

Cottam Parkway Railway Station

Environmental Statement

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14 Traffic and Transport

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14.1 Introduction

14.1.1 This chapter identifies and assesses the effect on traffic and transport during the operation and construction of the proposed Cottam Parkway Railway Station (herein referred to as the Scheme).

14.2 Relevant Legislative, Plans, Policies and Background

National Planning Policy

National Planning Policy Framework (the NPPF)

- 14.2.1 The NPPF (MHCLG, 2021) priorities and principles that are considered relevant in this assessment include the need to ensure that "any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree".
- 14.2.2 Section 9 of the NPPF relates to transport matters and states that transport issues should be considered from the earliest stages of development proposals. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a

genuine choice of transport modes. (NPPF Paragraph 105). This can help to reduce congestion and emissions and improve air quality and public health. However, it is also noted that opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be considered in decision-making.

- 14.2.3 When considering development proposals Paragraph 110 of the NPPF states that consideration should be given to whether:
 - a) "Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
 - b) Safe and suitable access to the site can be achieved for all users;
 - c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and,
 - d) Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."
- 14.2.4 Paragraph 111 of the NPPF goes on to say:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impact on the road network would be severe."

- 14.2.5 Therefore, in this context Paragraph 112 of the NPPF states that applications for development should:
 - a) "Give priority first to pedestrians and cycle movements, both within the scheme and with neighbouring areas; and second so far as possible –

to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

- b) Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- c) Create places that are safe, secure and attractive which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
- d) Allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- e) Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations".
- 14.2.6 A new 'parkway' rail station in the Cottam area would serve housing developments in North West Preston, providing a more sustainable alternative for travel to Blackpool and Preston and its national rail connections.

DfT Transport Investment Strategy

- 14.2.7 The DfT Transport Investment Strategy (DfT, July 2017) aims to "create a more reliable, less congested, and better-connected transport network that works for the users who rely on it".
- 14.2.8 The Scheme aligns strongly with these objectives as the scheme will support housing developments, improve rail connectivity to Blackpool, Manchester and beyond and potentially increasing road safety and air quality in Preston City Centre by reducing car-based demand for the station.

Decarbonising Transport: A Better, Greener Britain

- 14.2.9 One of the six strategic priorities listed within this report (DfT, July 2021) is *"Accelerating modal shift to public and active transport"*.
- 14.2.10 Through providing a train station near the large number of new housing developments in the Cottam area, it increases the potential for public transport to become the natural first choice particularly for those commuting into the centre of Preston. This would help to reduce the impact of new developments on the roads accessing Preston while also increasing the economic prosperity of the city.

The Transport for the North Strategic Transport Plan

- 14.2.11 The Transport for the North (TfN) Strategic Transport Plan (Transport for the North, February 2019) states that "of particular importance in encouraging a mode shift towards rail, will be the need to ensure effective connections to new and existing rail stations by all modes, and the provision of adequate access facilities such as parking".
- 14.2.12 The Scheme is recognised in TfN's Rail Strategy and the West Coast Sheffield City Region Strategic Development Corridor (SDC) as an enabler of growth within the key Advanced Manufacturing, Health Technology and Digital clusters. It would improve connectivity to areas of housing and employment and allow for the potential to maximise the economic potential of the North of England. Central Lancashire Core Strategy (2012)

Local Planning Policy

Central Lancashire Adopted Core Strategy

14.2.13 The Central Lancashire Core Strategy (Preston City Council et al., 2012) Policy 1 sets out the basis for locating growth within the strategy area and

identifies three proposed strategic locations where growth and investment will be concentrated – one of which is in the northern suburbs of Preston. Cottam Strategic Site is mostly greenfield land to the north west of Preston's City Centre, as well as the derelict urban brownfield Cottam Brickworks site. This comprises the land south of Hoyles Lane and North of Lancaster Canal, bounded to the west by Sidgreaves Lane, and to east by the existing urban boundary with of Ingol.

- 14.2.14 The development of the remaining areas at Cottam is strategically significant for the spatial vision for Preston. It is a serviced site that can be brought forward quickly to address the housing needs of Preston and Central Lancashire.
- 14.2.15 Policy 3 sets out the need to improve public transport at Cottam by providing a new park and ride railway station, which is identified as required infrastructure to support the strategic site.

Preston Local Plan

- 14.2.16 The Preston Local Plan 2012 26 (Preston City Council, 2015) assessed the concept of the Strategic Location from the Core Strategy, measured against housing and employment land requirements and the need to protect existing Green Infrastructure.
- 14.2.17 It is anticipated that approximately 1,300 homes will be delivered across the two sites. This includes both the Cottam Hall greenfield site west of Tom Benson Way, and the previously developed former Brickworks site east of Tom Benson Way. The majority of new homes will be delivered on the Cottam Hall site (circa 1,100), these proposals comprise an outline planning application approved by Preston City Council in 2012. The former Brickworks site currently benefits from planning permission. The main aspects of this approval include a new supermarket, up to 206 new houses and some employment floorspace.

- 14.2.18 The former brickworks is identified as the location for a new district centre (see Policy EP3).
- 14.2.19 The Scheme is a part of the necessary infrastructure required to support development and serve the North West Preston Strategic Housing location in accessing Preston City Centre employment areas and beyond.

