

Alternative Temporary Park and Ride and Heavy Goods Vehicle Marshalling Area - Environmental Statement Volume 2 Chapter 10: Traffic and Movement

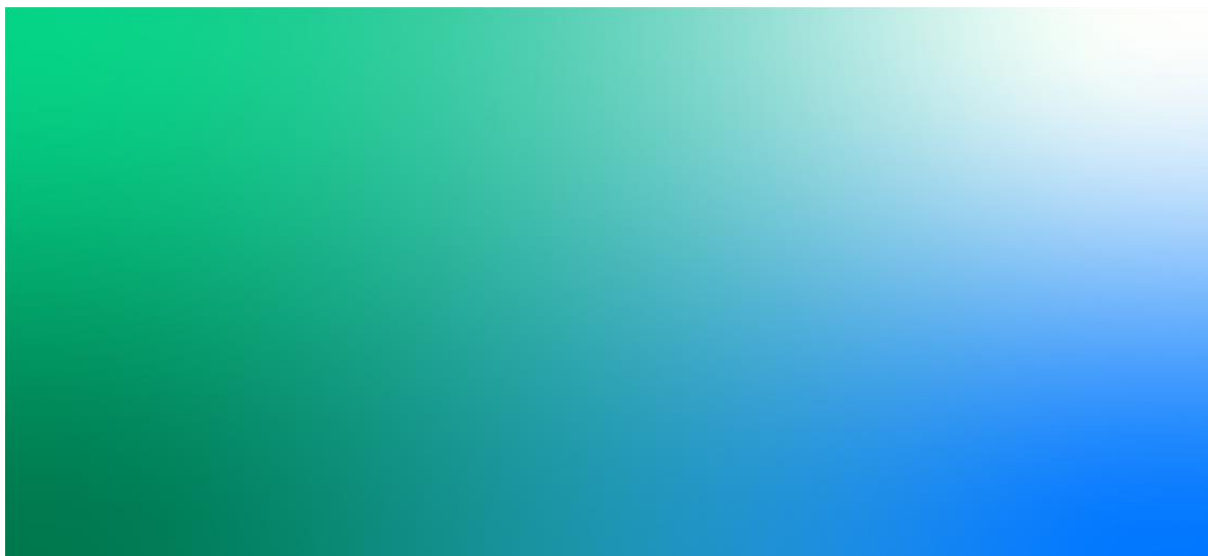
United Utilities Water Limited

Haweswater Aqueduct Resilience Programme

Planning Application Document RVBC-P&R-APP-RP-002 / ES-CH-10
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Water for the North West



Alternative Temporary Park and Ride and Heavy Goods Vehicle Marshalling Area - Environmental Statement Volume 2 Chapter 10: Traffic and Movement

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10. Traffic and Movement

10.1 Overview and Scope of the Assessment

- 1) This chapter details the likely significant effects of the Alternative Facility in relation to traffic and movement, during the construction, operational and decommissioning phases. This chapter will address:
 - Baseline conditions¹
 - Assessment methodology
 - Likely significant environmental effects
 - Potential mitigation measures
 - Likely residual effects.
- 2) The identification of potential environmental effects and mitigation strategies has been carried out using the Institute of Environmental Management and Assessment (IEMA) guidelines². This guidance is reviewed in more detail in Section 10.2.
- 3) The following potential effects of the Alternative Facility are considered in this chapter in accordance with the IEMA guidelines:
 - Road vehicle driver and passenger delay
 - Non-motorised user (NMU) delay
 - NMU amenity
 - Road user and pedestrian safety
 - Hazardous and abnormal and invisible loads³.
- 4) The assessment methodology in this chapter focuses on the identification of environmental effects. Additional detail on the potential highways and transport impact associated with the Alternative Facility is presented separately in Appendix F.1 Transport Statement.
- 5) This chapter is supported by the following figures and appendices:
 - Figure 10.1 Traffic and Movement Study Area
 - Figure 10.2 Public Rights of Way Plan
 - Figure 10.3 Traffic Count Site Locations
 - Figure 10.4 Road Traffic Collisions
 - Appendix F.1 Transport Statement
 - Appendix F.2 Construction Traffic Management Plan Addendum⁴

¹ Baseline: Describes the existing nature of the environment within the study area at a fixed point in time, as well as any changes likely to occur independently of the Alternative Facility.

² IEMA (2023). IEMA Guidelines: Environmental Assessment of Traffic and Movement. [Online] Available at: <https://www.iema.net/resources/blogs/2023/07/12/iema-guidance-ea-of-traffic-and-movement/> [Accessed: January 2025].

³ Abnormal loads: Large, heavy, or wide cargo that cannot be transported by a standard vehicle.

⁴ The Construction Traffic Management Plan is a plan developed by United Utilities with coordination with the Jacobs Traffic and Transport team, to manage traffic associated with the construction phase of the project.

- Appendix F.3 Swept Path Analysis
 - Appendix F.4 PICADY Capacity Analysis Results.
- 6) A list of abbreviations and acronyms is presented in Volume 4 Appendix A.1.
- 7) This chapter considers the following traffic scenarios as part of the traffic and movement assessment:
- Construction Phase – Defined as the 10-month programme when the construction of the Alternative Facility would take place. The assessment of this scenario focuses on the impacts related to the construction traffic generated during the Alternative Facility's construction phase.
 - Operational Phase – Defined as the operation of the Alternative Facility during the construction of the consented schemes. Because the consented schemes remain unchanged, the volumes of vehicles accessing/egressing the Alternative Facility in its operational phase would remain the same as for the consented park and ride/HGV marshalling area. There is, however, expected to be a change in traffic patterns on A671 Pimlico Link Road and West Bradford Road resulting from the alternative siting of the facility. The effects of these changes in traffic patterns are therefore assessed in this chapter.
 - Decommissioning Phase – Defined as the process of decommissioning the Alternative Facility once its operational phase is complete.

10.1.1 Scope of the Assessment

- 8) United Utilities issued the Scoping Report for the Alternative Facility to Ribble Valley Borough Council in October 2024. This set out the proposed scope of the assessment for each environmental topic. The following matters were scoped out of the assessment, as these were unlikely to result in significant effects given the embedded and good practice measures referenced in Appendix A.2 Construction Code of Practice:
- Severance of local communities – the Alternative Facility would not give rise to community severance as there would be no new or additional community effects over and above those described in the Environmental Statement for the consented schemes
 - Fear and intimidation – due to the nature and scale of the Alternative Facility, it is not likely to give rise to significant fear and intimidation concerns for road users.
- 9) Table 10.1 presents the scope of the assessment for traffic and movement based on the likely significant effects that would occur as a result of the Alternative Facility.

Table 10.1: Matters Scoped into the Assessment

Receptor/ Receptor Group	Matter/Likely Significant Effects	Comments
Road Users	Road users can experience delays to journey times and increased safety risks.	The assessment addresses road users on A671 Pimlico Link Road and West Bradford Road only.
NMUs	NMUs could experience severance and delays caused by the impact of highways works on a local Public Right of Way (PRoW) ⁵ .	The assessment addresses impacts on footpath FP0348005 and any other directly affected by the Alternative Facility; including severance, amenity and delays at road crossings.

⁵ Public Right of Way: Routes where there is a legal right to pass and repass covering a wide spectrum of different physical paths, tracks and unmarked ground.

10.2 Key Legislation, Policy and Guidance

- 10) Table 10.2 sets out key legislation, policy and guidance of relevance for traffic and movement.
- 11) There is no legislation specific to the environmental assessment of traffic and movement and associated effects.

Table 10.2: Key Legislation and Guidance for Traffic and Movement

Applicable Legislation and Guidance	Description
National Policy	
National Planning Policy Framework (NPPF) ⁶	The NPPF seeks to encourage development which aligns with the sustainable objectives of maximising sustainable transport solutions (Paragraph 110) and promoting the efficient delivery of goods (Paragraph 117). It emphasises the importance of considering the impact of the development on the transport network and environment at the earliest stages of plan-making (Paragraph 109). The latest revision to the NPPF, released in December 2024, adds how a 'vision-led approach' to transport planning should be used, which should focus on the desired outcomes and then plan for achieving them. To support this approach, amendments have been made in particular to Paragraphs 114 and 115 of the existing NPPF (now Paragraphs 115 and 116). The details of the changes are outlined in the 'Proposed reforms to the NPPF and other changes to the planning system' webpage⁷. The revisions include the following statements that apply to the Alternative Facility: ▪ Sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location (Paragraph 115) ▪ 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 through a vision-led approach (Paragraph 115) ▪ Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or if the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios (Paragraph 116). The nature of the Alternative Facility aligns with the objectives of the NPPF and with the latest revisions. The Alternative Facility promotes a more sustainable transport solution, by reducing staff dependency on single-occupancy car journeys; and reduces the impact on the road network by reducing the overall number of vehicles generated by the Alternative Facility. The Heavy Goods Vehicle (HGV) marshalling area promotes the efficient delivery of goods, as the facility would enable HGV traffic on the road network to be controlled to reduce its impacts. The Alternative Facility contributes to an overall mitigation strategy for the consented schemes which is implemented through the associated Construction Traffic Management Plan (CTMP), to reduce the impact of the Alternative Facility on the road network. Further details are contained in Appendix F.1 Transport Statement, and Appendix F.2 Construction Traffic Management Plan Addendum.

⁶ Ministry of Housing, Communities and Local Government (2024a). National Planning Policy Framework. [Online] Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf [Accessed: January 2025].

⁷ Ministry of Housing, Communities and Local Government (2024b). Proposed reforms to the National Planning Policy Framework and other changes to the planning system. [Online] Available at: <https://www.gov.uk/government/consultations/proposed-reforms-to-the-national-planning-policy-framework-and-other-changes-to-the-planning-system/proposed-reforms-to-the-national-planning-policy-framework-and-other-changes-to-the-planning-system> [Accessed: January 2025].

