

Alternative Temporary Park and Ride and Heavy Goods Vehicle Marshalling Area - Environmental Statement Volume 4 Appendix F.1: Transport Statement

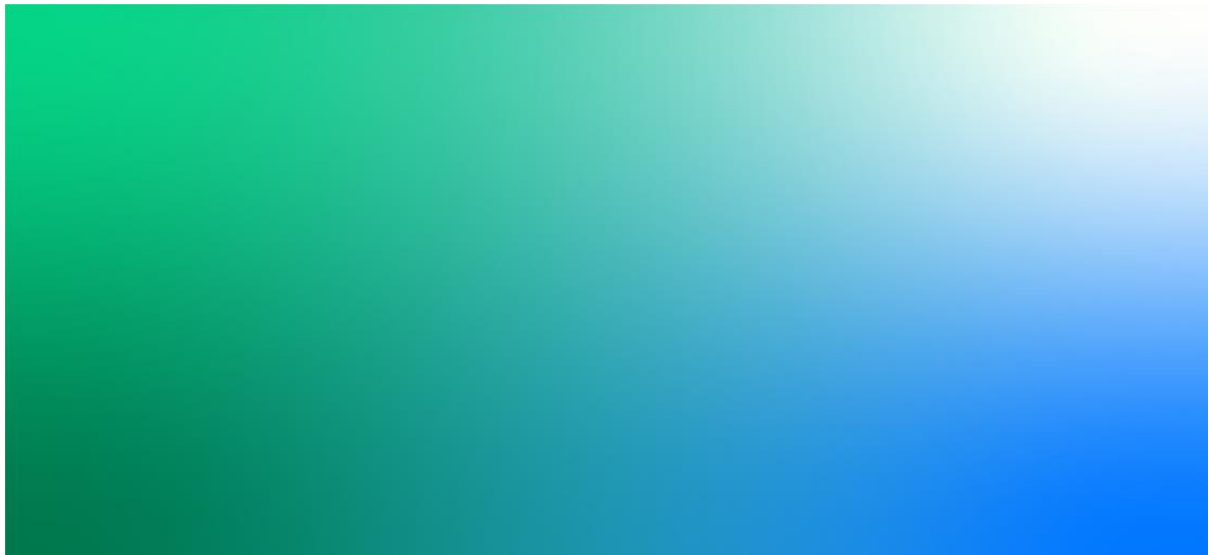
United Utilities Water Limited

Haweswater Aqueduct Resilience Programme

Planning Application Document RVBC-P&R-APP-RP-002 / ES-TA-F-1
February 28, 2025



Water for the North West



Alternative Temporary Park and Ride and Heavy Goods Vehicle Marshalling Area - Environmental Statement Volume 4 Appendix F.1: Transport Statement

Client name:	United Utilities Water Limited		
Project name:	Haweswater Aqueduct Resilience Programme		
Project no:	B27070EP		
Planning Application Document:	RVBC-P&R-APP-RP-002 / ES-TA-F-1		
Prepared by:	Jacobs U.K. Limited		
Date:	February 28, 2025	File name:	RVBC-P&R-APP-RP-002_ES-TA-F-1 Appendix F.1_Transport Statement

Jacobs U.K. Limited

5 First Street
Manchester M15 4GU
United Kingdom

T +44 (0)161 235 6000
F +44 (0)161 235 6001
www.jacobs.com

© Copyright 2025 Jacobs U.K. Limited. All rights reserved. The content and information contained in this document are the property of the Jacobs group of companies ("Jacobs Group"). Publication, distribution, or reproduction of this document in whole or in part without the written permission of Jacobs Group constitutes an infringement of copyright. Jacobs, the Jacobs logo, and all other Jacobs Group trademarks are the property of Jacobs Group.

NOTICE: This document has been prepared exclusively for the use and benefit of Jacobs Group client. Jacobs Group accepts no liability or responsibility for any use or reliance upon this document by any third party.

