Appendix 'C'

West Lancashire

Highways and Transport Masterplan

West Lancashire
Highways and Transport Masterplan

Local Transport Plan 2011-2021
Environmental Report
Draft Addendum

September 2014

Lancashire County Council

www.lancashire.gov.uk

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Non-Technical Summary

1. An environmental report, published in November 2010, documented the possible environmental impacts of the draft Local Transport Plan 2011-2021 Strategy for Lancashire (LTP3). The report also included health and equality impact assessments. A subsequent addendum was published in October 2011 that covered the LTP3 Implementation Plan for the period 2011/12-2013/14 for the county of Lancashire. Where schemes have been added to the implementation plan, the addendum has been updated.

2. Included in the Local Transport Plan Implementation Plan is a commitment to produce a Highways and Transport Masterplan for each area of Lancashire. This addendum presents the Draft Environmental Report on the West Lancashire Highways and Transport Masterplan (WLHTM).

3. This report provides the basis for further environmental evaluation to be carried out during the implementation of the masterplan.

4. This Environmental Report represents the first stage in documenting the likely environmental effects of the WLHTM. However, the masterplan is a strategic document and a lot of the proposals within it are still at the development stage. As a result, this report simply provides an overview of the options available and will need to be developed as the specific details of the schemes are finalised.

5. Throughout this Environmental Report addendum, consideration is given to how the WLHTM aligns to key priorities and principles detailed in Lancashire County Council's Local Transport Plan (LTP3) 2011- 2021 and the West Lancashire Local Plan 2012 - 2027. These are the two documents which have significantly guided the development of the masterplan.

6. Both the Local Transport Plan and the West Lancashire Local Plan have been the subject of environmental reports. Both environmental reports have been accepted as appropriate assessments of environmental impact and of required mitigation. Habitats Regulation Assessments have taken place for both the West Lancashire Core Strategy and the Preferred Options Paper.

7. Key issues raised by the environmental assessment presented in this report are:

   - Many rural areas of West Lancashire see a high reliance on private transport and typically **greater travel distances** than in more densely populated urban areas. In contrast, the urban area of Skelmersdale has a **low car ownership** level which constrains employment opportunities. However, within the urban areas of Ormskirk and Burscough congestion is increasing, which is having a detrimental effect on **air quality** and is contributing to increased levels of **carbon emissions.**

   - Public health in West Lancashire is a significant problem in parts of the district, which has wide ranging consequences. Walking and cycling can make a particularly important contribution towards improving **health**.

   - The poor quality of many **public spaces**, particualrly in Skelmersdale, makes walking, cycling and the use of public transport unattractive and compounds

perceived fears about crime and safety. Levels of traffic congestion and a lack of facilities addressing the needs of cyclists and pedestrians may further discourage residents from using sustainable transport options as their transport preference.

- **Anti-social and criminal behaviour** associated with transport has a negative impact on local communities, community cohesion and on measures to promote more sustainable alternatives to the car**.**

- **Air quality** problems exist in parts of West Lancashire, most notably in Ormskirk town centre around the Moor Street area. Specific air quality problems are associated with congestion hotspots and enclosed urban environments. Poor air quality can also impact on people's health and therefore remains a priority to implement effective mitigation and development measures to alleviate congestion in identified areas.

- The rate of casualties from **road accidents** is above the national average. Statistics also show a higher rate of fatalities on rural roads compared to urban roads. Studies suggest that this may be due to young or inexperienced drivers who consider it safer to exceed the speed limit on rural roads due to the relative lower levels of traffic. This is a concern due to the rural nature of West Lancashire.

- **Deprivation** exists in a number of areas, despite West Lancashire being amongst the least deprived districts in the County. The reasons for these problems are varied and complex. As in other parts of Lancashire, poor levels of relevant skills and training and low self-esteem present barriers to new employment opportunities, whilst crime, health and the poor standards of living compound problems.

8. The specific issues sit alongside the challenges indicated by the environmental data:

- The **natural environment** is significant to both the economy and to making West Lancashire a better place to live. Protecting and improving our environment is important, so extra care will need to be taken to get the most environmental benefit from what is done and limit any damage. This is particularly significant as West Lancashire contains some of the best agricultural land in Lancashire, a large proportion of which is green belt. It is also home to the internationally important Martin Mere Wildfowl and Wetland Trust reserve.

- West Lancashire's **historic environment** is a significant cultural asset to the district. Public realm and transport improvements have the potential to make positive contributions to this environment if sensitively implemented.

- The **landscape** of West Lancashire is particularly diverse and includes parts of the Lancashire and Amounderness Plain, which is the largest concentration of top quality farmland in the west of Britain, and the River Estuary Regional Park, which encompasses one of the most important places for birdlife in Europe.

- Making sustainable transport modes like walking, cycling and public transport more attractive will not only reduce our impact on the natural environment, but will reduce **noise** and help to preserve **tranquillity**. It will also help to reduce West Lancashire's **CO_2** footprint and help to improve air quality in our urban areas and reduce the number of **air quality management areas (AQMAs)**.

- **Flooding** can be a major problem and may become a bigger risk as the climate changes. We will have to make sure that surface water from our highways does not contribute to flooding or to pollution and that the County Council (as the Transport and Highway Authority) is committed to the implementation of sustainable drainage systems (SuDS) in new highway schemes. We will apply the National Planning Policy Framework (NPPF) Exception Test to schemes that are wholly or partly in Flood Zones 3a or 3b.

- The English Indices of Multiple **Deprivation** 2010 show that there are major differences across the county. This trend is mirrored within West Lancashire. In general, West Lancashire is a relatively affluent district with low levels of deprivation. However, Skelmersdale in particular has significant areas of deprivation some of which are categorised as 'priority neighbourhoods'. Since these indices were published, there has been an economic downturn that has had a significant impact on the North West.

- From April 2013, the **public health** system in England changed, with Lancashire County Council having greater responsibility to improve health. Since there are significant public health issues in West Lancashire, this will make promoting active travel even more important.

9. The masterplan's priorities have risks attached to them. The most significant risks identified are:

- Despite the investment brought about by the masterplan, the pressure on our transport infrastructure could increase, meaning that the environment is further threatened and that maintenance costs increase.
- Biodiversity could be reduced because of the emphasis on the economy.
- There are potential risks to protected species, sensitive habitats, geological sites and soils through the development of transport infrastructure and also through greater numbers of people walking and cycling in sensitive areas.
- Historic buildings, archaeological sites and other culturally important features and their settings could be damaged or lost, reducing the distinctive character of the area.
- Increasing travel to access employment in the key areas may not be done by sustainable modes, which will increase carbon emissions.
- Prioritising investment in the employment areas and economic priorities could divert resources from efforts to reduce carbon emissions.

10. Mitigation of the risks inherent in this masterplan has been discussed for each programme in the plan and certain themes have emerged:

- All options that develop from the further work put forward in the masterplan will need further assessment particularly those which have been identified here as having the greatest potential for positive or negative impacts.

- There is a need to maintain, protect and enhance biodiversity, geodiversity and soils where possible in schemes. This may be as simple as ensuring that new infrastructure links to existing wildlife corridors or that 'maintenance regimes' are species friendly.
- Historic buildings and landscapes, archaeological sites and their settings should be protected and improved where possible.
- Noise reduction improvements should be considered in all schemes.
- The contribution of surface water run-off to pollution and flood risk must be acknowledged and specific mitigation put in place, through the use of SuDs where appropriate.
- Although the focus of the Masterplan is on economic development, the needs of disadvantaged communities must not be forgotten. Access from these communities is a key consideration for the Masterplan.
- Public attitude to the needs of the environment may present a challenge to greater use of sustainable transport modes. Education and social marketing may be required to overcome a reluctance to switch modes.
- Improvements in health will be dependent on an acceptance of sustainable modes of travel.
- Due attention must be paid in all projects to the specific needs of users, particularly those who may be disabled or experience greater challenges in travelling.
- Road safety must be a priority in option development.

11. Effective monitoring will be carried out to make sure that the masterplan meets its targets and that any negative impacts are minimised, with mitigation measures devised and implemented.

12. The masterplan is a strategic document that sets out a vision for highways and transport in the area and the further work required to take that vision forward. However, as the masterplan does not identify detailed schemes at this stage, it is not possible to identify the full extent of environmental impacts. Environmental appraisal of each proposal from option appraisal through to delivery will need to be undertaken as work streams in the masterplan develop.

13. The masterplan seeks to target over-reliance on car journeys, which is a major contributor to CO_2 emissions and poor air quality, visual intrusion, community severance, road safety and poor levels of usage of active travel options.

14. The masterplan is intended to help facilitate economic growth and as such there is a real risk that car ownership and dependence on the car could be perpetuated. This is particularly the case if car ownership is encouraged in groups who currently do not own a car. The masterplan must therefore ensure that, particularly for non car owners, effective alternatives to the car are provided by improvements to public transport, cycling and walking.

15. The other risk identifiable at this stage is that of safety. As proposals develop, the safety of users must be taken into consideration at the earliest possible stages. This should include both personal security and road safety.

16. Overall, the masterplan has the potential to make a significant positive impact on the environment and population of West Lancashire, providing mitigation is

put in place against the risks identified here and against any risks that develop as the masterplan itself develops.

1. Introduction

1.1. An Environmental Report, published in November 2010, documented the possible environmental impacts of the draft Lancashire County Council Local Transport Plan 2011-2021 Strategy for Lancashire (LTP3). The report also included health and equality impact assessments. A subsequent addendum was published in October 2011 that covered the LTP3 Implementation Plan for the period 2011/12-2013/14 for the county of Lancashire. Where schemes have been added to the implementation plan, the addendum has been updated.

1.2. Included in the Local Transport Plan Implementation Plan is a commitment to produce a Highways and Transport Masterplan for each area of the county. This addendum presents the Draft Environmental Report on the West Lancashire Highways and Transport Masterplan (WLHTM).

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

1.4. The Environmental Report represents the first stage in documenting the likely environmental effects of the WLHTM. However, the masterplan is a strategic document and the schemes for it have not been finalised or are for further studies. As such, this report simply provides an overview of those considerations that will need to be developed in detail as the proposals develop and produce finalised details to be taken forward.

1.5. Consideration is also given to likely health, equality and wider social impacts which are commonplace in considering new public investment programmes. Such impacts will be considered across spatial and temporal scales for the broad-scale schemes identified in the masterplan.

1.6. An overarching emphasis throughout the masterplan, and indeed in the LTP3, is to support economic growth, not only now but also in the future. There is therefore a need to balance the positive and negative impacts of transport with the needs of the population and sensitivity of the wider environment. However, we can only do this if we consider the consequences that changing these networks will have not just on the users, but on the people, environment and economy of Lancashire, both now and in the future.

1.7. Lancashire County Council, as transport and highways authority, has a duty to determine any likely significant effects that may arise from the proposed schemes in the West Lancashire Highways and Transport Masterplan. Where significant effects are deemed likely, mitigation measures will be undertaken to ensure that such effects are prevented and/or minimised where possible.

2. Policy Context and Priorities

2.1. Throughout this environmental report consideration is given to how the WLHTM aligns to key priorities and principles detailed in Lancashire County Council's Local Transport Plan (LTP3) 2011- 2021 and the Local Plan for West Lancashire Borough Council. These are the documents which have significantly guided the development of the masterplan.

2.2. The Local Transport Plan sets out transport priorities in Lancashire until 2021. These priorities are to:

- Improve access into areas of economic growth and regeneration;
- Provide better access to education and employment;
- Improve people‘s quality of life and wellbeing;
- Improve the safety of our streets for our most vulnerable residents;
- Provide safe, reliable, convenient and affordable transport alternatives to the car;
- Maintain our assets; and
- Reduce carbon emissions and their effects.

2.3. The West Lancashire Local Plan, constituting the development plan, forms the overarching planning policy document and sets out the broad development strategy for West Lancashire until 2027. The purpose of the development plan is to guide and contribute towards boosting investment and employment opportunities, to encourage sustainable managed growth, and to protect and enhance green spaces and open countryside. Importantly it sets out where development will occur up to 2027 and indicates what strategic investment is necessary to deliver it.

2.4. Both the Local Transport Plan and the Local Plan have been the subject of environmental reports. Both reports have been accepted as appropriate assessments of environmental impact and of required mitigation.

2.5. A Habitat Regulations Assessment has taken place for the West Lancashire Core Strategy.

2.6. The WLHTM sits within the LTP3. It represents the County Council's proposals for meeting the infrastructure requirements of the West Lancashire Local Plan and as such supports accepted development proposals.

2.7. The Lancashire Enterprise Partnership (LEP) has also shaped the masterplan. This is a Government-endorsed partnership between the private and public sectors established to provide leadership for the county‘s economy and be a catalyst for job creation and economic growth; it has its own agreed priorities and programmes.

2.8. Whilst it is widely acknowledged that public finance is limited, the masterplan recognizes that there is need for substantial commitment from a variety of providers to see it through – county, borough and neighbouring councils, Lancashire’s Local Enterprise Partnership, Highways Agency, Network Rail, and Merseytravel - and the support of private business and house builders.

2.9 This master planning exercise puts Lancashire County Council in a position to

demonstrate that affordable and deliverable improvements can be made to the highways and transport network to support the development strategies of West Lancashire. These improvements will enable the successful development of an integrated transport network giving residents and visitors access to a greater range of sustainable travel options whilst making our roads safer, attractive and more efficient.

3. Environmental Context - Overview and Challenges

3.1 West Lancashire had a population of over 110,000 people in 2011. The borough covers an area of 347 square kilometres, giving West Lancashire a relatively low population density of 318 people per square kilometre. It boasts a very large land area classified as Green Belt, some of the highest quality agricultural land in the county and is home to internationally important areas for wildlife.

3.2 The majority of people live in the borough's three main settlements; the historic market town of Ormskirk (including Aughton); the New Town of Skelmersdale (including Up Holland); and the small town of Burscough. However, the rural nature of the borough means that settlements are unevenly distributed, with some areas suffering from rural isolation. Some of the larger settlements have grown up around the road network and now suffer in parts from congestion.

3.3 The location of the district next to Central Lancashire, Liverpool City Region and Greater Manchester gives it significant economic opportunity to grow and develop. This is particularly the case for Skelmersdale, which already benefits from excellent links to the strategic road network. The borough is home to a number of international and nationally recognised companies including Pilkington Group Ltd, ASDA, Co-operative Bank PLC, Matalan PLC and Walkers Snack Foods Ltd. Edge Hill University is an important asset which also brings significant benefits to the local economy. The Lancashire Enterprise Partnership (LEP) is also a key driver for West Lancashire's economic development.

3.4 Many rural areas of West Lancashire see a high reliance on private transport and typically **greater travel distances** than in more densely populated urban areas. This is a cause of increased **congestion** principally in urban areas such as Ormskirk, which has a detrimental effect on **air quality**. **Carbon emissions** in West Lancashire have also steadily increased. In contrast, urban areas within Skelmersdale have **low car ownership** levels which currently constrains employment opportunities.

3.5 Public health in West Lancashire is a significant problem, particularly within Skelmersdale. This has wide ranging consequences. Walking and cycling can make particularly important contribution towards improving **health**.

3.6 The poor quality of many **public spaces**, particualrly in Skelmersdale, makes walking, cycling and the use of public transport unattractive and compounds perceived fears about crime and safety. Levels of traffic congestion and a lack of facilities addressing the needs of cyclists and pedestrians may further discourage residents from using sustainable transport options as their transport preference.

3.7 **Anti social and criminal behaviour** associated with transport has a negative impact on local communities, community cohesion and on measures to promote more sustainable alternatives to the car.

3.8 **Air quality** problems exist in parts of West Lancashire. Specific air quality problems are associated with congestion hotspots and enclosed urban environments. Poor air quality can also impact on people's health and therefore it remains a priority to implement effective mitigation, and develop measures to alleviate congestion in identified areas.

3.9 While there is a pattern of decline for the number of people killed or seriously injured from **road accidents** in West Lancashire, the rate is still above the national average and is a particular concern in rural communities such as Scarisbrick, Scott and Parbold.

3.10 Despite West Lancashire being amongst the least deprived districts in the county, **deprivation** is a concern, particularly in Skelmersdale. The reasons for these problems are varied and complex. As in other parts of Lancashire, poor levels of relevant skills and training and low self-esteem present barriers to gaining new employment opportunities, whilst crime, health and the poor standards of living compound problems.

Environmental

3.11 The **natural environment** is significant to both the economy and to making West Lancashire a better place to live. Key issues and challenges to the masterplan are discussed below. See Appendix 1 for more information about these topics.

3.12 Getting more people into the countryside to enjoy the benefits that the countryside brings to health and wellbeing requires good access to be available. However, providing that access can have a detrimental effect on biodiversity, protected species and sites and on the landscape, whether directly by increasing numbers of people or by infrastructure provision and maintenance.

3.13 **Biodviersity** is an important component of a functioning environment and is essential to maintain clean water, fertile soil and clean air. Maintaining biodiversity is a key test of sustainability. Biodiversity also has economic and social value e.g. in leisure and recreation or tourism, and determines the distinctive character of an area.

3.14 Animals and plants protected under UK or European legislation are known collectively as Protected Species. The protection for animals includes protection from being disturbed, killed or injured and protection for the places where they live. It is an offence to damage, uproot or destroy protected plants.

3.15 The most significant sites for the conservation of wildlife (species and habitats) and/or geology are protected by international designations: Special Protection Areas, Special Areas of Conservation or Ramsar sites. The Habitat Regulations Screening Assessment is included in Appendix 2. Sites of National importance are designated as Sites of Special Scientific Interest (SSSIs) of Marine Conservation Zones (MCZ). There are 6 SSSIs and 1 MCZ in the West Lancashire area.

3.16 Most of the important environmental features lie outside statutory SSSIs. Lancashire County Council and West Lancashire Borough Council are partners in the Biological Heritage Sites (BHS) and Local Geodiversity Sites (LGS) partnerships. In addition, the County Council has identified special verges and West Lancashire have identified sites of district significance known as Local Nature Conservation Sites. Collectively non-statutory sites are known as local sites in the National Planning Policy Framework (NPPF).

3.17 **Geodiversity** is the variety of rocks, minerals, fossils, soils, landforms and processes that occur naturally, providing many of the essential natural resources on which society and economic growth depend. Geodiversity plays a key role in environmental regulation, including absorbing pollution, buffering climate change and filtering, purifying and storing water. Important geological sites can be concealed, damaged or destroyed by inappropriate development or the use of quarries for recreational activities or landfill.

3.18 **Soils** play a key role in environmental regulation such as pollution prevention by breaking down or reducing the impact of chemical contaminants. There are many pressures on soils, especially erosion, pollution and organic matter. Peat is a major store of carbon in the form of soil organic matter and is present in West Lancashire.

3.19 Development, involving sealing with impermeable materials such as concrete or tarmac, can lead to degradation of soils and loss of biodiversity. Sealing and compaction also contribute to increased surface run-off, ponding of water and localised erosion, flooding and pollution. The indirect impacts of soil sealing affect large areas due to fragmentation of habitats and disruption of ecological corridors.

3.20 Lancashire County Council hosts the Lancashire Environment Record Network (LERN), the partnership-led local environment record centre for Lancashire. LERN collects and collates information relating to the biodiversity and geodiversity of the county which is made available to Local Planning Authorities and other partners to inform and support their plan and decision making processes. LERN provides a significant resource to allow the biodiversity impact of schemes identified in the West Lancashire Highways and Transport Masterplan to be understood.

3.21 Lancashire County Council, in partnership with the district authorities in Lancashire, is developing Ecological Networks. The Networks aim to join together existing designated wildlife sites (i.e. SSSIs and BHS) by formulating protected pathways between them. These pathways are based on the type of ecological feature within them, such as grassland or woodlands and the established movement patterns of ecology.

3.22 West Lancashire's **historic environment,** including historic buildings, archaeological sites, townscapes, and landscapes**,** is a significant cultural asset. Public realm and transport improvements have the potential to make positive contributions to this environment if sensitively implemented and to provide better opportunities for people to access and understand local heritage and to participate in cultural and leisure activities.

3.23 The **landscape** of West Lancashire is diverse and supports a notable visitor economy through the presence of ten countryside parks, including the River Estuary Regional Park, which encompasses one of the most important places for birdlife in Europe. The landscape also includes a large amount of top grade farmland that supports intensive arable cropping and an important horticultural sector. Supporting the farming sector and visitor economy has a range of environmental impacts:

- Transport infrastructure to support these sectors can cause significant visual intrusion and noise which can threaten tranquillity. The materials used for road maintenance and the type of street lighting can reduce both visual and noise elements.
- Providing more sustainable transport for rural areas will benefit both residents and tourists and will also mitigate against further landscape impact.
- Changes in public realm and to levels of congestion will affect the urban landscape and heritage assets across West Lancashire.
- A shift to quieter transport modes will bring some noise reduction, as would ensuring freight transport uses appropriate roads.

3.24 **Flooding** is an important concern for the authority. The Flood and Water Management Act 2010 and the Flood Risk Regulations 2009 both impose new duties for the County Council as a "lead local flood authority". The delivery of these duties will be based on effective partnership between lead local flood authorities and other risk management authorities. Surface water from highways requires management in the context of Sustainable Drainage Systems (SuDS) to ensure that pollution and flood risks are minimised. There is a requirement under the National Planning Policy Framework (NPPF) to apply the Exception Test to transport infrastructure schemes that cross Flood Zones 3a or 3b.

3.25 Although **water quality** pollution control are not new issues, the Water Framework Directive and the development of a River Basin Management Plan for the northwest region have set significantly more challenging objectives than when previous transport masterplans were produced. The highway network can be a major source of pollution, ranging from the general build-up of contaminants on road surfaces to the consequences of major environmental incidents. Flooding and highway drainage also have important influences on water quality, as excess water can carry pollutants directly in nearby water courses. Commentary on the objectives and targets of the Water Framework Directive is given in Appendix 1.

3.26 The industrial history of an area is the principal factor in the presence of **contaminated land**. The presence of substances such as heavy metals, chemicals and oils in the ground around former factories, mines and waste sites can present a risk to people, property, waterbodies and the natural environment. The West Lancashire Contaminated Land Strategy (2009) stipulates an assessment criteria of what constitutes contaminated land. So far, no land in has been classed as contaminated.

3.27 Lancashire as a whole faces a range of issues in relation to **climate change** which could impact on West Lancashire:

- Hotter, drier summers with more frequent summer heat waves
- Winters that are warmer but wetter
- Extreme weather events becoming more common, bringing a greater risk of flooding and storm surges and with damage from high winds becoming more frequent.

3.28 33% of West Lancashire's **CO_2** emissions in 2011 were attributable to industry and commerce sector sources, 28.5% to transport, 28% to the domestic sector and 10.5% to land use, land use change and forestry. These numbers were similar to those for Lancashire as a whole (14 authorities), with the exception of

land use and change which was significantly higher in West Lancashire. In Lancashire the proportions were: industry and commerce 38%, domestic 30.5%, transport 29% and land use and change 2%. Reducing carbon emissions is therefore a major challenge and potential opportunities include:

- Reducing the consumption of energy by the authority, including maintenance and street lighting considerations.
- Reusing and recycling waste material generated in maintenance or construction of highway infrastructure.
- Providing more sustainable modes of transport, including more sustainable fuel sources.
- Reducing the need to travel.

3.29 Poor **air quality** has a significant negative impact on health, particularly in more deprived areas. Transport emissions are a major source of pollution. As for noise and CO_2, an increasing reliance on the private car and on road haulage has led to increasing pollution and congestion, particularly in the urban cores. This congestion further increases the impact that transport has. There is one declared Air Quality Management Areas (AQMAs) in West Lancashire and this is detailed in Appendix 1. The challenge will be to constrain or reduce private car use while seeking economic growth, which should bring increasing prosperity and has previously been associated with higher levels of car ownership.

3.30 There is a challenge presented to addressing all the issues raised above by the popularity of the private car and the reluctance in some sections of the community to accept that change is needed.

