

# Cottam Parkway Railway Station

## Sustainability Statement

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# 1 Introduction

- 1.1 The Cottam Parkway Railway Station Scheme (hereafter referred to as the 'Scheme') would serve the North West Preston Strategic Housing Location and would attract park and ride rail demand from the wider area and intercept journeys into Preston due to the Preston Western Distributor Road (PWDR) connection to the M55 and A583.

## 1.2 Purpose of Report

- 1.2.1 The National Planning Policy Framework requires new development to avoid increased vulnerability to the range of impacts arising from climate change. Therefore, the purpose of this report is to demonstrate how sustainable development would be met during the design, construction and operation of the Scheme. The report is intended to complement the Environmental Statement (ES) and its findings by ensuring sustainability is considered throughout the life cycle of the Scheme.
- 1.2.2 The structure of this report is as follows:
- Understanding the concept of sustainable development;
  - Policy and guidance surrounding sustainable development;
  - Key issues when considering sustainable development for the Scheme and surrounding areas;
  - Objectives that would be met to ensure that sustainable development can be achieved for the Scheme; and,
  - A summary of how key issues and sustainability objectives would be met through the design of the Scheme.

## 1.3 What is Sustainable Development?

- 1.3.1 Sustainable development has been defined in many ways, but the most frequently quoted definition is from, '*Our Common Future*', or sometimes known as the Brundtland Report 1987 which defines sustainable development as:

*'Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs'.*

- 1.3.2 The Brundtland Commission was created by the United Nations in 1983 to reflect upon protecting the environment and natural resources whilst preventing deterioration of economic and social development.

- 1.3.3 The United Kingdom's (UK) 'Sustainable Development Strategy Securing the Future' (2005) sets out five 'guiding principles' of sustainable development:

- Living within the planet's environmental limits;
- Ensuring a strong, healthy and just society;
- Achieving a sustainable economy;
- Promoting good governance; and,
- Using sound science responsibly.

- 1.3.4 'Sustainability' can be defined through the 3 pillars approach **Economic**, **Social** and **Environmental**. The 3 pillars can sometimes be referred to as the triple bottom line, meaning that all three have to be resolved for sustainability to be achieved. As a result, sustainability covers a wide range of topics, and only focusing on one or two areas of the triple bottom line does not consider the full range of issues. Therefore, sustainable development is the 'pathway to sustainability'.

1.3.5 According to the National Planning Policy Framework 2021 (the NPPF) (MHCLG, 2021), the three pillars give rise to the need for the planning system to perform a number of roles:

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

## 1.4 Environmental Limits and Planetary Boundaries Concept

1.4.1 The concept of 'Environmental Limits' and 'Planetary Boundaries' was established by the Stockholm Resilience Centre in 2009 (updated in 2015) to define a 'safe operating space for humanity' as a pre-condition of sustainable development.

1.4.2 The Stockholm Resilience Centre identified 9 Earth System Processes<sup>1</sup> which have boundaries. Within these boundaries the global population can

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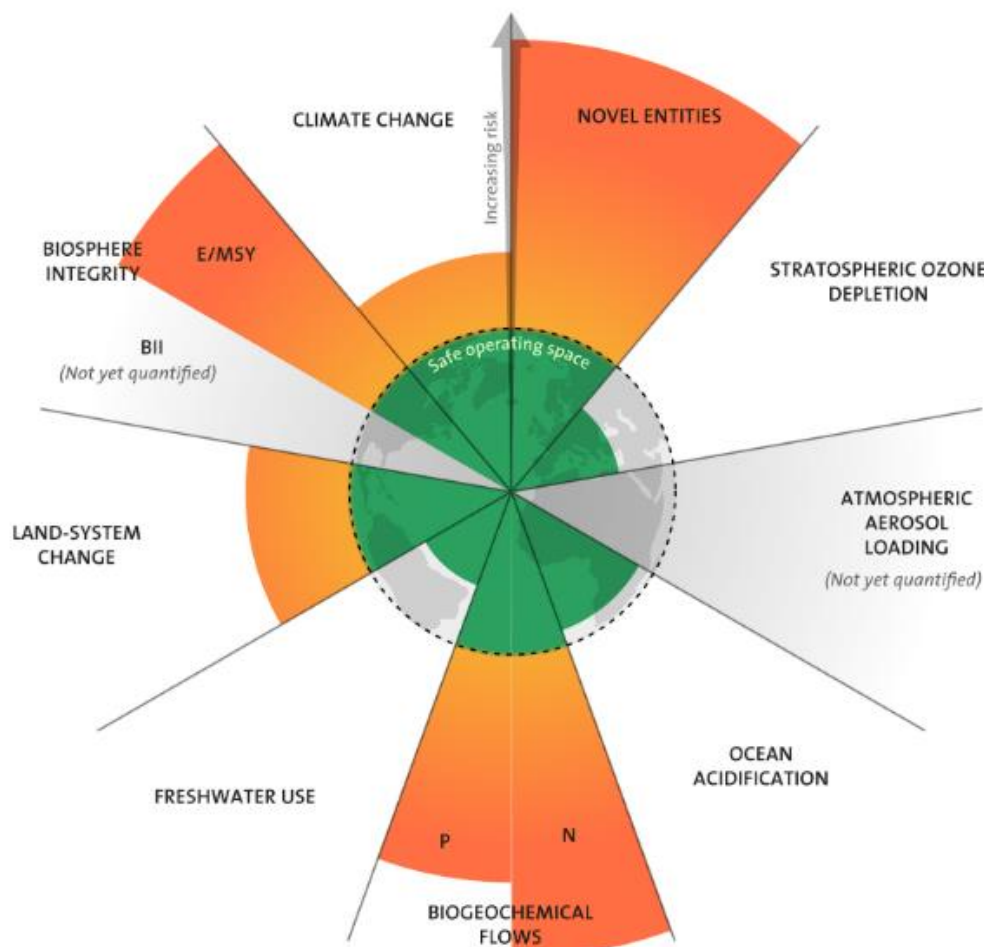
<sup>1</sup> The 9 Earth System processes are: Climate Change, Change in Biosphere Integrity, Stratospheric ozone depletion, Ocean acidification, Biogeochemical/biochemical flows, Land-system change, Freshwater use, Atmospheric aerosol loading and Introduction of novel entities.

