Cottam Parkway Railway Station

Environmental Statement

Volume 2: Main Statement

Chapter 18: Summary

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18 Summary

ES Chapter Number	Environmental Topic	Relevant Appendices
18	Summary	Appendix 18.1: Environmental Masterplan Appendix 18.4: Impacts Summary Table

18.1 Introduction

18.1.1 This section summarises the environmental impacts associated with the proposed Cottam Parkway Railway Station Scheme (the Scheme herein). It identifies the main environmental impacts, particularly those which are significant, and sets out the mitigation that would be implemented to ensure that where possible, the significance of any adverse impacts are reduced or avoided entirely. This information is also summarised in an Impacts Summary Table (Appendix 18.4) in volume 3 of this Environmental Statement (ES).

18.2 Landscape and Visual Impact

18.2.1 The Scheme is located in North West Preston and is bounded by Lea Road to the east and Sidgreaves Lane to the West. The Scheme would be located to the south of and directly accessed from Cottam Link Road. The site would be located entirely within the local authority boundary of Preston City Council.

18.2.2 The key mitigation measures for the landscape and visual impacts of the Scheme are shown in the Environmental Masterplan in Appendix 18.1 in

Volume 3 of this ES. The planting consists of mainly native woodland, shrubs, trees, hedgerows and grassland that would help to provide screening of the Scheme and biodiversity enhancement.

18.2.3 The existing landscape comprises Coastal Plain of the Fylde which, in 'A Landscape Strategy for Lancashire', is described as 'gently undulating or flat lowland farmland divided by low clipped hedges and punctuated by small secondary deciduous woodlands. This character is typified both within the site and the pastoral/farming/equestrian uses which surround the boundaries'.

18.2.4 The Scheme give rise to permanent effects on the local landscape and visual amenity.

18.2.5 There would be **moderate adverse significant effects** to Lea-Cottam Rural Urban Fringe LLCA and Fylde Farmland LLCA during construction and operation winter year 1, reducing to a **slight adverse significant effect** at operation summer year 15 when mitigation planting would provide screening and landscape integration.

18.2.6 The most apparent changes to landscape character and views during construction would result from the temporary presence and movement of:

- Construction plant;
- Localised regrading of landform;
- Removal of existing landscape elements such as trees and hedgerows; and,
- The construction of the station building and footbridge, car parks, access road, canal bridge and roundabout junction.

18.2.7 Tree, hedgerow and scrub removal would be minimised through careful and considerate design followed by adequate protection of remaining trees/hedgerows during the works.

18.2.8 The following receptors would experience a large adverse and moderate adverse impact during the construction period:

Large adverse significant effects

- VP1 Residences on Sidgreaves Lane
- VP3 Residences along Lea Lane, north of Lancaster Canal
- VP5 Residences along Lea Lane, south of Lancaster Canal
- VP6 Residences along Lea Road (south of Preston to Blackpool Railway)
- VP7 Residences along Darkinson Lane
- VP12 and VP14 Walkers on the Lancaster Canal Long Distance Path

Moderate adverse significant effects

- VP2 Residences at Earl's Farm and Bryars Farm and walkers on PRoW FP7
- VP7 Cyclists on NCR 62
- VP8 Walkers on PRoW FP 45 and users of Ashton and Lea Golf Club

18.2.9 The existing urban edge along Lea Road and the Preston Western Distributor Road (PWDR) further west would contain the effects of construction activity from the wider landscape and views.

18.2.10 At operation winter year 1, the following receptors would experience Large Adverse or Moderate Adverse impact:

Large adverse significant effect

- VP5 Residences along Lea Lane, south of Lancaster Canal
- VP7 Residences along Darkinson Lane

- VP12 and VP14 Walkers on the Lancaster Canal Long Distance Path

Moderate adverse significant effect

- VP1 Residences on Sidgreaves Lane
- VP2 Residences at Earl's Farm and Bryars Farm and walkers on PRoW FP7
- VP3 Residences on Lea Lane, north of Lancaster Canal
- VP6 Residences along Lea Road (south of Preston to Blackpool Railway)

18.2.11 The likely effects on landscape character would arise from the presence of the new and permanent station building and footbridge, car parks, access road, canal bridge and roundabout junction within the landscape and from views from nearby visual receptors.