Applicable Legislation and Guidance	Description
Planning Practice Guidance – Environmental Impact Assessment ⁸	This guidance webpage details the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ⁹ (the EIA Regulations). The guidance details the purpose of an Environmental Impact Assessment and the stages of the process. The guidance also describes how to submit an Environmental Statement, the requirements of one, and the process of considering planning applications that have been subject to an Environmental Impact Assessment.
Local Policy	
Ribble Valley Borough Council Core Strategy ¹⁰	The Core Strategy was adopted in 2014 and sets out the strategic planning policy framework to guide development in the borough up to 2028. The following local planning policies are relevant to transport: ▪ DMI1: Planning Obligations ▪ DMI2: Transport Considerations ▪ DMG1: General Considerations ▪ DMG3: Transport and Mobility.
Lancashire County Council Creating Civilised Streets ¹¹	This policy is based on the Department for Transport (DfT) publication Manual for Streets ¹² and focuses on the changes that can be made to existing street environments to achieve the objectives of street design: ▪ Enhance people's quality of life ▪ Improve safety, security and health ▪ Address climate change and protect the environment ▪ Create sustainable communities ▪ Contribute towards local and economic growth.
Lancashire County Council Infrastructure and Planning ¹³	This policy was produced to identify how Lancashire County Council will engage and inform outcomes of the planning process. It describes how investment will be focused on plans that promote sustainable transport modes and minimise development-related impacts on the environment and on road networks.
Lancashire County Council Business Travel Plans ¹⁴	This webpage discusses business travel plans, development travel plans and the support which Lancashire County Council can provide to help those submitting planning applications. It provides advice in relation to development and travel plans, stating that ' <i>a travel plan is requested for any planning application where the development will generate significant amount of movement</i> '.

⁸ Ministry of Housing, Communities and Local Government (2020). Planning Practice Guidance – Environmental Impact Assessment. [Online] Available at: <https://www.gov.uk/guidance/environmental-impact-assessment> [Accessed: January 2025].

⁹ The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. [Online] Available at: <https://www.legislation.gov.uk/uksi/2017/571/contents> [Accessed: January 2025].

¹⁰ Ribble Valley Borough Council (2014). Core Strategy 2008 – 2028 A Local Plan for Ribble Valley. [Online] Available at: <https://www.ribblevalley.gov.uk/downloads/file/1700/adopted-core-strategy> [Accessed: January 2025].

¹¹ Lancashire County Council (2010). Creating Civilised Streets. [Online] Available at: https://www.lancashire.gov.uk/media/81455/creating_civilised_streets.pdf [Accessed: January 2025].

¹² Department for Transport (2007). Manual for Streets. [Online] Available at: <https://assets.publishing.service.gov.uk/media/5a7e0035ed915d74e6223743/pdfmanforstreets.pdf> [Accessed: January 2025].

¹³ Lancashire County Council (2017). Infrastructure and Planning. [Online] Available at: <https://www.lancashire.gov.uk/media/903323/infrastructure-and-planning.pdf> [Accessed: January 2025].

¹⁴ Lancashire County Council (n.d.). Business Travel Plans. [Online] Available at: <https://www.lancashire.gov.uk/business/business-services/business-travel-plans/> [Accessed: October 2024].

Applicable Legislation and Guidance	Description
Guidance	
IEMA Guidelines: Environmental Assessment of Traffic and Movement ²	The purpose of these guidelines relates to assessing the environmental impacts arising from changes in traffic and movement. With reference to the requirements of the EIA Regulations, this relates primarily to potential impacts on population and human health, and biodiversity, typically through impacts on air quality, water and noise. Specifically for traffic and movement, the categories identified in the guidelines that require assessment include: severance of communities; driver delays; pedestrian delays and pedestrian amenities; accident and safety; and hazardous/abnormal indivisible loads.

10.3 Study Area

- 12) The Alternative Facility is an alternative site to the consented facilities. The traffic and movement effects associated with the consented schemes remain largely unchanged. The scope of the assessment therefore reflects only those sections of the highway network where changes in traffic patterns occur between the previously consented facilities and the Alternative Facility. For completeness, a 200 m extent has been applied at the limits of the study area to capture all links where changes in traffic patterns are likely to occur. The study area is shown in Figure 10.1 and covers the following sections of highway network:
- A671 Pimlico Link Road between A59/A671 junction immediately south-east of the Alternative Facility site access, and the A671/Chatburn Road/Pimlico Link Road roundabout. The study area also captures 200 m of the A671/Chatburn Road arms of the roundabout
 - A59 sections immediately east and west of A59/A671 junction
 - West Bradford Road between where it joins Pimlico Link Road to the south, and as far north as 200 m beyond the consented P&R and consented HGV marshalling facilities.
- 13) There are seven PRoWs interacting with the study area, as detailed in Figure 10.2, including footpath FP0348005 in the vicinity of the Alternative Facility site access. The Alternative Facility would be accessed from A671 Pimlico Link Road via an existing farm access, which would be upgraded to form a temporary junction. The junction has been designed in consultation with the highway authority, meeting relevant highway standards for motorist and NMU safety. PRoW FP0348005, shown in Figure 10.2, which crosses A671 Pimlico Link Road at the site of the proposed junction, would be temporarily closed and diverted and incorporated into the junction in the form of an uncontrolled pedestrian dropped crossing with tactile paving across the northern arm of the junction, to enable users to pass safely from one side of the road to the other and to provide users with improved visibility of oncoming traffic. The proposed junction layout is illustrated in the drawing RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application.

10.4 Baseline Environment

10.4.1 Data Sources and Field Surveys

- 14) The following data sources have been used to help establish an understanding of the baseline environment:
- Traffic Count Data from surveys conducted from 1 to 7 July 2024. This includes automatic traffic counts (ATC)¹⁵ and junction turning counts (JTC)¹⁶, as shown in Figure 10.3
 - Vehicle speed surveys at each of the ATC sites, conducted over the same weeklong period, including at ATC Site 14 in the vicinity of the Alternative Facility site access
 - Queue length survey at the A59/A671 Pimlico Link Road junction, covering the a.m. and p.m. peaks on Tuesday 2 July 2024
 - NMU survey conducted by Tracsis on a weekday (2 July 2024) and a weekend (6 July 2024) associated with footpath FP0348005
 - DfT Road Accidents and Safety Data (2017-2023)¹⁷ for the proposed study area.
- 15) Field surveys were also undertaken to support the desk study information and the understanding of the baseline environment. This included a visit to the site, undertaken on 19 June 2024.

10.4.2 Existing Baseline

- 16) The study area defined in Section 10.3, and the data sources detailed in Section 10.4.1, have been used to provide an understanding of the existing baseline environment in the vicinity of the Alternative Facility.

10.4.2.1 Traffic Flows

- 17) Traffic surveys were conducted in July 2024 and have been used to establish the existing baseline traffic levels within the study area defined in Figure 10.1. The traffic count survey locations are shown in Figure 10.3. To gain an understanding of how present-day traffic flows have changed from the 2019 baseline data that supported the consented schemes, the 2024 traffic surveys were compared to those carried out in 2019. The key link in this analysis is A671 Pimlico Link Road, from which access to the site is proposed. Table 10.3 presents the differences between the five-day weekly average traffic flows recorded in 2019 and 2024 for the morning peak hours (07:00 to 08:00 and 08:00 to 09:00), evening peak hours (17:00 to 18:00 and 18:00 to 19:00) and 12-hour daytime period (07:00 to 19:00).

¹⁵ Automatic Traffic Count: Traffic count that involves using sensors or cameras to collect data on vehicle flow, speed and other traffic-related information.

¹⁶ Junction Turning Counts: Classified turning traffic counts conducted by video camera which are used to classify the movements of vehicle through a junction over a 12-hour period, summarised in 15-minute intervals by movement with period totals.

¹⁷ Department for Transport (2024). Road Safety Data. [Online] Available at: <https://www.data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-safety-data> [Accessed: November 2024].

Table 10.3: Comparison of Two-Way Link Flows on A671 Pimlico Link Road Between 2019 and 2024

A671 Pimlico Link Road	2019 Two-Way Flow		2024 Two-Way Flow	
	Total	HGV (%)	Total	HGV (%)
AM Peak (07:00-08:00)	361	74 (20.5%)	440	65 (14.8%)
AM Peak (08:00-09:00)	562	94 (16.7%)	593	93 (15.7%)
PM Peak (17:00-18:00)	485	41 (8.5%)	487	27 (5.6%)
PM Peak (18:00-19:00)	294	26 (0.9%)	332	19 (0.6%)
12-hour (07:00-19:00)	5,140	963 (18.7%)	5,557	913 (16.4%)

- 18) The five-day weekly average traffic flows in 2024 on A671 Pimlico Link Road are shown to remain broadly comparable to those recorded in 2019 during the 08:00 to 09:00 and 17:00 to 18:00 peak hours where an increase in total vehicle flows of approximately 5.5% and 0.4% has occurred respectively. In contrast, the initial 07:00 to 08:00 morning hour and 18:00 to 19:00 evening hour represent greater increases in total vehicle flows of approximately 21.9% and 12.9% respectively.
- 19) Across all morning and evening peak hours the HGV percentage decreases in 2024 compared to 2019, with the largest reduction occurring in the 07:00 to 08:00 morning hour, decreasing from 20.5% to 14.8%. It is evident that the trend remains, whereby the largest volumes of HGV movements on A671 Pimlico Link Road take place in the morning peak hours where they represent a much higher percentage of the total vehicle flow compared to the evening peak hours and are typically spread throughout the daytime period.
- 20) Over the 12-hour daytime period, total vehicle flows increase by approximately 8.1% between the 2019 and 2024 traffic surveys, although HGV percentages decrease by approximately 2.3% over this period.
- 21) Overall, it is evident that the 08:00 to 09:00 and 17:00 to 18:00 hours remain the typical morning and evening peak hours on A671 Pimlico Link Road. Notably, the overall daytime traffic levels have increased by a marginal amount which has largely occurred outside of these peak hours. The volumes of HGVs travelling on this section of the corridor are shown to have decreased in each of the morning and evening hours compared to the levels recorded in 2019 that informed the consented schemes. The 2024 traffic surveys have subsequently been used to inform the baseline position for the assessment of environmental impacts presented in Section 10.6.

10.4.2.2 Vehicle Speed Surveys

- 22) The July 2024 traffic surveys included vehicle speed surveys, undertaken over the same weeklong period, including in the vicinity of the Alternative Facility access on A671 Pimlico Link Road. The vehicle speed survey was conducted over the same period as the ATC traffic counts (1 to 7 July 2024) and the survey location is shown by ATC Site 14 in Figure 10.3.
- 23) The recorded vehicle speeds averaged 43.4 mph (combined directions) and an 85th percentile speed of 50.0 mph (combined directions) over the seven-day period. A671 Pimlico Link Road is subject to a 40 mph speed limit, and the results therefore offer evidence that vehicles may typically travel at higher speeds on this section of the carriageway.