operate safely and sustainably. If one or more of these planetary boundary thresholds are crossed, it is predicted that it would trigger non-linear abrupt environmental change.

1.4.3 The Planetary Boundary approach has proved influential in global sustainability policy development and is therefore an important aspect to consider when reviewing the concept of sustainability for this Scheme.

1.4.4 Figure 1 demonstrates the current status of the planetary boundaries.

**Figure 1: Current status of the planetary boundaries. The green zone is the safe operating space, yellow/orange represents a zone of uncertainty and red is a high-risk zone.**



## **2 Policy and Guidance**

### **2.1 United Nation's Sustainable Development Goals**

- 2.1.1 The 2030 Agenda for Sustainable Development adopted by all United Nations Member States in 2015, provides a blueprint for peace and prosperity for people and the planet, now and in the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries in a global partnership.
- 2.1.2 The SDGs recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. See Appendix 1 for further details.

### **2.2 United Kingdom's 25 Year Environment Plan**

- 2.2.1 The 25 Year Environment Plan 2018 for the United Kingdom sets out government action to help the natural world regain and retain good health. The plan aims to champion sustainable development, lead in environmental science, innovate to achieve clean growth and increase resource efficiency to provide benefits to the environment and the economy.
- 2.2.2 One of the main goals of the plan is:
- Using resources from nature more sustainably and efficiently.
- 2.2.3 The first policy of the plan focuses on 'using and managing land sustainably'.

## 2.3 Central Lancashire Core Strategy

2.3.1 The Local Development Framework (LDF) for Central Lancashire was produced in collaboration with Preston City Council, South Ribble Borough Council and Chorley Borough Council. The collaborating councils adopted the Central Lancashire Core Strategy in July 2012.

2.3.2 The Core Strategy is a strategic document which covers the three districts of Preston, Chorley and South Ribble, whereas the more local-specific policies are outlined in the Preston Local Plan 2012-2026 (Site Allocations and Development Management Policies) and Supplementary Planning Documents.

2.3.3 **Strategic Objective (SO) 3 and SO 4** demonstrate the need for sustainable travel within central Lancashire. This means that increasing accessibility and promoting sustainable travel is a key theme within the Core Strategy. It includes promoting the use of cycling rather than the use of cars and enabling the use of alternative fuels for transport purposes such as electric vehicle charging stations.

- SO3: To reduce the need to travel, manage car use, promote more sustainable modes of transport and improve the road network to the north and south of Preston.
- SO 4: To enable easier journeys into and out of Preston City Centre and east/west trips across South Ribble, improve movement around Chorley, as well as safeguard rural accessibility, especially for mobility impaired people.

2.3.4 **Policy 3 Travel:** states that there will need to be a series of measures to find the best approach to planning for travel, which includes the following:

- Improving pedestrian facilities with:

- Safe and secure urban and rural footways and paths (including canal towpaths) linking with public transport and other services.
- Improving public transport by:
  - Providing new railway stations at Buckshaw Village, *Cottam*, Midge Hall and Coppull, and improving Preston and Leyland Stations.
- Enabling travellers to change their mode of travel on trips through:
  - Improving car and cycle parking facilities and railway stations, including at Adlington.
  - Better coordinated bus and rail services.

2.3.5 The Sustainability Appraisal for the Core Strategy highlighted that all proposed options for encouraging sustainable travel had some social, environmental and economic benefit and as such a combination of options should be brought forward in the publication policy.

2.3.6 The policy brought forward encompasses the most sustainable aspects of the options presented and encourages walking and cycling, efficient public transport and managing car use.

2.3.7 **Policy 17 Design of New Buildings:** states that all new buildings will be expected to take account of the character and appearance of the local area, including (but not limited to):

- Promoting designs that will be adaptable to climate change and adopting principles of sustainable construction including Sustainable Drainage Systems (SuDS).

2.3.8 **Policy 18 Green Infrastructure:** states that developments should manage and improve environmental resources through a Green Infrastructure approach to:

- Protect and enhance the natural environment where it already provides economic, social and environmental benefits;
- Invest in and improve the natural environment, particularly the canal networks including the Lancaster Canal into Preston.

2.3.9 **Policy 27 Sustainable Resources and New Developments:** states that new developments should incorporate sustainable resources through the following measures:

- Evidence is set out to demonstrate that the design, orientation and layout of the building minimises energy use, maximises energy efficiency and is flexible enough to withstand climate change; and
- Prior to the implementation of zero carbon building through BREEAM either additional fabric insulation measures or;
- Appropriate decentralised, renewable or low carbon energy sources are installed and implemented to reduce carbon dioxide emissions of predicted energy use by at least 15%.