Population

3.31 The English Indices of **Deprivation** 2010 were published in March 2011. These show that there are large and growing economic disparities between different parts of the county, with areas of severe social and economic deprivation and high levels of worklessness contrasting with areas of considerable prosperity. In some cases these areas of deprivation and affluence are situated very close together or even adjacent to one another. This pattern is demonstrated within West Lancashire, with some Lower Super Output Areas (LSOAs) ranked in the 10% most deprived in the country and others in the 10% least deprived. The most severe areas of deprivation are located in Skelmersdale, while the more affluent LSOAs include Aughton and Downholland.

3.32 Since these indices were published, an obvious and significant change that has been felt across all of Lancashire has been the **economic downturn**. There has been a significant impact upon national, regional and local economies as economic activity and output has contracted. This has been felt particularly hard in the North West where a higher proportion of the population work in the public sector. However, the full impact at the local level cannot be fully assessed until local data becomes available, when the full extent of the challenge will become clearer.

3.33 Detailed baseline data on population and social factors, together with commentary is provided in Appendix 1.

Human Health

3.34 The 'Health and Social Care Act' (2012) sets out the vision for improving the public's health and the changes were implemented on the 1st of April 2013. Upper tier and unitary local authorities now provide local leadership for public health, underpinned by new statutory functions, dedicated resources and an expert public health team, led by a director of **public health**. Priorities will focus on improving health, reducing health inequalities and maximising the wellbeing of the population.

3.35 Local authorities will be supported by a new integrated public health service: Public Health England (PHE). PHE will aim to protect and improve the nation's health by encouraging healthier behaviours, addressing inequalities and removing barriers to good health. PHE will provide public health expertise and access to intelligence, research and expert advice.

3.36 This need for strategic and joined up interventions to impact upon the determinants of health and resultant health outcomes is recognised by both local government and NHS health professionals in Lancashire and has led to the development of the Joint Strategic Needs Assessment (JSNA) for Lancashire. The JSNA provides an evidence base for the development of public health in Lancashire and is detailed in Appendix 1.

3.37 Health and Wellbeing Boards have strategic influence over commissioning decisions across health, public health and social care, bringing together clinical commissioning groups and local authorities to create a more effective and responsive local health and care system. In Lancashire, the health and wellbeing board has identified emergent priorities from the JSNA. These will focus on new and expectant families; mental health and wellbeing; long-term conditions; improving the health, wellbeing and independence of older people.

3.38 West Lancashire has densely populated urban areas coupled with semi-rural and more extensive rural areas, each offering their own unique transport needs, social/neighbourhood problems, education and employment issues and access to green spaces and the natural environment. These issues require different solutions – a "one size fits all" strategy will not be effective. Any community (whether rural or urban) with poor links to services will be more likely to face deprivation and disadvantage and the associated health and social issues identified above.

3.39 Walking and cycling offer the potential for daily physical activity of sufficient frequency and intensity to improve health. Even low levels of walking can have great potential for health gain and can be undertaken by the most inactive. Walking and cycling can also provide other benefits including: reducing obesity, improving local air quality through CO_2 reductions, and increasing social interaction and social capital.

4. Assessment of Priorities and Strands

4.1 The policy context and priorities that the WLHTM is responding to have been discussed.

4.2 In seeking to address the needs of the West Lancashire area, six priorities were identified as pivotal to the way the transport network will work in the future. These six priorities include:

1) Significant barriers to growth affecting Skelmersdale
2) Congestion in Ormskirk and key service centres
3) Current limitations to rail services and access to rail services
4) Better options for active travel
5) Rural access to services
6) Traffic on inappropriate routes

4.3 These priorities have been assessed for their environmental and human impacts in order to inform the development of actions leading from them. A summary of this work is provided below:

Priority 1	**Significant barriers to growth affecting Skelmersdale**
What challenges do these priorities aim to address?	Skelmersdale's highway and transport network is not fit for purpose. Without a functional highways and transport network, Skelmersdale cannot fulfil its potential for economic growth. This is the legacy left by a New Town development plan which has left the public realm largely inhospitable with many features acting as a barrier to local travel leaving many communities feeling isolated from employment, education and the community as a whole.
What environmental benefits will this priority provide?	New infrastructure or improvements to existing infrastructure that promotes public transport, cycling and walking will provide sustainable travel options and improve accessibility to employment, education and training opportunities. This is vital as Skelmersdale has some of the most disadvantaged communities in the country. Enabling people to get back into employment and education can have a significant impact on both the individual and the community, by offering the opportunity to reduce deprivation. In many cases, these communities are doubly affected by limited employment opportunities and deep-seated environmental and social problems. With low car ownership, improvements made under this priority may be the only viable travel option available. Improvements to sustainable travel options will also promote modal shift away from private car use which has clear benefits to air quality, noise, human health and climate change.
Will these priorities have any adverse	Providing new infrastructure and improving existing infrastructure at the scale required will mean major changes to Skelmersdale. The danger is that the cost of a total transformation would be

effects are they acceptable and can these effects be reduced?	enormous and disruptions to the town from the works carried out could potentially last for years. However, the masterplan has shown Skelmersdale's current highways and transport provision is not simply inadequate, but completely inappropriate for current and future needs. How can the effects be reduced? Providing new infrastructure will require major changes to Skelmersdale and therefore extensive public consultation. We will also work extensively with partners to review current walking, cycling and public transport connections and investigate all options available. This will ensure costs, disruptions and environmental damage are kept to a minimum.
Conclusion	Once complete, the large scale public realm improvements will transform the town. They will provide sustainable travel options to the town centre, local centres,employment opportunities and education. This will have a positive impact on Skelmersdale communities which are amongst the most deprived in the country. In this context, the case for solving the economic causes of these problems is overwhelming and makes the risk of some other environmental consequences acceptable.

Priority 2	**Congestion in Ormskirk and key service centres**
What challenges do these priorities aim to address?	Ormskirk suffers from significant traffic congestion. This results in deteriorating air quality, road safety concerns and creates a barrier to economic growth. This makes the town centre an undesirable place to travel to or through, particularly during peak times.
What environmental benefits will this priority provide?	Reducing congestion, in particular the number of vehicles, will improve air quality, reduce journey times, lower noise levels, potentially improve road safety and improve the sense of place. This can act as a catalyst for making public transport, cycling and walking attractive travel options. Active travel such as walking and cycling brings about additional health benefits by making people less sedentary. Reduction in congestion will also improve accessibility to job opportunities for both private transport and sustainable travel options.
Will these priorities have any adverse effects are they acceptable	Investment in infrastructure which reduces congestion and delays will provide environmental benefits in the short term. However, by reducing journey times it may encourage further car use and with increased access to employment opportunities, the increase in wealth could make car ownership more attractive. If the reliance on private car ownership increases, then in the longer term these

and can these effects be reduced?	benefits will disappear. How can the effects be reduced? Road transport will continue to play a significant role in accessing key service centres, but this should also be supported by public transport, cycling and walking measures. By ensuring that sustainable travel options are considered alongside road based alternatives, increase in congestion can be minimised over the long term.
Conclusion	Reducing congestion to key service centres will improve economic growth and amongst other things, employment opportunities. However, if the reduction in congestion is not supported by sustainable travel options, the long term benefits will disappear resulting in increased congestion, poorer air quality and increased safety concerns.

Priority 3	**Current limitations to rail services and access to rail services**
What challenges do these priorities aim to address?	The quality of rail travel in West Lancashire is poor. Current limitations, including poor frequency of service means rail travel is unattractive resulting in people travelling by private transport as their mode of choice. The poor rail service limits West Lancashire's economic potential and residents' ability to access employment opportunities, particularly for people without access to a car.
What environmental benefits will this priority provide?	As a result of a poor rail service, private transport is often the chosen mode to access key economies such as Liverpool, Manchester, Preston etc. Rail improvements will encourage modal change from private transport to the train. A reduction in the number of vehicles offers clear benefits to air quality, noise, human health, climate change and a reduction in congestion and delays on key routes. Direct rail services to large economies such as Liverpool and Preston also opens up employment and education opportunities to residents of West Lancashire, particularly for people without access to a car. This will enable people to get back into employment and education which will have a significant impact on both the individual and community, by offering the opportunity to reduce deprivation. It will increase 'travel horizons' of people in disadvantaged communities without encouraging reliance on the private car. Greater integration of railway stations into the public transport and cycling and walking provisions will allow easier access to rail services without the need for private transport. Active travel such as

	walking and cycling brings about additional health benefits by making people less sedentary.
Will these priorities have any adverse effects are they acceptable and can these effects be reduced?	Implementation of the proposed railway schemes is expensive and will take some time. The schemes require the agreement of stakeholders such as Network Rail, and extensive public consultation in the case of a new railway station in Skelmersdale. Also, many of those people living in Skelmersdale who need access to jobs could find rail fares too expensive for the line to be of use for longer distance travel. However, current limitations to rail services in West Lancashire are limiting economic growth and residents' ability to access employment opportunities further afield. Therefore, rail improvements remain a priority for the district. How are these effects reduced? We will work with our partners to investigate the viability, feasibility and deliverability of individual schemes. The schemes will only progress if there is a business case. However, in many cases the need to broaden 'travel horizons' for local residents by giving greater accessibility to employment opportunities further afield is vital.
Conclusion	Improvements to rail services will improve the economic potential of West Lancashire. They will improve accessibility to employment and education opportunities locally and further afield while encouraging modal shift for existing car users.

Priority 4	**Better options for active travel**
What challenges do these priorities aim to address?	The standard of public realm in Skelmersdale is poor as are walking and cycling links between Burscough and Ormskirk. This results in people choosing to travel by private transport rather than an active travel option. It is also a contributory factor in the lack of accessibility to employment and education opportunities for deprived communities.
What environmental benefits will this priority provide?	Improving the public realm will remove barriers to walking and cycling including the fear of crime, poor road safety and poor quality infrastructure. This will encourage increased levels of walking and cycling which provides obvious health benefits as well as a reduction in greenhouse gases if people switch travel modes from cars to active travel. The uptake of active travel is also vital for deprived communities where it may be the only viable travel option to access jobs, training, services, healthcare and education.
Will these priorities have any adverse effects are they	Greater use of sustainable modes may lead to more road accidents. Also inappropriate infrastructure can lead to personal safety issues, both actual and perceived which can lower the rate of people choosing active travel.

acceptable and can these effects be reduced?	How are these effects reduced? Investing in suitable infrastructure will reduce safety concerns and road casualties resulting in an increase in the uptake of active travel.
Conclusion	Investment in walking and cycling infrastructure to support active travel are positive measures. It will reduce safety concerns and encourage active travel as a means of accessing employment and education. Lancashire is moving towards a high rate of private car journeys and this could increase as the economic fortunes of more disadvantaged communities in West Lancashire improve. Active travel may also be the only viable travel option for deprived communities in Skelmersdale where car ownership levels are low.

Priority 5	**Rural access to services**
What challenges do these priorities aim to address?	Public transport in the most rural areas of the borough does not offer the access to services that is required. Often the only viable transport option in these areas is private transport. This has significant social and cultural consequences that result in communities becoming more isolated.
What environmental benefits will this priority provide?	This priority will improve accessibility for rural residents to employment, training, services, healthcare and education. Additionally, by providing a viable alternative to the car, residents who currently use a private car may be encouraged to switch travel modes. This provides obvious benefits such as reduced carbon emissions, improved air quality and a more active lifestyle.
Will these priorities have any adverse effects are they acceptable and can these effects be reduced?	The likelihood is that this priority would require some form of revenue funding at a time when such funding is uncertain. An effective solution which offers cheap transport for users would also require extensive partnership working. Providing rural communities access to employment will raise personal wealth. In the long term increased affluence may lead to an increase in car ownership. How are these effects reduced? Due to a decrease in the budget of public transport provision, an increase in public transport accessibility for rural communities is likely to result in a decrease in provision elsewhere. However, rural connectivity to services, education and employment is vital in order to prevent communities becoming isolated.
Conclusion	Improving accessibility to services via public transport will have a

	significant positive effect for isolated communities. It will give residents access to employment and education opportunities that would have otherwise been difficult without access to a car.

Priority 6	**Traffic on inappropriate routes**
What challenges do these priorities aim to address?	HGVs using inappropriate roads causes safety concerns, localised air quality issues, congestion and damage to the road surface.
What environmental benefits will this priority provide?	HGVs using inappropriate roads through villages cause numerous problems for local residents and accessibility problems for HGVs. Providing an alternative route will reduce safety concerns, improve local air quality and reduce congestion on inappropriate routes within villages. This will potentially encourage walking and cycling, bringing about associated health benefits. The additional active travel trips could also benefit local businesses within villages as they may increase passing trade. HGVs will also benefit from using appropriate routes as accessibility problems caused by using inappropriate routes will be reduced.
Will these priorities have any adverse effects are they acceptable and can these effects be reduced?	Although providing an alternative route will make journeys quicker and more convenient for HGV drivers, there is nothing to prevent them using inappropriate routes through villages. Providing an alternative route will re-distribute pollution from one route to another. How are these effects reduced? By providing a more convenient route, HGV drivers will be more likely to avoid inappropriate routes through villages. This will bring about numerous benefits to local residents and local businesses making the redistribution of pollution to other routes acceptable.
Conclusion	Providing an appropriate convenient route for HGVs which diverts traffic away from villages benefits local residents, local businesses and HGV drivers. The range of benefits provided makes this a priority for the district.

4.4 The assessment of the priorities set out above shows that, whilst there are substantial risks, mitigation will be possible through the detailed development of options within the masterplan. However, the extent to which mitigation will be achieved will be dependent on the resources available.

4.5 Because of West Lancashire's unique character, our vision is not based on how or why people travel, as in other masterplans, but on the towns and parishes of West Lancashire and the connections between them and on out to the wider

area. This has led to the masterplan being developed under five strands. These strands set our vision, and from them, specific work will be taken forward.

4.6 The five strands are:

Skelmersdale: becomes a town fit for the 21st century, with jobs, facilities and transport connections that can support good living standards across the town that everyone shares in.

Ormskirk: becomes a vibrant market town at the heart of West Lancashire's education and tourism sectors, with a town centre that is no longer dominated by the car.

Burscough: becomes a thriving small town where there is plenty of transport choice and commuters don't need to own a car.

The Rural Parishes: are free of unnecessary traffic and everyone knows that travel options are there if they cannot use a car.

Connected Networks: make travel easy for West Lancashire's residents, businesses and visitors and reduce the impact of longer distance journeys through the borough.

4.7 When considering the priorities of the masterplan and putting it in the context of the five strands outlined, specific schemes and have been brought forward and the key concerns and environmental impacts of these schemes are outlined in the table below.

Scheme: A new Skelmersdale town centre rail station	
What is the project?	The proposal is for a new railway station next to Skelmersdale town centre, with integration into the public transport network and cycling and walking provision, as well as car parking. We are working towards the rail infrastructure and station being part of Network Rail's programme for Control Period 6 (2019-2024).
How does it improve and benefit the environment?	Skelmersdale is the second largest town in the north west of England without a railway station. A new railway station will greatly improve Skelmersdale's economic potential by providing access to employment and education opportunities in Greater Manchester, Liverpool, Wigan etc. It will also maximise the opportunities made available through the SuperPort and Airport City. Furthermore, it will encourage modal change for existing car users, which will be made easier by the presence of a car park at the station, offering the opportunity for a park and ride system. A reduction in private car journeys offers clear benefits

	to air quality, noise, human health, climate change and a reduction in congestion and delays on key routes. For non car users it opens up employment and education opportunities that would not have otherwise been possible. This will have a significant impact on both the individual and community, by offering the opportunity to reduce deprivation. It will increase 'travel horizons' of people in disadvantaged communities without encouraging reliance on the private car. Greater integration of the railway station into the public transport and cycling and walking provisions will allow easier access to rail services without the need for private transport. Active travel such as walking and cycling brings about additional health benefits by making people less sedentary.
Are there any adverse environmental impacts and how will these be mitigated?	Implementation of a new railway station would be expensive and take some time. Providing the infrastructure for the station will require major changes and so potentially cause prolonged disruptions to Skelmersdale town centre. Also, many people living in Skelmersdale who need access to jobs could find rail fares too high for the line to be of use for longer distance travel. How will the impacts be mitigated? Providing new infrastructure will require major changes to Skelmersdale and therefore extensive public consultation. While we will endeavour to keep disruptions and environmental damage to a minimum, the lack of a railway station is severely restricting economic growth and access to employment and education opportunities. Therefore, the case for building a new railway station is overwhelming and makes the risk of some other environmental consequences acceptable.
Conclusion	A new railway station will improve the economic potential of West Lancashire. It will improve accessibility to employment and education opportunities locally, and further afield, while encouraging modal shift for people using cars. The need for the railway station far outweighs the negative impacts; therefore, we must try to mitigate as far as possible the adverse effects caused by the scheme.

Scheme: Reshape Skelmersdale's public realm	
What is the project?	We will radically reshape Skelmersdale's public realm and highways network through a single programme of works spread over a number of years. The improvements will ensure that Skelmersdale functions far better than it does now and

	has a sustainable, integrated transport network to support growth in the future.
How does it improve and benefit the environment?	Skelmersdale has some of the most disadvantaged communities in the country; they are doubly affected by limited employment opportunities and deep-seated environmental and social problems. With the addition of low car ownership, the uptake of active travel is vital as it may be the only viable travel option to access jobs, training, services, healthcare and education. However, barriers to walking and cycling have been created by a public realm which separates motorised vehicles from pedestrians and cyclists. This has led to routes through underpasses that are dirty, poorly drained, poorly lit and associated with anti-social behaviour. This has isolated many of the communities in Skelmersdale. Improvements to the public realm will therefore broaden travel horizons of the most disadvantaged communities in Skelmersdale. They will remove barriers to walking and cycling including the fear of crime, poor road safety and poor quality infrastructure giving residents improved access to jobs, training, services healthcare and education. This will encourage increased levels of walking and cycling which results in obvious health benefits as well as a reduction in greenhouse gases if existing car users switch travel modes.
Are there any adverse environmental impacts and how will these be mitigated?	Whilst Skelmersdale's public realm is clearly in need of improvement, the danger is that at the scale of changes required, the total cost would be substantial and disruption to the town from the works carried out could potentially last for years. How can the effects be reduced? Providing new infrastructure will require major changes to Skelmersdale and therefore extensive public consultation. We will also work with partners to review current walking, cycling and public transport connections and investigate all options available. This will ensure costs, disruption and environmental damage are kept to a minimum.
Conclusion	Skelmersdale's current highways and transport provision is not simply inadequate, but completely inappropriate for current and future needs. The public realm creates barriers to walking and cycling leaving residents in some of the most deprived communities in the country feeling isolated from employment, education and training opportunities. Therefore, there is an overwhelming need to improve Skelmersdale's public realm whilst we mitigate, as far as possible, the adverse effects

	caused by the scheme.

Scheme: Reconfigure Skelmersdale's public transport	
What is the project?	A new purpose built bus station that provides a dedicated interchange with the proposed rail station. The facilities will include secure cycle storage to encourage cycling as part of longer distance travel.
How does it improve and benefit the environment?	A new purpose built bus station will not only encourage additional bus use, but also maximise the potential of the railway station through a dedicated interchange. In addition, the secure cycle storage facilities will encourage cycling. Collectively they will offer a host of benefits to residents, commuters and the environment. The bus station will encourage modal change for existing car users. A reduction in private car journeys offers clear benefits to air quality, noise, and a reduction in congestion and delays on key routes. For non car users, it opens up employment and education opportunities that would not have otherwise been possible. This will have a significant impact on both the individual and community, by offering the opportunity to reduce deprivation. It will increase 'travel horizons' of people in disadvantaged communities without encouraging reliance on the private car. In addition, secure cycling storage facilities will encourage people to cycle to the bus station. This will allow them to use the bus for onward journeys or the train via the interchange for journeys further afield. Cycling has a host of health benefits as a result of making people less sedentary.
Are there any adverse environmental impacts and how will these be mitigated?	Whilst there is significant need for a new bus station, the works will potentially cause disruptions to Skelmersdale town centre. How can the effects be reduced? A new bus station will require major changes to Skelmersdale and therefore extensive public consultation. The public consultation will allow us to gain a consensus on the package of measures the bus station would be part of. Despite the cost, it is essential that schemes like this are delivered as a package of significant improvements are required to realise the potential for economic growth.
Conclusion	We will work with our partners and with the residents of Skelmersdale to draw up plans for a new bus station to provide

	interchange facilities with the rail station and then to produce a business case to seek funding through the Growth Deal to be negotiated by the LEP.

Scheme: Skelmersdale Employment Connections	
What is the project?	There is a lack of public transport provision between the main residential areas of Skelmersdale and employment centres, particularly at unsocial hours. We therefore need to establish how to best meet the needs of employers and employees in providing cheap and cost effective transport that has a long term future and is not dependent on short term revenue funding.
How does it improve and benefit the environment?	Public transport provision may be the only form of transport to employment for those who do not own a car. This is particularly relevant for deprived areas where car ownership levels are low. Enabling those from disadvantaged communities to share in economic opportunity is vital to reducing deprivation and improving health. For existing car owners, providing an option to use public transport may encourage them to switch travel modes. A reduction in car journeys offers a clear benefit to air quality. It may also save money for many residents who struggle to afford a car but feel as though they need to own one as they have no alternative travel option to access employment.
Are there any adverse environmental impacts and how will these be mitigated?	Providing public transport links to employment is unlikely to have any negative environmental impacts. However, the scheme would require some form of revenue funding at a time when such funding is uncertain.
Conclusion	Poor public transport links between industrial and housing areas within the Skelmersdale/Up Holland area present a real and significant challenge to employment, particularly for those on low income. Meeting the challenge of providing such links will enable a significant number of people to reach employment that otherwise would not have been possible.

Scheme: Ormskirk town centre	
What is the project?	We will work with our partners to produce an **Ormskirk Town Centre Movement Strategy** that will build on the work done for the corridor study and will provide the opportunity to fundamentally review how traffic is managed in Ormskirk. In addition, to complement the Movement Strategy and to start a process of travel culture change, we will pilot a new cycle hire scheme in Ormskirk.

How does it improve and benefit the environment?	The Ormskirk Town Centre Movement Strategy has been born out of a one way gyratory system which struggles to cope with the volume of traffic, particularly in the rush hours, resulting in siginifcant traffic congestion in Ormskirk. The Strategy will examine ways to better manage this traffic; in doing so it will reduce travel time, local air pollution and make the town centre a much more desirable place to travel to or through. Removing uneccessary traffic will not only help in this respect, but also encourage active travel such as walking and cycling which brings numerous health benefits. In addition, the UniCycle scheme will encourage additional cyclists. Collectively, these measures will make Ormskirk more accessible for essential traffic, cyclists and pedestrians. This will have a positive impact on economic growth.
Are there any adverse environmental impacts and how will these be mitigated?	It may prove challenging to secure a genuine change in culture that ends the reliance on the private car. How can the effects be reduced? To encourage a change in culture to active forms of travel, it is necessary to have an environment conducive to change. Reducing congestion will encourage people to use active travel methods through a reduction in local air pollution and potentially improving road safety. Also, in order to produce the Ormskirk Town Centre Movement Strategy, we will work with partners to identify what works while ensuring businesses are not adversely affected.
Conclusion	The Ormskirk Town Centre Movement Strategy will identify measures to reduce congestion in and around Ormskirk town centre. This will improve air quality, reduce journey times, lower noise levels, potentially improve road safety, encourage walking and cycling and improve the sense of place. This will give greater accessibility to employment, education and training opportunities. Furthermore, in conjunction with UniCycle, cycling will be encouraged as a modal choice facilitating a shift in culture from cars to more sustainble forms of transport.