10.4.2.3 Queue Length Surveys

- 24) The July 2024 traffic surveys also gathered queue length data for the A59/A671 Pimlico Link Road junction between the hours of 07:00-10:00 and 16:00-19:00. The queue length survey¹⁸ was carried out on Tuesday 2 July 2024 between the hours of 07:00-10:00 and 16:00-19:00.
- 25) During the morning peak, there was a maximum queue length of 195 m (at 08:45), and the data suggest that the period of increased congestion occurs between 08:30 and 09:00. During the evening peak, there was a maximum queue length of 260 m (at 17:10) and the data suggest that the period of increased congestion occurs between 17:00 to 17:25. Further analysis of the queue lengths at this junction is presented in the Transport Statement, contained in Appendix F.1.
- 26) Critically, the distance between the A59 junction and the Alternative Facility site access is approximately 400 m, which means the queue is not anticipated to extend to the site access.

10.4.2.4 Non-motorised Users

- 27) There is an existing PRoW footpath (FP0348005) which traverses the location of the Alternative Facility site access. Given the proximity of the PRoW to the Alternative Facility site access, an NMU survey was conducted at the location in which the PRoW crosses A671 Pimlico Link Road to understand its level of daily usage. The NMU survey was conducted on 2 July (weekday) and 6 July (weekend) 2024. The survey results revealed that there is minimal activity associated with this route where a total of five pedestrian movements (two travelling eastbound, three travelling westbound) were recorded across a neutral weekday; and 16 pedestrian movements (nine pedestrians travelling eastbound, seven travelling westbound) were recorded over the Saturday. No cyclists or equestrians were recorded using this PRoW on either of these surveyed days. The results of this NMU survey are summarised in Table 10.4.

Table 10.4: Summary of Results of 2024 NMU Survey on Pimlico Link Road

Total Daily Flows	Weekday, One Way	Weekend, One Way
Eastbound Movements	2	9
Westbound Movements	3	7

- 28) The ATC survey located on A671 Pimlico Link Road revealed a small number of cyclists using this link. A total average of eight cyclists per day (two-way) were recorded during Monday to Friday and similarly, a total of eight cyclists (two-way) were recorded on a Saturday.

10.4.2.5 Road Safety Review

- 29) A Personal Injury Collision (PIC) analysis, identifying road collisions and safety statistics, has been carried out. Due to the effects of the COVID pandemic during the years 2020 and 2021, which has the potential to result in non-typical traffic conditions on the local highway network, the additional two years prior to the pandemic have been included in the analysis. The study period therefore reflects 2017-2023. The catchment area reflects the extent of the proposed study area described in Section 10.3, along with a 200 m buffer zone around all junctions.
- 30) The PIC analysis has been carried out using data obtained from the DfT Road Accidents and Safety Data. This dataset comprises road collision statistics collected from information relating

¹⁸ Queue Length Surveys: Queue lengths are recorded by lane as part of the junction turning count (JTC) surveys at the end of each 5-minute period.

to PICs, and their consequent casualties in Great Britain to a common national standard. This dataset is advised by IEMA guidelines and is consistent with the dataset used as part of the consented schemes. The dataset does include a mid-year collisions summary for 2024, but these data are unvalidated and have hence been excluded from the analysis.

- 31) All collisions identified in the study area in the years 2017-2023 are shown in Figure 10.4. No fatal collisions were identified in the study area across this period. A total of 24 collisions were identified, of which six were deemed to be 'Serious' and 18 were 'Slight'.

10.4.3 Future Baseline

- 32) Future baseline traffic conditions have been derived using industry standard traffic growth forecasts, based on the following sources:
- Trip End Model Presentation Program (TEMPro)¹⁹
 - National Trip End Model²⁰.
- 33) The potential for cumulative effects associated with other, unrelated, committed and emerging projects has been considered. This includes traffic associated with the consented schemes away from the Alternative Facility.
- 34) Further detail is provided in Appendix F.1 Transport Statement which outlines the methodology used to identify applicable cumulative developments to be captured as part of the future baseline. Cumulative effects are further considered in Chapter 12 Cumulative Effects.

10.4.4 Alternative Facility

10.4.4.1 Construction Phase

- 35) Construction of the Alternative Facility is planned to take place over a 10-month programme beginning in early 2026. This would include enabling works, construction of the Alternative Facility site access from A671 Pimlico Link Road (including accommodation of PRoW Footpath FP0348005 into the design), asphalt-laying for the HGV marshalling area, car parking surface and internal circulation routes, as well as construction of the Site Drainage Attenuation Area and installation of welfare facilities. It has been agreed with Lancashire County Council (LCC) that the proposed new site access would take the form of a priority-controlled junction. The proposed junction layout is illustrated in the drawing RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application.
- 36) It is not expected that there would be any requirement for abnormal indivisible loads during the construction phase. A 2026 peak year is therefore identified for assessment of the construction phase.
- 37) On the basis of the above, the magnitude of impacts identified on the wider highway network are expected to remain consistent with those set out in the Environmental Statements and planning applications for the consented schemes.

¹⁹ Department for Transport (2023). Trip End Model Presentation Program (TEMPro) download. [Online] Available at: <https://www.gov.uk/government/publications/tempro-downloads>

²⁰ Department for Transport (2024). National Trip End Model (NTEM) [A transportation model used to forecast the growth in trip origins and destinations within a region] [Online] Available at: <https://www.data.gov.uk/dataset/11bc7aaf-ddf6-4133-a91d-84e6f20a663e/national-trip-end-model-ntem>

10.4.4.2 Operational Phase

- 38) Once operational, the Alternative Facility would act as a vehicle hub for HGVs and commuting workers associated with the construction of the consented schemes. Consequently, the Alternative Facility would help support the reduction in the number of vehicle trips generated by commuting workers whilst also controlling the movement of construction vehicles on the local road network.
- 39) The HGV marshalling area would hold HGVs before releasing them in escorted convoys onto the public highway network to manage their frequency, whilst also controlling the directional movement of vehicles greater than circa 2.55 m width on the public highway network. The HGV marshalling area would additionally provide a place to hold vehicles during school drop off/ collection periods when HGV movements would be restricted from travelling on the public highway network.
- 40) Construction workers would travel to the Alternative Facility, where they would leave their personal vehicle before travelling to the consented schemes on a fleet of minibuses.
- 41) There would be localised changes in traffic patterns on the immediate local highway network on the A671 Pimlico Link Road section between the Alternative Facility site access and the consented facilities sited further north at the Ribblesdale Cement Works. The road links with potential to be affected by these changes in traffic patterns form the study area considered in this chapter as outlined in Section 10.3.
- 42) The estimated operational vehicle numbers and daily scheduling over the duration of the HARP construction programme would be the same as for the original consented planning application. Therefore, it is not anticipated that the volumes of construction and workforce vehicles required for the construction of HARP would differ to those presented as part of the consented facilities. However, given that the relocation of the facility is likely to result in localised changes in traffic patterns to A671 Pimlico Link Road and West Bradford Road, it is necessary to consider the peak construction vehicles specifically using this route.
- 43) The Alternative Facility would serve the Newton-in-Bowland, Bonstone and Braddup compounds but not the Lower Houses compound, which would be accessed via a route to the north of the Bowland fells within LCC's administrative area. The peak construction traffic and associated peak year in which this occurs therefore excludes construction traffic associated with the Lower Houses compound, since this traffic would not be present on A671 Pimlico Link Road. In contrast, the Transport Assessments that supported the Consented Schemes relating to the Marl Hill Section of HARP (planning application reference 2/2021/0661) and the Bowland Section (planning application reference 3/2021/0660) considered a wider study area relative to the HARP proposals and therefore traffic data associated with all four compounds were used to determine the peak traffic generation. Further details on the methodology used to determine the peak traffic generation for the operational phase are provided in Appendix F.1 Transport Statement.
- 44) It should also be noted that the operational phase traffic does not include consented construction traffic associated with the construction of the Ribble and Hodder Crossings since these elements of the consented schemes would be constructed at the same time as the Alternative Facility. They would therefore form part of the cumulative traffic impacts in the construction phase. Further detail is provided in Chapter 12 Cumulative Effects.
- 45) On the basis of the above, the magnitude of impacts identified on the wider highway network are expected to remain consistent with those set out in the Environmental Statements and planning applications for the consented schemes.

10.4.4.3 Decommissioning

- 46) The decommissioning of the Alternative Facility would begin once the operational phase is complete. This phase is a requirement due to the temporary nature of the proposals. The number of vehicle movements generated during the decommissioning phase is expected to be of a similar level to those required during the construction phase, and therefore substantially fewer than the traffic movements generated in the operational phase. The effects in traffic and movement terms are therefore expected to be of a similar magnitude to those of the construction phase.

10.4.5 Assessment Scenarios

- 47) The potential environmental impacts associated with the Alternative Facility have been assessed using the scenarios set out in Table 10.5.
- 48) It should be noted that the 2028 Operational Do Minimum scenario does not include any cumulative traffic since there were no applicable committed or emerging developments relevant to the study area that were identified for this period, whilst the traffic generated by the consented schemes would utilise the Alternative Facility during its operational phase. This is, therefore, not deemed to be cumulative development. Further details are provided in Chapter 12 Cumulative Effects.

Table 10.5: Future Traffic Assessment Scenarios

2026 Construction Peak		2028 Operational Peak	
2026 Construction 'Do Nothing' scenario	TEMPro traffic growth applied to 2024 Existing scenario	2028 Operational 'Do Nothing' scenario	TEMPro traffic growth applied to 2024 Existing scenario
2026 Construction 'Do Minimum' scenario	TEMPro traffic growth + cumulative development applied	2028 Operational 'Do Minimum' scenario	TEMPro traffic growth + cumulative development applied
2026 Construction 'Do Something' scenario	TEMPro traffic growth + cumulative development + Alternative Facility construction activities	2028 Operational 'Do Something' scenario	TEMPro traffic growth + cumulative development + consented schemes

10.4.6 Traffic Distribution

- 49) As part of the consented schemes, it was agreed with LCC that a spreadsheet model would be produced to define daily and hourly impacts for the traffic and movement assessment. For consistency the same methodology has been applied for the Alternative Facility, using the spreadsheet model, which has included the following worker and construction vehicle traffic assumptions:
- Origin/destination of material and other deliveries – assumed to travel via the strategic road network using the M6 motorway routing via the A59. Therefore, HGVs are assigned to/from the A59/A671 Pimlico Link Road junction immediately south-east of the Alternative Facility. This applies to both construction and operational phase traffic. This approach reflects the aspirations of Lancashire County Council as local highway authority and the acceptance of all parties that construction activity should be concentrated on the principal routes best equipped to accommodate it.
 - Origin of employee trips to construction areas – it is assumed that workers would be accommodated in the same employee catchment area defined for the consented schemes,

which used labour market statistics based on the 2011 Census.²¹ Both construction and operational worker trips have been distributed across the study area using the same method. Therefore, the main areas where workers would live include Lancaster, Preston, Burnley, Blackburn and Clitheroe. Based on the traffic distribution, the majority of worker private vehicles would arrive at the Alternative Facility from the south via the A59/A671 Pimlico Link Road junction. Minibuses would then shuttle the workers to the compounds further north and these trips have therefore been assigned to A671 Pimlico Link Road section north of the Alternative Facility site.