2.3.10 **Policy 28 Renewable and Low Carbon Energy Schemes:** states that development will be supported and planning permission granted where the following criteria are met:

- The proposal would not have an unacceptable impact on landscape character and visual appearance of the local area, including the urban environment;
- The reason for the designation of a site with statutory protection would not be compromised by the development;
- Any noise, odour, traffic or other impact of development is mitigated so as not to cause unacceptable detriment to local amenity; and,

- Any significant adverse effects of the proposal are considered against the wider environmental, social and economic benefits, including scope for appropriate mitigation, adaptation and/or compensatory benefits.

2.3.11 **Policy 30 Air Quality:** states that development should improve air quality through delivery of Green Infrastructure initiatives and through taking account of air quality when prioritising measures to reduce road traffic congestion.

## 2.4 Preston Local Plan 2012-2026

2.4.1 The Preston Local Plan 2012-2026 (Preston City Council, 2015) forms part of the statutory Development Plan for Preston. It identifies the scale of development and allocates sites to meet the development needs of Preston over a 15 year period in order to achieve the vision for growth as outlined in the Central Lancashire Core Strategy. This replaces the Preston Local Plan 2004.

2.4.2 Cottam is identified as a strategic site for development (**Policy MD1**). As a result, planning permission will be granted in Cottam that delivers economic growth, vital infrastructure and sustainable development.

2.4.3 Chapter 7 of the Local Plan highlights the need to cater for sustainable travel with several broad principles to encourage walking and cycling, supporting bus and rail travel and improving accessibility.

2.4.4 The Scheme will need to comply with **Policy ST1** of the Local Plan, which states that 'all development proposals will provide car parking and servicing space in accordance with the Parking Standards adopted by the council'. However, 'locations that are accessible to services and well served by public transport may be considered appropriate for lower levels of provision'.

2.4.5 **Policy ST2** states that all developments will need to show that:

- Road safety and the efficient and convenient movement of all highway users (including bus passengers, cyclists, pedestrians and equestrians) is not prejudiced;
- Appropriate provision is made for public transport services;
- Appropriate measures are included to facilitate access on cycle or foot;
- Where practicable, ensure existing pedestrian, cycle and equestrian routes are protected and extended;
- The needs of disabled people are fully provided for; and
- Corridors which could be developed as future transport routes (e.g. disused railway lines) are not prejudiced.

2.4.6 The Scheme will cross an area designated as 'Protection and Enhancement of Green Infrastructure', otherwise known as **Policy EN2**. This designated area is located along the Lancaster Canal which the access road and bridge would cross. As a result, development proposals 'should seek to protect and enhance existing green infrastructure...proposals which would involve the loss of green infrastructure will only be granted planning permission where:

- It can clearly be shown that the site is surplus to requirement; or
- The loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity or quality in a suitable location; or
- The development itself is for alternative green infrastructure provision, the needs for which outweigh the loss; and
- Policy EN10 is adhered to where the site is part of an ecological network'.

2.4.7 **Policy EN3** – Future Provision of Green Infrastructure states that all development will where necessary:

- Provide appropriate landscape enhancements;
- Conserve and enhance important environmental assets, natural resources and biodiversity including the City's ecological network;
- Make provision for the long-term use and management of these areas; and,
- Provide access to well-designed cycle ways, bridleways and footpaths (both off and on road), to help link local services and facilities.

## **2.5 Network Rail Environmental Sustainability Plan**

2.5.1 Network Rail's Environmental Sustainability Plan 2020-2050 aims to make sure their railways are resilient, efficient and provide a great service in years to come. It aims to ensure that rail remains the 'greenest' and most reliable form of public transport in Britain, so it can play a part in green economic recovery and growth.

2.5.2 Although the Plan intends to make the 'travel' side of rail more environmentally friendly (i.e., low emission railways, railways that are resilient to climate change etc.), there are some objectives of the plan that relate to how railway stations can be more environmentally, and sustainability focused. These objectives include:

- Harmful pollutants will be reduced by 25% in Network Rail managed stations by 2030;
- Complete electric vehicle charging roll out by 2029;
- Produce an air quality improvement plan for all managed stations and depots by 2024; and
- Circular economy policy in place for reducing resource use and waste by 2022.

## 2.6 National Design Guide

- 2.6.1 The National Design Guide forms part of the government's collection of planning practice guidance and should be read alongside the separate planning guidance.
- 2.6.2 The National Design Guide sets out the characteristics of well-designed places and demonstrates what good design means in practice. It illustrates how well-designed places that are beautiful, enduring and successful can be achieved in practice.
- 2.6.3 **Policy R1** of the design guide states that well-designed places and buildings follow the energy hierarchy, as follows:
- Reducing the need for energy;
  - Energy efficiency;
  - Maximising the potential for energy supply from decentralised, low carbon and renewable energy sources, including community-led initiatives; and then
  - Efficiently using fossil fuels from clean technology.
- 2.6.4 They maximise the contributions of natural resources such as sun, ground and wind, and include passive measures for light, temperature, ventilation and heat.
- 2.6.5 They make use of renewable energy infrastructures, such as photovoltaic arrays, ground source heat pumps and district heating systems, to reduce demand for non-sustainable energy sources. IT advances and app-based solutions allow users of well-designed places and homes to take ownership or management of these systems in order to use them most efficiently.
- 2.6.6 Good developments minimise the cost of running buildings and are easy and affordable for occupants to use and manage.'

### **3 Issues**

3.1.1 There are a number of factors that can affect the sustainability of the Scheme. These are influenced by a combination of Environmental, Economic and Social elements. Table 1 provides a list of significant issues that may affect the Scheme. The list of issues is not intended to be exhaustive; rather it is a collection of the most significant issues that may affect the Scheme.