Scheme: Longer distance travel	
What is the project?	Although much of the traffic in Ormskirk is local, there is still a sizeable number of vehicles travelling through the town, including heavy lorries, largely due to Ormskirk's position on the main route between the M58 and Southport. Not only does this traffic contribute to congestion in Ormskirk, but also along the rest of the A570. As a result, Sefton Council are currently building the Thornton to Switch Island Link. The opening of the

	Thornton to Switch Island Link road will provide the opportunity to review how traffic is routed from the M58 and we will work with the Highways Agency and Sefton Council to ensure that Ormskirk receives the maximum benefit possible from the scheme.
How does it improve and benefit the environment?	Lancashire County Council and Sefton Council have both recently completed traffic studies on the corridor which will form the basis for a route management strategy that sets out how specific local issues can be relieved and how traffic can be reduced on the route. The route management strategy will form part of the Ormskirk Movement Strategy. In the short term it is unlikely this project will have any adverse environmental impacts; instead the project looks to maximise opportunities presented by the potential to remove some traffic from Ormskirk and the A570 to Southport corridor, including reducing the number of heavy goods vehicle and congestion on key junctions. A reduction in congestion has obvious benefts ranging from reduced and reliable travel times to an improvement in local air pollution, to name a few. This will directly benefit residents, businesses as well as Southport and Ormskirk Hospitals NHS Trusts. It will also Improve strategic highway access between the North West's motorway system and Southport, the Port of Liverpool and the Atlantic Gateway Strategic Investment Area.
Are there any adverse environmental impacts and how will these be mitigated?	The route management strategy will make the new link road the obvious way to reach Southport from the motorway. However, changes to signing cannot force traffic to use this route. Also, as development of Southport progresses, there is a danger that ttraffic on this route will increase. How can the effects be reduced? In order to reduce the adverse effect of additional traffic, alternative modes of transport must be encouraged. The new link road should make it attractive for not only cars, but also sustianable modes of transport. .
Conclusion	In the short term this project is unlikely to have negative environmental impacts. Its primary goal is to maximise the improved strategic access brought by the Thornton to Switch Island Link. In the long term, increase in traffic may develop.

Scheme: Derby Street Railway Bridge	
What is the	The bridge is located in the Ormskirk Town Centre

project?	Conservation Area and is Grade II listed. It carries the east bound A570 over the electrified Ormskirk to Liverpool railway. The bridge in its current state is not fit for purpose. Large vehicles cannot pass over the bridge side by side; the footways are too narrow for wheelchair users and pedestrians pushing pushchairs to comfortably pass oncoming traffic; and further deterioration of the bridge could mean that weight restrictions may need to be placed on traffic crossing it. The bridge therefore requires substantial maintenance work to preserve its structural integrity, or total replacement to overcome the insurmountable obstacles.
How does it improve and benefit the environment?	Both options would allow for a more efficient vehicular and pedestrian movement across the bridge. It would reduce safety concerns for pedestrians which acts as a barrier to active travel. Without intervention, future weight restrictions would restrict freight delivery into Ormskirk town centre, affecting businesses and therefore restricting economic growth.
Are there any adverse environmental impacts and how will these be mitigated?	Improving accessibility for cars may encourage additional car use. However, improvements will also reduce safety concerns for active travel and improve public transport accessibility thus encouraging sustainable travel options. There are a number of insurmountable obstacles which would present themselves if essential maintenance works were carried out. These include reducing the width of the road to a single traffic lane to allow for crash barriers; the crash barriers would provide a foothold for reckless or suicidal people to mount the parapets; and closing the bridge to pedestrians and providing a footbridge would mean pedestrians having to detour significantly to safely cross Derby Street. However, the alternative is to replace the bridge, which would be costly. It would also mean the loss of a listed structure within a conservation area. Both options would require major works which will cause disruptions in Ormskirk town centre for motorists, pedestrians and cyclists. How can the effects be reduced? The Ormskirk Movement Strategy will give us the chance to challenge the current role of the bridge. If it is found that the bridge is no longer required to carry two lanes of traffic one way, then the options for repairing the current bridge may

	become more viable, particularly if traffic is reduced to one lane across the bridge
Conclusion	Until we know we do not have to replace the bridge, we will continue to work towards a scheme to replace Derby Street Bridge, as this is a long process. This will initially involve consultations with West Lancashire Borough Council and with Network Rail. Once we have reached agreement on the scheme to take forward and consulted further on the options, a business case will be developed with a view to seeking funding through the LGF if the movement strategy indicates that replacement is still needed.

Scheme: Improve Burscough's Public Realm	
What is the project?	The A59, the most direct route between Central Lancashire and Liverpool, runs straight through the middle of Burscough town centre. Because of this, the main street becomes congested not only at peak times, but as frequent bottlenecks occur through the day. Furthermore, the A59 narrows from Burscough town centre towards Ormskirk making the journey unpleasant for cyclists in particular. As a result, public realm improvements are necessary in order to ease congestion by ensuring only essential traffic use the route.
How does it improve and benefit the environment?	The project provides opportunities for increased levels of walking and cycling between Burscough and Ormskirk. Walking and cycling will become a safe and attactive option for communities accessing employment, education and training. Furthermore, active travel has a host of health benefits and is an alternative to the car and so has the potential to reduce congestion and improve air quality if people switch travel modes. Route management work will aim to reduce traffic on the A59. A reduction in traffic and public relam improvements in Bruscough will encourage additional visitors into the town centre.
Are there any adverse environmental impacts and how will these be mitigated?	Reducing the traffic growth on the A59 will be a challenge, as will the reluctance of drivers to use other modes of transport. However, the route management work and suitable public realm improvements should ensure that traffic growth is reduced and alternative travel modes to the car become attractive options.
Conclusion	We will work with West Lancashire Borough Council to produce a public realm improvement plan for Burscough that can be the basis for discussions with other stakeholders. Improvements made will aim to reduce congestion whilst encouraging alternative forms of transport to the private car.

Scheme: Tarleton Green Lane Link	
What is the project?	At present, vehicles carrying produce from growers in Tarleton, Hesketh and Holmes Moss access the main road network primarily via Blackgate Lane, Church Road or Coe Lane. Most of the produce is transported using heavy goods vehicles (HGV). These commercial vehicles contribute to congestion and environmental damage within Tarleton. The congestion problem is exacerbated by narrow carriageways in residential areas and by on street parking in residential/shopping areas. A new link road is therefore proposed between local rural businesses and the A565. This will relieve the impact of through traffic, particularly heavy goods vehicles, in Tarleton.
How does it improve and benefit the environment?	The provision of a new link road will reduce the number of HGVs travelling through Tarleton village. This offers a number of benefits which include reduced congestion and improved air quality within Tarleton. The reduced congestion will improve road safety and therefore potentially encourage walking and cycling bringing about associated health benefits. The increase in active travel could increase passing trade. The new link road will also benefit HGVs by providing a quicker, more convenient route thus benefiting local growers.
Are there any adverse environmental impacts and how will these be mitigated?	There are a number of adverse envionrmental imapcts this scheme may have. However, if managed appropriately the impact of these effects can be limited. These include: • The scheme runs through green belt • A new link could lead to an increased density of businesses, which would need to be managed to avoid environmental impacts • Effects on the local flora and fauna will need to be managed, although the scheme is unlikely to have any significant impact on the local environment that cannot be mitigated.
Conclusion	Providing an appropriate convenient route for HGVs which avoids Tarleton village will benefit local residents and local businesses. The range of benefits provided make this a beneficial scheme.

Scheme: Rural Connections	
What is the project?	The rural parishes are very dependent on the car, which not only leads to local problems on the highways network, but makes life very difficult for those who, for whatever reason, do not have their own transport.

	Visitors to the area also need to be able to travel without needing a car and there is a definite need to support a sustainable visitor economy to ensure that the natural environment is protected while its economic benefit is maximised. We will therefore extend an existing project which sets out to find the most cost effective methods of providing access to services in rural or remote areas to cover communities within West Lancashire. We will also expand the study to include a pilot project to look at how necessary car use can be made more sustainable by supporting electric vehicles.
How does it improve and benefit the environment?	In rural communities the car is often the only viable travel option. This leaves those without access to a car (usually those on low income or the elderly) feeling isolated from services, employment and education. The scheme will look into providing sustainable alternatives to the car, including public transport and making cycling more attractive. These alternatives will not only provide crucial links to essential services for non car users, but also an attractive alternative for those with a car. Cycling and public transport provide numerous benefits over private transport including a reduction in air pollution and health benefits from being less sedentary. For necessary car users, we will look at the feasilibity of supporting the use of electric vehciles. Electric vehicles produce no tailpipe emission resulting in a reducution in carbon emissions.
Are there any adverse environmental impacts and how will these be mitigated?	The likelihood is that it will require some form of revenue funding at a time when such funding is uncertain. It may also be difficult to prioritise how the limited funding should be best spent. How are these effects reduced? There is no easy solution. With limited funds it is imperative that we ascertain the right project, in the right location, to offer maximum benefit.
Conclusion	Current financial and demographic circumstances make it imperative that we use our resources to best effect. This study will provide key information to allow difficult decisions to be taken.

Scheme: Rail connectivity	
What is the	There is an overwhelming need to improve rail connectivity in

project?	West Lancashire, both for West Lancashire and for surrounding areas. As a result, we look to persue a number of opportunities including the electricifcation of the Ormskirk to Preston line which currently requires passengers to change at Ormskirk to a diesel service; to provide a direct interchange between the two lines at Burscough (Burscough Curves) and potentially, the need to offer direct services between Southport and Liverpool and between Southport and Central Lancashire.
How does it improve and benefit the environment?	Improving rail connectivity offers the potential to reduce road traffic now and to restrict the growth of road traffic in the future. For existing car users, it will encourage modal change. The reduction in private car journeys offers clear benefits to air quality, noise, human health, climate change and a reduction in congestion and delays on key routes. For non car users, it opens up employment, education and training opportunities that would not have otherwise been possible. This strand will aim to create direct connectivitiy from Central Lancashire right through to South Liverpool via West Lancashire and South Liverpool. There would also be a direct link between Ormskirk and Southport, Ormskirk and Wigan/Manchester, Preston to Southport as well as a direct link to Lancashire's Arc of Prosperity and SUPERPORT. This opens up employment opportunities for existing residents as well as for residents of new housing in Burscough.
Are there any adverse environmental impacts and how will these be mitigated?	There is a significant cost involved in the scheme and it would require the agreement of both Network Rail and Merseytravel. In addition, any major works will clearly have a detrimental effect on the environment. How are these effects reduced? Electrification would result in fewer emissions from locomotives and the clear need to improve rail connectivity should justify any environmental impact upon construction. In addition, funding improvement will require the commitment of all partners affected by the proposals. Depending on the specific scheme, this includes Network Rail, Liverpool City Region Local Enterprise and Merseytravel, to name a few. By working with partners to investigate the viability, feasibility and deliverability of schemes we will be in a good position to get good value for money.
Conclusion	There is an overwhelming need to improve rail connectivity in West Lancashire, both for West Lancashire and for surrounding areas. We will therefore work closely with

	Merseyrail, Netowrk Rail and other partners to take forward a single programme of work that will seek to implement the Ormskirk – Preston enhancements package, with particular emphasis on the masterplans priorities.

Scheme: Highways Route Management	
What is the project?	The opening of the Thornton to Switch Island link has already been highlighted as providing the opportunity to review how traffic is routed from the M58. Likewise, we will be reviewing how we manage vehicle routing once the Green Lane Link is open. We therefore propose to extend this work to cover all the Rural Parishes, particularly around Tarleton, along the A5209 that runs from the M6 at junction 27 to Burscough and along the A577 through Up Holland. In doing so, we will work with partners in neighbouring authorities and with the Highways Agency to put in place a Route Management Plan for West Lancashire that maximises the benefits of all new road construction and highways and transport improvements in the area.
How does it improve and benefit the environment?	The plan will not only look at the engineering suitability of roads for the traffic on them, their road safety record and the traffic impact on the communities alongside them, but will specifically look at impacts on public transport and schools and facilities for young people. In doing so, it will offer a number of benefits to rural communities including potential noise and air quality improvements through re-routing traffic; improved connectivity to essential services and through the reduction in traffic and associated road safety implications, an uptake in the number of people walking and cycling, to name a few.
Are there any adverse environmental impacts and how will these be mitigated?	The route management strategy is unlikely to make any significant detrimental impact on the environment unless new roads are built. However, if as a result of the route management plan, it is deemed traffic will be re-routed, it will have no legal status in itself, so traffic cannot be forced to use the alternative route. Despite this, the plan can be strengthened by measures that are legally enforceable, such as weight limits.
Conclusion	This project is unlikely to have negative environmental impacts. Its primary goal is to maximise opportunities within rural parishes brought about throught the construction of Thornton to Switch Island link and Geen Lane Link.

Scheme: Green connections	
What is the	Skelmersdale and Up Holland have limited direct walking and

project?	cycling provision linking them to Ormskirk. The most direct route between Ormskirk and Burscough is along the A59. In places, the high speed of traffic is a deterrent to walkers and cyclists. Links between Burscough and Tarleton are similarly affected. Whilst these three links are perhaps the most obvious needs, there are further strategic connections that could be made, including between Southport and Tarleton and between Tarleton and Preston. There is therefore an overall need to provide a safe, high quality, direct multi-user network of routes linking Skelmersdale, Ormskirk, Burscough and Tarleton and on to Southport and Preston
How does it improve and benefit the environment?	The multi-user network of routes will be vital to the economy and local businesses, as well as to our communities. The project provides opportunities for increased levels of walking and cycling which produce obvious health benefits, as well as a reduction in greenhouse gases if existing car users switch travel modes. The scheme looks to remove safety concerns which act as a barrier to walking and cycling. This will benefit, amongst other groups, the most disadvantaged communities whose only viable travel mode may be walking or cycling. It will achieve this through building on West Lancashire Council's 'Linear Parks' concept; building on work being done under the VISIT initiative all of which will provide links to public transport, particularly to rail stations, including the new Skelmersdale station and Burscough Interchange. This will also improve the visitor economy giving sustainable travel links to the countryside.
Are there any adverse environmental impacts and how will these be mitigated?	The use of routes will be weather depedent and there are personal safety concerns for users of the 'Linear Park'. How can these effects be reduced? Adverse impacts could occur if the routes and linear park are not designed with personal security in mind. However, discussions with the community and high quality design should mitigate such concerns.
Conclusion	We will work with West Lancashire Borough Council to progress a strategic network of multi-user paths based on the linear park model. The network will need to address issues of personal safety and of year round usefulness, as well as the extent to which the network will be maintained.

4.8 These projects all represent the beginning of delivery programmes and as such there is not yet a level of detail available that would allow a detailed assessment of the environmental consequences of the measures that will result. Detailed

assessment will follow, forming part of the development of the project options and of the resultant scheme delivery.

5. Mitigation and Monitoring

Mitigation

5.1 Mitigation of the risks inherent in this Highways and Transport Masterplan has been discussed for each project in the Plan and certain themes have emerged:

- Options resulting from the further work proposed in the masterplan will need to be carefully considered in the light of the Environmental Report and further assessment carried out as needed, particularly if unaccepted issues are apparent.

- There is a need to maintain, protect and enhance biodiversity and geodiversity where possible in schemes. This may be as simple as ensuring that new infrastructure links to existing wildlife corridors or that maintenance regime are species friendly. The effects of increased access to sensitive sites should be minimised. The likely effects on Protected Species will need to be assessed and any necessary mitigation taken.

- Maintenance in areas of historic significance must take into account visual amenity and local character. Mitigation of impacts on heritage assets will be undertaken to avoid where possible damage to historic buildings and their settings, archaeological sites, townscapes and landscapes.

- Where possible, public realm enhancements should improve open space provision. This is particularly the case for walking and cycling infrastructure.

- Air quality improvements and noise reduction should be considered in all schemes, particularly connected to maintenance and sustainable transport provision.

- The contribution of surface water run-off to pollution and flood risk must be acknowledged and specific mitigation put in place. The County Council is committed to the implementation of Sustainable Drainage Systems in new highway schemes.

- The National Planning Policy Framework Exception Test should be applied to transport infrastructure schemes that cross Flood Zones 3a or 3b and appropriate mitigation and compensation measures will be taken in the event of loss of flood plain.

- Measures should be taken to prevent deterioration in water quality and, where possible, contribute towards improving water quality in waterbodies in the proximity of transport schemes.

- The risks and potential of developing land that is contaminated will be

investigated in partnership with West Lancashire Borough Council and the Envinronmental Agency once firm scheme proposals have been determined.

- The masterplan focuses on both economic development and the needs of disadvantaged communities in West Lancashire. Disadvantaged communities are a key consideration in Skelmersdale.

- Although not specifically addressed in the projects, the changing demographics of West Lancashire must increasingly be considered, particularly the challenges presented by an ageing population.

- Public attitudes to the needs of the environment vary greatly across West Lancashire and may present a challenge to greater use of sustainable transport modes. Education and social marketing may be required to overcome a reluctance to switch modes.

- Improvements in health will be dependent on an acceptance of sustainable modes of travel.

- Due attention must be paid in all projects to the specific needs of users, particularly those who may be disabled or experience greater challenges in travelling.

- Particular attention will need to be given to the design of the new road (Green Lane Link, Tarleton), where its construction and presence could have significant impact on the Ribble and Alt Estuaries and Martin Mere SPA/Ramsar sites (Natura 2000 sites). Appropriate mitigation measures should be built into the design from the first stages.

- Road safety must be at the forefront of option development.

Monitoring

5.2 The effectiveness of mitigation measures can only be gauged by monitoring appropriate indicators.

5.3 The purpose of monitoring is to measure the environmental effects of a plan, to measure success against the plan's objectives and to provide useful information for future plans and programmes. Given the resources that intensive monitoring would entail, many of the indicators require data that is already being routinely collected. The monitoring programme will evolve over time as the Highways and Transport Masterplan itself evolves and our knowledge of its impact improves. The monitoring of individual schemes / proposals will be addressed at the individual project level.

5.4 There are four key areas that are either crucial to the success of the masterplan or are at significant risk of adverse impact. The masterplan supports:

- economic growth

- reduced congestion
- access to employment
- access to education

There are however significant risks to:

- biodiversity
- heritage assets/historic environment
- CO_2 emissions
- air quality
- water quality
- deprivation
- human health

5.5 Consideration has been given to these areas and the data collection that would be necessary to monitor activity in a reasonable way without duplicating work done elsewhere. The result is shown in table below.

Key Areas Assessment

Subject	Monitored already?	Action
Economic Growth	Yes – Economic Development Unit	Utilise external measures
Congestion	Yes – Journey times	Monitor peak hour speeds on corridors with
Access to employment	NO	Monitor changes in accessibility to key employment sites. Reduction in benefit claimants
Access to education	NO	Monitor changes in accessibility to key educational facilities
Asset maintenanc	Yes – Asset manager	Utilise external measures
Biodiversity	Yes – Single List	Utilise external measures
Heritage	Yes - Nationally	No suitable data locally
CO_2	Yes – Nationally	No suitable data
Air quality	Yes – District	Utilise external measures
Water quality	Yes – Environment Agency, United	Utilise external measures
Deprivation	Yes – Nationally	No suitable data locally
Human	Yes – by NHS	Utilise external measures

6. Conclusion

6.1 This draft Environmental Report identifies the broad-scope environmental implications of the West Lancashire Highways and Transport Masterplan. However, as the masterplan identifies further work streams, rather than specific schemes, it is not possible to determine the full extent of environmental impacts. Individual Environment Impact Assessments will need to be undertaken as part of future option identification where appropriate.

6.2 The masterplan does seek to target over-reliance on car journeys which is a major contributor to CO_2 emissions and localised poor air quality, noise, visual intrusion, community severance, road safety and poor levels of usage of active transport options.

6.3 The masterplan is intended to help facilitate economic growth and as such there is a real risk that car ownership and dependence on the car could be perpetuated. This is particularly the case if car ownership is encouraged in groups who currently do not own a car. The masterplan must therefore ensure that, particularly for non car owners, effective alternatives to the car are provided by public transport, cycling and walking improvements as proposed.

6.4 The other significant risk identifiable at this stage is that of safety. As proposals develop, the safety of users must be taken into consideration at the earliest stages. This should include both personal security and road safety.

6.5 Overall, the masterplan has the potential to have a significant positive impact on the environment and population of West Lancashire, providing mitigation is put in place against the risks identified here and against any risks that develop as the masterplan itself develops.

Appendix 1: Environmental Context

Environment

1. The baseline data underpinning this assessment is taken from the Environment Report underpinning the LTP3. The data is not generally replicated here. Exceptions are made for key data. Consideration is also given to significant changes in policy affecting the environment.

Natural Environment

2. **Biodiversity**, short for biological diversity, is used to describe the variety of plants, animals, insects and micro-organisms in a place and the way in which they interact together in the environment. Biodiversity components can be evaluated in terms of:

- composition: what there is and how abundant it is structure
- how biological units are organised in time and space function
- the role different biological units play in maintaining natural processes and dynamics.

3. Biodiversity can be managed and used for economic benefit, for instance to produce crops, medicines, building materials, fuel and tools. It has economic and social value e.g. in leisure and recreation or tourism, and has educational, aesthetic and spiritual value, and so enriches quality of life. It also determines the distinctive character or 'feel‘ to an area.

4. Habitat amount, quality and spatial organisation affect genetic and species diversity. Landscapes with a large number and range of habitats usually support higher levels of species diversity than landscapes with a more limited range of habitats, but this does not necessarily make them more important.

5. The majority of species require a variety of habitats. The loss, fragmentation or decline in quality of a single habitat can therefore have a serious impact on the populations of a variety of species, even those not obviously associated with it. Populations need to be of a certain size to remain stable, and must be distributed so they can interact with other populations to maintain genetic diversity.

6. The main legislation relating to nature conservation in Great Britain is the Wildlife and Countryside Act 1981 (as amended). This is supplemented by provision in the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities Act 2006.

7. The UK is a signatory to the Convention on Biological Diversity (CBD) and is committed to the biodiversity goals and targets agreed in 2010 and set out in the Strategic Plan for Biodiversity 2011-2020. A set of indicators has been developed to report on progress towards meeting these international goals and targets and commitments on biodiversity made by the European Union. The most recent England biodiversity strategy, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra in 2011, with a progress update in July 2013.

8. Animals and plants protected under UK or European legislation referred to collectively as **Protected Species**. The protection applies to both the animals and the places where they live.

9. The animals and plants listed in Annex IV of the EC Habitats Directive are known as European Protected Species. These species are protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and include bats, otters, natterjack toads and great crested newts.

10. These species are also protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Other species protected under this legislation include adder, common lizard, red squirrel and water vole. This includes protection from being killed or injured and protection for the places they use for shelter and protection, as well as disturbance to an animal occupying such a place.

11. The Protection of Badgers Act 1992 includes prohibition of damaging, destroying or obstructing access to a badger sett or disturbing a badger when it is occupying a sett.

12. There are a large number of invertebrate species which receive different levels of protection under UK and/or European legislation. Almost 400 are listed under Section 41 of the Natural Environment and Rural Communities Act (NERC Act 2006), and form the Species of Principal Importance in England list as a Government priority for conservation action. The remaining protected invertebrates are listed in Schedule 5 of Wildlife and Countryside Act 1981 (as amended).

13. Certain plants are specially protected by both European Union and UK law. Plants in the UK are protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) and/or Schedule 4 of The Conservation of Habitats and Species Regulations 2010 (as amended). It is an offence to deliberately pick, collect, cut, uproot or destroy these wild plants.

14. Under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), all wild birds are protected from being killed, injured or captured, while their nests and eggs are protected from being damaged, destroyed or taken.

15. Natural England has produced Standing Advice for Protected Species to assist with the understanding of the impact of development on Protected Species.

16. **Geodiversity** consists of the rocks, minerals, fossils, soils, landforms and processes that occur naturally, providing essential natural resources including

soils for food and timber production, aggregates for construction and metals and fuels for industry and transport.

17. The complex relationships between geology, natural processes, landforms, landscape, soils and climate are fundamental to the distribution of hibitats and species. Important geological sites can be concealed, damaged or destroyed by inappropriate development.

18. Nationally important geological sites are protected as Sites of Special Scientific Interest (SSSIs), while locally important sites may be declared as Local Nature Reserves or Local Geological Sites (LGS), also known as Regionally Important Geological/Geomorphological Sites (RIGS). The importance of geodiversity and the need for geological conservation is recognised in the National Planning Policy Framework (NPPF).

19. **Soils** are an important component of nutrient cycling, help to prevent pollution by breaking down chemicals and reduce flood risk by regulating water flow. Soil, particularly peat, is also a major store of carbon in the form of soil organic matter.