10.4.6.1 Traffic Impact Assessment Method

- 50) The Alternative Facility would serve the consented schemes during their construction phases. The CTMP supporting the consented schemes confirmed the main construction activities would be limited to Monday to Friday (07:00 to 19:00) and Saturday mornings (07:00 to 13:00). Each of the construction, operation, and decommissioning phases of the Alternative Facility are therefore expected to align with these general working hours.
- 51) To maintain consistency with the traffic methodology agreed with LCC Highways for assessment of the consented schemes, the same traffic movement hours that were adopted for the original Transport Assessments that supported the Marl Hill Section (planning application reference 3/2021/0661) and the Bowland Section (planning application reference 3/2021/0660) have been applied to both the construction and operational phases of the Alternative Facility to assess traffic impacts. These reflect the movement of worker and HGV movements as follows:
- 06:45 to 08:00 and 18:45 to 20:00 (two shifts) – light movements (private car/minibus/vans) for commuting movements
 - 09:00 to 14:45 and 16:00 to 18:45 Monday to Friday and on Saturday between 08:00 to 13:00 – HGVs and abnormal load movements.
- 52) The above operating hours therefore restrict the movement of vehicles between 08:00 to 09:00 and 14:45 to 16:00 Monday to Friday to avoid traffic present on the public highway network during school drop-off times.
- 53) The above operating hours have been applied to the construction and operational traffic of the Alternative Facility for the purposes of the assessment of traffic and movement effects presented in this chapter.

10.4.6.2 Alternative Facility Traffic Hours

- 54) As part of the subsequent planning permissions granted for the consented schemes, the planning decision notice (Application Reference: 3/2021/0660²² and Application Reference: 3/2021/0661²³) included Condition 4.1 which stated:

"For the 'Main Project Stage', during school term times, no HGV movements, associated with the development approved, will be permitted along Route 2b (as defined in Condition 3.4) during the following hours:

²¹ Office for National Statistics (2011). 2011 Census. [Online] Available at: <https://www.ons.gov.uk/census/2011census>

²² [Planning Application - Ribble Valley Borough Council](https://webportal.ribblevalley.gov.uk/site/scripts/planx_details.php?appNumber=3%2F2021%2F0660), Application Reference: 3/2021/0660 [Online] Available at: https://webportal.ribblevalley.gov.uk/site/scripts/planx_details.php?appNumber=3%2F2021%2F0660

²³ [Planning Application - Ribble Valley Borough Council](https://webportal.ribblevalley.gov.uk/site/scripts/planx_details.php?appNumber=3%2F2021%2F0661), Application Reference: 3/2021/0661 [Online] Available at: https://webportal.ribblevalley.gov.uk/site/scripts/planx_details.php?appNumber=3%2F2021%2F0661

- 08:15 to 09:15 (Monday to Friday)
- 15:00 to 16:00 (Monday to Friday)

For the avoidance of doubt during school holidays the above restrictions will not be applicable."

- 55) The above hours supersede those applied in the original traffic impact assessment undertaken for the consented schemes and would therefore be adopted for the operational phase of the Alternative Facility. The HGV restricted hours would not apply to the construction phase since Route 2b relates to West Bradford Road (link C571 in the traffic model), which lies further north of the Alternative Facility. In accordance with the traffic distribution method, all HGV construction traffic would arrive/depart the Alternative Facility site via the A59/A671 Pimlico Link Road junction to the south-east and would therefore not impact any schools concerned with Condition 41.
- 56) In addition, United Utilities has identified that there may be requirement to consider a wider worker commuting period for the Alternative Facility to enable a degree of flexibility once the contractor is in place. The following worker commute times are therefore proposed to be taken forward for all phases of the Alternative Facility:
- 06:00 to 08:00 and 18:00 to 20:00 – light movements (private car/minibus/vans) for commuting movements.
- 57) In reality, there is potential that the construction and demolition phases would follow more typical daytime working hours, however this cannot be confirmed until the contractor is in place. It is also anticipated that minibus movements during the operational phase may not entirely fall within these hours since there could be a requirement to transport a small proportion of personnel on demand throughout the working day.
- 58) A sensitivity test has been undertaken as part of the traffic impact assessment to determine whether the revised HGV restrictions and proposed revisions to commuter hours would alter the conclusions of the main assessments. This has involved amendments to the hourly traffic distribution to align with the revised hours that construction and operational traffic would access the public highway network. The results of the sensitivity test are presented in Appendix F.1 Transport Statement and confirm that the revised hours have no material effect on the 12-hour and hourly link flows and therefore, there would be no change in traffic and movement effects.

10.5 Methodology

- 59) The potential highways and transport-related environmental effects of delivering the Alternative Facility have been assessed with reference to guidance outlined within Environmental Assessment of Traffic and Movement². These guidelines inform the environmental assessment of road traffic associated with major new developments and are designed to be applied to off-site traffic impacts.
- 60) Table 10.6 presents the criteria to assess value (sensitivity), which is based on a combination of the importance or rarity of the receptor²⁴ (e.g. level of designation) and also its susceptibility or vulnerability to the Alternative Facility.

²⁴ Receptor: A receptor refers to a specific component of the environment that could be adversely affected by an environmental impact.

Table 10.6: Criteria to Assess the Value/Sensitivity for Traffic and Movement

IEMA Guidelines: Environmental Assessment of Traffic and Movement ²	
Contributing Factors to Sensitivity Value	
Sensitive Groups and Locations	People at home
	People in workplaces
	Sensitive groups, including children, elderly and disabled
	Sensitive locations, including hospitals, churches and schools
	NMUs and PRoW users
	Open spaces, recreational sites and shopping areas
	Sites of ecological or nature conservation value
	Sites of tourist and visitor attraction
	Locations and routes with road safety concerns or collision clusters
	Junctions and highway links at or over capacity
IEMA Rules – denoting where a more detailed analysis of environmental effects is required	
Rule 1 – ‘Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)’.	The IEMA guidelines state that day-to-day variation of traffic on a route corridor is frequently at least + or – 10% of data recorded on a single survey date, and therefore projected changes in traffic of less than 10% would create no discernible environmental impact. As a result, IEMA guidelines recommend that as a starting point, a 30% change in traffic flow or HGV volumes is a reasonable threshold for including a highway link in an Environmental Impact Assessment.
Rule 2 – “Include any other specifically sensitive areas where traffic flows have increased by 10% or more”.	However, a 10% change in traffic is considered significant in environmentally ‘sensitive’ areas. The IEMA guidelines highlight places which could be considered to represent a ‘sensitive’ receptor, including but not limited to accident blackspot locations, conservation areas, hospitals and links with high pedestrian flows. The IEMA guidelines note that it would not normally be appropriate to consider links where traffic flows have changed by less than 10%, unless there are significant changes in the composition of traffic, such as a large increase in the number of HGVs. It is up to the professional judgement of the assessor to determine the level of sensitivity of any location, and consequently whether further assessment of environmental effects is necessary.
Summary of IEMA Thresholds	
IEMA Rule 1 Threshold	>30% increase in either 12-hour total traffic flows or HGV volumes
IEMA Rule 2 Threshold	>10% increase in either 12-hour total traffic flows or HGV volumes in environmentally sensitive areas

- 61) The assessment of potential impacts has taken into consideration both the construction and operation of the Alternative Facility. There are 13 quantifiable environmental effects identified within the IEMA guidelines; however, some are addressed in other chapters of the Environmental Statement:
- Ecology (Chapter 7)
 - Cultural Heritage (Chapter 8)
 - Noise and Vibration (Chapter 11).

- 62) Although performance against the IEMA Rules described in Table 10.6 is a useful indicator for the effect that traffic related to the Alternative Facility would have within the study area, it is not generally suitable to assess the impacts scoped into this assessment via a qualitative standard. Instead, the five core impacts have been assessed using the criteria presented in Table 10.7, as per the IEMA guidelines².

Table 10.7: Criteria to Assess the Magnitude of Impact for Traffic and Movement

Core Impacts	Criteria
Road vehicle driver and passenger delay	There is no quantitative standard for the assessment of driver delay. Instead, IEMA guidelines² suggests considering the four main areas where a project is likely to cause driver delay: Key intersections along the network: - Side roads where finding a gap in the traffic may become harder - Site entrances where additional turning movements would occur - Where additional parked cars on roads would reduce the width of the road. Instead of the IEMA Rules, the assessment of driver delays should be based on technical work reported within the Transport Assessment, focussing on the conditions in network peak periods. This includes queue surveys, link capacity analysis and junction capacity assessments in the relevant locations of the study area. Professional judgement should then be used to define the significance of any resultant effects.
NMU delay	NMU delay generally occurs when traffic demand impacts on the ability of NMUs to cross a carriageway. The provision of crossing facilities, the geometric characteristics of the road and the traffic volume, speed and composition are all factors that can determine NMU delay and should be considered for each link in the study area, along with the general level of pedestrian activity. It is advised within IEMA guidelines that quantitative thresholds should be avoided, with professional judgement being used instead due to the number of local factors that need considering.
NMU amenity	Pedestrian amenity is defined as the relative pleasantness of a journey and is affected by traffic flow, traffic composition and separation from traffic. The effect a development has on amenity is likely to influence NMUs' travel choices. The assessment of amenity should pay full regard to specific local conditions. The 1993 edition of the guidelines suggested a threshold for judging the significance of changes in pedestrian amenity would be where the traffic flow (or HGV component) is halved or doubled. Although there are no strict thresholds stated in the updated guidance, it states that the previous thresholds can be used as starting point. However, these thresholds should be used cautiously, with professional judgement and consideration of the specific local conditions as the preferred method of assessment of impacts on NMU amenity.
Road user and pedestrian safety	Accident and safety data provide the location and number of accidents on local roads, and the severity of the incidents. The IEMA guidelines recommend a 'collision cluster' assessment to identify potential impacts on road safety, using STATS19. The effects are derived based on this assessment, using professional judgement to identify any emerging patterns or factors that could be exacerbated by traffic and movement generation.
Hazardous/large loads	Some developments may involve the transportation of hazardous loads and should be recognised within the traffic and movement assessment if necessary. This includes specialist or abnormal indivisible loads involved with the construction phases of the development. The traffic and movement assessment must clearly outline the estimated number and composition of such loads. The movement of large (abnormal) loads is subject to separate agreement with the relevant highway authorities and appropriate routes for abnormal load movements must be considered.