#### **3.2 Key Environmental Issues**

Table 1: Key Environmental Issues

Key Environmental Issue	Summary of Issue	Location within the ES (if applicable) for further information.
<b>Climate Change</b>	<p>Climate change is caused by the emissions of greenhouse gases into the atmosphere. This is augmented by transport movements, business operations, energy supply, residential developments, agricultural developments etc.</p> <p>In the UK, the rate of climate change is increasing and as a result, the Scheme will need to adapt to these changes. Climate change leads to more extreme weather events (drier summers, wetter winters) which could affect the resilience of the Scheme to climate change.</p>	<p>Environmental Statement, volume 2, Chapter 12 'Climate Change'</p>
<b>Air Quality</b>	<p>There are several Air Quality Management Areas (AQMA's) within the Preston District. The nearest to the Scheme is approximately 3.7km east – known as 'AQMA No.2'. Strategic traffic modelling will be undertaken so that likely air quality effects of the Scheme can be established, and avoidance and</p>	<p>Environmental Statement, volume 2, Chapter 8 'Air Quality'.</p> <p>Environmental Statement,</p>

	mitigation measures agreed.	<p>volume 3, Appendix 8.1 'Figures'</p> <p>Appendix 8.2 'Air Quality Dispersion Modelling'</p> <p>Appendix 8.3 'Construction Dust Risk Assessment'</p>
<b>Historic Environment</b>	<p>There are several designated heritage assets located within the site area and nearby including listed buildings and historic parks. In particular, there is one listed bridge, 'Quaker Bridge', to the northern section of the site. There is one grade 2 historic park, '<i>Haslam Park</i>', approximately 2km east from the site area. There is the potential for the Scheme to harm the significance of the heritage assets or their setting. However, there is the opportunity to enhance the setting of the heritage assets or contribute to their preservation.</p>	<p>Environmental Statement, volume 2, Chapter 7 'Cultural Heritage'.</p> <p>Environmental Statement, volume 3, Appendix 7.1- 'Desk Based Assessment Report'.</p>
<b>Risk of Flooding</b>	<p>The site is located within a designated Flood Zone 1.</p> <p>However, the introduction of hardstanding means that surface run-off may be an issue in certain areas within the site and therefore Sustainable Drainage Systems (SuDS) may be</p>	<p>Environmental Statement, volume 2, Chapter 11 'The Water Environment'.</p> <p>Environmental Statement,</p>

	considered.	volume 3, Appendix 11.1 'Flood Risk Assessment'.
<b>Water Quality</b>	<p>The Scheme is within the Savick Brook Catchment with the watercourse flowing approximately 500m to the south of the Scheme. The Lancaster Canal also runs through the site and is approximately 350m north of the proposed station building. 3 further Ordinary Watercourses flow north to south through or adjacent to the Scheme.</p> <p>A surface water drainage system would be required to route surface water from the access road, railway station and car park into attenuation storage prior to discharge into local watercourse.</p> <p>Potential impacts of the proposed development are on the surface water quality, the quantity of runoff and the quality and quantity of groundwater.</p>	<p>Environmental Statement, volume 2, Chapter 11 'The Water Environment'.</p> <p>Environmental Statement, volume 3, Appendix 11.3 'Water Environment Regulations Assessment'.</p>
<b>Resource Use</b>	The use of resources includes water, energy, minerals, fuel and materials.	Environmental Statement, volume 2, Chapter 16 'Materials and Waste'.

<b>Open Space</b>	<p>There is a mixture of new developments and open space surrounding the site. To the north east of the site, several phases of housing developments have commenced, with more to follow. To the west, the Preston Western Distributor Road (PWDR) is currently under construction.</p> <p>Within Preston's Local Plan, the site area itself is designated as 'Open Countryside' (Policy EN1) and the Lancaster Canal is designated as 'Biodiversity and Nature Conservation', 'Wildlife Corridor' and a 'Biological Heritage Site' (Policy EN10).</p>	Environmental Statement, Volume 2, Chapter 15 'Land Use and Accessibility'
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### 3.3 Social and Economic issues

- 3.3.1 This table identifies a number of social and economic issues which may affect the Scheme, and where these issues are addressed within the Environmental Statement. The list of issues is not intended to be exhaustive; rather it is a collection of the most significant issues that may affect the Scheme.

Table 2: Key Social and Economic Issues

Key Social or Economic Issue	Summary of Issue	Location within the ES (if applicable).
<b>Access to services and facilities</b>	Being able to access key services and facilities such as shops, leisure and community facilities is of key importance for quality of life, and community cohesion. Improved access can also lead to less congestion on the roads which in turn improves air quality and reduces greenhouse gas emissions.	Environmental Statement, volume 2, Chapter 14 'Traffic and Transport'. Chapter 15 'Land Use and Accessibility'
<b>Crime</b>	Levels of crime has decreased by approximately 13% in Lancashire for the year 2019/2020 (which was not affected by COVID-19 as data is prior to March 2020), compared to the previous year 2018/2019 in which crime had increased by 30% <sup>2</sup> . The	Environmental Statement, volume 2, Chapter 13 'Human Health'.