20. The UK Soils Observatory has classified the soils of the UK into broad types. The West Lancashire area can be split into four main groups:

- A band of Loamy and claley soil can be found in the north east and south west of the district.
- A band of raised bog peat and fen peat soil dominate the west of the district stretching from the north to the south
- Central areas of West Lancashire stretching to the south west is dominated by wet very acid sandy and loamy soils. Other soil types found in this geography include loamy and clayey soils of differing types.

21. A Soil Strategy for England was published by the Government in 2009, followed by Safeguarding our Soils – A Strategy for England (Defra, 2011). As part of this strategy, Defra has published a Construction Code of Practice for the Sustainable Use of Soils on Construction sites, which outlines current guidance and legislation concerning the use of soil in construction projects. Soils are protected under UK legislation relating to agricultural land and minerals and waste planning.

22. In West Lancashire the vast majority of land is classified as grade one agricultural land; this is classified as excellent quality agricultural land. Pockets of grade two agricultural land can also be found and this is classified as very good quality agricultural land.

23. Development of buildings buildings and infrastructure can result in the loss of agricultural potential. The remaining soil is usually degraded as result of construction activities, through compaction by machinery and contamination by building waste materials. This affects the ability of the soil to support trees and other plants, which can reduce biodiversity, visual amenity and opportunities for wildlife. Contamination can also mean that soils with other materials in them cannot be re-used on site and must be disposed of appropriately. Sealing and compaction also contribute to increased surface

run-off, ponding of water and localised erosion, flooding and pollution.

24. The most significant sites for the conservation of wildlife (species and habitats) and/or geology are protected by international designations: **Special Protection Areas**, **Special Areas of Conservation** or **Ramsar sites**. The Habitat Regulations Screening Assessment is included in Appendix 2. Sites of National importance are designated as **Sites of Special Scientific Interest (SSSIs) of Marine Conservation Zones (MCZ)**. There are 6 SSSIs and 1 MCZ in the West Lancashire area.

25. Most of the important environmental features lie outside statutory SSSIs. Lancashire County Council and West Lancashire Borough Council are partners in the **Biological Heritage Sites** (BHS) and **Local Geodiversity** Sites (LGS) partnerships. In addition, the County Council has identified **special verges** and West Lancashire have identified sites of district significance known as **Local Nature Conservation Sites**. Collectively non-statutory sites are known as **local sites** in the National Planning Policy Framework (NPPF)

26. The current inventory of natural environment sites in West Lancashire is given below:

- 2 Ramsar sites
- 3 Special Protection Areas for birds
- 6 Sites of Special Scientific Interest
- 1 Marine Conservation Zone
- 78 Biological Heritage Sites covering 5,198ha
- 7 Local Geolodiversity Sites covering 7.3 ha
- 32 Local Nature Conservation Sites covering 320ha
- 18 Special verges covering 1.8ha

27. In addition the County Council is developing Ecological Networks in partnership with the Lancashire Local Nature Partnership. The networks are designated wildlife sites (i.e. SSSI and BHS sites) and corridors and stepping stones that connect them. At present the work is still in its initial stages, with the Central Lancashire districts (Preston, Chorley and South Ribble) the most advanced. It is likely that the Lancashire Ecological Network will be published in time to influence the development of a number of proposals in this Plan.

Historic Environment

28. **Heritage assets** such as historic buildings and archaeological sites are protected in law by designation under one or more categories, including Scheduled Monuments, Listed Buildings, Registered Parks and Gardens and Conservation Areas. The historic environment within Areas of Outstanding Natural Beauty is protected by planning controls operating in these areas. There are also buildings and sites of heritage interest that have not been designated but have a local significance.

29. The National Heritage List of England provides up to date information on the number and type of nationally designated historic places. In West Lancashire there are currently 505 Listed Buildings, 28 Conservation Areas and 12

Schedules Ancient Monuments respectively, as well as 1 Registered Parks and Gardens.

Air Quality

30. Under the Environmental Protection Act 1995, each district in Lancashire is required to review and assess air quality in their area. National Air Quality Objectives have been set by Government for seven pollutants (Benzene, 1,3-Butadiene, Carbon Monoxide, Lead, Nitrogen Dioxide, Particulates and Sulphur Dioxide). Air pollution is measured and predictions made as to how it will change in the following few years. If a local authority finds any places where the objectives are not likely to be achieved, it must declare an Air Quality Management Area (AQMA) and then put in place a Local Air Quality Action Plan.

31. The current AQMA declared in West Lancashire is shown in the table below.

Air Quality Management Areas (AQMAs)

District Authority	No.	Location of AQMA	Area included	Date of Declaration
West Lancashire Borough Council	1	Ormskirk town centre	An area encompassing properties in Moor Street and Stanley Street in Ormskirk.	20/01/2010

http://aqma.defra.gov.uk/list.php

CO2 Emissions

32. Total CO_2 (carbon dioxide) emissions in West Lancashire in 2011 were estimated at 846 thousand tonnes. 33% of West Lancashire's emissions were attributable to industry and commerce sector sources, 28.5% to transport, 28% to the domestic sector and 10.5% to land use, land use change and forestry. The percentage of CO_2 emissions attributed to land use, land use change and forestry is particularly high for West Lancashire when compared to Lancashire as a whole. The totals for Lancashire (14 districts) were: industry and commerce 38%, domestic 30.5%, transport 29% and land use and change 2%

33. Expressed in terms of per capita (per resident) in order to make allowance for the different size of areas, total CO_2 emissions in West Lancashire in 2011 were estimated at 7.6 tonnes per resident per annum. This is higher than the UK average of 6.9 tonnes and the estimate for Lancashire as a whole (6.9 tonnes). In considering such per capita ratios it should be noted that while emissions per resident may be a useful measure for domestic emissions, emissions from industry and road transport are driven by many factors other

than the size of the resident population so these ratios should be interpreted with caution.

34. Road transport emissions include freight and passenger transport, both private and for business purposes. The estimates of road transport CO_2 are made based on the distribution of traffic, therefore some of the emissions within an authority represent through traffic, or part of trips into or out of the area whether by residents or non-residents.

Climate Change

35. Climate Change in often seen as a 'global' issue with impacts such as rises in sea level, flooding, temperature increases and extreme weather having much less effect on the North West of England than other parts of the world. Whilst the North West may not expect to experience some of these extremes there will be changes in local weather patterns that may cause disruptions to business and distress to individuals here in Lancashire. However, by the predictive nature of the science, the likely change to our climate is one of the most difficult environmental variables to quantify succinctly in a report such as this.

36. The UK Climate Projections (UKCP09) provide climate information designed to help those needing to plan how they will adapt to a changing climate and is the fifth generation of climate information for the UK. Projections are broken down to a local level across the UK and illustrate the potential range of changes and the level of confidence in each prediction.

37. The projections are given as the value averaged over each of seven future overlapping 30 year time periods, stepped forward by a decade, starting with 2010–2039. The use of 30 year time periods reduces the effect of uncertainty due to natural internal variability. These future time periods are referred to for simplicity by their middle decade, starting from the 2020s (2010–2039) and ending with the 2080s (2070–2099). All changes are expressed relative to a modelled 30 year baseline period of 1961–1990.

38. There are uncertainties in future emissions. Though small over the next two or three decades, mainly because of climate system inertia, these uncertainties will be substantial in the second half of the century. UKCP09 therefore use three different scenarios for future emissions. These were decided, following consultation, as the A1FI, A1B and B1 scenarios in the IPCC Special Report on Emission Scenarios (SRES) — renamed for simplicity in UKCP09 as High, Medium and Low respectively.

39. The High emission scenario was used to produce projections for the Lancashire Adaptation Wizard which is available on the internet for use by anyone interested in climate change in the county (Lancashire Climate Change Projections). These projections cover 9 areas of Lancashire and are not replicated here.

40. Extreme events are also predicted to increase and UKCP09 also includes prediction tools for these. These tools have been recently updated and work

remains to revisit the Lancashire predictions. It is anticipated that this will be completed for subsequent ER updates.

41. The effect of Climate Change on Lancashire will be significant. The Environment Agency as the lead water management body for England has produced River Catchment Flood Management Plans for all rivers across the country which outlines the major future issues for areas in relation to climate change. Lancashire will see: sea level rise, an increase in peak river flows and as a result an increase in the number of properties at risk of flooding.

42. West Lancashire is covered by the Alt Crossens and River Douglas Catchment Flood Management Plans. In the Alt Crossens catchment area, the plan estimates that by 2100 there may be a 30% rise in peak flows and a 30% increase in the number of properties likely to flood (including areas of Ormskirk and Aughton) as a result of climate change. Flood depths may increase by 0.25m and hundreds of acres of prime agricultural land could be at risk of flooding.

43. The River Douglas Catchment Flood Management Plan estimates that by 2100 there will be an increase in peak flow of 20% and a rise in sea level of 841mm. Change in the number of properties at risk varies across the catchment, with the greatest increase (from 23 to over 200 properties) in the tidal villages, which include Tarleton and Hesketh Bank.

Water Quality

44. The **EU Water Framework Directive** (2000/60/EC) established a legal framework to protect and restore clean water across Europe and ensure its long term, sustainable use. The Water Framework Directive (WFD) set a number of different objectives. In summary these are:

- prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters;
- aim to achieve at least good status for all water bodies by 2015. Where this is not possible, and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027;
- meet the requirements of Water Framework Directive Protected Areas;
- promote sustainable use of water as a natural resource;
- conserve habitats and species that depend directly on water;
- progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
- progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants;
- contribute to mitigating the effects of floods and droughts.

45. All water bodies are assigned to one of the Directive's five status classes: high, good, moderate, poor or bad. This is based on an assessment of ecological, chemical and quantitative criteria. There are different criteria for assessing different types of water body, e.g. heavily modified and artificial

water bodies; groundwater; rivers and lakes etc., but they all include consideration of:

- **biological quality,** including presence or absence of various algae, plants, fish and invertebrates;
- **physical and chemical quality**, including oxygenation and nutrient conditions;
- **environmental quality standards** for levels of specific pollutants, such as pesticides; and
- **physical aspects** that support the biological quality of the water body, such as the quantity and dynamics of water flow (hydro-morphological quality).

46. If part of a water body fails on any one of the criteria monitored, it will fail to achieve or lose good status.

47. Under the Water Framework Directive (WFD), water management is based on **River Basin Districts** (RBD), which include lakes, streams, rivers, groundwater and estuaries, together with the coastal waters into which they flow. The WFD requires river basin management plans (RBMP) to be developed and reviewed on a six-yearly basis, specifying the actions required within each RBD to achieve set environmental quality objectives. RBMPs must identify discrepancies between the existing status of rivers and other water bodies, and that required by the WFD, so that a programme of measures can be put in place to achieve the desired goals.

48. The West Lancashire masterplan area falls within the North West River Basin District, which covers an area from Cheshire to the Lake District including the rivers Ribbble, Doughlas and Mersey. The River Basin Management Plan for this district was published in 2009 and is due for revision in 2015.

Contaminated Land

49. **Contaminated land** includes land polluted by heavy metals, e.g. arsenic, cadmium and lead, oils and tars, chemical substances, gases, asbestos and radioactive substances. The long industrial history of West Lancashire has caused areas of land to become contaminated in various ways over many years. The ground around former factories, mines and chemical sites may contain substances which can present a risk to people, animals, vegetation, rivers and streams, buildings and the groundwater system. Uses such as petrol stations, gasworks, tanneries, coal merchants and landfill sites also have the potential to contaminate.

50. The legal definition of contaminated land (Part IIA of the Environmental Protection Act 1990) includes land where substances could cause significant harm to people or protected species or significant pollution of surface waters or groundwater. The definition of significant harm is based on the pollutant linkage being present. A pollutant linkage consists of three parts:

- a contaminant': a substance which is in, on or under the land which has the potential to cause harm or to cause pollution of controlled waters

- a 'pathway': one or more routes or means through which a receptor is being exposed to, or affected by, a contaminant, or could be so exposed or affected.
- a 'receptor'.

The receptor can be one or more of the following:

- human beings
- ecological systems or living organisms forming part of a system within certain protected locations including SSSIs, national nature reserves, special areas of conservation (SACs), special protection areas (SPAs), RAMSAR sites and areas of special protection for birds
- property in the form of buildings, including ancient monuments
- property in other forms: livestock, crops, home-grown produce, owned or domesticated animals and wild animals subject to shooting or fishing rights
- controlled waters defined by the Water Resources Act 1991 including territorial and coastal waters, inland fresh waters, and ground waters.

51. The Contaminated Land Regulations 2000 place a legal duty on district and unitary authorities to identify any contaminated land in their areas, and bring about its remediation. Some types of contaminated land are classed as special sites and these are regulated by the Environment Agency.

52. The Government's Planning Policy on Contaminated Land is set out in paragraphs 120 and 121 of the National Planning Policy Framework 2012. If a development site has had any previous industrial uses or has been used for the disposal or treatment of wastes, there is a potential for contamination. Potential contamination is a material consideration and must be considered when dealing with any planning application.

53. It is the responsibility of the developer to ensure that a development is safe and 'suitable for use' for its proposed purpose. The developer is responsible for deciding whether any proposed development will be affected by contamination or may increase the potential for contamination and for satisfying the Planning Authority that any contamination can be successfully remediated with minimal adverse effect.

Access/Open Space/Recreation

54. West Lancashire has a network of 373 km of public rights of way, including 12 km of Bridleways. Access is also promoted through the Lancashire Countryside Service which manages a host of sites (picnic sites, recreation sites, access areas, etc) that together offer a range of opportunities for people to enjoy the Lancashire countryside.

55. Access to the countryside is partly managed through the implementation of the Countryside and Rights of Way Act. The Act requires every highway authority in England and Wales to prepare a Rights of Way Improvement Plan. The Lancashire Rights of Way improvement Plan (ROWIP) has been produced to meet the requirements of the Countryside and Rights of Way Act 2000 (CROW). The ROWIP assesses the extent to which right of way meet the

present and likely future needs of the public, the opportunities provided by rights of way for exercise and other forms of open air recreation and enjoyment and the accessibility of rights of way to blind and partially sighted persons and others with mobility problems.

56. The key commitments of the ROWIP are to:

- improve access to the rights of way network on the urban fringe and encourage more people to enjoy the benefits of walking.
- wherever possible take opportunities to develop or create multi user routes where all can enjoy better access, including the less mobile, horse riders, cyclists, families and walkers.
- work with the landowning and farming communities to improve access and look to assist them in resolving land management issues where access is concerned. Including the new rights of access to open countryside.
- continue to develop an integrated network of bridleway routes, which can also cater for cyclists.
- work with motorized users who wish to promote responsible use of the right of way network where legal.
- wherever possible make changes to the rights of way network that will improve access for those with mobility problems or other disabilities

Landscape

57. The **landscape** of West Lancashire is particularly diverse; it includes the Lancashire and Amoounderness Plain, Ribble Estuary, River Douglas and the gritstone upland of the Upholland Ridge.

58. In 2007 Lancashire County Council created a landscape classification system based on the former Countryside Commission's Character of England Map. The West Lancashire area is dominated by two character types which are coastal plain and mossland.

59. The other Character Types and Areas in West Lancashire include: Open costal marsh, Enclosed coastal marsh and Upland Ridge.

60. National character Area (NCA) Profiles have been prepared by Naturla England. The profiles include description of the ecosystem services provided in each character area and ow these benefit people, wildlife and the economy. They also identify opportunities for positive environmental change. The West Lancashire Area is covered by one Natural England NCA profile and this is hte Lancashire and Amounderness Plain.

Population

Deprivation

61. Many areas suffer the problems of multiple deprivation such as poor health, high infant mortality, low life expectancy, large numbers of benefit claimants, low skill levels, poor housing quality and high levels of worklessness. A major

concern is the direction of change, which suggests that deprivation is becoming even more entrenched across Lancashire.

62. West Lancashire is ranked 153rd out of 326 local authorities (where 1 is the most deprived) and dropped three places between 2007 and 2010. West Lancashire has 8% of lower super output areas (LSOA) in the most deprived 10% in England. At the local level,although the district is relatively affluent and predominantly rural, some of the most deprived urban areas in Lancashire are in Skelmersdale.

63. The position in Lancashire is worsening, with the percentage of LSOAs falling into the most deprived 10% increasing from 15.5% to 17.4%, between 2007 and 2010. In contrast the percentage of LSOAs from the most affluent 10% has increased from 1.2% to 5.4% suggesting the gap is widening between the most and least deprived areas.

64. The deprivation dimension figures from the 2011 census have recently been released and provide detailed information for Lancashire. The dimensions of deprivation used to classify households are the following four indicators based on selected household characteristics:

1. **Employment**: any member of a household (who is not a full-time student) is either unemployed or long-term sick.
2. **Education**: no person in the household has at least a level 2 education, and no person aged 16-18 is a full-time student.
3. **Health and disability**: any person in the household has general health rated 'bad' or 'very bad' or has a long-term health problem.
4. **Housing**: household accommodation is either overcrowded, with an occupancy rating of -1 or less, or is in a shared dwelling, or has no central heating.

65. For the 12-district Lancashire area, 43% of households were classified as 'not deprived', which is slightly higher than the England and Wales rate of 42.3%. West Lancashire has a lower proportion of households deprived in three and four dimensions than the Lancashire12 district area (Lancashire-12), the North West and England.

District	Not deprived	Deprived in one dimension	Deprived in two dimensions	Deprived in three dimensions	Deprived in four dimensions
West Lancashire	43.1	32.6	19.6	4.4	0.3
Lancashire (12-districts)	43	31.7	19.5	5.3	0.5
Lancashire (14 districts)	41.2	31.8	20.5	6	0.6
North West	40.5	31.7	20.8	6.4	0.6
England and Wales	42.3	32.6	19.3	5.2	0.5

66. Revised fuel poverty statistics for 2011 have recently been published by the government. The new results use a 'low income, high cost' definition of fuel poverty that supersedes the former definition based on households spending 10% or more of their income on fuel.

67. In West Lancashire approximately 11% of households are considered fuel poor; in comparison with 13.1% in Lancashire-12, 12.5% in the North West () and England (10.9%). West Lancashire ranks 144th out of 326 authorities (where 1 is the worst).[1]

68. Not surprisingly, West Lancashire has a lower proportion of homes in council tax band 'A' (the lowest band) when compared with Lancashire-12 and the North West rates. The higher percentage of homes in bands 'F' and 'G' demonstrates the affluence within the district. The table below shows the percentage breakdown of properties in each council tax band.

	Band A %	Band B%	Band C %	Band D %	Band E %	Band F %	Band G %	Band H %
West Lancashire	30.0	18.0	19.8	14.2	9.6	5.0	3.2	0.2
Lancashire-12	37.6	19.4	18.5	12	7.1	3.4	1.9	0.2
Lancashire-14	40.3	20.1	17.7	11	6.2	2.9	1.7	0.1
North West	41.8	19.9	17.5	10.1	5.8	2.8	1.9	0.2
England	24.8	19.6	21.8	15.3	9.4	5	3.5	0.6

Population

69. Between 2001 and 2011 the Lancashire county area (12 districts) saw a 3% increase in population, in comparison to the North West (5%) and England and Wales (7%).

70. More specifically the resident population of the 12-authority Lancashire area stood at 1,175,979 in mid-2012. This represented an increase of 0.3% over the previous year, lower than the rate for England and Wales (0.7%) and the North West (0.4%). The 2012 mid-year population estimates for West Lancashire show an increase of 0.3%; Lancashire-12 shows an increase of 0.4% whilst England has a larger increase of 0.7%.

71. West Lancashire has 16.6% of the population aged between 0-14 years, a slightly lower proportion than for Lancashire-12 (17%) and England (17.7%), reflecting the below average birth rates in the district. For young people aged 15-24 years, West Lancashire has 13.7% of the population in this age bracket, (Lancashire-12: 13.2%; England: 12.9%), whilst19.8% of the population are aged over 65+ years; higher than Lancashire-12 (18.8%) and England

Lower super output areas (LSOAs) are units of geographic boundary developed by the Office for National Statistics. LSOAs each contain a minimum population of 1,000 persons and on average (mean) contain a population of 1,500 persons. There are 32,482 LSOAs in England.

(16.9%). The biggest difference is in those aged between 30-44 years. Approximately 17.1% of the population are in this age bracket, compared to 20.3% for England and 18.5% for Lancashire-12. The table below shows the age breakdown for West Lancashire in comparison with Lancashire-12 and England.

Age group	West Lancashire %	Lancs-12 percentage	England %
0-4	5.34%	5.88%	6.34%
5 - 9 yrs	5.48%	5.57%	5.76%
10-14yrs	5.80%	5.59%	5.62%
15-19yrs	6.69%	6.35%	6.14%
20-24yrs	7.17%	6.90%	6.77%
25-29yrs	4.85%	5.89%	6.84%
30-44yrs	17.11%	18.48%	20.33%
45-59yrs	21.12%	20.29%	19.63%
60-64yrs	6.65%	6.26%	5.63%
65-69yrs	6.36%	5.90%	5.22%
70-74yrs	4.77%	4.36%	3.84%
75-79yrs	3.87%	3.54%	3.19%
80-84yrs	2.58%	2.59%	2.41%
85-89yrs	1.43%	1.56%	1.46%
90+yrs	0.79%	0.85%	0.82%

72. Projections suggest that over the next 25 years the overall population in the Lancashire county area will increase by 8.6%, which is similar to the North West forecast but substantially below the estimated national increase of 18%. This translates into an additional 100,000 people in Lancashire.

73. As with the UK as a whole the Lancashire county area is faced with demographic changes in the long term that will see the working age population grow at a much slower rate that the population of older people aged over 65 years. Projections for the period 2011-2021 show that the county area will face the challenge of an ageing population without significant growth in the numbers of younger residents, which will impact noticeably upon the Lancashire economy. This will also result in an increase in the demand for certain public services in the longer term. Consideration will need to be given to ensure the public realm, transport, and accessibility to services are suitable for an older/ageing population.

Unemployment

74. On the whole Lancashire has a relatively low unemployment rate, but this overall picture masks significant levels of unemployment and economic inactivity in the more deprived parts of Lancashire.

75. Worklessness is particularly acute in some localities, with over 110,000 Lancashire residents considered to be workless. Lancashire has higher rates of 18 to 24 year olds on the claimant count than national averages, with 32.7% compared to 29.5% nationally, although the levels of claimants in the county since 2004 remain consistently similar. The county performs relatively well in respect of longer-term JSA claimants, with the percentage of people claiming for more than a year and up to 3 years at 10.3% in Lancashire, substantially below the 16.9% in the UK. Only 0.1% of claimants are on the JSA claimant count for more than 3 years in Lancashire compared to 0.9% nationally.

76. In West Lancashire, 72.7% of the working age population are employed in the district (official labour market statistics) and there are 3,640 VAT/PAYE registered enterprises. This figure is a good indicator of the level of the entrepreneurship and health of the business population. West Lancashire's figure is the 3rd highest across the 14 districts in Lancashire (including Blackburn with Darwen and Blackpool).

77. The claimant count for Job Seeker's Allowance (3.3%) is in line with the county average (3.2%), and the proportion of residents claiming all out of work benefits in West Lancashire (14.3%), is below the county average (14.7%). However, at a more local level there are high unemployment rates in several wards and despite the affluence of some parts of the district there are concentrations of severe deprivation. The town of Skelmersdale has several wards with areas of significant deprivation. Specific wards in West Lancashire district with higher levels of JSNA claimant counts include Digmoor (9.6%), Tanhouse (8.3%), Moorside (6.9%) and Birch Green (6.8%).

78. According to the Annual Survey of Hours and Earnings 2012, resident-based earnings in West Lancashire (£425.70) are higher than workplace earnings (£368.30). The rates for Great Britain are £407.50 (resident-based earnings) and £406.80 (workplace earnings).

79. A key issue for Lancashire's economy is an insufficient number of people with higher level qualifications and too many low or unskilled individuals. Employers will to a greater extent demand higher level qualifications as the norm and more people with higher level skills are needed to support the shift to a higher value economy and for Lancashire to compete economically. The education and skills level of the population in West Lancashire is examined in further detail below.

Education and Skills

80. Educational achievement in the Lancashire county area is mixed with some

areas performing well. In West Lancashire, the presence of Edge Hill University contributes to the higher skills levels evident in some parts of the district. However, these higher skill levels are concealing lower rates within the more disadvantaged areas.