- 63) The following assessment has also considered the extent to which the Alternative Facility would impact a receptor and whether that impact is temporary, permanent and/or reversible.

- 64) Using the criteria detailed in Table 10.7, the likely significant effects have been assessed using professional judgement considering the value (sensitivity) of the receptors, and the magnitude of change (impact) likely to be caused by the Alternative Facility. These factors have been combined to give an overall significance of effect. The IEMA guidelines² then recommend a scale of negligible, slight, moderate and substantial is applied in accordance with the magnitude of change to the affected receptor. Although there are no fixed criteria or thresholds for the relevant impacts in this assessment, the decision has been evidenced using relevant analysis and data and professional judgement.

10.6 Assessment of Likely Significant Effects

10.6.1 Introduction

- 65) The assessment has been undertaken on the assumption that embedded and good practice measures (as described in Appendix A.2 Construction Code of Practice) would be carried out to provide a reasonable basis for the assessment.
- 66) For each road link contained within the traffic and movement study area, the notable items of sensitivity in proximity to each road link are detailed in Table 10.8. The identification of these sensitive locations is based on the IEMA guidelines² detailed in Section 10.5. Table 10.8 also states which IEMA Rule each link is considered under as part of the Environmental Impact Assessment. Although these thresholds do not apply to the impacts considered in this assessment, the performance against them still acts as a useful guide for the likely significance of effect on that link and highlights those links that have an increased level of sensitivity.
- 67) Table 10.8 was then used to inform the assessment of likely effects, in Table 10.9 to Table 10.14 (for construction phase) and Table 10.15 to Table 10.20 (for operation phase).

Table 10.8: Sensitive Locations and/or Groups by Link

Link	Link Name	Sensitivity	Description	IEMA Rule
56	A671 Chatburn Road	People at home Hospital School NMUs Biological Heritage Site (BHS) Site of Special Scientific Interest (SSSI)	The main entrance to Clitheroe Community Hospital is off Chatburn Road, some 70 m from the A671 Pimlico Link Road roundabout, making this a sensitive location. A671 Chatburn Road also has several housing estates, Clitheroe Royal Grammar School and footways that contribute to the sensitivity. Coplow Quarry SSSI, plus the Coplow Quarry and Pimlico Road Grasslands BHS are also in proximity to the link.	Considered under Rule 2 due to hospital
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	NMUs	There is also a footpath FP0348005 that crosses Pimlico Link Road and interacts with the Alternative Facility site access.	Considered under Rule 1
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Hospital People at work NMUs BHS SSSI Local Nature Reserve (LNR)	The main exit for the Clitheroe Community Hospital joins A671 Pimlico Link Road, increasing the sensitivity of the link. This junction is used by ambulances and other hospital traffic, along with commercial and commuter traffic associated with the Salthill and Bellman Park industrial units along Lincoln Way. Footpaths FP0301005 and FP0301006a also cross Pimlico Link Road and interact with the Alternative Facility site access. Salthill	Considered under Rule 2 due to hospital

Link	Link Name	Sensitivity	Description	IEMA Rule
			Quarry LNR and BHS, and Salthill and Bellman Park Quarries SSSI are also adjacent to the link.	
120	A59 (north of A671 junction)	BHSs SSSI	Worston Common BHS, and the Worsaw Hill, Warren Hill, Crow Hill and The Ridge BHS, are in the vicinity of the link, along with the Clitheroe Knoll Reefs SSSI.	Considered under Rule 1
125	Pimlico Link Road (north of Chatburn Road roundabout)	People at work BHS SSSI	Access to the Tarmac Clitheroe Asphalt Plant is off this section of Pimlico Link Road, with large volumes of HGV traffic likely to be associated with the site. 2024 traffic count data suggest approximately 11% of daily movements on this link are HGVs. The Coplow Quarry SSSI, plus the Coplow Quarry and Pimlico Road Grasslands BHS are also situated alongside the link.	Considered under Rule 1
126	West Bradford Road	People at work People at home NMUs BHS LNR	Access to the Ribblesdale Cement Works is off West Bradford Road, with large volumes of HGV traffic likely to be associated with the site, consistent with that on link 125. There are also residential properties fronting onto, and situated on roads off this link, along with a footway. Cross Hill Quarry LNR and Cross Hill Quarry BHS are also adjacent to the link.	Considered under Rule 1
149	A59 (south of A671 junction)	NMUs	The Lancashire Cycleway runs alongside and crosses the A59. The route is set back from the A59, other than where it crosses the A59 at 376283, 441908 (easting/northing).	Considered under Rule 1
150	Chatburn Road	People at home NMUs BHS	There is a residential property some 50 m from the A671 Pimlico Link Road roundabout and there is a footway adjacent to the road. The Bellman Farm Marsh BHS runs alongside the link.	Considered under Rule 1

10.6.2 Likely Significant Effects Prior to Mitigation

10.6.2.1 Construction

- 68) Comparing the daily (12-hour, 07:00-19:00) link flows between the 2026 Do Minimum (future baseline position) and 2026 Do Something (Construction Phase) scenarios demonstrates that increases in total two-way traffic flows as a consequence of construction activities associated with the Alternative Facility, do not exceed 10% on any of the road links. The maximum increase in daily flows is forecast to occur on A671 Pimlico Link Road south of the Alternative Facility representing a 1.3% increase in daily flows. This suggests that during the construction phase there would be a modest increase in two-way traffic flow and that construction activities would have a negligible impact on the highway network.
- 69) Furthermore, with respect to changes in daily HGV flows within the study area resulting from the Alternative Facility, it was noted that none of the links would experience daily increases in excess of Rule 1 (30%), with a maximum increase of 6.1% occurring on A671 Pimlico Link Road south of the Alternative Facility. Therefore, the construction of the Alternative Facility is not expected to contribute to congestion within the study area.

- 70) Whilst the traffic volumes presented in Table 10.9 represent two-way vehicle flows, where odd numbers occur these are a consequence of a small proportion of the workforce traffic arriving in the 06:00 to 07:00 period prior to the 12-hour 07:00 to 19:00 general working hours, outlined in Section 10.4.6.
- 71) All of the road links within the study area are detailed in Table 10.9, comparing each road link against the thresholds identified within the IEMA guidelines² and/or whether each link is likely to have an impact on a sensitive location or group. The individual 'receptors' for each road link are considered in further detail within Table 10.10 to Table 10.14 against the following scoped categories:
- Road vehicle driver and passenger delay
 - NMU delay
 - NMU amenity
 - Road user and pedestrian safety
 - Hazardous and abnormal indivisible loads.

Table 10.9: 12-Hour Traffic Flows (Two-Way Flows)

Link	Link Name	2026 Do Minimum			Construction Traffic			2026 Do Something			% Increase (Impact)	
		Total	HGVs	% HGV	Total	HGVs	% HGV	Total	HGVs	% HGV	Total	HGVs
56	A671 Chatburn Road	8,767	307	3.5%	5	0	0.0%	8,772	307	3.5%	0.1%	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	5,723	1,011	17.7%	77	62	80.7%	5,800	1,073	18.5%	1.3%	6.1%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	5,723	1,011	17.7%	9	0	0.0%	5,732	1,011	17.6%	0.2%	0.0%
120	A59 (north of A671 junction)	10,137	1,061	10.5%	3	0	0.0%	10,140	1,061	10.5%	0.0%	0.0%
125	Pimlico Link Road (north of Chatburn Road roundabout)	2,513	285	11.3%	4	0	0.0%	2,517	285	11.3%	0.1%	0.0%
126	West Bradford Road	2,513	285	11.3%	4	0	0.0%	2,517	285	11.3%	0.1%	0.0%
149	A59 (south of A671 junction)	13,117	1,478	11.3%	75	62	83.2%	13,191	1,540	11.7%	0.6%	4.2%
150	Chatburn Road	2,647	291	11.0%	0	0	N/A	2,647	291	11.0%	0.0%	0.0%

Table 10.10: Road Vehicle Driver and Passenger Delay

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded	During the construction phase of the Alternative Facility, the total vehicles on this link would increase from 8,767 to 8,772 per 12 hours. HGVs per 12 hours would not increase. The maximum number of vehicles per hour associated with the Alternative Facility on this link is five, aggregated as a vehicle every 12 minutes. Although this link has an increased level of sensitivity due to the presence of the hospital access, the very low volumes of traffic associated with the Alternative Facility using this link mean that the significance of effect would be Negligible.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded	This is a key link on the traffic network since it contains the Alternative Facility site access and the main route out for commuters and HGVs associated with the construction phase via the A59. The total vehicles on this link would increase from 5,723 to 5,800 per 12 hours. HGVs per 12 hours would increase from 1,011 to 1,073. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 12, aggregated as a vehicle every five minutes. The queue length surveys carried out at the A59 junction suggest that the additional traffic associated with the construction phase would not result in significantly lengthened queues and would not result in queues extending back to the Alternative Facility site access. Therefore, the significance of effect is expected to be Negligible.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded	During the construction phase of the Alternative Facility, the total vehicles on this link would increase from 5,723 to 5,732 per 12 hours. HGVs per 12 hours would not increase. The maximum number of vehicles per hour associated with the Alternative Facility on this link is seven, aggregated as a vehicle every nine minutes. Although this link has an increased level of sensitivity due to the presence of the hospital access, the very low volumes of traffic associated with the Alternative Facility using this link mean that the significance of effect would be Negligible.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded	During the construction phase of the Alternative Facility, the total vehicles on this link would increase from 10,137 to 10,140 per 12 hours. HGVs per 12 hours would not increase. This represents a maximum increase of three vehicles associated with the Alternative Facility over the daytime period and therefore the significance of effect is expected to be Negligible.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – not exceeded	During the construction phase of the Alternative Facility, the total vehicles on this link would increase from 2,513 to 2,517 per 12 hours. HGVs per 12 hours would not increase. This represents a maximum increase of four vehicles associated with the Alternative Facility over the daytime period and therefore the significance of effect is expected to be Negligible.	Negligible
126	West Bradford Road	Rule 1 – not exceeded	During the construction phase of the Alternative Facility, the total vehicles on this link would increase from 2,513 to 2,517 per 12 hours. HGVs per 12 hours would not increase. This represents a maximum increase of four vehicles associated with the Alternative Facility over the daytime period and therefore the significance of effect is expected to be Negligible.	Negligible

