the road and rail networks being key components. This approach reflects the spatial challenges and opportunities of Lancashire – for example, it is recognised that the rural north of the sub-region includes many dispersed and aging communities that could be at risk of transport related social exclusion. Similarly, it was shown in the LTP that problems caused by poor transport connections across the plan area create barriers for growing businesses and preventing residents from accessing good jobs and essential services.

It is to be expected that targeted infrastructure improvements to help deliver key development sites and to improve road and rail infrastructure, while having

benefits such as relieving congestion and facilitating new development, will also likely have adverse environmental or social effects, which could potentially be significant. These effects could be during construction and operation and would likely be experienced at a local level and perhaps regionally. Potential significant adverse effects would include air, noise and carbon emissions (particularly during operation), but less significant adverse effects (in particular during construction) could also include loss of biodiversity, and potential impact (direct or indirect) on sites designated for nature conservation or geodiversity. In addition, there is a potential for adverse effects on the setting of heritage assets, or loss of unknown archaeology, as well as landscapes, soils and the water environment. New infrastructure such as road or rail links would also require use of fresh materials and would generate waste. Such adverse effects are to be expected from heavy civil engineering works that are, on occasion, to take place across large areas.

Nevertheless, overall, it is considered that the draft LTP, in particular through a focus on improving public transport connections and establishing safe active travel options, will bring a range of beneficial effects to the environment and people of Lancashire.

The LTP promotes and encourages a shift to public transport (bus and rail) and active travel modes, away from private vehicles. The LTP also promotes an uptake in Electric Vehicles and sets out how the charging network will be expanded. Overall, the transport network would be made more efficient, with more reliable journey times.

These measures will contribute to reducing pollution emissions (including carbon), as well as noise emissions. These beneficial effects could be most experienced at a local level. Reduction in emissions (noise and air) will also reduce disturbance or pollution deposition on biodiversity habitats, including those areas designated for nature conservation. There are also likely to be other beneficial effects such as less pollution incidents to the water environment, improvements to the setting of heritage assets, improvements to townscape and a reduction in the use of hydrocarbons. Adverse impacts would not be eliminated – for example, the use of EVs has been shown to be associated with higher brake and tyre wear (due to their weight) which can lead to water runoff problems.

A key element to the LTP is also a focus on placemaking and creating safer, greener and healthier streets. From an environmental perspective, such a focus would allow for the strengthening of existing, or creation of new habitats, to improve biodiversity through planting of trees for example, that could provide benefits during extreme weather events, such as shading during heat waves, or could allow for some carbon sequestration (albeit relatively small amounts). Such placemaking could also allow for sustainable drainage measures that can help control runoff and thereby reduce the risk of flooding and can help improve water quality. Opportunities could be taken to remediate contaminated land, with potentially an overall further benefit to townscapes and landscapes.

A changing climate is a particularly significant environmental risk to transport networks and the LTP sets out how resilience will be built into the Lancashire network. This will include development of green and blue infrastructure that would act to benefit biodiversity as well as other environmental aspects as noted for general placemaking. 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. Proactive maintenance may also allow for historic aspects of the transport network such as bridges to be kept in better condition. Overall, better and more proactive approaches to maintenance will reduce carbon, improve safety and maximise efficiency of resources.

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. A particular focus will be on creating even stronger economic links, facilitating access to new opportunities, attracting tourism and investment, and reducing economic isolation for communities and towns.

This increased connectivity will result in greater reliability of journey times benefitting the movement of people and goods. There will also be greater access to development / strategic growth sites that are considered key to Lancashire's economic ambitions.

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, including those with sensory issues, to access the job market and therefore increase the workforce and enhance the availability of vital skills.

In addition to environmental and economic effects, the LTP will have effects on society, in particular the people of Lancashire, but also those who come to visit.

A focus on placemaking and accessible high quality spaces will improve 'a sense of place' and have beneficial effects for wellbeing. It is also noted that areas will be designed and built with sufficient, dedicated space for active travel and efficient bus movements, so that these are safe and convenient. This approach will support active lifestyles by helping to embed healthy living into daily activities and creating safer, more welcoming streets. Such active travel routes (along with a focus on access to green spaces) could provide significant benefits to health and wellbeing, though it should be noted that not all groups will be able to take full advantage, with the elderly and those with certain disabilities remaining challenged. Nevertheless, effective placemaking, including improved lighting, removing clutter from footways and providing safer crossing points, rest stops etc, will make it easier and safer for those with mobility issues to access and navigate the streetscape, with a consequent reduction in severance. It is important that placemaking and movement related interventions are sensitively

designed to maximise inclusiveness. This may include adherence to inclusive design standards, use of tactile paving, visual displays, multi-modal communications and integration of low-stimulation environments (balancing lighting requirements and minimising noise)

There is also a strong focus on safety in the LTP, with a policy to apply a 'vision zero' approach to road safety – an ambition for there to be no fatalities or serious injuries on the Lancashire road network. Children and the elderly should particularly benefit. A safer road network will also encourage active travel and remove barriers which prevent people from travel by these modes. This may be of particular benefit for younger people and cyclists, pedestrians and commuters.

Anti-social behaviour is also a recognised problem for transport networks, with particular implications for vulnerable travellers. As such, the LTP sets out a need to design spaces which feel safe and discourage antisocial behaviour, and ensuring scheme design and development processes assess and minimise the potential negative impacts on different groups of people. There is a commitment made to undertake further work to understand and address these issues and it is anticipated this will benefit all vulnerable groups as well as the population as a whole.

It is also a clear aim of the LTP to address issues related to accessibility and affordability. This would likely provide for better access to employment or training opportunities, alongside better accessibility and connectivity and more affordable fares across the whole of the region. This can be expected to have benefits for wellbeing, with the young, the elderly and those on low incomes likely to particularly benefit.

Ultimately the measures set out in the LTP will be implemented via a series of transport related interventions. While mitigation would be developed that will allow adverse effects to be addressed as they arise, at a strategic level, mitigation has been proposed in relation to refining the LTP itself, 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 to be recognised that the LTP will not act or be delivered in isolation and will influence and be influenced by other plans, policies and developments across and beyond Lancashire. 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 LCCA understands the effect of the implementation of their LTP and the ISA sets out a potential series of monitoring indicators that will be considered and finalised alongside further development of the LTP and subsequent Implementation Plan. These will also complement those KPIs which LCCA has identified in the LTP for measuring their progress. 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 beneficial and adverse) being monitored. This will be of particular benefit to those involved with any future 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 vision for Lancashire of a stronger economy, with fairer opportunities and a sustainable future can be achieved in a balanced and integrated fashion.