<sup>2</sup> Source: Office for National Statistics – Crime in England & Wales, 2019/20

	fear of crime is also a significant sustainability issue, and it is not always in line with actual crime levels.	
<b>Health</b>	Levels of health in Preston are generally below the UK average, with life expectancy lower than the national average. In addition, in common with the rest of the UK, obesity is becoming a more prominent issue, both in adults and children.	Environmental Statement, volume 2, Chapter 13 'Human Health'.
<b>Travel</b>	<p>Levels of car ownership and dependence on car is increasing year on year.</p> <p>Approximately two thirds of working residents travel to work by car or van.</p> <p>For commuting and journeys to school the desired walking distance is 500m, 1000m is considered acceptable, and 2000m considered the preferred maximum.</p>	Environmental Statement, volume 2, Chapter 14 'Traffic and Transport'.

<b>Employment levels</b>	<p>The construction of the Scheme would result in employment opportunities for the duration of the construction and would also result in an ongoing employment need in terms of the staffing of the railway station and maintenance of the railway and access roads.</p> <p>The railway station would also improve employment opportunities indirectly through improved connectivity to the surrounding area.</p>	Environmental Statement, volume 2, Chapter 13 'Human Health'
<b>Accessibility</b>	The Scheme will incorporate safe and segregated footpaths and cycle routes for users to ensure that access to the site should be safe and suitable for all users.	Environmental Statement, volume 2, Chapter 14 'Traffic and Transport' Chapter 15 'Land Use and Accessibility'

## 4 Objectives

4.1.1 Following the review of policy and guidance and of the key sustainability issues for the Scheme, 8 objectives were developed. The number of social, economic and environmental objectives are not evenly matched as they reflect the key issues for the site, or Preston as a whole.

4.1.2 The purpose of the objectives is to aid in the design and planning of the Scheme. The objectives are as follows:

1. Address Climate Change and reduce emissions of greenhouse gases during construction and operation of the site.
2. Adapt to Climate Change by preparing for extreme weather events, including avoiding and managing the risk of flooding, heat waves, drought and storm damage during operation of the site.
3. Conserve and enhance the diversity of wildlife, habitats and geology, including Green Infrastructure during construction and operation of the site.
4. Address the waste hierarchy by minimising waste as priority, reuse, then recycle, composting or energy recovery during construction of the site.
5. Support the introduction of renewable and low carbon energy during construction and operation of the site.
6. Support the use of recycled or low carbon materials during construction.
7. Facilitate sustainable economic growth and regeneration which provides employment opportunities during construction and operation of the site.

8. Improve accessibility to and from the site and reduce the need for travel by car.

## 5 Design of the Scheme

### 5.1 Access Arrangements

- 5.1.1 Objective 8 states that the Scheme would be designed to 'improve accessibility to and from the site and reduce the need to travel by car'. The access arrangements have been designed as such, and this would improve the sustainability of the Scheme whilst also improving the permeability of the Scheme for all methods of transport.

#### Access Road

- 5.1.2 The access road to the Scheme would link the Cottam Link Road and Lea Road. Whilst the access road would traverse the width between the two existing roads access to the Lea Road is for buses, pedestrians and cyclists only.

#### Bus Access

- 5.1.3 Bus services to the Scheme would require the re-routing of existing services, and provision would increase in line with demand. A bus gate has been included as access to Lea Road, which would limit the amount of traffic using Lea Road to access the Scheme. Bus access directly to the railway station would reduce the need for the private car and would encourage the use of public transport.

#### Cycling and Walking

- 5.1.4 Provision for well-connected and segregated cycling and walking infrastructure has been incorporated into the design of the Scheme. The Scheme would result in the provision of a 3m wide segregated cycle track on

the northern side of the Scheme, which will provide important links to the existing National Cycle Network, the Ashton residential area, and any proposed residential areas to the north. The access road would intersect NCR62, requiring cyclists to cross. A crossing facility would be provided to ensure safe access. Cycle access to the Scheme would be from either Lea Road or Sidgreaves Lane (which would be for the sole use of pedestrians and cyclists) with a segregated cycle track and pedestrian footpath allowing for safe access and egress to the station.

5.1.5 Existing Footpath 44 would be diverted around the car park using the new footpath on the access road. This would allow for a lit and paved alternative 40m north of the original footpath.

5.1.6 The permeability of the Scheme, and the links with existing sustainable transport routes and provision would encourage the use of sustainable transport options and would contribute towards reducing the use of the private car.

### Materials

5.1.7 It is proposed that the materials used in the construction of the access road and associated infrastructure is as follows; asphalt surfacing, recycled material in the road starter layer, granular material for the road embankment construction and site own cohesive material. There is a potential for recycled concrete for the kerb and edging, and there is also an opportunity for recycled plastic kerbs. Existing topsoil from the site can also be used in landscaping of the Scheme.

### Maintenance

5.1.8 General maintenance access of the railway station and maintenance of the sub-station has been provided for using hardstanding The SME to the south of the railway line would also allow for maintenance access if required.

## 5.2 Accessibility

- 5.2.1 An Equality Impact Assessment (EQIA) has been carried out etc. The scheme has been designed to ensure that it is accessible to users with limited or restricted mobility. This would be achieved through a provision of 14 disabled parking bays, with additional provision of 13 large parking spaces which could be adapted to disabled parking spaces if changes to the population identify a need.
- 5.2.2 Access from the car park will include tactile surfacing and step free access/ramps into the railway station building. Tactile surfacing will also be a feature of all footpaths at both formal and informal crossings.