Central Lancashire Highways and Transport Masterplan

- 14.2.20 The Central Lancashire Highways and Transport Masterplan (CLHTM) (Lancashire County Council, 2013) represents Lancashire County Council's priorities for future investment in highways and transport across Central Lancashire. The principles from the Masterplan considered relevant to the Scheme are detailed below.
- 14.2.21 The Masterplan leads with an *'Integrated Transport Vision'*, setting out a vision for highways and transport in Central Lancashire.
- 14.2.22 Based on highway modelling and both local and national forecasts of demand growth, the Integrated Transport Vision accepts that by 2026, Lancashire's existing highway network would not be able to cope, and given the scale of growth planned, along with existing levels of congestion, a new road linking the M55 near Bartle with the A583/A584 at Clifton was proposed. This was to support delivery of the North West Preston strategic housing location and improve access to the Strategic Road Network from the Enterprise Zone site at Warton. It also enabled the provision of the 'Parkway' rail station in Cottam.
- 14.2.23 The Masterplan identifies that the Scheme will:

" serve the North West Preston strategic housing location is planned to provide rail-based Park and Ride opportunities to Preston/Manchester/Liverpool and Blackpool. " Moreover, the Scheme will:

- "[act] as a possible link to the national high speed rail network in the longer term."
- 14.2.24 In summary, the CLHTM emphasises the need for the scheme in supporting future strategic housing and employment opportunities in Preston.

14.3 Methodology

Network Traffic Capacity

- 14.3.1 The junction capacity assessment has been undertaken using a microsimulation model built in Aimsun, based on demand derived from the Saturn highway assignment model. This Aimsun model does not have a validated base, although it does use the validated CLTM as a parent model. This is considered appropriate in this instance due to the significant highway infrastructure changes brought about by the PWDR meaning any future year network will bear little resemblance to the existing network and significant changes to traffic patterns are expected.
- 14.3.2 The Cottam Parkway Aimsun is a version of the North West Preston Aimsun model. This model was built by Jacobs on behalf of Lancashire County Council as a planning tool for testing the impacts of development in north west Preston upon the surrounding highway network. The coverage of the network is presented in Figure 14.1.

Figure 14.1: Aimsun Model Network



- 14.3.3 Aimsun provides several network wide statistics which describe the performance of the model network as a whole, and Level of Service [LoS] data which describes the performance of individual junctions.
- 14.3.4 The network performance statistics used in this TA are as follows:
 - Average Delay Time per Vehicle (measured in seconds)
 - Average Speed (measured in km/h)
 - Average journey time (measured in seconds)
 - Average Delay per Vehicle Km travelled (measured in seconds)

14.3.5 The definition of LoS for junctions is presented in Table 14.1

Table 14.1. Level Of Service (LOS) Deminitions
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LoS	Average Delay per Vehicle (secs/veh)			
	Traffic Signals. Roundabouts	Give Way & Stop Signs		
А	<10	<10		
В	10 to 20	10 to 15		
С	20 to 35	15 to 25		
D	35 to 55	25 to 35		
E	55 to 80	35 to 50		
F	>80	>50		

- 14.3.6 A LoS level of A or B indicated an uncongested junction, operating below 85% of its theoretical capacity; an LoS C indicates a junction operating between 85% and 100% of capacity and D or above indicating a junction operating above its theoretical capacity.
- 14.3.7 For a detailed description of the methodology utilised to prepare the information contained within this chapter please refer to Appendix 14.1 in volume 3 of this ES.

14.4 Baseline Description and Evaluation

Highways

14.4.1 Relative to the road network, the Scheme is located to the south of the M55 motorway which links Blackpool and north Preston to the M6. The current nearest connection to the motorway is M55 Junction 1, which is approximately 6 km away from the site via Cottam Way, however with the completion of the

Preston Western Distributor Road (PWDR), the new M55 Junction 2 would provide a connection to the motorway within 3 km of the Scheme. The A583 is approximately 1 km to the south of the Scheme which links central Preston and Blackpool via Lea.

14.4.2 Figures 14.2 to 14.4 show the 2019 base year modelled highway flows, around the site location, for the three modelled time periods (AM peak, Inter-Peak, and PM Peak). The AM peak hour for the model was identified as 08:00 – 09:00 and the PM peak was identified as 17:00 – 18:00. The Inter-Peak represents an average of the traffic between 10:00 – 16:00. The local area roads, such as Lea Road, Cottam Way, and Sidgreaves Lane, currently have very low levels of traffic in each of the modelled time periods. Higher levels of traffic can be seen on the M55 to the north of the Scheme, the M6 to the east, and the A583 to the south.









Figure 14.4: PM Peak (17:00 – 18:00) – Site Location 2019 Modelled Highway Flows (PCU/hr)



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- 14.4.3 The local road network experiences high levels of traffic demand throughout a typical day which results in significant traffic congestion in and around Preston. Congestion is especially severe at peak commuting times (8am-9am and 5pm-6pm).
- 14.4.4 Journey time data for the first quarter of 2019 was obtained from the TrafficMaster dataset, the time periods selected were consistent with Transport Analysis Guidline (TAG) requirements and only neutral months and dates were used.
- 14.4.5 The following Figures 14.5 -14.7 show average travel speeds for AM peak, Inter peak (IP) period, and PM peak time period across the highway network in Preston, which were derived using TrafficMaster's journey time data. The AM peak hour for the model was identified as 08:00 – 09:00 and the PM peak was identified as 17:00 – 18:00. The IP represents an average of the traffic between 10:00 – 16:00.



Figure 14.5: AM Peak – Estimated Mean Vehicle Speeds



Figure 14.6: IP Peak – Estimated Mean Vehicle Speeds

Figure 14.7: PM Peak – Estimated Mean Speed



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14.4.6 The TrafficMaster data shows that there are multiple locations along the key arterial routes where the average traffic speed is below 20mph. Access to the motorway network is also subject to significant queues and delays. There is also significant congestion on the A6, and in central Preston. It should be noted that these current levels of congestion do not account for the projected growth in traffic associated with the additional dwellings that are proposed in North West Preston, this additional growth would exacerbate issues of poor performance in northern and western Preston without appropriate mitigation. Passengers arriving at Preston Railway Station by car adds to this congestion.