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Link	Link Name	IEMA Rule	Description	Effect
149	A59 (south of A671 junction)	Rule 1 – not exceeded	During the construction phase of the Alternative Facility, the total vehicles on this link would increase from 13,117 to 13,191 per 12 hours. HGVs per 12 hours would increase from 1,478 to 1,540. The maximum number of vehicles per hour associated with the Alternative Facility on this link would be 10, aggregated as a vehicle every six minutes.	Negligible
150	Chatburn Road	Rule 1 – not exceeded	No commuting or HGV traffic would use this link during the construction phase of the Alternative Facility.	Negligible

Table 10.11: NMU Delay

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded	Footways are present on both sides of this link, providing NMU access to the hospital, Clitheroe Grammar school and residential frontages. However, only five vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period. The very low volumes of construction traffic associated with the Alternative Facility would have a negligible effect on NMU delays.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. There is a PRoW (Footpath FP0348005), which would have a signalised crossing and dropped kerb provided as part of the Alternative Facility site access junction design. During the construction phase, the Alternative Facility is forecast to generate 62 HGVs against a background flow of 1,011 HGVs over a 12-hour period, equating to a 6.1% increase in HGVs. This represents an aggregated additional HGV every 8.5 minutes during the hours of HGV movements. Within the peak traffic-generating hour (07:00 to 08:00), the Alternative Facility would generate a maximum of 12 vehicles using this link, representing an additional vehicle every five minutes. The low volumes of construction traffic associated with the Alternative Facility would therefore have a negligible effect on delays to NMUs using the PRoW.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. There are two PRoWs crossing the link, however, only nine vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period. The very low volumes of construction traffic associated with the Alternative Facility would have a negligible effect on delays to NMUs using the PRoWs.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, only three vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, only four vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
126	West Bradford Road	Rule 1 – not exceeded	There is a footway along this link, providing NMU access to residential frontages and the Ribblesdale Cement Works sites. However, only four vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
149	A59 (south of A671 junction)	Rule 1 – not exceeded	There is no footway along this link, however, the Lancashire Cycleway runs alongside this link and crosses the A59 at 376283, 441908 (easting, northing). During the construction phase, the Alternative Facility is forecast to generate 62 HGVs against a background flow of 1,478 HGVs over a 12-hour period, equating to a 4.2% increase in HGVs. This represents an aggregated additional HGV every 8.5 minutes during the hours of HGV movements. Within the peak traffic-generating hour (07:00 to 08:00), the Alternative Facility would generate a maximum of 10 vehicles using this link, representing an additional vehicle every six minutes. The low volumes of construction traffic associated with the Alternative Facility would therefore have a negligible effect on delays to cyclists crossing the A59.	Negligible
150	Chatburn Road	Rule 1 – not exceeded	No commuting or HGV traffic would use this link during the construction phase of the Alternative Facility.	Negligible

Table 10.12: NMU Amenity

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded	Footways are present on both sides of this link. However, only five vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period. The very low volumes of construction traffic, none of which would be HGVs, associated with the Alternative Facility would have a negligible effect on NMU amenity.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded a five-day average of only six cyclists (two-way) using this link over a 12-hour period. There is a PRow (Footpath FP0348005), which would have a signalised crossing and dropped kerb provided as part of the Alternative Facility site access junction design. During the construction phase, the Alternative Facility is forecast to generate 62 HGVs against a background flow of 1,011 HGVs over a 12-hour period, equating to a 6.1% increase in HGVs. This represents an aggregated additional HGV every 8.5 minutes during the hours of HGV movements.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, survey data recorded a five-day average of only six cyclists (two-way) using this link over a 12-hour period. There are two PRowS crossing the link, however, only nine vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period. The very low volumes of construction traffic associated with the Alternative Facility, none of which are HGVs, would have a negligible effect on amenity to NMUs using the PRowS.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded a five-day average of only eight cyclists (two-way) using this link over a 12-hour period. Additionally, only three vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded a five-day average of only five cyclists (two-way) using this link over a 12-hour period. Additionally, only four vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
126	West Bradford Road	Rule 1 – not exceeded	There is a footway along this link, providing NMU access to residential frontages and the Ribblesdale Cement Works sites. The July 2024 surveys recorded a five-day average of only five cyclists (two-way) using this link over a 12-hour period. Only four vehicles (zero HGVs) associated with the construction phase of the Alternative Facility would use this link over a 12-hour period.	Negligible

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Link	Link Name	IEMA Rule	Description	Effect
149	A59 (south of A671 junction)	Rule 1 – not exceeded	There is no footway along this link and the July 2024 surveys recorded only seven cyclists (two-way) using this link over a 12-hour period. However, the Lancashire Cycleway crosses the A59 at 376283, 441908 (easting, northing). During the construction phase, the Alternative Facility is forecast to generate 62 HGVs against a background flow of 1,478 HGVs over a 12-hour period, equating to a 4.2% increase in HGVs. This represents an aggregated additional HGV every 8.5 minutes during the hours of HGV movements. The low volumes of construction traffic associated with the Alternative Facility would have a negligible effect on amenity to cyclists crossing the A59.	Negligible
150	Chatburn Road	Rule 1 – not exceeded	No commuting or HGV traffic would use this link during the construction phase of the Alternative Facility.	Negligible

Table 10.13: Road User and Pedestrian Safety

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded; Accidents – 2; Slight – 2; Serious – 0; Fatal – 0	A 0.06% increase in total traffic and no increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every 180 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded; Accidents – 7; Slight – 6; Serious – 1; Fatal – 0	A 1.3% increase in total traffic and a 6.1% increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every nine minutes. Therefore, additional accidents are unlikely to occur.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded; Accidents – 9; Slight – 5; Serious – 4; Fatal – 0	A 0.2% increase in total traffic and no increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every 80 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded; Accidents – 2; Slight – 2; Serious – 0; Fatal – 0	A 0.02% increase in total traffic and no increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every 240 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – not exceeded; Accidents – 2; Slight – 1; Serious – 1; Fatal – 0	A 0.1% increase in total traffic and no increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every 180 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
126	West Bradford Road	Rule 1 – not exceeded; Accidents – 1; Slight – 1; Serious – 0; Fatal – 0	A 0.1% increase in total traffic and no increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every 180 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
149	A59 (south of A671 junction)	Rule 1 – not exceeded; Accidents – 0; Slight – 0; Serious – 0; Fatal – 0	A 0.6% increase in total traffic and a 4.2% increase in HGVs is forecast to occur over a 12-hour period, equating to an additional vehicle every 9.6 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
150	Chatburn Road	Rule 1 – not exceeded; Accidents – 1; Slight – 1; Serious – 0; Fatal – 0	No commuting or HGV traffic would use this link during the construction phase of the Alternative Facility.	Negligible

Table 10.14: Hazardous and Abnormal Indivisible Loads

Alternative Facility Phase	Hazard and Origin	Description	Effect
Construction Phase	Operation of deliveries	It is not anticipated that there would be any hazardous materials transported to the Alternative Facility site within the proposed programme of works. Deliveries of diesel fuel and oils would be required to support the on-site generators; however, these are not classified as hazardous from a human health viewpoint.	Negligible
Construction Phase	Abnormal indivisible loads	It is not anticipated that there would be any requirement for abnormal indivisible loads during the construction phase.	Negligible

10.6.2.2 Operation

- 72) Several of the road links that make up the study area are regarded as featuring 'sensitive' receptors along their route, as defined in Table 10.8. For completeness, all links contained within the study area have been carried forward for assessment in further detail against the IEMA criteria.
- 73) As described in Section 10.4.4.2, the operational phase of the Alternative Facility would serve the construction traffic associated with the consented schemes. Therefore, the estimated operational vehicles numbers and daily scheduling over the duration of the HARP construction programme would be the same as for the original consented planning application. The study area adopted for the assessment of traffic and movement effects relating to the Alternative Facility originally formed part of the wider traffic and movement study area within the Environmental Statement for the consented schemes. Therefore, the traffic and movement effects for the operational phase traffic have in effect already been quantified and assessed for the affected links and, where required, appropriate mitigation identified within the consented works. Notwithstanding, to account for the potential changes in baseline conditions since the consented application and allowing for the anticipated minor localised changes in traffic patterns on A671 Pimlico Link Road and West Bradford Road associated with the relocation of the facility, this section has reassessed the traffic and movement effects as part of the Alternative Facility.
- 74) A review of the daily (12-hour, 07:00-19:00) link flows across the highway network demonstrated that increases in total two-way traffic flows as a consequence of the operation of the Alternative Facility do not exceed 10% on any of the road links, with a maximum increase of 4.6% occurring on West Bradford Road. The modest increase in total traffic within the study area means that the operation of the Alternative Facility is expected to have a negligible to slight effect on congestion.
- 75) With respect to the changes in HGV demand within the assessment area, it was noted that two road links would experience daily increases in excess of the Rule 1 (30%) threshold. These two road links relate to the section of A671 Pimlico Link Road north of the Chatburn Road roundabout (Link 125) and the section of West Bradford Road north of the consented facilities (Link 126). The traffic increases on these road links may contribute to congestion, however it is noted that both links are still operating well within their capacity. Both links similarly exceeded the IEMA thresholds in the traffic assessments for the consented schemes. It is important to note that these two links would experience a reduction in traffic associated with the consented schemes using these links if the Alternative Facility were taken forward. This is because the relocation of the P&R further south would reduce the number of commuter vehicle movements travelling on these links further north, with only commuters originating north of West Bradford Road using these links to access the Alternative Facility. A more detailed commentary on the impact of the additional HGV traffic on these links is provided in Table 10.16 to Table 10.20.

- 76) All of the road links within the study area are detailed in Table 10.15, comparing each road link against the thresholds identified within the IEMA guidelines and/or whether each link is likely to have an impact on a sensitive location or group. The individual 'receptors' for each road link are considered in further detail within Table 10.16 to Table 10.20 against the following scoped categories:
- Road vehicle driver and passenger delay
 - NMU delay
 - NMU amenity
 - Road user and pedestrian safety
 - Hazardous and abnormal indivisible loads.