## 5.3 Access Road Bridge

- 5.3.1 Whilst there is an existing Quaker Bridge provides access over the canal it is considered that this bridge would not provide sufficient access to the Station, therefore it is to be retained and used by pedestrians, cyclists and horse-riders. Therefore, a new bridge spanning the canal is proposed. The access road bridge would be a three-span design. The central span would span the Lancaster Canal with a minimum headroom from the canal to soffit of the structure of 3.5m, with a 2.7m headroom clearance on the towpath.
- 5.3.2 The access road bridge would likely be constructed from pre-cast concrete and natural facing materials to ensure it assimilates with the aesthetic of the area. The materials used in the construction would be required to comply with design and build codes which promote ensuring the structure is safe for its expected use with minimal maintenance requirements. Therefore, proving to be sustainable due to the longevity of the survival of the structure.

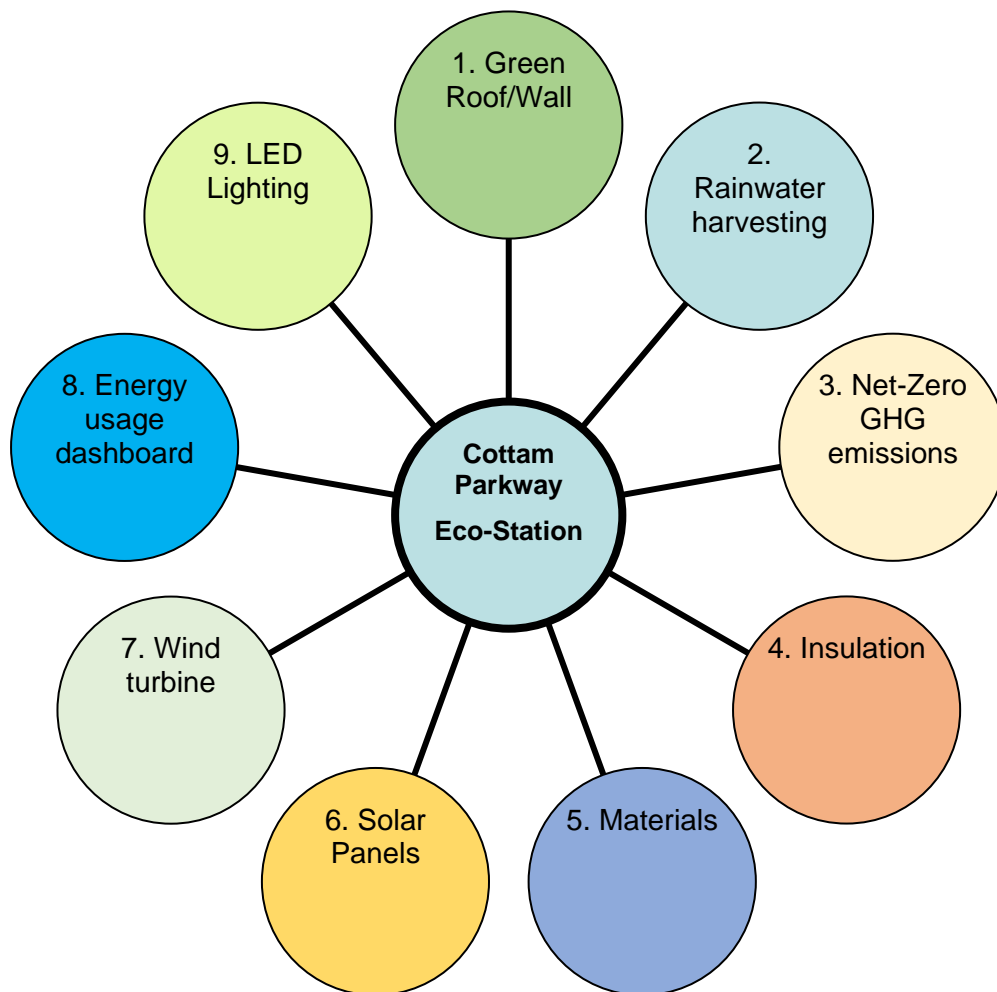
## 5.4 Car Park

- 5.4.1 As per the Central Lancashire Core Strategy, Preston Local Plan and Network Rail's Environmental Sustainability Plan, the inclusion of electric vehicle charging stations is encouraged. Therefore, the car park would include 38 electric vehicle charging stations.
- 5.4.2 It is proposed that the surface of the car park be constructed from permeable hardstanding with the circular access for the car park be laid with asphalt.

## 5.5 Railway Station Building

- 5.5.1 After reviewing the requirements of planning policy and national guidance, objectives of the Scheme along with case studies around the North West of England, it is an aspiration that an 'Eco-Station' is created as part of this Scheme.
- 5.5.2 'Eco' stands for environmentally friendly. The design of the station aims to reduce potential harmful effects on the environment. Figure 3 demonstrates what has been included to create the 'Eco-Station' and how these elements assist in Sustainable Development. Each number within the diagram represents a key element which would assist in creating an Eco-Station.

**Figure 3: A representation of elements that would create an 'Eco-Station'.**



#### 1. Green Roof/Wall:

- A green roof is proposed which would mitigate the buildings impact in the rural landscape and contribute to biodiversity net gain;
- A green roof will assist in reducing GHG emissions and increase air quality; and
- Potential to reduce noise impacts from the station's operations.

## 2. Rainwater Harvesting:

- Due to the design of the station building it is not possible to incorporate rainwater harvesting into its design.

## 3. Net Zero GHG emissions

- GHG calculations are set out within Chapter 12 'Climate Change' of the ES

## 4. Insulation

- The insulation of the building is required to comply with Network Rails sustainability requirements including the insulation of the building. This will be determined at the detailed design stage of the scheme.