Preston Western Distributor Road (PWDR)

- 14.4.7 A major new road is currently under construction which would link the M55 with the A583 / A584 at Clifton. The PWDR and associated East-West Link Road (EWLR) are crucial to supporting the delivery of North West Preston and Cottam Hall housing developments. As such the roads are a key element of Central Lancashire Highways and Transport Masterplan. The PWDR is expected to open to traffic in 2023.
- 14.4.8 An additional benefit from the development of PWDR and the EWLR is the strategic opportunity provided by a highway connection (the Cottam Link Road) for the Scheme. This would allow passengers from further afield to park and ride at the Scheme rather than driving to their destination or driving into Preston to access the wider rail network.

Sustainable Travel Modes

- 14.4.9 The Scheme is located within close proximity to three general bus routes and one school bus route:
 - The 43 service running between Preston Bus Station and the Royal Preston Hospital. The route has stops located nearby on Cottam Way and Sidgreaves Lane;

- The 44 circular service running between Preston Bus station via Ingol to Cottam. The service has nearby stop on Cottam Way and Sidgreaves Lane; and,
- The 88 service running between Larches to Royal Preston Hospital, running via Cottam, Ingol, and Cadley Causeway. The service has stops on Lea Road and Cottam way.
- 14.4.10 Table 14.2 provides further details regarding the existing bus services. Additional bus services or a high frequency of existing services are likely to be introduced as housing growth in North West Preston continues.

Bus Route Number	First Service	Last Service	Frequency (buses Per Hour)	Sunday Service
43	06:00	21:00	2 Bph	Hourly, 09:40 – 19:40
44	07:20	20:00	2 Bph	Hourly 9:45 – 18:45
88	06:40	17:40	1 Bph	No Sunday service

Table 14.2: Bus Services adjacent to the Scheme



Figure 14.8 Plan of the Current Bus Services Across Preston

14.4.11 The site location does not currently have any direct rail provision. The nearest railway stations are Salwick Railway Station, which is approximately 3.2km to the west of the site, and Preston Railway Station, which is approximately 5km to the south of the site. Salwick is a small station located on the Preston to Blackpool line whereas Preston Railway Station is located on the West Coast Main Line and this allows access to a wide range of locations as summarised in Table 14.3.

Table 14.3 Summary of Rail Services from Preston Station

From Preston to:	Journey Time (mins)	Frequency (trains per hour)
Blackpool North	22	4 tph
Blackpool South	37	1 tph

From Preston to:	Journey Time (mins)	Frequency (trains per hour)
Manchester Piccadilly	36 - 52	4 tph
Manchester Victoria	56	1 tph
London Euston	129 mins – 186 mins	2 tph
Lancaster	14	3/4 tph
Liverpool Lime Street	50	1 tph
Leeds	109 mins	1 tph
Kirkham & Wesham	9	3 tph
Poulton-le-Fylde	15 – 18 mins	4 tph

- 14.4.12 Error! Reference source not found. 14.3 shows that there are frequent services to Blackpool North / Poulton-le-Fylde, Lancaster and Manchester and hourly services to other key locations.
- 14.4.13 The Chartered Institute of Highways and Transportation provide a schedule of recommended walk distances to facilities based on journey purpose, This states that for commuting and school trips the desirable walking distance is 500m, with 1000m considered acceptable and 2000m considered the preferred maximum. Figure 14.9 illustrates the areas which lie within these distances and are therefore able to reasonably access the Scheme by foot.



Figure 14.9 Walking Accessibility

- 14.4.14 As can be seen from **Error! Reference source not found.** 14.9, the majority of the areas of Cottam and Lea are within walking distance of the Scheme. The new housing development site at Cottam Hall is also within walking distance.
- 14.4.15 A distance of 5km is generally considered to be acceptable for a utility cycling trip. Figure 14.10 shows the areas within 5km of the development site.



Figure 14.10 Cycling Accessibility

14.4.16 As shown in Figure 14.10 significant areas of new residential development are within this distance, such as the North West Preston and Cottam Hall Housing areas. The Scheme is also within cycling distance for the existing residential areas of Cottam, Lea and Ingol.

Existing Walking Network and Limitations

14.4.17 The Scheme is approximately 0.8 km from the nearby urban area of Cottam to the north-east, and 1.6 km from Lea Town to the west. There are two key roads leading to the Scheme, Lea Road to the east and Sidgreaves Lane / Darkinson Lane to the west. These routes currently both provide limited pedestrian facilities. Lea Road is on the desire line for the north-eastern residential areas, while Sidgreaves Lane (northern section) facilitates movements from the north. Higher volumes of pedestrians are expected on

the Lea Road route in particular, as it is the most direct road to the Scheme from the large north-eastern residential areas. Sidgreaves Lane becomes Darkinson Lane just south of the Scheme and provides a connection to Lea Town to the west.

14.4.18 The quality of footway provision along Lea Road is generally poor and inconsistent along its length. Much of the section north of the Lea Road railway bridge is 1 metre in width or less, and provision is inconsistent with the footway disappearing entirely on one side of the road near the canal and railway bridges. Some short stretches on the eastern footway achieve the 1.5 metre minimum provision (as required by '*Inclusive Mobility. A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure*': Section 4.2), however these locations tend to be wholly or partially blocked by pavement parking. The width of the eastern footway improves between the Westleigh Conference Centre and The Shires residential development (which is approximately opposite the Lea Road Scheme access), with the provision of a consistent 1.5 to 2 metres wide footway for 100 metres.