Contents

1.	Introduction.....	1
1.1	Background to the Alternative Facility	1
1.2	Transport Statement Structure.....	2
2.	Existing Conditions	3
2.1	Site Description	3
2.2	Proposed New Site Access/Local Highway Network	3
2.3	Existing Traffic Flows	3
2.4	Vehicle Speeds	4
2.5	Queue Lengths	5
2.6	Non-Motorised Users.....	7
2.7	Personal Injury Collision Analysis	7
2.8	Policy Review.....	9
3.	Proposed Development.....	11
3.1	Development Description	11
3.2	Construction Phase.....	11
3.3	Operational Phase.....	12
3.4	Decommissioning Phase	12
3.5	Alternative Facility Programme	12
3.6	Proposed New Site Access	14
4.	Traffic Impact.....	15
4.1	Assessment Year.....	15
4.2	Assessment Scenarios	16
4.3	Vehicle Operating Hours for Traffic Impact Assessment.....	17
4.4	Construction Phase.....	18
4.5	Operational Phase.....	28
4.6	Summary and Conclusions.....	38

Acronyms and Abbreviations

ATC	Automatic Traffic Count
CTMP	Construction Traffic Management Plan
DfT	Department for Transport
HARP	Haweswater Aqueduct Resilience Programme
HGV	Heavy Goods Vehicle
IEMA	Institute of Environmental Management and Assessment
LCC	Lancashire County Council
LOS	Level of Service
NMU	Non-Motorised User
NPPF	National Planning Policy Framework
NTM	National Transport Model
PCU	Passenger Car Unit
PIC	Personal Injury Collision
PRoW	Public Rights of Way
P&R	Park and Ride
RFC	Ratio of demand Flow to Capacity
RVBC	Ribble Valley Borough Council
SRN	Strategic Road Network
SSD	Stopping Sight Distances
TA	Transport Assessment
TEMPro	Trip End Model Presentation Program
TS	Transport Statement

1. Introduction

- 1) This Transport Statement (TS) has been prepared by Jacobs on behalf of United Utilities in support of the planning application for the Proposed Alternative Temporary Park and Ride and HGV Marshalling Area (Alternative Facility). The TS sits alongside the Environmental Statement and should be read in conjunction with Chapter 10 Traffic and Movement.
- 2) The purpose of this TS is to present the potential highways and transport impacts associated with the Alternative Facility to allow these to be considered by Ribble Valley Borough Council (RVBC) in consultation with the Highway Authority, Lancashire County Council (LCC), as it determines whether to grant planning consent for the Alternative Facility.
- 3) The Alternative Facility is associated with the Haweswater Aqueduct Resilience Programme (HARP), which was granted planning consent in 2024. The main construction activities are scheduled to start on site in 2026, with prior ground investigation and enabling works commencing during the second half of 2025. The Alternative Facility is 3.78 hectares (ha) in size and is located on agricultural land to the west of A671 Pimlico Link Road, approximately 1.75 km north-east of Clitheroe town centre as shown in Figure 10.1.

1.1 Background to the Alternative Facility

- 4) In 2021, United Utilities submitted two planning applications to RVBC in connection with HARP. These planning applications related to the proposed Marl Hill Section (planning application reference 3/2021/0661), which is located entirely within RVBC's administrative area, and the proposed Bowland Section (planning application reference 3/2021/0660), only part of which – the Newton-in-Bowland Compound and a portion of the Bowland tunnel – is situated within the authority's area. These two developments are referred to in this document as the consented schemes.
- 5) A separate temporary Park and Ride (P&R) and Heavy Goods Vehicle (HGV) marshalling area formed part of both consented schemes. The consented facilities were identified as an integral part of the Construction Traffic Management Plan (CTMP) to manage the timing and flows of construction vehicles and private vehicles using the local road network during construction of HARP.
- 6) Under the 2021 planning applications, it was intended that the consented P&R facility would act as a car park for private cars and light goods vehicles transporting construction personnel from a wide labour catchment area to Clitheroe. At the consented P&R facility, construction personnel would transfer from their vans and private vehicles to minibuses for the final leg of the journey to the Marl Hill and Newton-in-Bowland construction compounds. In doing so, it was intended that this would reduce the volume of traffic travelling towards and through Waddington. The purpose of the consented HGV marshalling area facility was to enable the control of traffic leaving the A59 prior to trafficking the narrower local road network. This would also allow the use of escorted convoys and directional control of vehicles greater than circa 2.55 m wide.
- 7) Since the submission of the applications for the consented schemes, the owners of Ribblesdale Cement Works informed United Utilities that the land previously proposed for use as the consented facility is unlikely to be available for the full duration of the HARP works. Therefore, United Utilities needed to identify a suitable alternative location for the proposed facility and serving the same function. A preferred location has been selected, further south of the

consented facilities, on agricultural land to the west of A671 Pimlico Link Road, approximately 1.75 km north-east of Clitheroe town centre.