Table 10.15: 12-Hour Traffic Flows (Two-Way Flows)

Link	Link Name	2028 Do Minimum			Operational Traffic			2028 Do Something			% Increase (Impact)	
		Total	HGVs	% HGV	Total	HGVs	% HGV	Total	HGVs	% HGV	Total	HGVs
56	A671 Chatburn Road	8,871	248	2.8%	23	0	0.0%	8,894	248	2.8%	0.3%	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	5,741	944	16.4%	142	92	64.7%	5,883	1,036	17.6%	2.5%	9.8%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	5,741	944	16.4%	136	92	67.6%	5,877	1,036	17.6%	2.4%	9.8%
120	A59 (north of A671 junction)	10,345	1,083	10.5%	6	0	0.0%	10,351	1,083	10.5%	0.1%	0.0%
125	Pimlico Link Road (north of Chatburn Road roundabout)	2,543	276	10.9%	118	92	78.1%	2,660	368	13.8%	4.6%	33.3%
126	West Bradford Road	2,543	276	10.9%	118	92	78.1%	2,660	368	13.8%	4.6%	33.3%
149	A59 (south of A671 junction)	13,289	1,421	10.7%	136	92	67.6%	13,425	1,513	11.3%	1.0%	6.5%
150	Chatburn Road	2,707	291	10.7%	0	0	N/A	2,707	291	10.7%	0.0%	0.0%

Table 10.16: Road Vehicle Driver and Passenger Delay

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded	During the operational phase of the Alternative Facility, the total vehicles on this link would increase from 8,871 to 8,894 per 12 hours. HGVs per 12 hours would not increase. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 18, an average of a vehicle every 3.3 minutes. Although this link has an increased level of sensitivity due to the Clitheroe Community Hospital access, the low volumes of traffic associated with the Alternative Facility using this link would result in a Negligible significance of effect.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded	This is a key link on the traffic network since it contains the Alternative Facility site access and the main route out for commuters and HGVs associated with the operational phase via the A59. The total vehicles on this link would increase from 5,741 to 5,883 per 12 hours. HGVs per 12 hours would increase from 944 to 1,036. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 40, aggregated as a vehicle every 1.5 minutes. The queue length surveys carried out at the A59/A671 junction suggest that peak queueing occurs around 08:30 to 09:00, later than the 06:00 to 08:00 hours when the peak operational traffic is generated, associated with worker movements. Similarly, in the evening peak, the peak queueing occurs around 17:00 to 17:25, prior to the 18:00 to 20:00 hours when worker daytime and night-time change overs are anticipated. During these observed periods of peak queues forming, the Alternative Facility is forecast to generate approximately five HGVs and no worker vehicle movements and is therefore unlikely to present a material effect on the performance of the A59/A671 junction. Furthermore, the maximum queue lengths observed extended approximately 195 metres in the morning peak and 260 metres in the evening peak. The Alternative Facility site access is located approximately 400 metres north of the A59/A671 junction and the queues are therefore unlikely to interact with the operation of the Alternative Facility site access. Overall, the significance of effect is therefore expected to be Negligible.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded	During the operational phase of the Alternative Facility, the total vehicles on this link would increase from 5,741 to 5,877 per 12 hours. HGVs per 12 hours would increase from 944 to 1,036. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 35, aggregated as a vehicle every 1.7 minutes. Although this link has an increased level of sensitivity due to the presence of the hospital access, the low volumes of traffic associated with the Alternative Facility using this link, mean the significance of effect would be Negligible.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded	During the operational phase of the Alternative Facility, the total vehicles on this link would increase from 10,345 to 10,351 per 12 hours. HGVs per 12 hours would not increase. This represents a maximum increase of one vehicle associated with the Alternative Facility over the daytime period and therefore the significance of effect is expected to be Negligible.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – exceeded	During the operational phase of the Alternative Facility, the total vehicles on this link would increase from 2,543 to 2,660 per 12 hours. HGVs per 12 hours would increase from 276 to 368, aggregated as an additional HGV every 5.7 minutes during the hours of HGV movements. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 21, aggregated as a vehicle every 2.9 minutes.	Negligible to Slight

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Link	Link Name	IEMA Rule	Description	Effect
126	West Bradford Road	Rule 1 – exceeded	During the operational phase of the Alternative Facility, the total vehicles on this link would increase from 2,543 to 2,660 per 12 hours. HGVs per 12 hours would increase from 276 to 368, aggregated as an additional HGV every 5.7 minutes during the hours of HGV movements. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 21, aggregated as a vehicle every 2.9 minutes.	Negligible to Slight
149	A59 (south of A671 junction)	Rule 1 – not exceeded	During the operational phase of the Alternative Facility, the total vehicles on this link would increase from 13,289 to 13,425 per 12 hours. HGVs per 12 hours would increase from 1,421 to 1,513. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 35, aggregated as a vehicle every 1.7 minutes.	Negligible
150	Chatburn Road	Rule 1 – not exceeded	No commuting or HGV traffic would use this link during the operational phase of the Alternative Facility.	Negligible

Table 10.17: NMU Delay

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded	Footways are present on both sides of this link, providing NMU access to the hospital, Clitheroe Grammar school and residential frontages. However, only 23 vehicles (zero HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period. The very low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on NMU delays.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. There is a PRoW (Footpath FP0348005), which would have a signalised crossing and dropped kerb provided as part of the Alternative Facility site access junction design. During the operational phase, the Alternative Facility is forecast to generate 92 HGVs against a background flow of 944 HGVs over a 12-hour period, equating to a 9.8% increase in HGVs. This represents an aggregated additional HGV every 5.7 minutes during the hours of HGV movements. Within the peak traffic-generating hour (07:00 to 08:00), the Alternative Facility would generate a maximum of 40 vehicles using this link, representing an additional vehicle every 1.5 minutes. The low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on delays to NMUs using the PRoW.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. There are two PRoWs crossing the link, which would have a signalised crossing and dropped kerb provided as part of the Alternative Facility site access junction design. During the operational phase, the Alternative Facility is forecast to generate 92 HGVs against a background flow of 944 HGVs over a 12-hour period, equating to a 9.8% increase in HGVs. This represents an aggregated additional HGV every 5.7 minutes during the hours of HGV movements. In the peak hour for traffic related to the operational phase of the Alternative Facility, there would be a maximum of 40 vehicles using this link, representing an additional vehicle every 1.5 minutes. The low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on delays to NMUs using the PRoWs.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Additionally, only six vehicles (zero HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Additionally, only 118 vehicles (92 HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period, aggregated as an additional HGV every 5.7 minutes during the hours of HGV movements. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 21, aggregated as a vehicle every 2.9 minutes.	Negligible
126	West Bradford Road	Rule 1 – exceeded	There is a footway along this link, providing NMU access to residential frontages and the Ribblesdale Cement Works sites. However, only 118 vehicles (92 HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period, aggregated as an additional HGV every 5.7 minutes during the hours of HGV movements. The maximum number of vehicles per hour associated with the Alternative Facility on this link is 21, aggregated as a vehicle every 2.9 minutes.	Slight

Link	Link Name	IEMA Rule	Description	Effect
149	A59 (south of A671 junction)	Rule 1 – not exceeded	There is no footway along this link, however, the Lancashire Cycleway runs alongside and crosses the A59 at 376283, 441908 (easting, northing). During the operational phase, the Alternative Facility is forecast to generate 92 HGVs against a background flow of 1,421 HGVs over a 12-hour period, equating to a 6.5% increase in HGVs. This represents an aggregated additional HGV every 5.7 minutes during the hours of HGV movements. Within the peak traffic-generating hour (07:00 to 08:00), the Alternative Facility would generate a maximum of 35 vehicles using this link, representing an additional vehicle every 1.7 minutes. The low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on delays to cyclists crossing the A59.	Negligible
150	Chatburn Road	Rule 1 – not exceeded	No commuting or HGV traffic would use this link during the operational phase of the Alternative Facility.	Negligible

Table 10.18: NMU Amenity

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded	Footways are present on both sides of this link. However, only 23 vehicles (zero HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period. The very low volumes of operational traffic associated with the Alternative Facility, none of which are HGVs, would have a negligible effect on NMU amenity.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded only six cyclists (two-way) over a five-day average using this link over a 12-hour period. There is a PRow (Footpath FP0348005), which would have a signalised crossing and dropped kerb provided as part of the Alternative Facility site access junction design. During the operational phase, the Alternative Facility is forecast to generate 92 HGVs against a background flow of 944 HGVs over a 12-hour period, equating to a 9.8% increase in HGVs. This represents an aggregated additional HGV every 5.7 minutes during the hours of HGV movements. The low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on amenity to NMUs using the PRow.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded only six cyclists (two-way) over a five-day average using this link over a 12-hour period. There are two PRows crossing the link. During the operational phase, the Alternative Facility is forecast to generate 92 HGVs against a background flow of 944 HGVs over a 12-hour period, equating to a 9.8% increase in HGVs. This represents an aggregated additional HGV every 5.7 minutes during the hours of HGV movements. The low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on amenity to NMUs using the PRows.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded only eight cyclists (two-way) over a five-day average using this link over a 12-hour period. Additionally, only six vehicles (zero HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – exceeded	There is no footway along this link and the location is rural, therefore limited pedestrian activity is permissible. Furthermore, the July 2024 surveys recorded only five cyclists (two-way) over a five-day average using this link over a 12-hour period. 118 vehicles (92 HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period, aggregated as an additional HGV every 5.7 minutes during the hours of HGV movements.	Negligible
126	West Bradford Road	Rule 1 – exceeded	There is a footway along this link, providing NMU access to residential frontages and the Ribblesdale Cement Works sites. The July 2024 surveys recorded only five cyclists (two-way) over a five-day average using this link over a 12-hour period. 118 vehicles (92 HGVs) associated with the operational phase of the Alternative Facility would use this link over a 12-hour period, aggregated as an additional HGV every 5.7 minutes during the hours of HGV movements. The presence of a footway, limited volumes of cyclists and a 33.3% increase in HGVs mean it is anticipated that the operational phase of the Alternative Facility would have a slight effect to NMUs using this link.	Slight

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Link	Link Name	IEMA Rule	Description	Effect
149	A59 (south of A671 junction)	Rule 1 – not exceeded	There is no footway along this link and the July 2024 surveys recorded only seven cyclists (two-way) over a five-day average using this link over a 12-hour period. However, the Lancashire Cycleway crosses the A59 at 376283, 441908 (easting, northing). During the operational phase, the Alternative Facility is forecast to generate 92 HGVs against a background flow of 1,421 HGVs over a 12-hour period, equating to a 6.5% increase in HGVs. This represents an aggregated additional HGV every 5.7 minutes during the hours of HGV movements. The low volumes of operational traffic associated with the Alternative Facility would have a negligible effect on amenity to cyclists crossing the A59.	Negligible
150	Chatburn Road	Rule 1 – not exceeded	No commuting or HGV traffic would use this link during the operational phase of the Alternative Facility.	Negligible