Figure 14.11: Footway Leading onto the Scheme along Lea Road (Direction - looking north, north of the railway bridge)



14.4.19 The footway halts completely on the western side at the Lea Road Canal Bridge (no.18) with no crossing facilities provided. Immediately south of the canal bridge an uncontrolled crossing has been provided to connect

pedestrians to the Lancaster Canal walking and cycling route, but the western footway does not recommence for another 100 metres. Approximately 160 metres north of Lea Road railway bridge the eastern footway halts, also with no crossing facilities provided for pedestrians to reach the western footway. An uncontrolled crossing is provided immediately south of the railway bridge where the eastern footway recommences.

Figure 14.12: Footways Leading onto the Scheme along Lea Road (Direction - looking south north of the railway bridge)



Figure 14.13: Footways Leading onto the Scheme along Lea Road (Direction – looking south, south of the railway bridge)



- 14.4.20 South of Lea Road railway bridge the footway widths are more consistent, with the western footway continuing to the Ribble Link at approximately 1 metre wide. However, there are restrictions to the effective width of this route due to hedgerow growth. The eastern footway is a consistent 1.5 metres wide and provides a good walking link to the Ashton area.
- 14.4.21 Overall, Lea Road route is poorly suited for high flows of pedestrians potentially using this route as the most direct road to the Scheme, particularly along the section from the railway bridge to the northern extent.
- 14.4.22 Segregated shared-use cycleway and footway provisions commence at the Lea Road roundabout junction with Cottam Way, and the facilities continue along both the northern and southern sides of the Cottam Way route. This section provides good walking provision to the Scheme from the northern Guild Wheel route and eastern Cottam residential areas. This route intersects with multiple side roads and roundabouts, all facilitated by uncontrolled crossing points. The connectivity of this high-quality section to the Scheme is disrupted by the transition onto the poor-quality pedestrian provision on Lea Road and Sidgreaves Lane.
- 14.4.23 The northern section of Sidgreaves Lane is another key route. The stretch between Lea Road and Hoyles Lane has a narrow footway on the eastern side of the road facilitating pedestrian movements from the northern housing areas to and from Lea Endowed Church of England School and beyond. The section of Sidgreaves Lane south of its junction with Lea Road has no pedestrian facilities south of the school, after which the route becomes a single-track lane of rural character.

Figure 14.14: Footways Leading onto the Scheme along Sidgreaves / Darkinson Lane (Direction – south bound)



Figure 14.15: Footways Leading onto the Scheme along the Sidgreaves Lane (Direction – north bound)



14.4.24 Darkinson Lane is an unlit single track rural lane which continues directly southwest of the southern extent of Sidgreaves Lane.

14.4.25 In view of the connectivity, accessibility, and residential areas within 1.2 km of the site, it has been shown that the existing pedestrian accessibility to the site is limited due to the poor provision on the crucial Lea Road and Sidgreaves Lane (north) links.

Existing Cycling Network and Limitations

14.4.26 The key existing routes leading to or proximate to the Scheme are listed in Table 14.4, and key existing numbered cycle routes illustrated in Figure 14.16, with Lea Road providing a key link for cyclists to access the site from the routes to the south.

Name	Description/Comments (within the 5km radius)
Tow Paths	
Millennium Ribble Link Tow Path	Runs alongside Savick Brook on the south side
Lancaster Canal towpath	Follows the length of the Lancaster Canal, connecting Cottam to the Maudlands area of Preston. Provides connections to NCR62
Shared Footway / Cyc	eways adjacent to Roads
Shared footway/cycleway	3m wide footway & cycleway along both sides of the road
along Preston Western Distributor	
Road, Cottam Link	
Road (currently under construction), and	
Cottam Way	
Cycle Routes	
National Cycle Route 62 (NCR62)	National Cycle Route 62 (NCR62) connects Fleetwood on the Fylde region of Lancashire with Selby in North Yorkshire. It forms the west and central sections of The Trans Pennine Trail which is a long-distance path running from coast to coast across northern England.

Table 14.4: Existing Towpath and Cycle Routes

Name	Description/Comments (within the 5km radius)
	Split into three sections, section 1 of NCR62 runs from Fleetwood to Hutton (also referred to as Blackpool to Preston).
	Within the vicinity of the Scheme the route runs east-west, on road through Lea Town via Darkinson Lane and on to Cottam via Sidgreaves Lane and Cottam Way, supporting the scheme's accessibility from Lea Town.
National Cycle Route 622 (NCR622)	Route 622 is a 21-mile cycle route encircling the city of Preston in Lancashire. This route is locally known as the 'Preston Guild Wheel'. Within the vicinity of the Scheme the route runs along the south side of the A583 before crossing the A583 via a ramped footbridge near Old Hall Cottages. The route then continues off road along the Millennium Ribble Link tow path where it intersects with the Lea Road link to the Scheme. It also provides connections to NCR62 and the towpath from Ingol.

- 14.4.27 The cycle network through Preston allows for access along indirect routes from the city centre and surrounding housing to the Scheme. The housing areas between the city centre and the Scheme, including Cottam, Lea and Ingol, allow for use of lightly trafficked routes away from main roads, with some off-road routes also available. This includes the local 'Guild Wheel' route which connects into part of the national cycle route 622 near the site as shown on Figure 14.16. National cycle route 62 from the west along Darkinson Lane and Sidgreaves Lane is also route identified by local cyclists. In terms of direct routes to the Scheme, there are no proximate roads other than Cottam Way with cycle infrastructure suitable for the speed and volume of traffic present.
- 14.4.28 Lea Road itself serves as a crucial link for cyclists who may wish to access the Scheme, as it provides a connection both from the Guild Wheel routes to the south and the segregated cycle infrastructure provided on Cottam Way to the northeast. Lea Road route also crosses the Lancaster towpath. The cycle routes are shown in Figure 14.16. The routes shown are:

- Darkinson Lane and Sidgreaves Lane Alternative route recommended by cyclists; and
- Via Lancaster canal and NCN62 Alternative route recommended by cyclists.