81. Overall Lancashire's skills profile is broadly comparable to national averages and slightly better than the regional position. In terms of higher level skills there are 28.6% of West Lancashire's working age residents qualified to NVQ level 4 and above, compared to 30.3% in the North West and 34.4% nationally. Level 3 and equivalent qualifications stand at 46.8% for West Lancashire (52.0% in the North West, 55.1% nationally). The district has 68.4% qualified to NVQ level 2, lower than the North West (69.9%) and Great Britain (71.8%). West Lancashire has 11.3% of residents with no qualifications (9.6% in Lancashire, 12.1% regionally and 11.3% nationally). Increasingly NVQ level 2 qualifications are considered a minimum requirement for the workforce, as employers seek individuals with employability skills. This presents a significant barrier to employment for a substantial proportion of Lancashire residents with low or no skills.

82. West Lancashire is the fifth best in the county for pupils obtaining five GCSEs (grades A* to C) in maths and English (63.1% in 2012). This is higher than the rate for Lancashire (59.9%), and better than the rate for England (59.0%). Within West Lancashire there are large variations in performance in the wards. Halsall ward has the lowest rate of GCSE attainment (42.9%), with Birch Green (44.4%) and Digmoor wards (44.6%) also scoring poorly. At the other end of the scale Aughton Park ward has the highest proportion of young people obtaining five GCSEs (grades A* to C) in maths and English at 83.3%, followed by Scarisbrick (82.9%) and Parbold wards (82.8%). Low attainment in GCSEs can also be a barrier for further education, higher qualifications and quality employment opportunities.

83. A key issue for Lancashire's economy is an insufficient number of people with higher level qualifications and too many low or unskilled individuals. Employers will to a greater extent demand higher level qualifications as the norm and more people with higher level skills are needed to support the shift to a higher value economy and for Lancashire to compete economically.

Crime

84. The level of crime is varied across the district. The highest rates are to be found within the urban wards of Birch Green (326 per 1,000 of the population) and Scott (157.6). The lowest rates are in Aughton Park (9.7) and Rufford (8.0). These figures are taken from 'Safer Lancashire' for August 2012-July 2013. Overall, West Lancashire has the seventh lowest crime rate in the county.

85. Crime and disorder problems on public transport are a serious concern for transport providers, service users and the community. A public transport system where people can travel easier and safer is a key corporate priority for Lancashire County Council and in Lancashire there is in excess of 62 million bus passenger journeys made each year. There were nearly 15 million entries and exits at railway stations in Lancashire. Crime and incidents on the railway

system in Lancashire has reduced by 18% (September 2009-August 2010) compared to the previous 12 months. Safer Travel unit statistics show that there was a reduction of 15% April 2009 – March 2010, when compared with the previous period. Incidents on school buses fell by 5%. Incidents on public buses fell by 28%. However, there has been an increase in the second quarter of 2010 (July to September 2010) on public buses.

86. Crime and anti-social behaviour on public transport discourages people from using it and contributes to increased road usage. A Department for Transport survey found that 11.5% more journeys would be made on public transport if passengers felt they were more secure. This would equate to 7.13 additional bus journeys and 1.5 million more railway station entry and exits in Lancashire each year.

Human Health

87. The variations that exist in life chances in Lancashire can be measured by life expectancy, health outcomes, and quality of life. Lancashire is diverse and varied in terms of social issues facing the county, with large areas experiencing issues including poor health, deprivation, social exclusion, low educational attainment, limited employment opportunities, and poor housing and neighbourhoods.

88. There are affluent districts in Lancashire that have areas of deprivation, including rural locations, where access to services can be restricted. The relationship between the social issues and lower life expectancy / poorer health is complex and is strongly correlated with measures of socio-economic status and other wider determinants of health such as the natural and built environment (public realm), community, lifestyle behaviours and the local economy

89. The health challenges facing the county are examined in detail in Lancashire's Joint Strategic Needs Assessment (JSNA), which provides an overview of the health status of the population. The key transport-related health issues are:

- casualty rates particularly among children and vulnerable road users
- poor self-reported health and well-being
- increasing rates of obese and overweight residents in the population
- cardiovascular diseases
- diabetes

90. The health of people in West Lancashire is mixed: residents living in Skelmersdale have poorer health outcomes than those in the more affluent areas. Life expectancy at birth for males is 78.5 years, not significantly different to the rate for England (78.9 years). For females, life expectancy from birth (81.7 years) is significantly worse than for England (82.9 years).

91. In the most deprived areas of West Lancashire, the difference in life expectancy is marked. Males living in the most deprived areas will live on average 9.1 years less than males in the least deprived areas. For females,

those in the most deprived areas can expect to live 7 years less (based on the Slope Index of Inequality, 2006-10).

92. With regards to disability-free life expectancy, males in West Lancashire can expect to have 9.3 years free from disability (at age 65), which is the joint sixth best rate in Lancashire (England:10.2). For females, disability-free life expectancy is higher at 11.4 years (England 10.9).

93. The behavioural risk factors for many long-term conditions (such as cancer, coronary heart disease, and chronic obstructive pulmonary disease) include physical inactivity; whilst the associated medical risks of inactivity include high blood pressure, being overweight or obese and having diabetes.

94. Walking and cycling for transport can be the most appropriate physical activity option, offering the potential for daily physical activity of sufficient frequency and intensity. Even low levels of walking can have great potential for health gain and can be undertaken by the most inactive.

95. Whilst walking and cycling can contribute to physical activity objectives in the public health outcomes framework, they can also provide other benefits, including improving local air quality through CO2 reductions, and increasing social interaction and social capital.

96. However, as previously noted, the poor quality of many public spaces makes walking, cycling and the use of public transport unattractive and compounds perceived fears about crime and safety. Levels of traffic congestion and a lack of facilities addressing the needs of cyclists and pedestrians may further discourage residents from using sustainable transport options as their transport preference.

97. Whilst there are risks associated with walking and cycling (see 'road safety' below), physical inactivity is riskier than being sedentary; Department for Transport (DfT) road traffic casualties for 2012 reported 118 cyclists killed on the road, with 420 pedestrian deaths. In comparison, there were 32,647 deaths from coronary heart disease attributed to inactivity (British Heart Foundation statistics 2010).

Road Safety

98. Perceptions of safety on the road continue to be a major barrier sustainable travel options. There has been a 7% reduction in pedestrian deaths in Great Britain between 2011 and 2012 (Department for Transport), however, the number of seriously injured pedestrians increased by 2 per cent to 5,559. There were a total of 25,218 reported pedestrian casualties in 2012, down 4 cent in comparison with 2011. The number of cyclists killed increased 10% between 2011 and 2012, whilst, the number of seriously injured cyclists increased by 4% to 3,222. The number of seriously injured cyclists continues to increase, a trend that has been recorded over the past eight years.

99. The number of people injured in road traffic collisions (RTCs) in Lancashire has been decreasing year on year. However, the rate (per thousand of the

population) for Lancashire is still above both the North West and England rates. Regrettably, 38 people were killed and 612 were seriously injured (KSI) on the roads in Lancashire during 2011 as drivers, passengers, pedestrians or cyclists. They also place burdens on emergency and health services and have an economic impact on communities. Many accidents are avoidable and Lancashire's Road Safety Strategy 2011 - 2021 will deliver actions that will reduce the number of accidents that occur in future. Whilst children and young people represent a slightly lower proportion of all those killed and seriously injured in West Lancashire when compared with the Lancashire averages, there are still a number of issues.

100. The issues and priorities in West Lancashire:

- Children and young people aged up to 25 years represent 36% of all the killed and seriously injured casualties in West Lancashire (Lancashire 40%)
- The 16 to 25 year age group represent 27% of all killed and seriously injured in West Lancashire (Lancashire 27%)
- The 0-15 year age group represent 10% of all killed and seriously injured in West Lancashire (Lancashire 13%)
- 49% of all children killed and seriously injured in West Lancashire were pedestrians
- Casualties amongst young people 0-15 year olds, as car occupants, represent the highest number of any district in Lancashire.

101. The JSNA Health Inequalities report states that accidents are one of the top ten causes of reduced life expectancy of both sexes in Lancashire. For road traffic collisions, the most vulnerable age group are young adults.

102. Lancashire Opinions on Policing (LOOP) Survey 2 found that dangerous / inconsiderate driving / speeding cars was one of the top three things that made people feel unsafe. The Living in Lancashire panel was asked in June 2010 what the main problems in their local area are and 45% felt that speeding cars or motorbikes was a major issue.

103. Significant progress has been made in tackling road safety issues over recent years, with accident reduction rates that are better than the national average. The progress made highlights what can be done and reinforces the belief that we can go further in improving the safety of our highway network.

104. Reducing the number of road traffic casualties can make the biggest change to cycling and walking rates. Perceptions of unsafe roads may be the biggest barrier to encouraging people to walk or cycle more, however, there is evidence that the greater the number of cyclists/pedestrians, the safer the roads and pavements become. (Jacobsen 2003, Robinson 2005).

Vehicle Ownership and Modes of Travel to Work

105. According to the latest census figures, 19.8% of households in West Lancashire had no car or van in 2011. In West Lancashire 44.2% of people travel to work by car, 3.9% take public transport and 6.6% walk or cycle.

Self Reported Health and Wellbeing

106. In Lancashire self-perceived poor health is associated with deprivation; with the experience of poor health more pronounced at the bottom of the social gradient. People from the most deprived areas are at higher risk of poor mental health and of developing mental health problems, as are their children. They are twice as likely to consult their GP for help with mental health; they are also more likely to commit suicide, especially when they are young. Those in the most deprived areas are 6 times more likely to experience extreme anxiety and depression as those in the more affluent areas.

107. For self-reported health, 47.6% of people in West Lancashire rated their health as 'very good' (Lancashire 45.9%, North West 46.5%, England and Wales 47.1%). At the other end of the scale, 6.3% of people reported their health as 'bad' or 'very bad' (Lancashire 6.3%, North West 6.8%, England and Wales 5.6%).

108. Other factors which may affect a person's health and wellbeing include unemployment, which has a number of adverse effects. These can include reduced psychological wellbeing and a greater incidence of self-harm, depression and anxiety. Conversely, quality employment opportunities have a protective effect on an individual’s mental health. The ongoing public sector cuts are likely to mean further increases in the claimant count and a potential increase in poor health.

109. Poor housing is an aspect of deprivation associated with poor mental health. Some indication of the quality of housing in the county is provided by its value and its condition. Often poor housing is located in areas where crime and fear of crime exists. This is also a significant factor associated with poor mental health outcomes. There is a significant inequality in crime levels, with those in the most deprived areas in Lancashire many times more likely to be a victim of crime than those in the least deprived areas.

Obesity

110. In the UK, the predicted trend for obesity indicates that by 2030 the prevalence of obesity will have risen from 26% to 41% - 48% in men, and from 26% to 35% - 43% in women. This would equate to 11 million more obese adults by 2030, 3.3 million of whom would be older than 60.

111. In the UK, the rise in obesity is expected to be associated with increased cases of diabetes, heart disease and stroke, and cancer. In addition, the increasing prevalence of debilitating disorders such as osteoarthritis would affect the duration of the person’s healthy lifespan.

112. Medical costs associated with treatment of these long-term conditions are estimated to increase by £1.9-2 billion per year in the UK by 2030 (www.nhs.uk). Estimates of obesity in Lancashire show a greater relationship to deprivation than is the case nationally. The estimates suggest that obesity levels are higher than the national pattern would predict.

113. Obesity in childhood is linked to a range of diseases in adult life including diabetes, coronary heart disease and depression. In Lancashire obesity and underweight prevalence are highest in the most deprived parts of the sub-region. However, there is a strong inverse relationship between deprivation and childhood obesity as children in the most deprived areas are the least likely to be overweight.

114. Approximately 10.8% of reception children are obese, which is significantly worse than the rate for England (9.6%). For year six children, 19.6% are obese, which is not significantly different from England (19.0%). For adults, 22.7% of the population are obese (England 24.7%), again, not significantly different. Encouraging more physical activity through walking and cycling measures would be beneficial in reducing obesity and overweight levels and improving health in other areas.

Coronary Heart Disease

115. Premature death from coronary heart disease occurs across Lancashire at higher levels than for England as a whole, although some districts have lower rates of premature death than would be expected.

116. West Lancashire is significantly worse than England for deaths from all causes, circulatory diseases, stroke, and respiratory disease. For coronary heart disease, West Lancashire ranks the fourth best in the county (Lancashire-12), with the table below showing the rates of mortality for males, females and all persons (all ages). West Lancashire had 5% less mortalities from CHD than England in the period 2008-10 (Lancashire-12, 13%). Between the period 1993-95 and 2008-10, Lancaster has seen a 67.6% decrease in mortality from CHD.

Mortality from CHD (all ages) 2008-2010, per 100,000 of the population

District	Males DSR	Females DSR	All persons DSR
West Lancashire	53.5	18.2	35.3
Lancashire-12	64.3	21.1	42.2
North West	72.5	23.4	47.3
England	58.1	17.5	37.2

Source: Mortality from coronary heart disease (ICD9 410-414 adjusted, ICD10 I20-I25):2008-2010, https://indicators.ic.nhs.uk/

117. One of the main contributors to coronary heart disease and chronic obstructive pulmonary disease (COPD) is smoking and tobacco use. West Lancashire has the highest prevalence of smoking in Lancashire (14 districts) with 28.2% of the population aged over 18 years smoking; this is significantly worse than for England (20.0%). Whilst there is no significant difference with smoking attributable mortality (213 per 100,000 of the population over 35 years) in the 12 districts of Lancashire (England 210), a shocking 46.8% of routine/manual workers smoke (England 30.3%), the highest percentage in the region. This could potentially lead to serious problems for the clinical commissioning group and health care services in the near future.

Diabetes

118. Diabetes is a condition where the body is unable to produce the insulin required to convert glucose (sugar) from food sources into energy for its cells. All cells in the body need this energy to function properly and if the insulin production is faulty this results in very high, and potentially dangerous, levels of glucose in the blood.

119. There are two types of diabetes: type 1 and type 2. Type 2 diabetes is related to lifestyle but additional risk factors are inherent in specific populations. Type 2 diabetes usually develops in people over the age of 40, although it can appear from the age of 25 in those who are of South Asian or Black/African Caribbean heritage. South Asian populations are more likely to develop diabetes than other groups. There are also links with deprivation, which complicates the issue further as black/minority ethnic (BME) communities tend to live in areas of deprivation. Higher rates of death are expected in those areas with larger BME communities. There is a strong social gradient to death from diabetes, with those in the most deprived areas many times more likely to die than those living in less deprived areas. There is a stronger association between deprivation and death from diabetes in Lancashire than nationally.

120. The table below shows the rate of mortality from diabetes for males, females and all persons in West Lancashire, England, the North West and the 12 Lancashire authorities. A significantly higher rate of women died from diabetes, in comparison with the rate for England. West Lancashire had 6.8% less mortalities from diabetes than England in the period 2008-10 (Lancashire-12, 12.3%). Between the period 1993-95 and 2008-10, West Lancashire has seen a 28% decrease in mortality from diabetes.

Mortality from diabetes (all ages) 2008-2010, per 100,000 of the population

District	Males DSR	Females DSR	All persons DSR
West Lancashire	6.26	5.86	6.19
Lancashire-12	6.43	5.08	5.77
North West	6.79	4.79	5.69
England	6.65	4.87	5.68

Source: Mortality from diabetes (ICD10 E10-E14): 2008-2010, https://indicators.ic.nhs.uk/

121. The cause of many health conditions can be the result of a myriad of factors including genetic risk, an individual's lifestyle and environmental/social factors. It is well evidenced that modifying unhealthy lifestyle behaviours (tobacco use, a poor diet, increased alcohol consumption and physical inactivity) can have the largest effect on reducing the incidence and impact of poor health and long-term health conditions.

122. Sources of information used in this document:

Protected Species

Source: Natural England
http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/specieslinks.aspx

Local Geodiversity Sites (LGS)
Source: GeoLancashire (formerly Lancashire RIGS Group) (2012)
http://www.lancashirerigs.org.uk/indexef1c.html

Soils
Source: UK Soil Observatory
http://www.ukso.org/mapViewer.html

Agricultural Land Classification
Source: Natural England
http://publications.naturalengland.org.uk/publication/35012

Sites of Special Scientific Interest (SSSI)
Source: Natural England (1 January 2014)
http://www.sssi.naturalengland.org.uk/Special/sssi/report.cfm?category=C,CF

Natura 2000 Sites (SAC and SPA)
Special Areas of Conservation (SAC)
Source: Joint Nature Conservation Committee (JNCC) (26 September 2013)
http://jncc.defra.gov.uk/ProtectedSites/SACselection/SAC_list.asp?Country=E

Special Protection Areas (SPA)
Source: Joint Nature Conservation Committee (JNCC) (5 July 2013)
http://jncc.defra.gov.uk/page-162

Ramsar Sites
Source: Joint Nature Conservation Committee (JNCC) (29 November 2011)
http://jncc.defra.gov.uk/page-1390

Marine Conservation Zones (MCZ)
Source: DEFRA (21 November 2013)
https://www.gov.uk/government/policies/protecting-and-sustainably-using-the-marine-environment/supporting-pages/marine-protected-areas

Biological Heritage Sites
Source: Lancashire Environmental Records Network
http://www.lancspartners.org/lern/

Historic Environment
Source: National Heritage List for England (English Heritage)
Listed Buildings, Scheduled Monuments, Registered Parks and Gardens, Conservation Areas
http://hc.english-heritage.org.uk/National-Report/indicator-data/
See 'Understanding the Assets' spreadsheet for summary tables for each Local Authority

Air Quality Management Areas
Source: DEFRA and District Councils
See AQMA list at http://aqma.defra.gov.uk/aqma/list.php

See LCC web pages for more detailed information:
http://www.lancashire.gov.uk/corporate/web/?siteid=6116&pageid=35382&e=e

CO_2 Emissions
Source: Lancashire Joint Strategic Needs Assessment (JNSA)

http://www.lancashire.gov.uk/corporate/web/?siteid=6116&pageid=40218&e=e

Source: DECC
https://www.gov.uk/government/publications/local-authority-emissions-estimates

Flood Risk
Source: Lancashire Resilience Forum
http://www.lancsresilience.org.uk/Pages/Advice/Flooding.html
For areas at risk, see Appendix J of Lancashire Multi Agency Flood Plan PDF

Source: Environment Agency for River Douglas Flood Management Plan
https://www.gov.uk/government/publications/douglas-catchment-flood-management-plan
For the Lancashire Local Flood Risk Management Strategy see
http://www3.lancashire.gov.uk/corporate/atoz/a_to_z/service.asp?u_id=3904&tab=1

Landscape Character Types
Source: Lancashire Landscape Character Assessment web pages
http://www.lancashire.gov.uk/corporate/web/?Landscape/6228

Source: Natural England - National Character Areas
http://www.naturalengland.org.uk/publications/nca/default.aspx

Population Statistics
Source: Office for National Statistics (ONS)
http://www.neighbourhood.statistics.gov.uk/dissemination/ for Key figures for each Local Authority

Health
Source: Lancashire Joint Strategic Needs Assessment (JNSA)
http://www.lancashire.gov.uk/corporate/web/?siteid=6117&pageid=35389&e=e

Road Safety
Source: Lancashire County Council / MADE (Multi-Agency Data Exchange)
http://www.lancashire.gov.uk/office_of_the_chief_executive/lancashireprofile/ia/Public_District_Profile_IA/atlas.html for casualties by ward

Use Zoom to District filter, then go to Select Data and choose Highways option. Choose required category then double click on 2011 to see data.

Source: Department for Transport
http://road-collisions.dft.gov.uk/ for comparison between Local Authorities

Appendix 2: Habitat Regulations Screening Assessment

Introduction

1. This report considers the likelihood of significant adverse effects on internationally-important wildlife sites within and around Lancashire. The wildlife sites in question are known as European wildlife sites and are designated under the Habitats and Birds Directives set by the European Commission.

2. The Habitats Directive and Birds Directive provide for the establishment of wildlife protection areas across Europe. These areas are designated either as Special Areas for Conservation (SAC) or as Special Protection Areas (SPA). Sites may also be classified under the Ramsar convention. Collectively, these sites form the Natura 2000 network.

3. Development proposals with the potential to adversely affect these sites (either directly or indirectly) are subject to preventative controls set out in the Conservation of Habitats and Species Regulations 2010. These regulations seek to avoid development in areas which are likely to cause harm to the conservation interests of these sites or, where harm is unavoidable, to secure compensatory measures in return. In the case of proposals which would have a significant adverse effect, there must be an overriding public interest in the proposal.

4. Protection is also afforded to these areas from policies leading to development. Plans and policies with the potential to adversely impact on the conservation interests of European wildlife sites require screening to determine whether the plan is likely to result in a significant adverse effect.

5. In accordance with The Conservation Natural Habitats, &c. (Amendment) Regulations 2007 and European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna, the County Council is required to undertake a screening exercise of the likely significant effects of their plan, in this case the Local Transport Plan 2011-2021 Draft Implementation Plan for 2011/12 – 13/14.

Description of Plan and Review of Habitats Regulations Assessment (HRA)

West Lancashire Highways and Transport Masterplan

6. Lancashire County Council is the transport authority for West Lancashire with responsibility for a network of local roads, cycle lanes, bridges and traffic

control infrastructure.

7. The Highways and Transport Masterplan is an area-specific action plan based on strategic transport priorities set out in the Local Transport Plan.

8. The Highways and Transport Masterplan for West Lancashire sets out the ideas for a future highways and transport strategy to 2023 and beyond. The Masterplan links economic development strategies and adopted spatial planning strategies to wider strategic policy objectives as well as setting out how we can deliver the programme.

9. The Masterplan:

- Outlines current land and transport use in West Lancashire
- Considers the impact of adopted development plans on the area in the future
- Suggests the strategic highway and transport measures that we believe will be needed to support plans for future growth and development
- Outlines funding mechanisms, delivery programmes and associated risks.

10. This Masterplan is required in order to provide greater certainty about the schemes that will be implemented to 2023, and it is these schemes that could result in direct development and have therefore been subject to the HRA.

11. The strategic nature of the policies within the Masterplan means that it is not considered meaningful or realistic to try to undertake a HRA assessment of the policies themselves. Rather, it is the schemes within the Masterplan (which the policies give rise to) that could result in direct development which potentially adversely affects a Natura 2000 site.

Habitats Regulations Assessment Process

12. The regulations require an assessment to be undertaken of the 'likely significant effects' of a plan or project on sites of international nature conservation importance. The West Lancashire Highways and Transport Masterplan can only be approved where it has been satisfied that there will be no adverse effect on the integrity of the international nature conservation sites.

13. Stage one of the Habitat Regulations Assessment process is to undertake a screening exercise of the proposed project or plan to assess whether any likely significant effects will arise as a result. In this case the options and schemes within the Highways and Transportation Masterplan will be assessed.

14. Assessment of the significance of effects is undertaken by considering the schemes identified in the Highways and Transport Masterplan in relation to the designated European and International nature conservation sites and whether any likely significant effects would compromise the condition of the site in an adverse way.

15. Where no likely significant effects are identified then there is no need for further work at this stage. If significant effects are identified it may be

necessary to undertake a full Appropriate Assessment of those parts of the plan causing the effect.

Natura 2000 Sites

16. Natura 2000 is the collective term for the various European designated sites that are of exceptional importance due to the type of habitat and in particular their rare, endangered or vulnerable state.

17. These sites include:

- Special Protection Areas (SPAs) designated under the EU 'Wild' Bird's Directive;
- Special Conservation Areas (SACs) designated under the EU 'Habitats Directive' and Offshore Marine Sites (OMS);
- Ramsar Sites designated as wetland sites of international importance at the Iranian International Wetlands Convention at Ramsar.

Methodology

18. The screening assessment will firstly identify and gather information on the sensitivity and vulnerability of features of interest of Natura 2000 sites, in West Lancashire (and up to 15km beyond).

The West Lancashire Highways and Transport Masterplan schemes and proposals are then subjected to a three stage screening process.

Stage One: The first will identify those schemes that will directly lead to some form of development that may have a potential impact (Direct Development). If no Direct Development will occur as a result of the scheme, or not within the timeframe of the masterplan, then the scheme can be screened out at this stage. Proposals identified as having "*No direct development"* have been screened out at this stage.