18.2.12 A loss of vegetation would be noticeable and grass reinstatement areas would be yet to establish.

18.2.13 Tree and hedgerow mitigation planting would not be established and would have limited reduction in impacts at this stage. Therefore, the effects would be the same as in the absence of proposed mitigation.

18.2.14 The Scheme would not result in any significant effects by operation summer year 15 although the loss of pre-development open green space would be permanent. All landscape and visual receptors would experience slight adverse or neutral residual effects. By operation summer year 15 the planting in combination with the retained vegetation would have achieved sufficient height and density to screen and integrate the Scheme into the local landscape. Although some features such as lighting would remain visible above the canopy, the Scheme would be viewed within the context of the existing highway infrastructure of the adjacent PWDR, Cottam Link Road and the adjacent urban edge.

18.3 Ecology

18.3.1 The Scheme is located within the Natural England Impact Risk Zones (IRZs) for the Ribble Estuary SSSI and Newton Marsh SSSI. The Scheme is located within 5km of four statutory designated sites: Ribble and Alt Estuaries SPA, Ribble and Alt Estuaries Ramsar, The Ribble Estuary Marine Conservation Zone (MCZ) and Haslam Park Local Nature Reserve (LNR) and located within 1km of Lancaster Canal which is a non-statutory designated Biological Heritage Site. The Ribble Estuary MCZ is located approximately 1.4km south of the Scheme and, Haslam Park Local Nature LNR is located approximately 1.9km east of the Scheme. These sites are of National and District importance respectively.

18.3.2 An ecological impact assessment was carried out on the ecological features and species that were determined to be of sufficient value to be further assessed.

18.3.3 Following the implementation of a comprehensive mitigation plan laid out in the Environmental Masterplan (Appendix 18.1), significant impacts of the Scheme would be limited to the following ecological features:

- Scattered broad-leaved trees (mature trees);
- Hedgerows;
- Common toad;
- Slow worm;
- Bats;
- Hedgehog; and
- Brown hare.

18.3.4 After 20 years it is anticipated that residual impacts the ecological features detailed above would not be significant. The exception to this would be

brown hare. Due to the cumulative impacts of habitat loss, such effects on brown hare would remain significant at Local level.

18.3.5 The Scheme would result in residual impacts of significance at the Local level equating to a Negligible (Adverse) Impact in the opening year, and Minor (Beneficial) Impact 20 years after opening. For brown hare, residual effects would remain and have a Moderate (Adverse) Impact; the significance of the impact is assessed as Slight Adverse (at the Local level).

18.4 Cultural Heritage

18.4.1 69 cultural heritage assets were identified in the cultural heritage assessment (Chapter 7 of the ES) comprising:

- 38 archaeological sites;
- 26 historic buildings or structures including 6 Grade II Listed Buildings; and,
- 5 historic landscape types.

18.4.2 Moderate significant adverse effects during construction of the Scheme have been identified on 14 non-designated sites archaeological sites (Assets 8, 9, 14, 27, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51) and two historic buildings (Assets 22, 39). Moderate significant effects during operation of the Scheme have been identified on one Historic building (Asset 22).

18.4.3 Measures to mitigate impacts on cultural heritage assets have been proposed comprising one or more of the following:

- Archaeological earthwork survey to Historic England Level 1;
- Careful removal of the Possible Railway Milestone (Asset 52), safe storage, and reinstatement after construction;
- Evaluation through archaeological investigation; and,

- Development of a targeted archaeological mitigation strategy during detailed design.

18.5 Air Quality

18.5.1 The potential air quality impacts and residual effects associated with the construction and operation of the Scheme at human and ecological receptors were assessed. The assessment included detailed consideration of dust emissions during construction and road traffic emissions during operation.

18.5.2 Appropriate good practice mitigation measures would be implemented to manage and control dust emissions during the construction phase based on the identified risks. With these measures in place, it was concluded that air quality effects arising from the construction of the Scheme would be **not significant**.

18.5.3 The assessment of operational road traffic emissions demonstrated that any changes in air quality at human receptor locations would be **negligible**, and therefore a **not significant** effect on air quality.