Figure 14.16: Existing Numbered Cycle Routes Within the Study Area

- 14.4.29 There is a moderately developed cycle network throughout Preston, providing a partial route to the Scheme from the city centre and surrounding housing. As with the walking routes, the key roads providing access to the Scheme are Lea Road to the east, providing a link for residents from the south and east of Preston, and Sidgreaves Lane to the west, providing access for residents from the West and northwest areas around the Scheme. All wider routes would need to have suitable connectivity to these two roads in order to facilitate a continuous cycle route to and from the Scheme.
- 14.4.30 Lea Road is a 20 / 30mph speed limit road which varies in width and character along its length. The Lea Road 20mph section is at its southernmost extent and is residential in character, stretching from a point 130 metres north of its junction with Ainsdale Drive to its junction with Blackpool Road. The frequent presence of parked cars along this section creates a natural traffic calming effect, though negotiating around parked vehicles may also create some difficulty for less confident cyclists at peak times.
- 14.4.31 The 30mph section of Lea Road continues from the northern extent of the 20mph terminus up to its junction with Sidgreaves Lane to the north of the Scheme. This stretch has only sporadic housing, a varying width, and no cycle provisions on or off-carriageway. The route becomes particularly narrow at Lea Road canal bridge, which is signalised due to being single track. As a result of the higher speeds and need to negotiate between primary and secondary riding positions depending on the varying road width, this section of Lea Road is also accessible to only more confident cyclists.
- 14.4.32 The key route connecting residents from the southern area of Preston into Lea Road is the Guild Wheel (NCR622), which meets Lea Road near its junction with Ainsdale Drive to the south of the site. This section of the Guild Wheel route (running adjacent to Savick Brook) provides a good quality off-road route connecting the areas of Lea and Ashton-on-Ribble to the Lea Road route. It joins Lea Road at the northern extents of the 20mph speed limit and is near a flat-top speed hump. The lower speeds at this location help cyclists to join the Lea Road route safely. There are painted cycle lanes along much of Blackpool

Road, however these are frequently parked in. This is a barrier to all but the most confident cyclists.

- 14.4.33 The Cottam Way shared-use cycle track connects cyclists from the east and north into the Lea Road route at the Cottam Way roundabout junction. The Cottam Way route itself is good quality for cyclists. Two-way cycling is permitted on both sides of the road and there are very few obstructions or detours. The recent changes to the highway code reduces the impact of the barrier presented by the frequent side roads where previously they would have been required to give way.
- 14.4.34 The transition between Cottam Way and Lea Road is particularly poor. The shared-use path terminates suddenly at the edge of the road in both directions along Lea Road, and there is poor intervisibility at these locations between cyclists wishing to re-join the carriageway and approaching vehicles. This junction has high flows, making it difficult to cross at the uncontrolled crossing points.
- 14.4.35 The southern section of Sidgreaves Lane (which transitions into Darkinson Lane south of the railway line) is part of the national Preston-Blackpool cycle path leading to the Scheme. This route is a single-track national speed limit country lane with low traffic flows and provides a connection to the Scheme from small settlements such as Lea and Clifton situated to the west.
- 14.4.36 The section of Sidgreaves Lane north of the Cottam Way Link Road is expected to have a lower traffic flow after the Cottam Way Link Road is constructed, thus the cycling safety and experience along the route is expected to be suitable for most levels of cycling confidence. The main barrier to cyclists approaching the site from the northwest would be in crossing the Cottam Link Road itself, which is proposed to be a two-stage uncontrolled crossing at a roundabout junction.

Public Rights of Way (PRoW) Proximate to the Scheme

- 14.4.37 The nearest PRoW to the Scheme is Footpath 44 which connects Lea Road with Sidgreaves Lane, running in close proximity to the railway line. Also proximate to the Scheme is the Lancaster Canal towpath, which runs west to east within the boundary of the Scheme. Footpath 25 is located approximately 550m to the south of the railway line and parallel and to the south of the Millenium Ribble Link. Finally, Footpath 70 runs west to east adjacent to Savick Brook and forms part of the Guild Wheel cycle route.
- 14.4.38 The existing PRoWs that are located within the study area of the Scheme are illustrated in Figure 14.17 and Table 14.6.

Figure 14.17: Public Rights of Way in Proximate to the Scheme



Footpaths	Description/Comments
proximate to the Scheme	
Lea Footpath 6	Footpath runs north between Redwood Drive and Hoyles Lane linking Woodplumpton Footpath 101 and Lea Footpath 4
Lea Footpath 4	Footpath runs north between Cottam Way and Hoyles Lane linking footpaths 5 and 6.
Lea Footpath 3	Runs south-west to north-east between Cottam Way and The Weald.
Lea Footpath 25	The Public Right of Way 6-8-FP-25 located to the south of the station site parallel to Savick Brook
Lea Footpath 26	Footpath runs south of Tudor Avenue and crosses the off- road Guild Wheel
Lea Footpath 50	Footpath is located south of the Scheme ad runs at the back of some residential properties
Lea Footpath 23a	Footpath runs parallel to Savick Brook on the north side before joining footpaths 23 and 45.
Lea Footpath 45	Footpath run south west of the scheme and connects the National Cycle Network Route 62 north and Lea Footpath 23a south respectively.
Lea Footpath 23	Footpath runs east from Lea Footpath 22 crossing a stream adjoining Savick Brook via a footbridge. The route then runs parallel to Savick Brook on the north side before joining footpaths 23a and 45. TEMPORARILY CLOSED: Works Laying Signals (until July 2023).
Lea Footpath 24	TEMPORARILY CLOSED: Works Laying Signals (until July 2023).
Lea Footpath 22	TEMPORARILY CLOSED: Works Laying Signals (until July 2023).
Lea Footpath 7	Footpath runs east from Lea Lane via Bryars Farm to Sidgreaves Lane via Earl's Farm.
	TEMPORARILY CLOSED: PWDR Work (until July 2023)