Stage Two: If the scheme itself does, or could, lead to Direct Development then it will need to undergo a second stage assessment, using the 'source-pathways-receptors' approach, to see if any of the potential impacts listed below are likely or uncertain. If there are potential impacts then any pathways for the potential impacts to reach a Natura 2000 site will be assessed. Proposals identified as having "*No mechanism for a likely significant adverse effect*" or "*No pathway of impact to reach Natura 2000 site*" have been screened out at this stage.

Stage Three: The third stage will consider schemes that could lead to significant impacts and whether these can be avoided or mitigated. In some cases it may be that the Highways and Transport Masterplan proposes a scheme where the outcomes (and likely impacts) are not currently known.

Analysis of Potential Impacts / Pathways

19. In order to assess whether any likely significant effects will impact upon the Natura 2000 sites, as a result of a scheme or schemes identified in the West Lancashire Highways and Transport Masterplan, or in-combination with other

plans, it is necessary firstly to identify potential impacts that could cause a likely significant effect on the habitats or species for which a Natura 2000 site is identified.

20. The following direct and indirect impacts of development have been identified:

- **Air Quality –** Changes in the composition of air quality as a result of development or an increase in traffic levels in the vicinity of a Natura 2000 site that could damage vegetation and harm species dependent on these habitats.
- **Water Quality** – Changes in the quality of water composition in the watershed as a result of development in or near to the Natura 2000 site, and increased pollution that could alter the water quality entering the water network and could damage vegetation and habitats/ species at these sites.
- **Hydrology** – Changes in the hydrological cycle affected by altered drainage, heat, surface run off, loss of permeable surfaces etc. which can result in drought or flooding of Natura 2000 sites that could damage vegetation or harm species living in these habitats.
- **Habitat Species / Damage and Disturbance** – Damage to habitats and disturbance of species within Natura 2000 sites. Also disturbance to species travelling to and from sites and damage to external habitats utilized by species. Impacts could result from restricted migratory routes or impacts on food resources or breeding grounds resulting in increased ecological fragmentation and isolation. Impacts may be long-term or short-lived e.g. during construction.

Recreational / Visitor Pressure – Disturbance to habitats and to species as a result of significant increases in the number of people visiting Natura 2000 sites.

N.B. Impacts to habitats outside the site boundary, or disturbance to species utilizing the site whilst they are outside the site boundary (eg feeding, moving between roosting and feeding areas or on migration) may also adversely affect the integrity of a Natura 2000 site. Also, impacts that could result in increased ecological fragmentation and isolation of sites should be considered.

21. There is also a need to establish a set of particular pathways where potential impacts may be able to find a path to a Natura 2000 site. Where no pathways exist to the Natura 2000 site, the potential impacts can be ruled out as they will not have a likely significant effect on the site.

22. Potential pathways include:

- **Wind** – An assessment of whether the potential impacts outlined above, specifically air quality can reach the Natura 2000 sites via the prevailing wind.
- **River Network** – As assessment of whether potential impacts, specifically water quality, and hydrology are connected via the river network to the Natura 2000 sites.
- **Roads** – Distance to Natura 2000 sites in relation to the road network and the feasibility of air, noise and light pollution from increased traffic on the roads, due to a higher population or greater accessibility across Lancashire.
- **Species movement** – Distance between Lancashire and the Natura 2000 sites and the location of other important habitats within the boundary of the plan such as Sites of Special Scientific Interest (SSSI), Biological Heritage Sites and Local Nature Reserves.

23. If any schemes remain likely to have an effect on a Natura 2000 site and a pathway connects the impact to the site then a further assessment will be required. This will assess whether any avoidance measures (such as mitigation measures) can be used to negate the potential impact. All schemes where the impacts can be neutralised by some form of avoidance or mitigation can then be screened out. Any schemes left in will then need to be subject to a further assessment.

24. Appendix A presents the full results of the assessment in tabular format and incorporates a traffic light system to highlight the screening process. All schemes that are highlighted in 'green' in the Potential Impacts column conclusion in Appendix A were screened out of this assessment at stage one as having no likely significant effects. All schemes that are highlighted in 'orange' were screened out in the second stage. If any schemes are highlighted in 'red' this means that a significant likely effect could potentially arise and measures have been put in place to ensure that the potential impacts can be appropriately addressed.

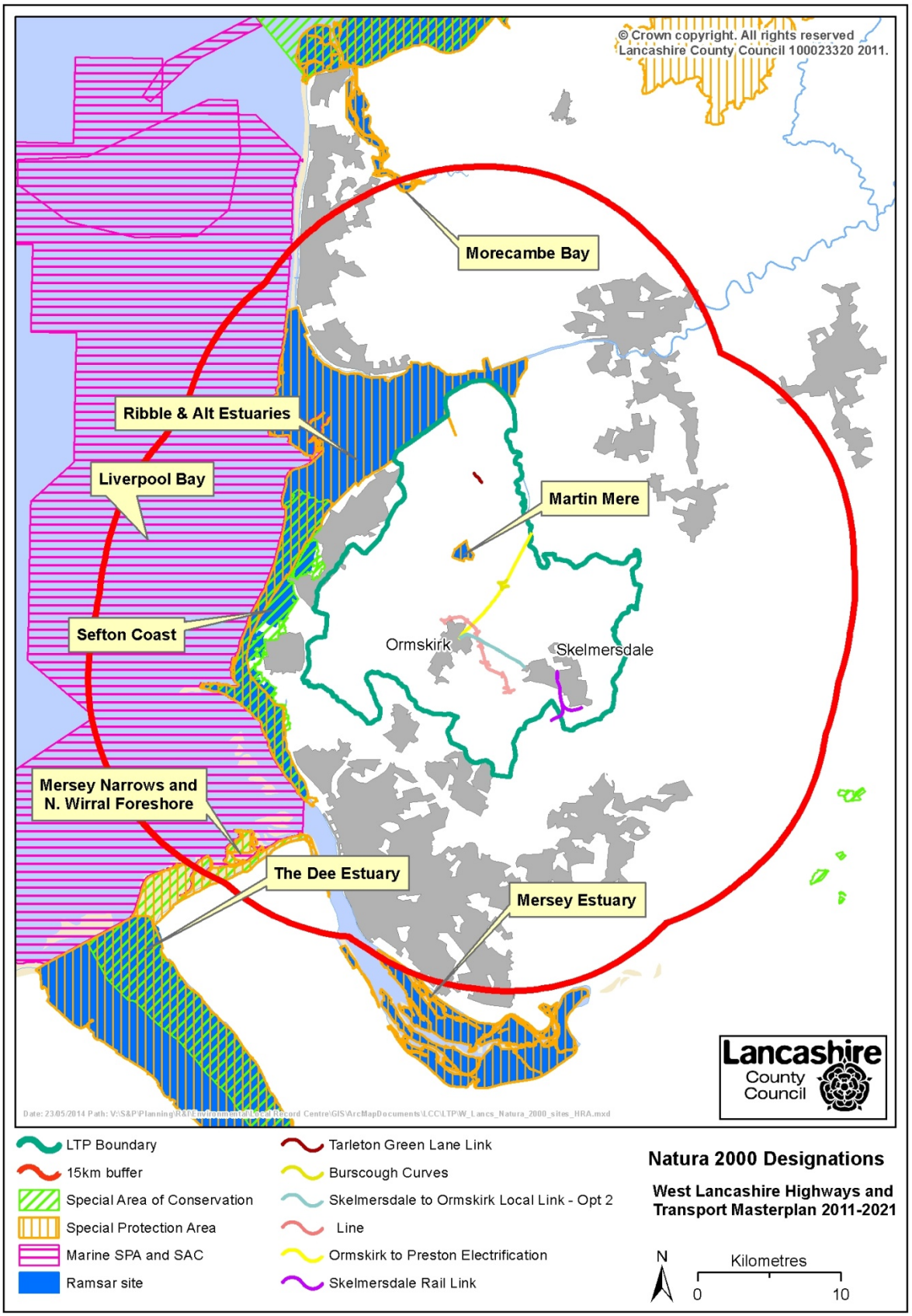
The Assessment

Identification and Description of Natura 2000 Sites

The Habitats Regulations Assessment identified **9** Natura 2000 sites as either located wholly or partially within West Lancashire (or within a 15km buffer of the plan area). These sites are identified in Table 1. Some Natura 2000 designations share or have overlapping boundaries.

Figure 11 of the West Lancashire Highways and Transport Masterplan identifies the schemes. Map 1 below shows the locations of the Natura 2000 sites in the plan area. These are listed in Table 1 and the site details are presented in Appendix B. Map 2 shows the areas which may be functionally connected to Natura 2000 sites.

Map 1 Natura 2000 Sites in West Lancashire Area



Map 2 Areas which may be functionally connected to Natura 2000 Sites.

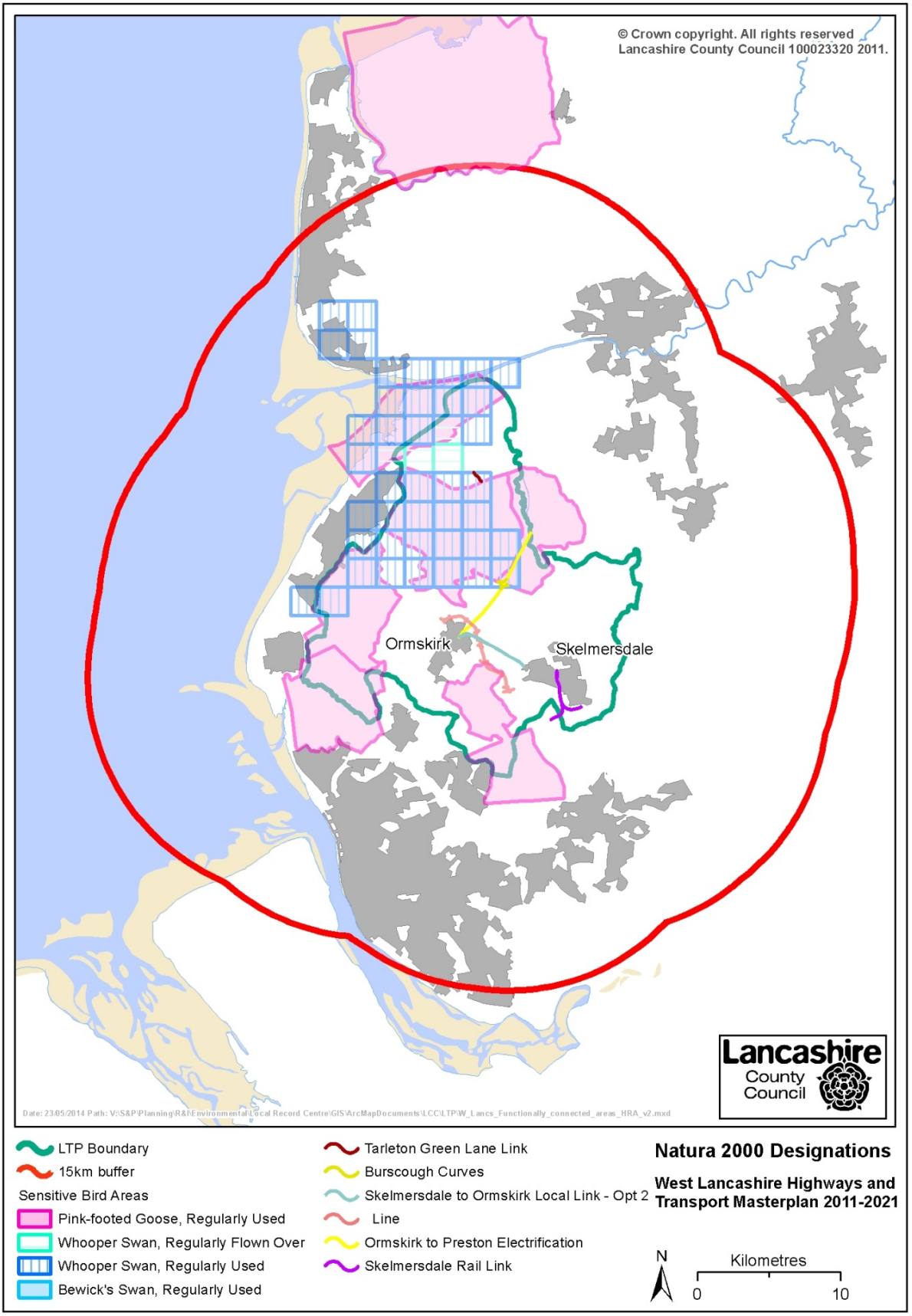


Table 1 - Natura 2000 designations within 15km of the masterplan area

Site	SAC	SPA	Ramsar site	Marine SPA	Marine SAC
Dee Estuary	*				
Liverpool Bay#				*	
Martin Mere#		*	*		
Mersey Estuary		*	*		
Mersey Narrows and North Wirral Foreshore		*			
Morecambe Bay#	*	*	*		
Ribble & Alt Estuaries#		*	*		
Sefton Coast	*				

Sites located wholly or partially within Lancashire

Assessment of likely significant effects

Conservation Objectives for Eurpoean sites in the in NW England is published by Natural England here: http://www.naturalengland.org.uk/ourwork/conservation/designations/sac/northwest.aspx

Advice for Marine Sites is published here: http://publications.naturalengland.org.uk/category/3212324

Appendix A gives the results of the screening process.

Two schemes were identified as having potential adverse effects upon Natura 2000 sites. Table 2 below, identifies the scheme to be assessed and considers what other avoidance and mitigation measures would be sufficient to ensure that no likely significant effects on the Natura sites could occur.

Table 2 – Assessment of Green Lane Link, Tarleton

Scheme	Natura 2000 site(s) Potentially Affected	Potential Impact(s)	Conclusion/Mitigation
Green Lane Link, Tarleton	Ribble & Alt Estuaries and Martin Mere SPA/Ramsar sites	The proposed route lies within an area identified as being regularly used by Whooper Swans and adjacent to an area regularly used by Pink-footed Geese.	The LTP recognises that there are ecological constraints which need to be addressed and managed as part of the scheme development. Further detailled information will need to be collected and collated relating to the actual usage of the land by Whooper Swans and Pink-footed Geese and the liklihood of any

		Martin Mere and the Ribble and Alt Estuaries qualify as Natura 2000 sites for the presence of Whooper Swans and Pink-footed Geese. Consequently, the development location may be considered to have the potential to impact on land functionally connected to a SPA. The sensitivity period is from early September to early April for Pink-footed Geese and early October to early April for Whooper Swans	impacts arising from the construction of the link which will be just over 600m in length. Any impacts will assessed for their significance and appropriate measures will be identified and implemented with reference to the mitigation hierarchy. The Green Lane Link could potentially result in temporary loss of habitat and increased disturbance during the construction phase. There would also by permanent land take and disturbance, due to increased traffic, after the link is constructed. There may potentially be consequential development of the surrounding land following construction of the Link. However, at present the West Lancashire Local Plan has not allocated land for development around the line of the Link; the surrounding land lies within the Green Belt. No development therefore immediately consequent upon the link road which would give rise to in-combination impacts. Any development proposed in future local plans will be subject to the appropriate HRA scoping assessment.
Ormskirk to Preston Electrification	Ribble & Alt Estuaries and Martin Mere SPA/Ramsar sites	The proposed route lies partially within areas identified as being regularly used by Whooper Swans and Pink-footed Geese. These birds are likely to be using the Ribble and Alt Estuaries and Martin Mere SPAs. Martin Mere and the	The LTP proposes to investigate the options for this scheme with Network Rail and Merseyrail. No physical construction works are proposed by the LTP. Any scheme is likely to be developed in two phases: Phase 1 Ormskirk to Burscough, which is outside the potentially functionally connected area, and phase 2, Burscough to the LTP

		Ribble and Alt Estuaries qualify as Natura 2000 sites for the presence of Whooper Swans and Pink-footed Geese. Consequently the development location may be considered to have the potential to impact on land functionally connected to a SPA. The sensitivity period is from early September to early April for Pink-footed Geese and early October to early April for Whooper Swans.	boundary, which lies within it. There is potential for any electrification scheme to cause temporary disturbance to birds during the construction phase. This could be avoided by ensuring construction works are undertaken outside the sensitive period. There is also potential for bird strike of overhead powerlines. The likelihood and significance of this will need to be considered as part of the proposal to investigate the options for this scheme including the option of third rail vs overhead electrification.

These schemes were identified as requiring specific measures to mitigate any potential impacts on Natura 2000 sites.

With regards to future screening / HRAs for the specific proposals arising from the scheme for the Green Lane Link at Tarleton, which could potentially include proposals that adversely affect a Natura 2000 site, it is recommended to utilise the following additional information:

- Details of sites and areas for proposed development, together with information on operational impacts (where feasible) e.g. the timing of operations, noise, visual disturbance, dust and traffic.
- Information on potential pathways will be assembled (including river corridors, known feeding/roosting areas, flyways and known networks of existing habitats) as necessary for the location of development sites/areas being assessed.
- For proposals outside of designated sites, the assessments will identify whether the area (including adjoining land) is used by species protected under the Regulations, e.g. using existing habitat surveys, species records, and specialist advice.
- Conservation objectives of wildlife sites which might be affected to be compiled from relevant citation reports.

With regards to future screening / HRAs for the specific proposals arising from the scheme for the electrification of the Ormskirk to Preston railway, which could potentially include proposals that adversely affect a Natura 2000 site, the plan is proposing that the County Council investigate the options, prepare a business plan and work with Merseytravel and Network Rail to identify the best options for electrification.

The potential for adverse impacts on birds from the Natura 2000 sites will be considered during these planning phases and the potential for, and need to avoid, adverse impacts will be integrated into the process to identify the best solution.

Relationship with other Plans and Programmes

An assessment was made of the potential for schemes within the West Lancashire Highways and Transport Masterplan to result in adverse impacts on a Natura 2000 site in combination with proposals being put forward by other plans within the LTP area.

The assessment of 'in combination' impacts was taken in conjunction with the HRA for the emerging Local Plan for West Lancashire. There are no schemes in the West Lancashire Highways and Transport Masterplan identified as having the potential for 'in combination' impacts upon Natura 2000 sites.

Conclusion

The West Lancashire Highways and Transport Masterplan has undergone a Habitat Regulations Screening Assessment (HRA) in line with the guidance and legislation. This report documents a comprehensive and logical account of this screening process.

The majority of schemes were considered to be small in scale and located far enough away from, and with no identifiable pathways to the Natura 2000 sites that they were unlikely to lead to any significant impacts.

As a result of the screening process, two scheme proposals (i.e. Green Lane Link, Tarleton and Ormskirk to Preston Electrification) were identified as potentially having a significant effect on a Natura 2000 site. However, it was concluded that appropriate mechanisms could be built into the design phase of these schemes which would enable any impacts on the Natura 2000 Site to be identified and satisfactorily mitigated against.

Any development that is likely to have a significant effect on a European site, either alone or in combination with other plans and projects, will be subject to assessment under Part 6 of the Conservation of Habitats and Species Regulations 2010 at project application stage. If it cannot be ascertained that there would be no adverse effects on site integrity the project will have to be refused or pass the tests of Regulation 62 in which case any necessary compensatory measures will need to be secured in accordance with Regulation 66 of the Conservation of Habitats and Species Regulations 2010.

In conclusion, this HRA report finds the West Lancashire Highways and Transport Masterplan to have **no likely significant effects on the identified Natura 2000 sites** and it is not deemed necessary to carry out an 'appropriate assessment' at this stage.

Appendix A Habitats Regulations Screening Results

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
A new Skelmersdale town centre rail station	The proposal is for a new railway station next to Skelmersdale town centre, with integration into the public transport network and cycling and walking provision, as well as car parking. We are working towards the rail infrastructure and station being part of Network Rail's programme for Control Period 6 (2019-2024).	**No mechanism for a likely significant adverse effect.**		Screened out	
Reshape Skelmersdale's public realm	We will radically reshape Skelmersdale's public realm and highways network through a single programme of works spread over a number of years. The improvements will ensure that Skelmersdale functions far better than it does now and has a sustainable, integrated transport network to support growth in the future.	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Reconfigure Skelmersdale's public transport	A new purpose built bus station that provides a dedicated interchange with the proposed rail station. The facilities will include secure cycle storage to encourage cycling as part of longer distance travel.	**No mechanism for a likely significant adverse effect**		Screened out	
Skelmersdale Employment Connections	There is a lack of public transport provision between the main residential areas of Skelmersdale and employment centres, particularly at unsocial hours. We therefore need to establish how to best meet the needs of employers and employees in providing cheap and cost effective transport that has a long term future and is not dependent on short term revenue funding.	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Ormskirk Bypass	Ormskirk suffers from significant traffic congestion. This results in deteriorating air quality, road safety concerns and creates a barrier to economic growth. This makes the town centre an undesirable place to travel to or through, particularly during peak times. In order to tackle this issue, two options have been outlined by the masterplan. Bypass	**Potential impacts on feeding and roosting areas and flyway.**	The proposed route lies partially within an area identified as being regularly used by Pink-footed Geese. These birds are likely to be using the Ribble and Alt Estuaries and Martin Mere SPAs. Martin Mere and the Ribble and Alt Estuaries qualify as Natura 2000 sites for the presence Pink-footed Geese. Consequently the development location may be considered to	Screened out	In 2012 Jacobs completed an M58 to Southport Corridor Study. It found there were significant costs involved in building the bypass for option one (£37.8m in 2007). The study also stated that the cause of the majority of congestion within Ormskirk is from journeys either starting or finishing in Ormskirk. As a result, the creation of a bypass would not alleviate much traffic within Ormskirk and so provide limited benefits for the economy and environment. As a result, **option two** is the preferred option and works have already commenced.

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
			have the potential to impact on land functionally connected to a SPA. The sensitivity period is from early September to early April.		The LTP proposes to remove the current protection from the existing bypass scheme. Should the bypass option ever be taken forward then plans will need to give due consideration to the potential for impacts on Pink-footed Geese.
Ormskirk town centre (Ormskirk Town Centre Movement Strategy)	We will work with our partners to produce an **Ormskirk Town Centre Movement Strategy** that will build on the work done for the corridor study and will provide the opportunity to fundamentally review how traffic is managed in Ormskirk. In addition, to complement the Movement Strategy and to start a process of travel culture change, we will pilot a new cycle hire	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
	scheme in Ormskirk.improvements (commenced).				
Derby Street Railway Bridge	The bridge is located in the Ormskirk Town Centre Conservation Area and is Grade II listed. The bridge is not fit for purpose and requires either substantial maintenance work to preserve its structural integrity, or more likely, total replacement to overcome insurmountable obstacles.	**No mechanism for a likely significant adverse effect.**		Screened out	
Longer distance travel	Although much of the traffic in Ormskirk is local, there is still a sizeable number of vehicles travelling through the town, including heavy lorries, largely due to Ormskirk's position on the main route between the M58 and Southport. Not only does this traffic contribute to congestion in Ormskirk, but also along the rest of the A570. As a result, Sefton Council are currently building the Thornton to Switch Island Link. The opening of the Thornton to Switch Island Link road will provide the opportunity to review how traffic is routed	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
	from the M58 and we will work with the Highways Agency and Sefton Council to ensure that Ormskirk receives the maximum benefit possible from the scheme.				
Improve Burscough's public Realm	The A59, the most direct route between Central Lancashire and Liverpool, runs straight through the middle of Burscough town centre. Because of this, the main street becomes congested not only at peak times, but as the frequent bottlenecks occurs through the day. Furthermore, the A59 narrows from Burscough town centre towards Ormskirk making the journey unpleasant for cyclists in particular. As a result, public realm improvements are necessary in order to ease congestion by ensuring only essential traffic use the route.	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Highways route manageement	The opening of the Thornton to Switch Island link has already been highlighted as providing the opportunity to review how traffic is routed from the M58. Likewise, we will be reviewing how we manage vehicle routing once the Green Lane Link is open. We therefore propose to extend this work to cover all the Rural Parishes, particularly around Tarleton, along the A5209 that runs from the M6 at junction 27 to Burscough and along the A577 through Up Holland. In doing so, we will work with partners in neighbouring authorities and with the Highways Agency to put in place a **Route Management Plan for West Lancashire** that maximises the benefits of all new road construction and highways and transport improvements in the area.	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Rail connectivity	There is an overwhelming need to improve rail connectivity in West Lancashire, both for West Lancashire and for surrounding areas. As a result, we look to persue a number of opportunities including the electricifcation of the Ormskirk to Preston line which currently requires passengers to change at Ormskirk to a diesel service; to provide a direct interchange between the two lines at Burscough (Burscough Curves) and potentially, the need to offer direct services between Southport and Liverpool and between Southport and Central Lancashire.	**Potential impacts on feeding and roosting areas and flyway.**	The proposed route lies partially within areas identified as being regularly used by Whooper Swans and Pink-footed Geese. These birds are likely to be using the Ribble and Alt Estuaries and Martin Mere SPAs. Martin Mere and the Ribble and Alt Estuaries qualify as Natura 2000 sites for the presence of Whooper Swans and Pink-footed Geese. Consequently	Screened out	The LTP proposes to investigate the options for this scheme with Network Rail and Merseyrail. No physical construction works are proposed by the LTP. Any scheme is likely to be developed in two phases: Phase 1 Ormskirk to Burscough, which is outside the potentially functionally connected area, and phase 2, Burscough to the LTP boundary, which lies within it. There is potential for any electrification scheme to cause temporary disturbance to birds during the

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
			the development location may be considered to have the potential to impact on land functionally connected to a SPA. The sensitivity period is from early September to early April for Pink-footed Geese and early October to early April for Whooper Swans.		construction phase. This could be avoided by ensuring construction works are undertaken outside the sensitive period. There is also potential for bird strike of overhead powerlines. The likelihood and significance of this will need to be considered as part of the proposal to investigate the options for this scheme including the option of third rail vs overhead electrification.