18.6 Noise and Vibration

18.6.1 A number of potential significant noise effects have been identified for sensitive receptors during the construction phase. Although Best Practicable Means (BPM) would be implemented to control construction noise, it cannot be guaranteed that all adverse impacts would be reduced to a level resulting in no significant effects at the nearest noise sensitive receptors. As such, it is likely, even with the inclusion of noise mitigation measures, that some **significant adverse effects** would remain during the construction phase. These effects are likely to be transient in nature and only impact the following receptors:

- Quaker Lodge;

- The Shires;
- Ashton Lodge; and,
- Railway Cottages

18.6.2 **No potential significant vibration effects** have been identified during the construction phase once BPM are applied to control vibration. The duration of the vibration impacts is likely to be less than 10 days in a 15-day period or 40 days in a six-month period.

18.6.3 Operational road traffic noise modelling was undertaken for all noise sensitive receptors within the defined operational study area. The Scheme is predicted to result in a number of significant beneficial effects in the short-term. These beneficial effects have been predicted along Lea Road, which is predicted to experience a reduction in traffic flow with the Scheme in place. **No significant adverse effects** are predicted.

18.6.4 Operational station noise modelling was undertaken for the nearest noise sensitive receptors to the west and east of the scheme. **No significant effects** are predicted as a result of operation of the station.

18.6.5 Overall, the Scheme is predicted to result in a relatively low number of significant effects. There are a greater number of adverse effects than beneficial effects, with the adverse effects occurring during construction and the beneficial effects occurring in the short-term during operation.

18.7 Soils and Geology

Human Health

18.7.1 Infilled ponds, farmland, the Lancaster Canal and existing railway lines are all sources of potential contamination within the Scheme boundary. Ground investigation data and soil sample analysis failed to identify any pollutant

linkages within the site or potentially harmful levels of pollutants. Therefore, the construction effect is considered to be **negligible**.

18.7.2 The Scheme consists primarily of hardstanding. This would remove the pathway between any contamination which may be in the ground and the future site users and off-site receptors. Therefore, the operational effect is considered to be **no change**.

18.7.3 The ground investigation identified no significant sources of ground gas and as such the operational effect on ground gas is considered to be **negligible**.

Surface Water

18.7.4 The surface water course and the Lancaster Canal lie within or directly adjacent to the site footprint. Both are considered to be of **low sensitivity**.

18.7.5 Soil sample analysis has not shown contamination to be present. Therefore, the construction effect is considered to be **minor**, and no remedial measures are considered necessary.

18.7.6 No contamination has been identified during the ground investigation, it is not anticipated that the presence of the Scheme would act as a preferential pathway. Therefore, the operational effect has been assessed as **negligible**.

Groundwater

18.7.7 The sensitivity of the groundwater receptors in the study area ranges from low to very high. Monitoring data from the ground investigation indicates that groundwater is perched and localised within the Glacial Till and Glaciofluvial deposits. The hydraulic connectivity from the surface to the bedrock aquifer is not considered to be significant. In addition, no potential sources of contamination were identified during the ground investigation. As such, the construction effect is considered to be no change for the bedrock aquifer and **negligible** for the superficial units.

18.7.8 Long-term impacts to groundwater may occur where groundwater levels and flows are altered as a result of the presence of the Scheme, or through the scheme acting as a preferential pathway for contamination. In addition, spillages during maintenance activities have the potential to introduce contaminants into groundwater bodies. During the operational stage, potential contaminated land linkages would have been broken due to the construction of extensive hardstanding for car parking and roads. Therefore, the operational effects are considered to be **negligible.**

Buildings and infrastructure

18.7.9 The ground investigation did not identify any potential sources of ground gas or putrescible Made Ground and there was no recommendation for ground gas monitoring. In addition, no areas were found to be at significant risk of rising groundwater during construction and no significant below-ground works are proposed. Therefore, the construction effect magnitude is considered to be **negligible**.

18.7.10 Operational effects on buildings and infrastructure may occur from the presence of the Scheme altering the ground gas regime, leading to gases accumulating in confined spaces and potentially resulting in an explosion. In addition, any remaining contamination that was not remediated or removed during construction may result in aggressive ground conditions.