## 5. Materials

- Materials can be sourced locally which would reduce the use of fossil fuels;
- Use recycled material (such as Eco-concrete) in the building;

## 6. Solar Panels

- Introduce Solar Panels to the roof to produce electricity needed at the railway station.

## 7. Wind Turbine

- A wind turbine will not be included in the scheme design.

## 8. Energy Usage Dashboard

- Energy usage dashboards around the station would show the public using the station the benefits of sustainable/renewable energy. However, this cannot be guaranteed at this stage of the design process.

## 9 LED lighting

- All lighting proposed as part of the scheme is LED, this is a standard determined by Lancashire County Council in its approach to tackling climate change.

### **Case Studies:**

5.5.3 There are two case studies in the North-West of England which have used sustainability principles within the design of their railway stations and have been designated as 'Eco-Stations'.

#### Accrington Eco-Station

5.5.4 Accrington Railway Station was re-built in 2010 and designated as an 'Eco-Station' and was part funded by the 'Interreg for Sustainable Stations Project'. As part of the project, the station was re-designed to include:

- Solar Panels in the roof and car park to produce up to 30% of the electricity needed at the station;
- Solar heated hot water to keep the station warm;
- A water recycling tank that uses rainwater in their toilets instead of wasting clean drinking water;
- Recycled local stone;
- Recycled crushed glass instead of sand for the stones to rest on; and,
- Use of Eco-concrete in the building, which is at least 30% recycled material.

#### Ainsdale Eco-station

5.5.5 The Ainsdale Eco-station in Merseyside was awarded a CEEQUAL rating for its Sustainability excellence in 2018. The design of the station included:

- Rain-water harvesting system;
- LED lighting;
- Solar Panels (which provides energy for the whole station throughout the day without the need for grid energy);
- Various design changes to improve resource efficiency
- Energy usage dashboards;
- Thermal insulation in the roof, walls and floor;
- Highly glazed areas to decrease the dependence on artificial lighting; and,
- Canopy overhangs over the glazed areas to reduce overheating and the need for artificial cooling.

## **5.6 Green Infrastructure**

5.6.1 Green infrastructure is shown on the Environment Masterplan in Appendix 18.1 in volume 3 of the ES and indicated that whilst it is acknowledged that the existing landscape and green infrastructure will be altered significantly by the scheme, care has been taken to ensure that the landscape and green infrastructure of the area is improved.

5.6.2 Biodiversity net gain is a positive bi-product of good quality green infrastructure being planned into a scheme. The Governments upcoming requirement for development to result in a minimum of 10% biodiversity net gain on the site would be achieved through the design of the Scheme. The full landscape plan can be seen on the (Environmental Masterplan) and biodiversity net gain calculations have been produced to support the sustainability of the development these are available in Appendix 6.16 'Biodiversity Metrics Report' in volume 3 of the ES

## 5.7 Waste, Recycling and Re-use

- 5.7.1 Mitigation and enhancement for waste and resources management during construction of the Scheme would be set out in an overall construction practice guidance, the Resource Management Plan (RMP). As the Scheme progresses, mitigation to avoid or reduce the likely effects from the export of waste arisings off-site would be developed and outlined in the CEMP. Included in the CEMP would be the level of recycling of materials which could be used onsite. While reduction of waste should remain the highest priority, where feasible waste produced shall also be segregated for recycling. This would allow materials to be recycled and ultimately reduce the amount of waste that has to be finally disposed of.

## 6 Summary

- 6.1.1 The purpose of this statement was to demonstrate how the concept of sustainable development can be integrated into the design of the Scheme.
- 6.1.2 The 8 sustainability objectives laid out in section 4 of this statement are the key issues for the scheme in terms of ensuring the best possible scheme design to reduce the impact the Railway Station and access road will have on the climate. Through the discussion of the design of the scheme, and its aspiration to become an 'Eco Station' it is clear that efforts have been made to address all the sustainability objectives listed.
- 6.1.3 Details within the Environmental Masterplan and the CEMP will ensure that the Scheme will aspire to be sustainable for the lifetime of the development and will seek to contribute towards the governments journey towards its net zero emissions targets.

Table 4: How policy has been met as part of this Scheme

Policy or Guidance Document	Policy	How has this Policy been met?
Central Lancashire Core Strategy	<b>Policy 17: Design of New Buildings</b>  'Designs will be adaptable to climate change and adopting principles of sustainable construction including Sustainable Drainage Systems (SuDS)'.	The station building has solar panels and a sedum/green roof incorporated into the design.  Slow release attenuation tanks/ponds have been incorporated into the design of the Scheme.
	<b>Policy 18: Green Infrastructure</b>  'Developments should manage and improve environmental resources through a Green Infrastructure approach by: <ul style="list-style-type: none"> <li>• Protect and enhance the natural environment where it already provides</li> </ul>	Landscape mitigation has been designed to restore landscape features and elements lost as a result of the Scheme; to integrate the Scheme into the local landscape; to complement and reinforce the special character of the surrounding landscape. This includes the improvement of the green infrastructure provision on the site.