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Burscough Curves (rail connectivity)	Burscough has two railway stations, Burscough Bridge (Wigan-Southport Line) and Burscough Junction (Ormskirk-Preston Line). There is no connection between the stations and passengers transferring between the two lines are required to walk approximately half a mile, which discourages interchange. The proposed scheme will create three extra sections of track at the point where the rail lines cross. This will allow for direct links between Ormskirk and Southport, Southport and Preston, and Ormskirk and Wigan/Manchester as well as offering a direct rail link between the two Burscough stations.	**Potential impacts on feeding and roosting areas and flyway.**	The proposed route lies on the periphery of an area identified as being regularly used by Whooper Swans and adjacent to an area regularly used by Pink-footed Geese. These birds are likely to be using the Ribble and Alt Estuaries and Martin Mere SPAs. Martin Mere and the Ribble and Alt Estuaries qualify as Natura 2000 sites for the presence of Whooper Swans and	Screened out	The LTP proposes that the Council will not work towards the reinstatement of the curves but may review its position if circumstances change. Should the Council ever review its position it will give due consideration to the HRA requirements.

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
			Pink-footed Geese. Consequently, the development may be considered to have the potential to impact on land functionally connected to a SPA. The sensitivity period is from early September to early April for Pink-footed Geese and early October to early April for Whooper Swans.		

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Green connections	Skelmersdale and Up Holland have limited direct walking and cycling provision linking them to Ormskirk. The most direct route between Ormskirk and Burscough is along the A59. In places, the high speed of traffic is a deterrent to walkers and cyclists. Links between Burscough and Tarleton are similarly affected. Whilst these three links are perhaps the most obvious needs, there are further strategic connections that could be made, including between Southport and Tarleton and between Tarleton and Preston. There is therefore an overall need to provide a safe, high quality, direct multi-user network of routes linking Skelmersdale, Ormskirk, Burscough and Tarleton and on to Southport and Preston	**No mechanism for a likely significant adverse effect.**		Screened out	

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Tarleton Green Lane Link	At present, vehicles carrying produce from growers in Tarleton, Hesketh and Holmes Moss access the main road network primarily via Blackgate Lane, Church Road or Coe Lane. Most of the produce is transported using heavy goods vehicles (HGV). These commercial vehicles contribute to congestion and environmental damage within Tarleton. The congestion problem is exacerbated by narrow carriageways in residential areas and by on street parking in residential/shopping areas. A new link road is therefore proposed between local rural businesses and the A565. This will relieve the impact of through traffic, particularly heavy goods vehicles, in Tarleton.	**Potential impacts on feeding and roosting areas and flyway.**	The proposed route lies within an area identified as being regularly used by Whooper Swans and adjacent to an area regularly used by Pink-footed Geese. Martin Mere and the Ribble and Alt Estuaries qualify as Natura 2000 sites for the presence of Whooper Swans and Pink-footed Geese. Consequently, the development location may be considered to	Screened out	The LTP recognises that there are ecological constraints which need to be addressed and managed as part of the scheme development. Further detailled information will need to be collected and collated relating to the actual usage of the land by Whooper Swans and Pink-footed Geese and the liklihood of any impacts arising from the construction of the link which will be just over 600m in length. Any impacts will assessed for their significance and appropriate measures will be identified and implemented with

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
			have the potential to impact on land functionally connected to a SPA. The sensitivity period is from early September to early April for Pink-footed Geese and early October to early April for Whooper Swans		reference to the mitigation hierarchy. The Green Lane Link could potentially result in temporary loss of habitat and increased disturbance during the construction phase. There would also by permanent land take and disturbance, due to increased traffic, after the link is constructed. There may potentially be consequential development of the surrounding land following construction of the Link. However, at present the West Lancashire Local Plan has not

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
					allocated land for development around the line of the Link; the surrounding land lies within the Green Belt. No development therefore immediately consequent upon the link road which would give rise to in-combination impacts. Any development proposed in future local plans will be subject to the appropriate HRA scoping assessment.

Scheme Name	Proposal Summary	Potential Impacts	Natura2000 Sites/ Pathways	Screening Option	Justification/ Mitigation
Rural connections	The rural parishes are very dependent on the car, which not only leads to local problems on the highways network, but makes life very difficult for those who, for whatever reason, do not have their own transport. Visitors to the area also need to be able to travel without needing a car and there is a definite need to support a sustainable visitor economy to ensure that the natural environment is protected while its economic benefit is maximised. We will therefore extend an existing project which sets out to find the most cost effective methods of providing access to services in rural or remote areas to cover communities within West Lancashire. We will also expand the study to include a pilot project to look at how necessary car use can be made more sustainable by supporting electric vehicles.	**No mechanism for a likely significant adverse effect.**		Screened out	

Appendix B – All Features of European Importance

When undertaking an appropriate assessment of impacts at a site, **all** features of European importance (both primary and non-primary) need to be considered.

Dee Estuary	Status: SAC	Area: 15805.89 hectares
SAC features of European importance		Vulnerability
Annex I habitats that are a primary reason for selection of this site **1140 Mudflats and sandflats not covered by seawater at low tide** Habitat occurrence description not yet available. **1310 *Salicornia* and other annuals colonising mud and sand** The Dee Estuary is representative of pioneer glasswort *Salicornia* spp. saltmarsh in the north-west of the UK. *Salicornia* spp. saltmarsh forms extensive stands in the Dee, especially on the more sandy muds where there is reduced tidal scour. It mainly occurs on the seaward fringes as a pioneer community, and moving landwards usually forms a transition to common saltmarsh-grass *Puccinellia maritima* saltmarsh (SM10). There is also a low frequency of *Salicornia* spp. extending well inland. Associated species often include annual sea-blite *Suaeda maritima* and hybrid scurvy grass *Cochlearia x hollandica*. **1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)** The Dee Estuary is representative of **H1330 Atlantic salt meadows** in the north-west of the UK. It forms the most extensive type of saltmarsh in the Dee, and since the 1980s it		The majority of the site is in the ownership and sympathetic management of public bodies and voluntary conservation organisations. Unlike most western estuaries, sizeable areas of the Dee saltmarshes remain ungrazed and therefore plant species that are susceptible to grazing are widespread. This distinctive flora would therefore be sensitive to increase in grazing pressure. The intertidal and subtidal habitats of the estuary are broadly subject to natural successional change and the Dee Estuary continues to show annual net sediment accretion. Saltmarshes on the English side of the estuary continue to accrete overall whilst on the Welsh shoreline the main river channel has moved onshore leading to localised erosion of the saltmarshes Threats to the estuary's conservation come from its industrialised shorelines on the Welsh side and the impact of adjacent historic industrial use including waste disposal from former manufacturing industry such as chemical and steel manufacture. Contemporary issues relate to dock development and navigational dredging, coastal defence works and their impact on coastal process, regulation of fisheries, and the recreational use of intertidal, sand dunes and saltmarshes. The statutory agencies are working with landowners and regulatory bodies towards the further remediation of historic

has probably displaced very large quantities of the non-native common cord-grass *Spartina anglica*. The high accretion rates found in the estuary are likely to favour further development of this type of vegetation. The saltmarsh is regularly inundated by the sea; characteristic salt-tolerant perennial flowering plant species include common saltmarsh-grass *Puccinellia maritima*, sea aster *Aster tripolium*, and sea arrowgrass *Triglochin maritima*. In a few areas there are unusual transitions to wet woodland habitats. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site** **1130 Estuaries** **1210 Annual vegetation of drift lines** **1230 Vegetated sea cliffs of the Atlantic and Baltic coasts** **2110 Embryonic shifting dunes** **2120 Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`)** **2130 Fixed dunes with herbaceous vegetation (`grey dunes`)** * Priority feature **2190 Humid dune slacks** **Annex II species that are a primary reason for selection of this site** Not applicable. **Annex II species present as a qualifying feature, but not a primary reason for site selection** **1095 Sea lamprey *Petromyzon marinus*** **1099 River lamprey *Lampetra fluviatilis*** **1395 Petalwort *Petalophyllum ralfsii***	threats and the reconciliation of conservation management with human and commercial pressures.
Source: Joint Nature Conservation Committee	

Liverpool Bay	Status: SPA	Area: 170292.94 hectares
SPA		Vulnerability
This is a marine site. This site qualifies under Article 4.1 of the Directive (79/409/EEC) as during the breeding season it regularly supports populations of European importance of Red-throated Diver (*Gavia stellata*) (5.4% of the GB population) The site qualifies under Article 4.2 of the Directive (79/409/EEC) as in the non-breeding season the area regularly supports: 55597 waterfowl Including Red-throated Diver (*Gavia stellata)* and Common Scoter *(Melanitta nigra).*		The site is subject to commercial fishing. The sandbanks of Liverpool Bay support the nursery and feeding grounds for many fish species. The distribution and concentrations of red-throated divers will at least partly be determined by the presence, abundance, and availability of their prey species. The site holds various fish of commercial importance, and extraction of the red-throated diver's main fish prey, as either target and/or bycatch species, or through recreational fishing could impact the population. Entanglement in static fishing nets is an important cause of death for red-throated divers in the UK waters however the extent of this impact in Liverpool Bay is not known. Commercial and recreational fishing could directly affect both the food source and feeding grounds used by common scoters and in addition a number of ports undertake navigational dredging and disposal both in, and adjacent to, the site. Dredging for bivalves has been shown to have significant negative effects on their benthic habitat. Red throated divers and common scoters are sensitive to non physical, (noise and visual) disturbance by both commercial and recreational activities, for example disturbance by moving vessels - the larger the vessel, the greater disturbance distance expected. Aggregate extraction presents some risks of disturbance and also changes to sediment structures which may, in particular, impact on common scoter through changes to their benthic feeding grounds. However, aggregate extraction tends to be temporary and localised and so is not anticipated that moderate and targeted

	extraction will present a significant risk to either of the qualifying species. Liverpool Bay is an attractive location for the off-shore renewal energy industry and there is evidence that red-throated divers and common scoters are displaced by the presence of the turbines and the associated activities of construction and maintenance vessels. A number of wind farms in the site are currently in operation, under construction or consented. There are a number of areas along the coast where marine tourism and leisure activities are common, with existing marinas and partially completed and proposed marina developments. As a result of these leisure users of the area, in combination with the whole suite of commercial activities, including those outlined above, the site is a very active boating and shipping site. However, most vessel activity is restricted to well-established areas which the birds already tend to avoid.
Source: Joint Nature Conservation Committee	

Martin Mere	Status: SPA/Ramsar	Area: 119.89 hectares
SPA	Ramsar	Vulnerability
This site comprises occupies part of a former lake and mire that extended extensively over the Lancashire Coastal Plain during the 17th century. It comprises open water, seasonally flooded marsh and damp, neutral hay meadows overlying deep peat. This site qualifies under Article 4.1 of the	Martin Mere occupies part of a former lake and mire which extended over some 1300 hectares of the Lancashire Coastal Plain during the 17th century. In 1972 the Wildfowl and Wetlands Trust purchased 147 hectares of the former Holcrofts Farm, consisting mainly of rough damp pasture, with the primary aim of providing grazing and roosting opportunities for	Since the sites designation as a Wetland of International Importance under the Ramsar Convention and as a Special Protection Area in 1985 there has been a gradual increase in the usage of the mere by certain species of wildfowl and wading birds as a direct consequence of positive management.

Directive (79/409/EEC) by supporting over-wintering populations of European importance of Bewick's Swan (*Cygnus columbianus bewickii*), and Whooper Swan (*Cygnus Cygnus*), which are species listed on Annex 1 of the Directive. The site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of Pink-footed Goose (*Anser brachyrhynchus*) and Pintail (*Anas acuta*) and Wigeon (*Anas penelope*).	wildfowl. Since acquisition the rough grazed pastures have been transformed by means of positive management into a wildfowl refuge of international importance. Areas of open water with associated muddy margins have been created, whilst maintaining seasonally flooded marsh and reed swamp habitats via water level control. In addition large areas of semi- improved damp grassland, unimproved species rich damp grassland and rush pasture have been maintained and enhanced via appropriate grazing management. Of the pastures the most botanically important are those species rich areas supporting whorled caraway, present here at one of very few sites in northern England. Such pastures are nationally important. However, the outstanding importance of Martin Mere is as a refuge for its large and diverse wintering, passage and breeding bird community. In September 2002, an additional 63 hectares of land were purchased on the southern most part of the refuge at Woodend Farm, with the aid of the Heritage Lottery Fund, to restore arable land to a variety of wetland habitats including seasonally flooded grassland, reedbed, wet woodland and open water habitats. These are all key Biodiversity Action Plan habitats within the Lancashire	The refuge is vulnerable to water levels being adversely affected water abstraction for agriculture, but this is closely monitored /controlled by the Environment Agency in consultation with English Nature. Similarly the refuge is vulnerable to changes in farming practice. Grazing management is largely dependent upon cattle from surrounding farms. Water levels on the Mere are controlled to maintain optimum levels throughout the winter period, then lowered progressively in summer to expose marginal mud and the underlying damp pastures and maintain a mosaic of shallow pools. Ditches are regularly cut and dredged and all areas of pasture are positively managed under a Countryside Stewardship Scheme. Nutrients brought in with the water supply from the surrounding arable farmland and inadequate sewage treatment adds considerably to the large deposits of guano from wintering waterfowl. This results in the refuge being highly eutrophic with extremely poor water quality conditions and creates the possible risk of water borne diseases which could affect waterfowl, although no such outbreaks have been recorded. Water quality issues have started to be

	Plain and Valleys Natural Area. It supports assemblages of international importance with peak counts in winter of 25306 waterfowl (Ramsar criterion 5). It has species/populations occurring at levels of international importance (Ramsar criterion 6) in spring/autumn: Pink-footed goose (*Anser brachyrhynchus)* and in winter: Bewick's swan (*Cygnus columbianus bewickii)*, Whooper swan (*Cygnus cygnus*), wigeon (*Anas penelope*), Northern pintail (*Anas acuta*).	addressed by WWT with the creation of reedbed water filtration systems and a series of settlement lagoons helps to reduce suspended solids of effluent water arising from waterfowl areas. Regular herbicide control of trifid burr marigold is necessary in order to prevent this plant from invading lake/scape margins to the detriment of bird populations.
Source: Joint Nature Conservation Committee		

Mersey Estuary	Status: SPA/Ramsar	Are: 5023.35 hectares
SPA	Ramsar	Vulnerability
The estuary supports extensive areas of and inter-tidal sand and mudflats, with limited areas of brackish marsh and saltmarsh. This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting over-wintering populations of Golden Plover (*Pluvialis apricaria*). The site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of	The Mersey is a large, sheltered estuary which comprises large areas of saltmarsh and extensive intertidal sand and mudflats, with limited areas of brackish marsh, rocky shoreline and boulder clay cliffs, within a rural and industrial environment. The intertidal flats and saltmarshes provide feeding and roosting sites for large and internationally important populations of waterfowl. During the winter, the site is of major importance for duck and waders. The site is also important during spring and autumn	Wintering bird numbers and associated intertidal flats are robust to day-to-day change. Nevertheless, the estuary is subject to multiple uses; it is heavily industrialised, a substantial urban conurbation, has multiple transport requirements and increasing recreational activities. The site is vulnerable to physical loss through land-claim and development, physical damage caused by navigation capital and maintenance dredging, agricultural requirements, non-physical loss, toxic and non-toxic

Pink-footed Goose (*Anser brachyrhynchus*) and Pintail (*Anas acuta*), Teal (*Anas crecca),* Wigeon (*Anas penelope*), Dunlin (*Calidris alpina alpina),* Black-tailed Godwit *(Limosa limosa islandica*), Curlew (*Numenius arquata*), Grey Plover (*Pluvialis squatarola*), Great Crested Grebe (*Podiceps cristatus*), Shelduck *(Tadorna tadorna),* Redshank *(Tringa tetanus)* and Lapwing (*Vanellus vanellus*). On passage the area regularly supports: Ringed Plover (*Charadrius hiaticula*) and Redshank (*Tringa totanus*).	migration periods, particularly for wader populations moving along the west coast of Britain. It supports assemblages of international importance with peak counts in winter of 89576 waterfowl (Ramsar criterion 5). It has species/populations occurring at levels of international importance (Ramsar criterion 6) in spring/autumn: Common shelduck (*Tadorna tadorna*), Black-tailed godwit (*Limosa limosa islandica*) and Common redshank (*Tringa totanus totanus*) and in winter: Eurasian teal (*Anas crecca*), Northern pintail (*Anas acuta*) and Dunlin (*Calidris alpina alpina*).	contamination and biological disturbance by wildfowling. The Special Protection Area status, requirements for Environmental Impact Assessment and the estuary management plan should, however, safeguard the site.
Source: Joint Nature Conservation Committee		

Mersey Narrows and North Wirral Foreshore	Status: SPA	Are: 2078.41 hectares
SPA		Sensitivity
The site comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth Nature Reserve and the extensive intertidal flats at North Wirral Foreshore. Egremont is most important as a feeding habitat for waders at low tide whilst Seaforth is primarily a high-tide roost site, as well as a nesting site for terns. North Wirral Foreshore supports large numbers of feeding waders at low tide and also includes important high-tide roost sites. The most notable feature of the site is the exceptionally high density of wintering Turnstone *Arenaria interpres*. Mersey Narrows and North Wirral		Natural England advice is presented here: http://www.naturalengland.org.uk/Images/MNNWF-operations_tcm6-37653.pdf

Foreshore has clear links in terms of bird movements with the nearby Dee Estuary SPA, Ribble and Alt Estuaries SPA, and (to a lesser extent) Mersey Estuary SPA.	
Source: Joint Nature Conservation Committee	

Morecambe Bay	Status: SAC/SPA/Ramsar		Area: see below
SAC features of European importance Area: 61506.2237404.6 hectares	SPA Area: 37404.6 hectares	Ramsar	Vulnerability
Annex I habitats that are a primary reason for selection of this site **1130 Estuaries** Morecambe Bay in north-west England is the confluence of four principal **estuaries**, the Leven, Kent, Lune and Wyre (the latter lies just outside the site boundary), together with other smaller examples such as the Keer. Collectively these form the largest single area of continuous intertidal mudflats and sandflats in the UK and the best example of muddy sandflats on the west coast. The estuaries are macro-tidal with a spring tidal range of 9 m. The significant tidal prisms of the estuaries result	This site is predominantly comprised of tidal rivers, estuary, mud flats, sand flats and lagoons. There are also areas of salt marshes/pastures, sand dunes/sand beaches and shingle. This site qualifies under Article 4.1 of the Directive (79/409/EEC) as during the breeding season the area regularly supports populations of European importance of *Sterna sandvicensis*. The site qualifies under Article 4.2 of the Directive (79/409/EEC) as over winter the area regularly supports populations of European	Morecambe Bay lies between the coasts of South Cumbria and Lancashire, and represents the largest continuous intertidal area in Britain. Morecambe Bay comprises the estuaries of five rivers and the accretion of mudflats behind Walney Island. The area is of intertidal mud and sandflats, with associated saltmarshes, shingle beaches and other coastal habitats. It is a component in the chain of west coast estuaries of outstanding importance for passage and overwintering waterfowl (supporting the third-largest number of wintering waterfowl in Britain), and breeding waterfowl, gulls and terns.	SAC There are a wide range of pressures on Morecambe Bay but the site is relatively robust and many of these pressures have only slight or local effects on its interests. The interests depend largely upon the coastal processes operating within the Bay, which have been affected historically by human activities including coastal protection and flood defence works. Opportunities to reverse coastal squeeze are being explored. The saltmarsh is traditionally grazed and is generally in favourable condition for its bird interest. Most of the

in the Bay being riven by large low-water channel systems. The Kent, Leven and Lune estuaries have been modified variously by railway embankments, flood embankments and training walls but support extensive intertidal areas. Although cobble ‘skears’ and shingle beaches occur at their mouths, the estuaries consist predominantly of fine sands and muddy sands. The estuaries support dense invertebrate communities, their composition reflecting the salinity and sediment regimes within each estuary. Extensive saltmarshes and glasswort *Salicornia* spp. beds are present in the Lune estuary, contrasting with the fringing saltmarshes and more open intertidal flats of the Leven and Kent estuaries. Most of the saltmarshes are grazed, a characteristic feature of north-west England. In the upper levels of the saltmarshes there are still important transitions from saltmarsh to freshwater	importance of *Anas acuta, Anser rachyrhynchus, Arenaria interpres, Calidris alpina alpine, Calidris canutus, Haematopus ostralegus, Limosa lapponica, Numenius arquata, Pluvialis squatarola, Tadorna tadorna* and *Tringa tetanus*. On passage the area regularly supports significant populations of *Charadrius hiaticula.* The site also qualifies under Article 4.2 of the Directive (79/409/EEC) as having an internationally important assemblage of birds. During the breeding season the area regularly supports 61,858 seabirds and over winter the area regularly supports 210,668 waterfowl.	It is a staging area for migratory waterfowl including internationally important numbers of passage ringed plover *Charadrius hiaticula* (Ramsar criterion 4). It has waterfowl assemblages of international importance (Ramsar criterion 5) and in winter 223,709 waterfowl have been recorded. It also has waterfowl species/ populations occurring at levels of international importance (Ramsar criterion 6).	saltmarsh is traditionally grazed and is utilised by breeding, wintering and migrating birds for feeding, roosting and nesting purposes. Positive management is being secured through NGO reserve management plans, English Nature's Site Management Statements and Coastal Wildlife Enhancement Scheme, the European Marine Site Management Schemes for the Duddon Estuary and Morecambe Bay, and the Duddon Estuary and Morecambe Bay Partnerships. These aim for sustainable use of the site, taking account of other potential threats including commercial fisheries, aggregate extraction, gas exploration, recreation and other activities. SPA The site is subject to a wide range of pressures such as land-claim for agriculture,

and grassland vegetation. Water quality is generally good. **1140 Mudflats and sandflats not covered by seawater at low tide** Morecambe Bay in north-west England is the confluence of four principal estuaries, the Leven, Kent, Lune and Wyre (the latter lies just outside the site boundary), together with other smaller examples such as the Keer. Collectively these form the largest single area of continuous intertidal **mudflats and sandflats** in the UK and the best example of muddy sandflats on the west coast. At low water, large areas of sandflats are exposed, and these range from the mobile fine sands of the outer Bay to more sheltered sands in the inner areas. With increasing shelter in the Bay's adjoining estuaries, finer sediments settle out and form extensive mudflats, supporting a particularly rich and diverse range of infaunal species.			overgrazing, dredging, overfishing, industrial uses and unspecified pollution. However, overall the site is relatively robust and many of those pressures have only slight to local effects and are being addressed thorough Management Plans. The breeding tern interest is very vulnerable and the colony has recently moved to the adjacent Duddon Estuary. Positive management is being secured through management plans for non-governmental organisation reserves, English Nature Site Management Statements, European Marine Site Management Scheme, and the Morecambe Bay Partnership.