18.7.11 The ground investigation did not identify any potential sources of contamination or ground gas, and therefore the operational effect is expected to be **negligible.**

Soil Quality

18.7.12 The site is underlain by Grade 3 Agricultural Land Classification (ALC) land. No site-specific ALC survey is available so it is conservatively assumed that this land can be considered to be Grade 3a best and most versatile (BMV) land. A permanent loss of agricultural land is associated with the proposed

areas of hardstanding and road realignments. Temporary reduction of access or a loss of quality is associated with the areas of temporary land take, which may be used for construction compound areas or subjected to other disturbances.

18.7.13 There are not considered to be any operational effects on soil quality, as any potential loss or degradation of soil quality would occur during the construction stage.

18.8 The Water Environment

Surface Water Quality

18.8.1 **No significant effects** on surface water quality are anticipated during the construction and operational phases, provided prescribed mitigation is adhered to.

Hydromorphology

18.8.2 **No significant effects** on hydromorphology are anticipated during the construction and operational phases, provided prescribed mitigation is adhered to.

Flood Risk

18.8.3 A Flood Risk Assessment identified that the Scheme would need to consider flood risk from and impacts to fluvial flooding, surface water, groundwater, and canals. However, the development has been located within Flood Zone 1 after a sequential approach to site selection has been applied and is generally at low risk from other sources identified. As the Scheme would be classified as Essential Infrastructure, its location within Flood Zone 1 is considered to be appropriate within planning practice guidance.

18.8.4 Embedded mitigation and good practice including the appropriate design of a new culvert to convey the Central Watercourse beneath the new station and a surface water management system based on Sustainable Urban Drainage Systems would ensure the Scheme is safe from flooding without increasing the risk of flooding elsewhere. Therefore, it would comply with the requirements of the NPPF and with the requirements of local planning policies and guidance.

Groundwater

18.8.5 **No residual significant effects** to groundwater are anticipated during the construction and operational phases, provided embedded and additional mitigation is implemented.

18.9 Climate Change

Climate Change Resilience

18.9.1 Short-term effects from the construction of the Scheme are **not likely to be significant** due to the mitigation that would be implemented, the nature of the construction activities and the dates of the construction period.

18.9.2 The assessment of operational impacts and effects has considered the likelihood of climate events and hazards occurring, and the consequence of the potential impacts on disruption to the Scheme, taking account of the identified embedded and standard mitigation measures.

18.9.3 The findings of the assessment are presented in Chapter 16 'Climate Change'. These results have concluded that **no significant effects** would occur to the Scheme in respect of climate change.

Greenhouse Gas Emissions

18.9.4 The construction GHG emissions from the Scheme would represent a value significantly below the indicative threshold of 5% of the UK carbon budget in the applicable time period. Developments that meet or exceed this threshold irrespective of any reductions is likely to be significant and can in itself materially affect achievement of the carbon budget.

18.9.5 As the GHG emissions of the Scheme are lower than the 5% threshold, the effect of GHG emissions associated with the Scheme are considered to have a **minor non-significant adverse impact**.

18.9.6 Operational GHG emissions of the Scheme are predicted to be below the emissions created during the construction of the Scheme. This is due to the extraction and transportation required for the materials during construction. Comparatively, the station would utilise sustainable energy generation once operational and energy efficient lighting and heating/cooling systems. The GHG emissions associated with the operation of the Scheme over its lifetime are considered to be non-significant.

18.10 Human Health and Population

18.10.1 The construction and operation of the Scheme is predicted to result in **negligible adverse impacts** once mitigation measures have been implemented and **minor** to **major beneficial significant impacts**. Resultingly, the Scheme is predicted to provide the population of Ingol and Cottam with beneficial outcomes overall from a human health perspective.

18.10.2 **No significant adverse impacts** are anticipated from the development of the Scheme once mitigation measures have been fully implemented.

18.10.3 A construction management plan in the form of a CEMP would be followed to ensure that no negative impacts on human health are encountered from the construction of the Scheme. A monitoring and management plan would

be developed to ensure that no negative impacts on human health are encountered from the operation of the Scheme.

18.11 Traffic and Transport

18.11.1 The traffic and transport assessment determined that the Scheme would increase public transport accessibility for Cottam and wider north west Preston area, with areas such as Blackpool, South Ribble and Wigan all easily accessible by public transport.

18.11.2 The proposed station is predicted to generate 1,146 daily passengers in 2024, increasing to 1,248 in 2039.

18.11.3 Traffic modelling undertaken of the proposed station indicate that there would be **negligible impact** upon the capacity, safety or operation of the surrounding highway network and as a result, no mitigation measures would be required.