1.2 Transport Statement Structure

8) This TS is divided into the following sections:

- Section 1 – Outlines the background to the Alternative Facility and the structure of the TS
- Section 2 – Provides a description of the site location and the highway network serving the site along with a review of the Personal Injury Collision (PIC) analysis for the agreed highway network of interest and a policy review
- Section 3 – Provides a description of the proposed development and programme and access strategy
- Section 4 – Presents the anticipated traffic impact of the proposed development, sensitivity test and traffic modelling scenarios, assessed for construction and operational phases.

2. Existing Conditions

2.1 Site Description

- 9) The site of the Alternative Facility is presently under pasture and largely surrounded by further agricultural land, however, to the north and north-west lies Salthill Industrial Estate. The site is shown in more detail and in relation to the surrounding geography in Figure 10.1.

2.2 Proposed New Site Access/Local Highway Network

- 10) The site is accessed via an existing agricultural field gate from A671 Pimlico Link Road, which would be upgraded to provide a temporary access to the Alternative Facility. A671 Pimlico Link Road runs in a north-westerly direction from the A59 to the south-east of the site, to the A671 Chatburn Road to the north-west of the site. In the vicinity of the site, A671 Pimlico Link Road has a speed limit of 40 mph, it is an approximately 7.3 m wide two-way single carriageway road bounded on both sides by grass verges, vegetation and trees.
- 11) There are seven Public Rights of Way (PRoWs) interacting with the study area, as detailed in Figure 10.2, including FP0348005 in the vicinity of the Alternative Facility site access.

2.3 Existing Traffic Flows

- 12) 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.
- 13) 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 2.1 presents the differences between the five-day weekly average traffic flows recorded in 2019 and 2024 for the AM peak hours (07:00 to 08:00 and 08:00 to 09:00), PM peak hours (17:00 to 18:00 and 18:00 to 19:00) and 12-hour daytime period (07:00 to 19:00).

Table 2.1: 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%)

- 14) The five-day weekly average traffic flows in 2024 on A671 Pimlico Link Road are shown to remain relatively 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.

- 15) 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.
- 16) Over the 12-hour daytime period total vehicle flows increase by approximately 8.1% between the 2019 and 2024 traffic surveys, albeit HGV percentages decrease by approximately 2.3% over this period.
- 17) 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.
- 18) Morning and evening commuter peak hour traffic flows passing the site on A671 Pimlico Link Road have been derived from an Automatic Traffic Count (ATC) survey located in the vicinity of the proposed new site access, the location of which is shown in Figure 10.3. The ATC was undertaken from 1 to 7 July 2024. The traffic survey results indicate that the commuter network peak hours are 08:00 to 09:00 and 17:00 to 18:00 hours.
- 19) The commuter peak hour traffic flows, based on five-day average weekday survey data, are presented in Table 2.2. The observed data indicate that A671 Pimlico Link Road is lightly trafficked during the weekday commuter peak hours with moderate use by HGVs.