1160 Large shallow inlets and bays Morecambe Bay in north-west England is the second-largest embayment in the UK, after the Wash. It is a large, very shallow, predominantly sandy bay bordered on the south by the channel of the Lune estuary and on the north by Walney Channel. At low tide vast areas of intertidal sandflats are exposed, with small areas of mudflat, particularly in the upper reaches of the associated estuaries. The sediments of the bay are mobile and support a range of community types, from those typical of open coasts (mobile, well-sorted fine sands), grading through sheltered sandy sediments to low-salinity sands and muds in the upper reaches. Apart from the areas of intertidal flats and subtidal sandbanks, Morecambe Bay supports exceptionally large beds of mussels *Mytilus edulis* on exposed 'scars' of boulder and cobble, and small areas			

of **1170 Reefs** with fucoid algal communities. Of particular note is the rich community of sponges and other associated fauna on tide-swept pebbles and cobbles at the southern end of Walney Channel. **1220 Perennial vegetation of stony banks** Morecambe Bay represents **Perennial vegetation of stony banks** in north-west England. Walney Island on the shores of Morecambe Bay is a barrier island fringed by shingle with a partial sand covering. Two areas of exposed vegetated shingle occur at the extremes of the barrier. The southern area has been highly modified by eutrophication from a large gull colony, resulting in communities that are unusually species-rich for pioneer shingle vegetation. Perennial rye-grass *Lolium perenne*, common chickweed *Stellaria media* and biting stonecrop *Sedum acre* are constant elements, with			

dove's-foot crane's-bill *Geranium molle* an unusual and important feature. **1310 *Salicornia* and other annuals colonising mud and sand** Two types of pioneer saltmarsh are represented at Morecambe Bay in north-west England. Pioneer glasswort *Salicornia* spp. saltmarsh occurs intermittently along the coastline of the bay, forming a transition from the extensive intertidal sand and mudflats to the distinctive saltmeadows at this site. The sea pearlwort *Sagina maritima* community occurs in open pans on the upper marsh. **1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)** Morecambe Bay is characteristic of saltmarshes in north-west England, with large areas of closely grazed upper marsh. The mid-upper marsh vegetation is strongly dominated by the saltmarsh-grass/fescue			

Puccinellia/*Festuca* communities, of which over 1,000 ha occur here, and by smaller areas of saltmarsh rush *Juncus gerardii* community. NVC type SM18 *Juncus maritimus* community is also more strongly represented here than elsewhere in England. The plant species include both southern elements, such as lesser centaury *Centaurium pulchellum*, and northern elements, such as saltmarsh flat-sedge *Blysmus rufus* and few-flowered spike-rush *Eleocharis quinqueflora*. **2120 Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`)** **Shifting dune** vegetation forms a major component of the active sand dune systems at the entrance to Morecambe Bay on Walney Island and the Duddon Estuary at Sandscale Haws. A small area is also present at the entrance to the Wyre. Sandscale Haws supports a mosaic of shifting			

communities, which form a continuous block around the seaward edge of this site. There are transitions to **2110 Embryonic shifting dunes**. The prograding shingle spits at either end of Walney Island support dune systems at South End and North End Haws. Species associated with these shifting dunes include sea holly *Eryngium maritimum*, sea spurge *Euphorbia paralias*, Portland spurge *Euphorbia portlandica* and sea bindweed *Calystegia soldanella*. **2130 Fixed dunes with herbaceous vegetation (`grey dunes`)** * Priority feature Sandscale Haws at the entrance to the Duddon Estuary supports the largest area of calcareous **fixed dunes** in Cumbria, which contrast with the acidic dunes at the adjacent North End Haws on Walney Island. South End Haws on Walney Island supports a smaller area of fixed dunes. North Walney			

and Sandscale in particular show well-conserved structure and function. The fixed dunes support a rich plant diversity including wild pansy *Viola tricolor*, lady's bedstraw *Galium verum*, common restharrow *Ononis repens* and the uncommon dune fescue *Vulpia membranacea* and dune helleborine *Epipactis dunensis*. **2190 Humid dune slacks** Dune slacks are particularly well-represented at Sandscale Haws, the largest calcareous dune system in Cumbria. The slacks support a good range of vegetation communities and are very species-rich. Several uncommon species including marsh helleborine *Epipactis palustris*, dune helleborine *Epipactis dunensis* and coralroot orchid *Corallorhiza trifida* occur. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site** **1110 Sandbanks which are**			

slightly covered by sea water all the time **1150 Coastal lagoons** * Priority feature **1170 Reefs** **2110 Embryonic shifting dunes** **2150 Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)** * Priority feature **2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)** **Annex II species that are a primary reason for selection of this site** **1166 Great crested newt *Triturus cristatus*** The site, located on the southern shore of the Duddon estuary in north-west England, consists of a large sand dune complex containing both permanent and ephemeral waterbodies and man-made scrapes. Breeding colonies of great-created newts are known in approximately 20 of these ponds, and are believed to utilise 200 ha of the 282 ha			

site, foraging widely over foreshore, yellow dunes, dune-heath and scrub. **Annex II species present as a qualifying feature, but not a primary reason for site selection** Not applicable.			
Source: Joint Nature Conservation Committee			

Ribble & Alt Estuaries	Status: SPA/Ramsar	Are: 12412.31 hectares
SPA	Ramsar	Vulnerability
This site comprises two estuaries, together with an extensive area of sandy foreshore along the Sefton Coast. The site consists of extensive sand and mud flats and in the Ribble Estuary, large areas of saltmarsh. There are also areas of coastal grazing marsh located behind the sea embankments. The intertidal flats are rich in invertebrates, on which waders and wildfowl feed. This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of Common Tern (*Sterna hirundo*) and Ruff (*Philomachus pugnax*), which are species listed on Annex 1 of the Directive. Over	A large area including two estuaries which form part of the chain of west coast sites which fringe the Irish Sea. The site is formed by extensive sand and mudflats backed, in the north, by the saltmarsh of the Ribble Estuary and, to the south, the sand dunes of the Sefton Coast. The tidal flats and saltmarsh support internationally important populations of waterfowl in winter and the sand dunes support vegetation communities and amphibian populations of international importance. Its sand dunes support up to 40% of the Great Britain population of Natterjack Toads (Ramsar criterion 2).	Overall, the dunes, intertidal flats and saltmarsh enjoy a relatively robust status and a favourable condition. However, the site is, in places, subject to pressure from recreation, built development (including coastal defence), wildfowling and industry, including sand-winning. Wildfowling is not considered to have a significant impact in terms of direct take; resulting disturbance is effectively managed through the provision of refuge areas and strict regulation on shooting activities. Military activities only take place at Altcar Rifle Range which is adjacent to the Alt Estuary. Recreation is informal and of

winter the site supports populations of European importance of Bar-tailed Godwit (*Limosa lapponica*), Bewick's Swan (*Cygnus columbianus bewickii)*, Golden Plover (*Pluvialis apricaria*) and Whooper Swan (*Cygnus Cygnus*), which are species listed on Annex 1 of the Directive. The site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of Lesser Black-backed Gull (*Larus fuscus*) during the breeding season. On passage it also supports populations of European importance of Ringed Plover (Charadrius hiaticula) and Sanderling (Calidris alba). Over winter it supports populations of European importance of Black-tailed Godwit (*Limosa limosa islandi)*, Dunlin (*Calidris alpina alpina*), Grey Plover (*Pluvialis squatarola*), Knot (*Calidris canutus*), Oystercatcher (*Haematophus ostralegus*), Pink-footed Goose (*Anser brachyrhynchus*), Pintail (Anasacuta), Redshank (*Tringa tetanus*), Sanderling (*Calidris alba*), Shelduck (*Tadorna tadorna*), Teal (*Anas crecca*) and Wigeon (*Anas* *Penelope*).	It has waterfowl assemblages of international importance (Ramsar criterion 5) Species with peak counts in winter of 222,038 waterfowl. It has waterfowl species /populations occurring at levels of international importance (Ramsar criterion 6). Species regularly supported during the breeding season: Lesser black-backed gull (*Larus fuscus graellsii*). Species with peak counts in spring/autumn: Ringed plover (*Charadrius hiaticula*), Grey plover (*Pluvialis squatarola*), Red knot (*Calidris canutus islandica*), Sanderling (*Calidris alba*), Black-tailed godwit (*Limosa limosa islandica*), Common redshank (*Tringa totanus tetanus*) and Lesser black-backed gull (*Larus fuscus graellsii*). Species with peak counts in winter: Bewick's swan (*Cygnus columbianus bewickii*), Whooper swan (*Cygnus Cygnus)* and Pink-footed goose (*Anser brachyrhynchus*). Petalwort (*Petalophyllum ralfsii*) is noteworthy flora present at the site.	relatively low intensity along most of the Sefton Coast and in the Ribble Estuary. There is no longer a registered beach airfield at Sefton, however occasional landing of pleasure craft may be requested during large events. Beach activities are managed by the Beach Management Plan. Sand-winning was addressed during a Public Inquiry in August 2001, with the result that detailed environmental monitoring will now be incorporated into the renewed planning permission. Much of the site attracts beneficial land management via the implementation of agreed plans for three NNRs, two LNRs and other initiatives developed by the Sefton Coast Partnership. These plans/initiatives are addressing a number of these pressures, whilst other pressures will be addressed following procedures under the Habitat Regulations. Wider land management issues are being developed via the neighbouring Ribble and Mersey Estuary Strategies. The issue of grazing pressure on the saltmarsh will be addressed through a management agreement to reduce the grazing pressure. Although there is little evidence of sea-level rise so far, the extent and distribution of habitats remains vulnerable

		to changes in the physical environment, either natural or man-induced. In contrast the coast at Formby Point and Ainsdale is suffering intense erosion which is being investigated through the Sefton Shoreline Management Plan, and beach management practices have effectively encouraged the creation of considerable areas of embryo dunes on the upper shore elsewhere. The Ribble Estuary is also evolving as sediment patterns are changing and saltmarsh continues to accrete following past land-claim and the closure of Preston Docks. The intertidal habitats are vulnerable to accidental pollution from the nearby Mersey Estuary and the Irish Sea oil and gas fields. Oil spill contingency plans are being updated to deal with such events. The Ribble in particular has failed to meet the requirements of the Bathing Waters Directive. Government Office North West and the Environment Agency are investigating likely sources of pollution that may have caused this.
Source: Joint Nature Conservation Committee		

Sefton Coast	Status: SAC	Area: 4569.97 hectares
SAC features of European importance		Vulnerability
Annex I habitats that are a primary reason for selection of		Sefton Coast is primarily owned and managed by Sefton Council,

this site **2110 Embryonic shifting dunes** The Sefton Coast in north-west England displays both rapid erosion and active progradation. **Embryonic shifting dunes** are of the northern, lyme-grass *Leymus arenarius*, type and are mainly associated with the areas of progradation, though vegetation dominated by lyme-grass is also found associated with areas of persistent, heavy disturbance further inland. **2120 Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`)** A substantial stretch of the Sefton Coast dune system in north-west England is fronted by about 163 ha of **shifting dunes**. Marram *Ammophila arenaria* usually dominates the mobile dunes, amidst considerable areas of blown sand. Where rates of sand deposition decline, lyme grass *Leymus arenarius*, sea-holly *Eryngium maritimum* and cat's-ear *Hypochaeris radicata* occur, with red fescue *Festuca rubra* and spreading meadow-grass *Poa humilis* present on the more sheltered ridges. Sea spurge *Euphorbia paralias* and the nationally scarce dune fescue *Vulpia fasciculata* are frequent, while sea bindweed *Calystegia soldanella* is very local. Formby Point is the hinge point between two coastal sub-cells. The zone around the Point has been eroding since 1906 while areas north and south of this zone are accreting (where the nature of the coast allows). The rapid erosion is therefore reducing the area of shifting dunes at Formby, and high, steep eroding dunes abut the beach with extensive areas of blown sand immediately inland. **2130 Fixed dunes with herbaceous vegetation (`grey dunes`)** * Priority feature Sefton Coast is a large area of predominantly calcareous	with other major landowners including English Nature (Ainsdale Sand Dunes and Cabin Hill NNRs), the National Trust, Ministry of Defence, and a number of international standard golf clubs. The extensive sand dunes and intertidal areas attract large numbers of summer tourists. This impact is addressed in Sefton Metropolitan Borough Council's Beach Management Plan. Co-ordinated management of the coast is achieved through the long-standing Sefton Coast Management Scheme (now the Sefton Coast Partnership), in which all key landowners play a part. Golf course management achieves a positive balance between play areas and important habitats. Concerns have been raised regarding water abstraction on the coast. This is being addressed through detailed modelling of the dune aquifer by the Environment Agency. The coniferous plantations are also a source of debate, with a balance needed between restoration of dune habitats and public enjoyment of the woodlands. Work on this is being carried out on Ainsdale Sand Dunes National Nature Reserve, which holds a significant proportion of these woodlands.

dune vegetation in north-west England. The sequence of habitats from foredunes to dune grassland and dune slack is extensive, and substantial areas of open dune vegetation remain. There are large areas of semi-fixed and **fixed dunes with herbaceous vegetation** exhibiting considerable variation from calcareous to acidic. In the calcareous areas common restharrow *Ononis repens* is prominent. There are small but significant areas of decalcified sand with grey hair-grass *Corynephorus canescens*, a species more characteristic of decalcified fixed dunes in the east of England and around the Baltic. **2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)** At Sefton Coast on the north-west coast of England there are extensive dune slacks dominated by creeping willow *Salix repens* ssp. *argentea*, making this site particularly important for **dunes with *Salix repens* ssp. *argentea***. Radley (1994) estimated that 99 ha, or 43% of the total English resource of the main dune slack community dominated by creeping willow occurred here. The species also dominates areas of free-draining dune grassland to a much greater extent than at most other UK sites. Despite some urban and recreational development, both successional and geomorphological processes are still active and the structure and function of the site as a whole is still well-conserved. Management, including partial removal of planted conifers, has taken place in recent years to maintain and enhance these processes. **2190 Humid dune slacks** Sefton Coast is a large area of predominantly calcareous dune vegetation, containing extensive areas representative of **Humid dune slacks** in north-west England. Some active	

slack formation can still be seen and a variety of successional stages are represented. The sequence from foredunes to dune grassland and dune slack is extensive. The site contributes to the range and variation of humid dune slack vegetation, being a large and representative base-rich system towards the northern limit for some **humid dune slack** communities along the west coast of Britain. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site** **2150 Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)** * Priority feature **Annex II species that are a primary reason for selection of this site** **1395 Petalwort *Petalophyllum ralfsii*** A large population of **petalwort *Petalophyllum ralfsii*** occurs at Sefton Coast, the only site chosen for this species in north-west England. The plant was first recorded on the Sefton Coast at Ainsdale in 1861 and it is still found within the dune system between Southport and Ainsdale. It seems to prefer damp ground around the edges of dune slacks of fairly recent origin, with the largest populations found in slacks of less than 25 years old. The plant is often found in association with footpaths, where light trampling keeps the ground vegetation sparse; infrequently-used paths or less-trampled edges of pathways seem to be favoured. Although the preferred habitat is short damp turf with plenty of bare patches, populations have been found growing amongst dense marram *Ammophila arenaria* with few other associated species. **Annex II species present as a qualifying feature, but not a primary reason for site selection** **1166 Great crested newt *Triturus cristatus***	

Source: Joint Nature Conservation Committee

Appendix 3: Equality Impacts Assessment (EqIA)

Name/Nature of the Decision

To approve the West Lancashire Highways and Transport Masterplan

What in summary is the proposal being considered?

The approval of the West Lancashire Highways and Transport Masterplan.

The masterplan accepts that additions to existing highway infrastructure will be needed to support the development aspirations of West Lancashire.

Because this will allow us to do far more to promote and prioritise public transport, walking and cycling, we will see a greater increase in the use of sustainable travel than other options would achieve.

It is an accepted part of the legal framework that governs new development that developers are asked to contribute to the new public infrastructure, of any type, that their development requires. This will be the case in West Lancashire, as this new capacity is required for the housing developments to go ahead.

As well as allowing development, however, this new road capacity will give us the opportunity to improve our use of the existing network. Without this, it will simply be too busy to allow public transport and active travel to prosper and everyone will suffer the effects of increasing congestion ~ slower, unreliable journeys, more cars, poorer air quality and streets that are busy and unwelcoming.

By creating extra capacity, we will be able to accommodate new development, make far more significant public transport improvements and manage the highway network more effectively. It will also allow us to enhance our public realm to a far greater extent and to make walking and cycling the modes of choice.

The technical assessment shows that without new capacity in our highway network, we will simply exacerbate existing problems. This master planning process demonstrates that there are ways to solve these problems.

Although this option proposes new highway capacity, it is still in agreement with the County Council‘s strategic vision of a sustainable future where transport is fully integrated and where walking, cycling and public transport are an effective and obvious alternative to the private car.

With the emerging Local Plan in West Lancashire a new Economic Partnership (LEP) to take forward economic development, the time is right to set in place a masterplan for Highways and Transport that will both support West Lancashire's economic ambitions and maximise the benefits of a high quality integrated transport network for its residents.

Is the decision likely to affect people across the county in a similar way or are specific areas likely to be affected – e.g. are a set number of branches/sites to be affected? If so you will need to consider whether there are equality related issues associated with the locations selected – e.g. greater percentage of BME residents in a particular area where a closure is proposed as opposed to an area where a facility is remaining open.

The masterplan is the **fourth** in a series of documents that will set out LCC's highways and transportation strategy across the county. This document is specific to West Lancashire.

Could the decision have a particular impact on any group of individuals sharing protected characteristics under the Equality Act 2010, namely:

Age
Disability including Deaf people
Gender reassignment
Pregnancy and maternity
Race/ethnicity/nationality
Religion or belief
Sex/gender
Sexual orientation
Marriage or Civil Partnership Status

YES

If you have answered "No" in relation to all the protected characteristics, please briefly document your reasons below and attach this to the decision-making papers. (It goes without saying that if the lack of impact is obvious, it need only be very briefly noted.)

The masterplan sets out our highways and transportation strategy for West Lancashire. The 3 core strands of the strategy are roads, public transport and public realm. These strands are specifically intended to ensure that everyone, regardless of protected characteristic, can benefit from the strategy. Specific schemes will be evaluated separately for any potential impact on all groups sharing protected characteristics and the overall impact of the strategy will be monitored to ensure that no group suffers any dis-benefit.

Question 1 – Background Evidence

What information do you have about the different groups of people who may be affected by this decision – e.g. employees or service users (you could use monitoring data, survey data, etc to compile this). As indicated above, the relevant protected characteristics are:

Age
Disability including Deaf people
Gender reassignment/gender identity
Pregnancy and maternity
Race/Ethnicity/Nationality
Religion or belief
Sex/gender
Sexual orientation
Marriage or Civil Partnership status (in respect of which the s. 149 requires only that due regard be paid to the need to eliminate discrimination, harassment or victimisation or other conduct which is prohibited by the Act).

All residents of and visitors to West Lancashire will be affected by the masterplan. Whilst we have information on some of the characteristics above, information is lacking on others. However, given the size of the area under consideration, it is safe to assume that all of the above groups will be represented within users of the highways and transportation network.

Question 2 – Engagement/Consultation

How have you tried to involve people/groups that are potentially affected by your decision? Please describe what engagement has taken place, with whom and when.

(Please ensure that you retain evidence of the consultation in case of any further enquiries. This includes the results of consultation or data gathering at any stage of the process)

The masterplan will be the subject of public consultation over the course of summer 2013. As well as making the consultation documents available online and through libraries and council offices, specific consultees will be approached.

Question 3 – Analysing Impact

Could your proposal potentially disadvantage particular groups sharing any of the protected characteristics and if so which groups and in what way?

It is particularly important in considering this question to get to grips with the actual practical impact on those affected. The decision-makers need to know in

clear and specific terms what the impact may be and how serious, or perhaps minor, it may be – will people need to walk a few metres further to catch a bus, or to attend school? Will they be cut off altogether from vital services? The answers to such questions must be fully and frankly documented, for better or for worse, so that they can be properly evaluated when the decision is made.

The masterplan sets out our highways and transportation strategy for West Lancashire. The 3 core strands of the strategy are roads, public transport and public realm. These strands are specifically intended to ensure that everyone, regardless of protected characteristic, can benefit from the strategy. Specific schemes will be evaluated separately for any potential impact on all groups sharing protected characteristics and the overall impact of the strategy will be monitored to ensure that no group suffers any dis-benefit.

The masterplan has the potential to improve highways and transport for a number of groups of people. Without the improvements the masterplan sets out, travel will become more difficult for all people across West Lancashire; age and disability groups could face significant extra difficulties. Under this masterplan, more vulnerable travel users will benefit from better and safer transport and from a more user friendly public realm that has been designed with the needs of these groups in mind.

Question 4 –Combined/Cumulative Effect

Could the effects of your decision combine with other factors or decisions taken at local or national level to exacerbate the impact on any groups?

If Yes – please identify these.

The masterplan sets out a strategy to achieve an integrated transport system that will be open and accessible to all users. There are substantial funding requirements to achieve this. Changes to current funding regimes by central government and as currently established for developers could have an adverse effect on the development of the strategy. Age and disability groups could see a potentially greater adverse impact than other users if the strategy is limited in this way.

Question 5 – Identifying Initial Results of Your Analysis

As a result of your analysis have you changed/amended your original proposal?

Continuing with the Original Proposal – the masterplan represents the most cost effective way to ensure the future success of the West Lancashire area for all users and visitors. It will enable the needs of specific groups to be provided for and will therefore ensure more equitable access to transport and to public spaces.

Question 6 - Mitigation

Please set out any steps you will take to mitigate/reduce any potential adverse effects of your decision on those sharing any particular protected characteristic. It is important here to do a genuine and realistic evaluation of the effectiveness of the mitigation contemplated. Over-optimistic and over-generalised assessments are likely to fall short of the —due regard requirement.

Also consider if any mitigation might adversely affect any other groups and how this might be managed.

At this stage, no mitigation is needed. As specific schemes come forward during the life of the masterplan, they will individually be assessed for any potential negative impact and mitigation measures taken accordingly.

Question 7 – Balancing the Proposal/Countervailing Factors

At this point you need to weigh up the reasons for the proposal – e.g. need for budget savings; damaging effects of not taking forward the proposal at this time – against the findings of your analysis. Please describe this assessment. It is important here to ensure that the assessment of any negative effects upon those sharing protected characteristics is full and frank. The full extent of actual adverse impacts must be acknowledged and taken into account, or the assessment will be inadequate. What is required is an honest evaluation, and not a marketing exercise. Conversely, while adverse effects should be frankly acknowledged, they need not be overstated or exaggerated. Where effects are not serious, this too should be made clear.

Any adverse effects will come during the course of the strategy as schemes are developed. It will therefore be vital to assess the impact of design work as proposals are developed further.

Question 8 – Final Proposal

In summary, what is your final proposal and which groups may be affected and how?

The masterplan sets out our highways and transportation strategy for West Lancashire. The 3 core strands of the strategy are roads, public transport and public realm. These strands are specifically intended to ensure that everyone, regardless of protected characteristic, can benefit from the strategy.

Question 9 – Review and Monitoring Arrangements

Describe what arrangements you will put in place to review and monitor the effects of your proposal.

Specific schemes will be evaluated separately for any potential impact on all groups sharing protected characteristics and the overall impact of the strategy will be monitored to ensure that no group suffers any dis-benefit. We will work closely with our consultations groups to ensure that their views are part of the decision making process as the strategy is implemented.

Equality Analysis Prepared By **Hazel Straw**

Position / Role Transport Planning Manager

Equality Analysis Endorsed by Line Manager and / or Chief Officer **Marcus Hudson**

Decision Signed-Off By

Cabinet Member / Chief Officer or SMT Member