Table 14.6: Existing Public Rights of Way in Proximate to the Scheme

Footpaths affected by the scheme	Description/Comments
Lea Footpath 44	The Public Right of Way 6-8-FP-44 runs parallel to the location of the Scheme.

14.5 Consultation

14.5.1 Public consultation was carried out on the Scheme between December 2021 and January 2022. A full summary of the consultation can be viewed in Consultation Statement in Appendix 4.1.

14.6 Impacts – Construction

- 14.6.1 Details regarding the proposed levels of construction traffic would be supplied to the planning authority once a contractor has been appointed.
- 14.6.2 During the construction phase, the Scheme would be constructed predominantly off-line. Temporary construction access would be required from the Cottam Link Road and Lea Road.
- 14.6.3 There would be short term disruption to cyclists, Lancaster towpath users and PRoW users while the Scheme;
 - Intersects FP44 which would be closed during construction;
 - Creates some significant impact to the towpath;
 - Intersects Darkinson Lane and National Cycle Route 62 with the construction of the access road along alignment of Sidgreaves Lane and constriction of an access road canal bridge parallel to Quaker's Bridge. With Quaker's Bridge retained, the conflicts would be crossing construction of the access road at points of tie in. Mitigation would be provided during construction to signpost alternative cycle routes.

14.6.4 There would be short term disruption to public transport;

- There may be disruption to bus services along Lea Road as a result of slowmoving vehicles or traffic control measures in operation during construction. This would be mitigated by ensuring that traffic movements are managed in such a way that construction traffic uses the most appropriate main roads, and that traffic is kept out of sensitive areas and unsuitable roads whenever possible.
- Impacts on the railway, including the possibility of line closures during construction phases.

14.7 Impacts – Operation

14.7.1 The following section considers operational impacts of the Scheme on the transport network for both motorised and non-motorised users.

Predicted Walking and Cycling Trips

- 14.7.2 The Scheme is predicted to generate 1,146 daily passengers in 2024, increasing to 1,248 in 2039.
- 14.7.3 The percentage of walking and cycling trips anticipated under the catchment Scheme would be similar to 'Buckshaw Parkway'. Table 14.5 shows the breakdown of trips to the station by different mode. Within 0-1.2km of walking distance to the Scheme, the second most popular mode of travel (behind walking) to get to Buckshaw Parkway was by car. A total of 53 per cent and 2 per cent of the journeys are expected to be walking and cycling, respectively.

Table 14.5: Breakdown Trips to Buckshaw Parkway by Different Modes

Trip Rate model	% Walk	% Car Driver	% Car Passenger	% Bus	% Taxi	% Cycle
Study Area Average (0 -1.2km)	53%	23%	21%	1%	1%	2%

1.2 – 5 km	11%	49%	38%	0%	2%	1%
Station Choice	-	100%	-	-	-	-
Model: 5 km+						

14.7.4 Based on these examples, it is expected that walking trips would be the predominant mode of transportation to the Scheme within the 1.2km catchment area. Over this threshold it is expected that private car users would be the most common mode of transport to the Scheme.

Non-Motorised User Impacts

- 14.7.5 The Cottam area does not currently have any direct rail provision, thus the Scheme would have a very large benefit to non-motorised users due to the provision of access within easy walking and cycling distance to the wide range of locations previously summarised in Table 14.3 (Section 14.4).
- 14.7.6 On completion, the pedestrian entrances to the Scheme would be located via Sidgreaves Lane to the north-west of the site, and on Lea Road to the east. There would also be a footbridge allowing access to the westbound platform south of the line.
- 14.7.7 The segregated cycling and walking facilities provided on access road would provide a safe and high-quality alternative to the existing limited provision on Sidgreaves Lane and Lea Road for residents travelling from the north. The wide, fully segregated and lit walking and cycling facilities would tie in to the shared-use facilities provided by the upcoming Cottam Link Road, and thus will be linked to the existing high quality Cottam Way facilities. While slightly less direct than the Lea Road alternative, the provision of a continuous fully segregated route presents a moderate improvement for pedestrians and cyclists, particularly at peak times.
- 14.7.8 The quiet nature of the Darkinson Lane route south of the Scheme means it is likely to be suitable and accessible for most cyclists in the summer months, however the lack of street lighting may be a barrier to potential cycle trips from Lea and Clifton in the darker winter months due to safety concerns.

- 14.7.9 The section of Sidgreaves Lane between the Scheme and the new Cottam Link Road would be restricted to motor traffic, and shared with pedestrians, making it accessible for all levels of cycling confidence.
- 14.7.10 The main barrier to cyclist access to the site from the south is Blackpool Road, which has high traffic flows and infrequent crossing points for cyclists.
- 14.7.11 Pedestrians and cyclists travelling from the north eastern residential areas may still choose to travel along the more direct Lea Road route. The Scheme would benefit these users through the addition of a signalised crossing facility at the Lea Road site access. This facilitates a safe crossing to the Scheme from the higher quality eastern footway on Lea Road for pedestrians, and would enable less confident cyclists to make the right turn into the Scheme without having to move out in front of traffic. The crossing also provides the general benefit to all pedestrians on Lea Road regardless of destination as it upgrades the existing uncontrolled crossing to a signalised facility.
- 14.7.12 The predicted effects of the Scheme on the existing PRoW and local cycle network are described in Table 14.7.