	<p>economic, social and environmental benefits;</p> <ul style="list-style-type: none"> <li>Invest in and improve the natural environment'.</li> </ul>	
	<p><b>Policy 27:</b> Sustainable Resources and New Developments</p> <p>'New developments should incorporate sustainable resources through the following measures:</p> <ul style="list-style-type: none"> <li>Evidence is set out to demonstrate that the design, orientation and layout of the building minimises energy use, maximises energy efficiency and is flexible enough to withstand climate change; and</li> <li>Prior to the implementation of zero carbon building through BREEAM either additional fabric insulation measures or;</li> </ul>	<p>The railway station building has solar panels and a sedum/green roof incorporated into the design.</p> <p>Compliance with IEMA 2015 guidance for assessing climate change resilience on how to consider the impacts of climate change within project design.</p>

	<ul style="list-style-type: none"> <li>• Appropriate decentralised, renewable or low carbon energy sources are installed and implemented to reduce carbon dioxide emissions of predicted energy use by at least 15%.'</li> </ul>	
	<p><b>Policy 28:</b> Renewable and Low Carbon Energy Schemes states that development will be supported and planning permission granted where the following criteria are met:</p> <ul style="list-style-type: none"> <li>• The proposal would not have an unacceptable impact on landscape character and visual appearance of the local area, including the urban environment;</li> <li>• The reason for the designation of a site with statutory protection would not be compromised by the development;</li> <li>• Any noise, odour, traffic or other impact of</li> </ul>	<p>It is accepted that the Scheme would have an impact on the landscape of the area, however the Environmental Masterplan (Appendix 18.1 of the ES) indicates that sufficient landscape mitigation is proposed to enhance the area, especially post construction.</p> <p>Noise and vibration impacts have been considered within Chapter 9 'Noise and Vibration' of the ES, the mitigation will comply with BS 5228-1 and BS 5228-2 (British Standards Institution, 2014a and 2014b) good practice measures.</p> <p>Biodiversity net gain calculations (Appendix 6.16' Biodiversity Metric Report') are proposed to exceed the 10% minimum requirement for new development. this would provide sufficient compensatory benefits for the landscape and environment.</p>

	<p>development is mitigated so as not to cause unacceptable detriment to local amenity; and</p> <ul style="list-style-type: none"> <li>Any significant adverse effects of the proposal are considered against the wider environmental, social and economic benefits, including scope for appropriate mitigation, adaptation and/or compensatory benefits.</li> </ul>	
	<p><b>Policy 30:</b> Air Quality - states that development should improve air quality through delivery of Green Infrastructure initiatives and through taking account of air quality when prioritising measures to reduce road traffic congestion.</p>	<p>IAQM (Institute of Air Quality Management t(2016) guidance will be adhered to in order to address dust from emissions, and construction plant and machinery.</p>
Preston's Local Plan	<p><b>Policy ST2 (Sustainable Travel 2)</b></p> <p>'All developments will need to show that:</p> <ul style="list-style-type: none"> <li>Road safety and the efficient and</li> </ul>	<p>The safe use for all users of the highway has been considered. Footpaths and segregated cycle track, and tactile/accessible surfaces have all be incorporated into the design. A bus gate would be constructed with the junction at Lea Road to ensure efficient public transport use. A PRoW</p>

	<p>convenient movement of all highway users (including bus passengers, cyclists, pedestrians and equestrians) is not prejudiced;</p> <ul style="list-style-type: none"> <li>• Appropriate provision is made for public transport services;</li> <li>• Appropriate measures are included to facilitate access on cycle or foot;</li> <li>• Where practicable, ensure existing pedestrian, cycle and equestrian routes are protected and extended;</li> <li>• The needs of disabled people are fully provided for; and,</li> <li>• Corridors which could be developed as future transport routes (e.g. disused railway lines) are not prejudiced.</li> </ul>	<p>has been diverted as part of the design of the Scheme and the national standard has been achieved in terms of disabled parking and access ramps.</p>
	<p><b>Policy EN2: Green Infrastructure.</b></p>	<p>Green corridors and green infrastructure has been considered and this is illustrated on the Environmental</p>

	<p>Developments should seek to protect and enhance existing Green Infrastructure proposals which would involve the loss of Green Infrastructure will only be granted planning permission where:</p> <ul style="list-style-type: none"> <li>• It can clearly be shown that the site is surplus to requirement; or</li> <li>• The loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity or quality in a suitable location; or</li> <li>• The development itself is for alternative green infrastructure provision, the needs for which outweigh the loss; and,</li> <li>• Policy EN10 is adhered to where the site is part of an 'ecological network'.</li> </ul>	<p>Masterplan (Appendix 16.1 of the ES). Where there is loss of existing vegetation and habitat, care has been taken to ensure that it is replaced within the site, and as close to the lost provision as possible.</p>
	<p><b>Policy EN3 – Future Provision of Green</b></p>	<p>Green corridors and green infrastructure have been considered and is illustrated on the Environmental</p>

	<p><b>Infrastructure</b></p> <p>Development will where necessary:</p> <ul style="list-style-type: none"> <li>• Provide appropriate landscape enhancements;</li> <li>• Conserve and enhance important environmental assets, natural resources and biodiversity including the city's ecological network;</li> <li>• Make provision for the long-term use and management of these areas; and,</li> <li>• Provide access to well-designed cycle ways, bridleways and footpaths (both off and on road), to help link local services and facilities.</li> </ul>	<p>Masterplan. Where there is loss of existing vegetation and habitat, care has been taken to ensure that it is replaced within the site, and as close to the lost provision as possible.</p> <p>Maintenance of areas planted for biodiversity would be maintained for a minimum of 30 years in line with the proposed Environment Bill requirements.</p> <p>Access to cycle ways, bridleways and footpaths has been considered and is illustrated on the Site Plan (Drawing reference: CLM07-LCC-DEV-0000-002)</p>
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## 7 References

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## 8 Appendix 1



More information can be found at: <https://sdgs.un.org/goals>