18.11.4 There is expected to be a **slight beneficial** operational impact on pedestrians and cyclists due to the provision of well-connected segregated cycling and walking infrastructure. This also accounts for mitigation provided on the Lea Road route to accommodate for existing difficult crossing movements.

18.11.5 During operation, there would be a **slight beneficial** residual impact to the PRoW network, as closures would be mitigated by the provision of a proximate alternative route.

18.11.6 The effect on public transport would be a large benefit as a result of significantly improved access to the railway network, despite a slight bus route disbenefit resulting from journey time impacts in the construction and operational phases.

18.12 Land Use and Accessibility

18.12.1 The land use and accessibility assessment considered the impacts of the Scheme on loss of land from private assets, loss of community land, community severance impact and the effects on development and agricultural land.

18.12.2 A **significant adverse impact** was predicted on Rowland Homes, Lea Road as a result of disruption to the highways network on Lea Road during construction.

18.12.3 It is unlikely that any adverse effects on the loss of land from private assets, loss of community land or severance and development land would occur once the Scheme is in operation.

18.12.4 Following the completion of the Scheme, there would be a minor adverse effect on three agricultural businesses.

18.13 Materials and Waste

18.13.1 The independent assessment of the likely significant environmental effects arising from waste, materials or use of natural resources has been scoped out of the Environmental Impact Assessment, as the topics would be sufficiently addressed within the Scheme design, relevant discipline chapters and management plans.

18.14 Cumulative Impacts

18.14.1 The Scheme is likely to have adverse impacts on landscape and ecology.

18.14.2 Without mitigation, the Scheme would contribute to the removal of hedgerows and trees that would further impact the local ecology. However, the Scheme does propose to achieve biodiversity net gain and so, once planting is established there would be up to a 10% increase in biodiversity in

the local area to compensate for the removal of hedgerows, trees and general loss of habitat and enhance the local biodiversity. The exception to this would be the loss of habitat for brown hare where the cumulative habitat loss would increase the level of impact and be **significant adverse** for brown hare at the **Local level**.

18.14.3 The Scheme would have **major to slight adverse significant impacts** on the views of residents and canal users in cumulation with the additional developments that occur in the area of Cottam. However, all landscape and visual receptors would experience **slight adverse or neutral residual effects** by operation summer year 15 as the screening and planting of the Scheme would have achieved sufficient height and density. The wider landscape of North West Preston would have changed significantly within the 15 year period as housing developments and road schemes are constructed and completed. As North West Preston is identified in the Central Lancashire Core Strategy and Preston Local Plan 2012 – 2026 and as a Strategic Location for development, it is an acceptable change in landscape character to provide housing and associated infrastructure to the area.

18.14.4 Significant cumulative effects are not predicted for air quality, noise and vibration, socioeconomics, traffic and transport and, water and hydrology. Consequently, the Scheme would have **no significant effect** to cumulative environmental impacts regarding air quality, noise and vibration, socioeconomics, traffic and transport and water and hydrology on the wider area of North West Preston.

18.15 Conclusion

18.15.1 Overall, the Scheme would result in a number of key benefits to the local area. These include provision of sustainable transport infrastructure to reduce congestion in Preston city centre by providing a park and ride facility for residents of North West Preston and increasing rail access between

Preston and other parts of Lancashire, as well as the regional and national network.

18.15.2 Other beneficial effects of the Scheme include:

- Reduced transport noise along Lea Road;
- Increasing walking and cycling infrastructure;
- Increasing employment opportunities; and,
- Increased biodiversity 15 years from the Scheme opening.

18.15.3 The development of the cycle track and pedestrian footpaths would provide improved sustainable transport routes in the local area that would be traffic free, safe and quiet with a range of accessible pedestrian crossing points and station facilities.

18.15.4 Whilst potential significant adverse impacts have been identified during the construction phase of the Scheme in respect of landscape, ecology, noise, land use and accessibility, these would be managed through the range of measures in the Construction Environmental Management Plan (CEMP) implemented throughout the construction period.

18.15.5 During the operational phase of the Scheme, a monitoring and management plan would be implemented to ensure that the impacts of the Scheme on the environment do not exceed those predicted in the EIA.