Route number	Proposal	Impact			
Footpaths					
Lea Footpath 6	No physical impact.	Neutral			
Lea Footpath 4	No physical impact.	Neutral			
Lea Footpath 3	No physical impact.	Neutral			
Lea Footpath 25	No physical impact.	Neutral			
Lea Footpath 26	No physical impact.	Neutral			
Lea Footpath 50	No physical impact.	Neutral			
Lea Footpath 23a	No physical impact.	Neutral			

Table 14.7: Operational Impacts of the Scheme on PRoW's

Route number	Proposal	Impact			
Lea Footpath 45	No physical impact.	Neutral			
Lea Footpath 23	No physical impact.	Neutral			
Lea Footpath 24	No physical impact.	Neutral			
Lea Footpath 22	No physical impact.	Neutral			
Lea Footpath 44	Footpath diverted	Neutral			
Cycle Routes					
National Cycle Route 62 (NCR 62)	The route will be intersected by the access road, resulting in increased journey times.	Slight			
National Cycle Route 622 (NCR622)	No impact on journey times.	Neutral			
Towpaths					
Millennium Ribble Link Tow Path	No impact on journey times.	Neutral			
The Lancaster Canal towpath	No impact on journey times.	Neutral			

Proposed Walking and Cycling Facilities at the Scheme

- 14.7.13 The access road as part of the Scheme partially integrates with Sidgreaves Lane to provide a segregated two-way cycle and pedestrian footway between Cottam Link Road and the Scheme. On Lea Road, a signalised cycle crossing facility is proposed to allow cyclists and pedestrians to access and egress from Lea Road onto the two-way cycle track and adjacent footway in a safe and controlled manner.
- 14.7.14 Cycle parking spaces would be provided to the east of the railway station building and would comply with the cycle infrastructure design standards set out in LTN 1/20 and will provide safe and secure parking for train passengers and station staff. This would include cycle storage (secure, sheltered,

noticeable to the public, lit and close to the railway station building) to ensure that it is attractive and well-used.

Network Results

14.7.15 The network results for the morning peak are displayed in Table 14.9

Statistic	2024 Do Minimum	2024 Do Something	Difference	2039 Do Minimum	2039 Do Something	Difference
Average delay time per vehicle (s)	29.2	29.6	0.4	32.0	35.4	0.4
Average Speed (km/h)	68.7	68.5	-0.2	67.9	66.2	-0.3
Average Journey Time (s)	111.7	111.9	0.2	116.8	120.9	4.1
Average Delay per km (s)	15.0	15.2	0.2	16.9	17.8	0.9

Table 14.9: Network Results – Morning Peak

14.7.16 As demonstrated in Table 14.9 the introduction of the Scheme and the traffic generated by it has a slight detrimental impact upon the operation of the highway network. The average delay experienced by vehicles increases by under half a second in both 2024 and 2039. Average speeds are reduced by 0.2kph and 0.4kph in 2024 and 2039 respectively, with average journey times increasing by 0.2 seconds in 2024 increasing to 4.1 seconds in 2039. Therefore, whilst the traffic generated by the Scheme does have a slight impact upon the highway network, it will likely be imperceptible to users and therefore considered to be **negligible**.

14.7.17 The network results for the evening peak are displayed in Table 14.10.

Statistic	2024 Do Minimum	2024 Do Something	Difference	2039 Do Minimum	2039 Do Something	Difference
Average delay time per vehicle (s)	25.4	26.2	0.8	28.3	33.6	5.3
Average Speed (km/h)	70.4	70.1	-0.3	69.4	67.3	-2.1
Average Journey Time (s)	112.1	113.2	1.1	118.5	124.9	6.4
Average Delay per km (s)	12.8	13.2	0.4	13.8	16.4	2.6

Table 14.10: Network Results – Evening Peak

14.7.18 As with the morning peak results, the evening peak results in Table 14.10 also demonstrate that the introduction of the Scheme and the traffic generated by it has a slight detrimental impact upon the operation of the highway network. The average delay experienced by vehicles increases by under a second in 2024 increasing to 5.3 seconds in 2039. Average speeds are reduced by 0.3kph and 2.1kph in 2024 and 2039 respectively, with average journey times increasing by 1.1 seconds in 2024 increasing to 6.4 seconds in 2039. To conclude, the modelling indicates the impact of the station in the evening peak will be **negligible**.

Junction Level of Service Results

14.7.19 The performance of ten junctions in within the highway network have been assessed. Assessment has been undertaken for the do something scenario in 2024 and 2039. The junctions assessed can be seen in Figure 14.18.

14.7.20 The performance of the new Darkinson Lane junction with the access road was not assessed due to Darkinson Lane becoming a no-through-route with very low predicted traffic levels.