Table 10.19: Road User and Pedestrian Safety

Link	Link Name	IEMA Rule	Description	Effect
56	A671 Chatburn Road	Rule 2 – not exceeded; Accidents – 2; Slight – 2; Serious – 0; Fatal – 0	A 0.3% increase in total traffic and no increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 31.3 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Rule 1 – not exceeded; Accidents – 7; Slight – 6; Serious – 1; Fatal – 0	A 2.5% increase in total traffic and a 9.8% increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 5.1 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Rule 2 – not exceeded; Accidents – 9; Slight – 5; Serious – 4; Fatal – 0	A 2.4% increase in total traffic and a 9.8% increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 5.3 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
120	A59 (north of A671 junction)	Rule 1 – not exceeded; Accidents – 2; Slight – 2; Serious – 0; Fatal – 0	A 0.1% increase in total traffic and no increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 120 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
125	Pimlico Link Road (north of Chatburn Road roundabout)	Rule 1 – exceeded; Accidents – 2; Slight – 1; Serious – 1; Fatal – 0	A 4.6% increase in total traffic and a 33.3% increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 6.1 minutes.	Negligible
126	West Bradford Road	Rule 1 – exceeded; Accidents – 1; Slight – 1; Serious – 0; Fatal – 0	A 4.6% increase in total traffic and a 33.3% increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 6.1 minutes.	Negligible
149	A59 (south of A671 junction)	Rule 1 – not exceeded; Accidents – 0; Slight – 0; Serious – 0; Fatal – 0	A 1.0% increase in total traffic and a 6.5% increase in HGVs would occur over a 12-hour period, equating to an additional vehicle every 5.3 minutes. Therefore, additional accidents are unlikely to occur.	Negligible
150	Chatburn Road	Rule 1 – not exceeded; Accidents – 1; Slight – 1; Serious – 0; Fatal – 0	No commuting or HGV traffic would use this link during the operational phase of the Alternative Facility.	Negligible

Table 10.20: Hazardous and Abnormal Indivisible Loads

Alternative Facility Phase	Hazard and Origin	Description	Effect
Operational Phase	Operation of fuel stations and manufacturers	It is noted that there are some fuel stations located within Preston, Mellor Brook and Clitheroe which should be taken into consideration.	Negligible
Operational Phase	Operation of deliveries	It is not anticipated that any hazardous loads associated with the Proposed Programme of Works would include toxic material, however, it is understood that there could be spillages associated with it which could result in accidents.	Negligible
Operational Phase	Abnormal indivisible loads	During the operational phase the Alternative Facility would cater for abnormal indivisible loads. In accordance with the measures proposed in the CTMP which supported the consented schemes, vehicles greater than 2.55 m in width would be effectively managed during the course of the day to ensure that no two vehicles of this type would meet in opposing directions to avoid impacts to narrow road sections.	Negligible

10.6.2.3 Decommissioning

- 77) The decommissioning of the Alternative Facility relates to the decommissioning of the facility at the end of its life. This phase is a requirement due to the temporary nature of the proposals. Similar to the construction phase, the number of vehicle movements during the decommissioning is likely to be significantly less than during the operational phase.
- 78) It is also expected that the number of vehicle movements during this phase would be similar to those in the construction phase and would therefore have no significant effect on the road network. Therefore, no likely significant effects are anticipated during decommissioning.

10.6.3 Proposed Mitigation and Residual Effects

- 79) Embedded mitigation is inherent to the design of the Alternative Facility. In relation to traffic and movement, the proposed new junction serving the Alternative Facility is the key element of embedded mitigation. Good practice measures are standard industry methods, guidelines and technical approaches used to manage commonly occurring environmental effects. Essential mitigation relates to site-specific solutions required to deliver acceptable environmental outcomes, over and above those achieved through good practice mitigation.
- 80) The assessment outcomes presented in this section are considered taking into account the implementation of good practice and essential mitigation measures. The Alternative Facility is an alternative to the consented facilities and would therefore align to the good practice and essential mitigation that has already been applied to the consented schemes:
- Construction Traffic Management Plan (CTMP) – this is an essential mitigation measure that is the subject of planning conditions attached to the consented schemes
 - Travel Plan
 - Highways Stakeholder Group.
- 81) An addendum to the CTMP for the consented schemes is contained in Appendix F.2. The addendum is intended to supplement rather than replace or supersede the CTMP associated with the consented schemes. It presents essential information and mitigation commitments which allow for the Alternative Facility to be constructed, operated and decommissioned without undue adverse effects on the local highway network, or on users of local roads. The CTMP for the consented schemes provides the framework for the management of construction traffic from the Alternative Facility to the three construction compounds associated with the consented schemes in the Ribble Valley Borough area. The CTMP covers the following aspects:
- Proposed vehicle routing
 - Proposed peak traffic flows
 - Other road users
 - Traffic management.
- 82) On sections of highway where interaction with road users and local communities was considered to be unavoidable (e.g. on the access route to the construction compounds) the CTMP identifies which periods of the day are considered to be most sensitive. The CTMP then commits to measures to avoid, where practicable, sensitive locations at agreed times of the day. For example, HGV movements in the CTMP for the consented schemes have been restricted during term-time school drop-off and pick-up periods.

- 83) No specific highway works are required for the Alternative Facility outside of the planning application boundary (off-site highways works were a feature of the consented schemes).
- 84) Table 10.21 and Table 10.22 summarise the mitigation and residual effects that have been identified during the construction and operational phases of the Alternative Facility respectively. As described in Section 10.6.2.3, the number of vehicle movements generated during the decommissioning phase is anticipated to be significantly fewer than during the operational phase, and likely to be of a similar scale to the construction phase. As such, the residual effects identified for the construction phase in Table 10.21 are expected to be similar in the decommissioning phase and therefore the mitigation would remain appropriate.

Table 10.21: Significance of Effects: Construction Phase

Link	Name	Significance of Effect (Pre-mitigation)					Proposed Mitigation	Significance of Residual Effects
		Road Vehicle Driver and Passenger Delay	NMU Delay	Road User and Pedestrian Safety	NMU Amenity	Hazardous and Abnormal Indivisible Loads		
56	A671 Chatburn Road	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plan, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plan, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
120	A59 (north of A671 junction)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plan, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
125	A671 Pimlico Link Road (north of Chatburn Road roundabout)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
126	West Bradford Road	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
149	A59 (south of A671 junction)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
150	Chatburn Road	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible

Table 10.22: Significance of Effects: Operational Phase

Link	Name	Significance of Effect					Proposed Mitigation	Likely Effect Following Mitigation
		Road Vehicle Driver and Passenger Delay	NMU Delay	Road User and Pedestrian Safety	NMU Amenity	Hazardous and Abnormal Indivisible Loads		
56	A671 Chatburn Road	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plan, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
57b	A671 Pimlico Link Road (between Alternative Facility site access and Chatburn Road roundabout)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
120	A59 (north of A671 junction)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
125	A671 Pimlico Link Road (north of Chatburn Road roundabout)	Negligible to Slight	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible to Slight
126	West Bradford Road	Negligible to Slight	Slight	Negligible	Slight	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Mitigated by CTMP – HGV movements restricted between 08:15-09:15 and 15:00-16:00 (Route 2b). Commuter shift changes avoid morning and evening peaks.	Negligible to Slight
149	A59 (south of A671 junction)	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible
150	Chatburn Road	Negligible	Negligible	Negligible	Negligible	N/A	CTMP, Travel Plans, Highways Stakeholder Group. Commuter shift changes avoid morning and evening peaks.	Negligible

10.7 Conclusion

- 85) This chapter of the Environmental Statement considered the potential traffic and movement effects associated with the construction and operation of the Alternative Facility. Traffic and transport effects were assessed for the construction and operational peaks, when the highest traffic levels generated by the Alternative Facility are anticipated.
- 86) The assessment has focused on those sections of the highway network where changes in traffic patterns are anticipated to occur due to relocating the consented facilities. The study area has therefore focused on sections of the highway network between West Bradford Road (where access to the consented facilities is located) and A671 Pimlico Link Road near its junction with the A59, where access to the Alternative Facility is proposed. Eight links have been examined in the traffic impact assessment for the Alternative Facility, based on surveys undertaken in July 2024 and Lancashire County Council traffic counts.
- 87) Each link provides two-way flows over a 12-hour period. The effects of additional traffic associated with the Alternative Facility have been assessed against criteria identified in the IEMA guidelines². None of the assessed links exceeded the IEMA thresholds during the construction phase and only two links are forecast to exceed the IEMA thresholds during the operational phase. These two links relate to the section of A671 Pimlico Link Road north of the Chatburn Road roundabout (Link 125) and the section of West Bradford Road north of the consented facilities (Link 126). Both links similarly exceeded the IEMA thresholds in the traffic assessments for the consented schemes. Notwithstanding, these two links would experience a reduction in traffic associated with the consented schemes using these links if the Alternative Facility were taken forward. This is because the relocation of the P&R further south would reduce the number of commuter vehicle movements travelling on these links to access the Alternative Facility. Furthermore, the traffic control measures outlined in the CTMP which supported the consented schemes ensure that Alternative Facility traffic would generally avoid the traditional morning and evening weekday peak hours when the network is at its busiest.
- 88) A mitigation strategy is proposed as part of the consented schemes to reduce potentially slight impacts over a short period of time in locations which are most sensitive to an increase in traffic levels. The strategy aims to deliver the lowest reasonably achievable traffic impacts on local roads and communities. As outlined in this chapter, the Alternative Facility would not create significant new or additional traffic and movement effects over and above those associated with the consented schemes. Therefore, the measures outlined in the original mitigation strategy for the consented schemes would also be appropriate to mitigate the level of effects associated with the Alternative Facility. The mitigation strategy includes:
- CTMPs, which would be agreed with Lancashire County Council and National Highways. The focus of the CTMPs would be to reduce HGV and commuter movements during the morning and evening peaks and school drop-off and pick-up periods
 - A Travel Plan, which would support sustainable travel amongst the workforce and seek to manage vehicle trips to/from the consented compound areas, as a part of which, the Alternative Facility is an integral component to reduce the number of private vehicle trips travelling to these locations
 - A commitment to establish a Highways Stakeholder Group as part of the consented schemes
- 89) These mitigation measures would reduce effects on local receptors to negligible levels, noting that the Alternative Facility itself is both temporary (nine years from construction to completion of decommissioning) and reversible.