Figure 14.18 Assessed Junctions

14.7.21 The junctions assessed are as follows:

- A M55 Junction 2
- B PWDR Junction with east-west link road
- C PWDR junction with Cottam Link Road
- D Cottam Link Road / Sidgreaves Lane
- E Cottam Link Road / Station Access
- F Lea Road / Cottam Way
- G Cottam Way / Haydock Lane / Canberra Lane

- H Cottam Way / Tom Benson Way
- I PWDR / A583
- J– Lea Road / A5085 Blackpool Road

Table 14.11: Junction Level of Service Results

Junction	2024 AM	2039 AM	2024 PM	2039 PM
Α	А	А	А	А
В	А	В	A	В
С	А	А	A	А
D	А	А	A	А
E	А	А	A	А
F	А	А	A	А
G	А	А	A	А
н	А	А	A	А
I	А	В	A	В
J	В	В	В	В

14.7.22 As can be seen in Table 14.11, the modelling indicates that all of the junctions within the study area would operate with a LoS value of either A or B in both 2024 and 2039 and in both the morning and evening peaks, indicating that they will operate within their theoretical capacity.

Bus Users

14.7.23 Existing bus routes would be extended to facilitate access to the Scheme. This would have a slight impact on journey times as the diversion to the Scheme is in addition to the existing bus routes.

14.8 Mitigation

Construction Mitigation

- 14.8.1 Routes would be specifically selected to minimise impact to residents, and ensure appropriate roads are used by construction traffic and HGV's. However, to further mitigate the effects of construction related traffic on local residents and the existing road network, it is proposed that the following measures are also developed as part of engagement with the contractor. These include:
 - Deliveries of materials would be managed through the use of agreed HGV access routes and abnormal load routes to minimise potential for local traffic congestion and to avoid residential areas
 - Where possible, avoid deliveries during the identified peak hours of 08.00-09.00 and 17.00-18.00;
 - Wheel washing facilities and/or road sweepers will be utilised where required to maintain highway cleanliness;
 - HGV monitoring to ensure drivers are following prescribed routes;
 - Temporary route signage to the site would be proposed and submitted to the local highway authority for review and to ensure compliance of the above; and,
 - Staff vehicles would be parked at the construction site, and not elsewhere.
- 14.8.2 A number of other strategies could be implemented to ensure best practice for the movement of materials to and from the Scheme during construction. These include:
 - Ensuring where possible all loads are full to minimise HGV trips;

- Ensuring no dust or detritus is spread onto the highway network by installing a wheel wash facility as required and ensuring that all loads are completely covered; and,
- Route planning to avoid sensitive local receptors, based on route planning and mapping.
- 14.8.3 More information would be provided within a required Construction Environmental Management Plan (CEMP), to be produced during the detailed design stage in agreement with the contractor and would be subject to management and monitoring to ensure compliance.

Operation Mitigation

- 14.8.4 National Cycle Route 62: Crossing facilities designed to LTN 1/20 standards would be provided to the proposed segregated cycle track leading onto Sidgreaves Lane. Cyclists would have priority at this crossing, therefore the impact on journey times to cyclists using the route can be expected to be minimal.
- 14.8.5 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 to the original route approximately 40 metres north of the original footpath.
- 14.8.6 The network results from the Aimsun modelling indicate that the Scheme would have a **negligible impact** upon the operation and capacity of the highway network. Furthermore, the junction assessments indicate that with the Scheme in place, each junction within the study area will operate below 85% of their theoretical capacity. On the basis of these results, it is considered that no interventions are required to mitigate the impact of railway station vehicle traffic.
- 14.8.7 A bus gate has been included as access to Lea Road. This would limit the amount of traffic choosing to use Lea Road to access the Scheme, which

would result in a slight impact on cyclists and pedestrians approaching from the south.

14.8.8 The bus gate and accompanying signalised junction on Lea Road would benefit bus journey times.

14.9 Residual Impacts

- 14.9.1 The Scheme would result in the provision of 3m wide cycletrack on the northern side of the Scheme, providing an improved link between NCR62 and the Ashton residential area.
- 14.9.2 The access road would intersect NCR62, requiring cyclist to cross. A cycleprioritised crossing facility would be provided, however there will be a residual **slight impact** on cyclist journey times along this route.
- 14.9.3 The construction of the Cottam Link Road would enhance the positive impact of the access road non-motorised user facilities. This route is slightly less direct for cyclists travelling from the north east but would enable less confident cyclists to continue along a shared-use path directly to the Scheme (via the segregated facilities along the access road) rather than needing to use Lea Road.
- 14.9.4 For cyclists and pedestrians using the PWDR, the Cottam Link Road route would also facilitate a continuous traffic-segregated route from future proposed housing developments to the north.
- 14.9.5 Impacts on the existing PRoW network are mitigated against with the provision of an upgraded and proximate replacement route, and the provision of safe crossing locations. The wider benefit realised by the Scheme is that the cycletrack will link together the existing PRoW Footpath 7 to the relocated Footpath 44.

14.9.6 After mitigation there would be a **slight** residual impact on buses due to operationally existing services calling at the Scheme, adding to the total journey times.

14.10 Summary

- 14.10.1 This chapter has considered the planning and policy alignment of the Scheme and has demonstrated a policy and strategic fit with a range of planning and transport strategies. Each of these clearly demonstrates 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.
- 14.10.2 The Scheme is predicted to generate 1,146 daily passengers in 2024, increasing to 1,248 in 2039.
- 14.10.3 Traffic modelling undertaken of the Scheme 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.
- 14.10.4 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.
- 14.10.5 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.
- 14.10.6 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.

14.10.7 A summary of the significance of impact after mitigation for the Scheme is presented in Table 14.12.

Table 14.11: Summary of the Significance of Impact after Mitigation

Description of Impact	Significance of Impact	
Pedestrians and Cyclists		
Impact on NMUs during the construction phase	Moderate Adverse (Short-term, construction)	
Impact on NMUs during the operational phase	Slight Benefit (Long-term, operational)	
Public transport		
Impact on users of public transport during the construction phase	Slight adverse (Short- term, construction)	
Impact on users of public transport during the operational phase	Large Benefit (Long- term, operational)	

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