Table 2.2: A671 Pimlico Link Road Commuter Peak Hour Traffic Flows, July 2024

Direction	AM Peak (08:00 to 09:00)		PM Peak (17:00 to 18:00)	
	Total	% HGV	Total	% HGV
Northbound	414	11.0%	281	5.2%
Southbound	179	26.4%	206	6.2%

2.4 Vehicle Speeds

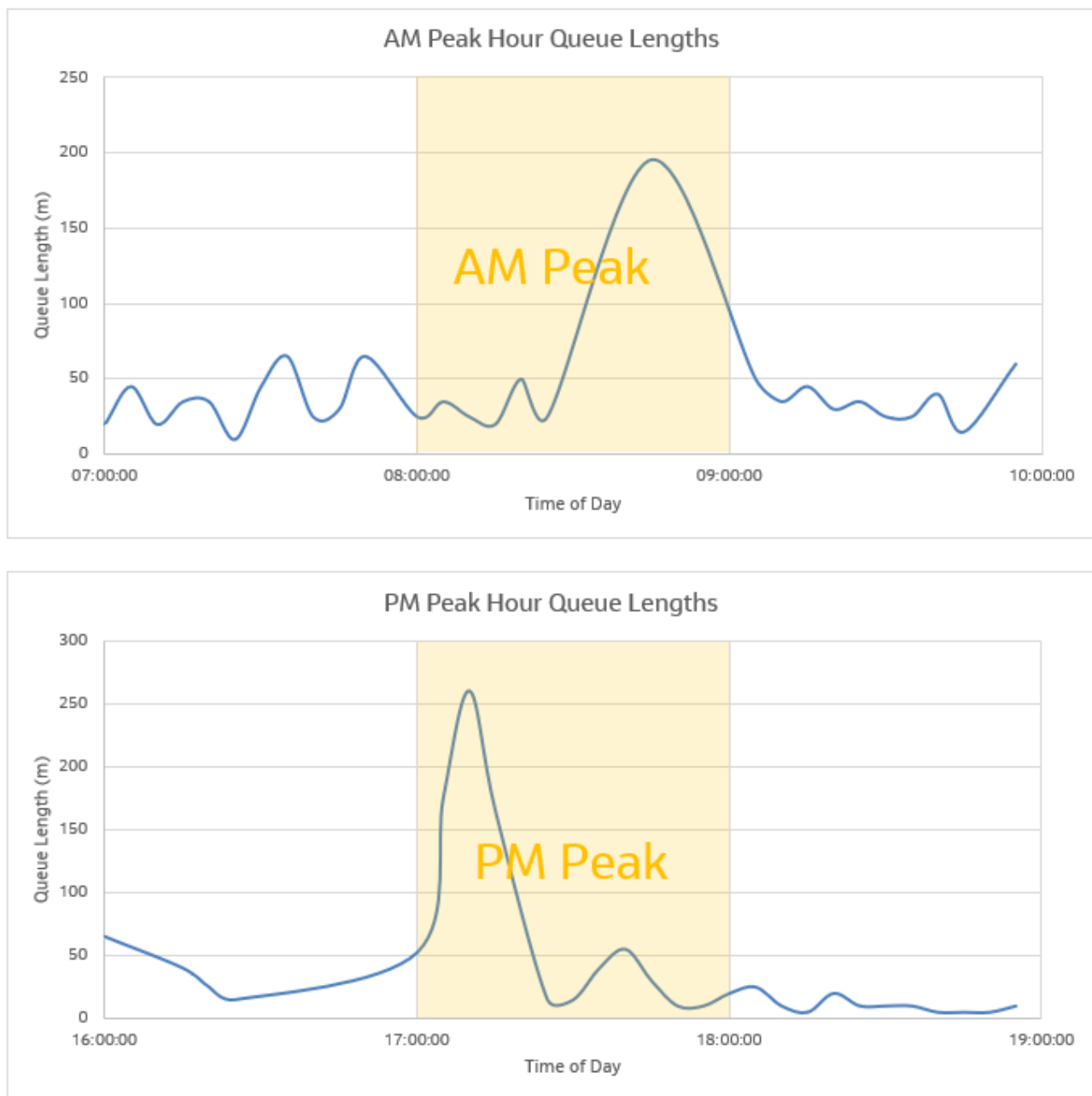
- 20) The July 2024 traffic surveys included vehicle speed surveys undertaken over the same week-long period, including in the vicinity of the proposed new site access on A671 Pimlico Link Road. The vehicle speed survey location is shown in Figure 10.3.
- 21) Table 2.3 presents the recorded vehicle speeds which average 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 evidence that vehicles may typically travel at higher speeds on this section of the carriageway.
- 22) The actual vehicle speeds have informed the design of the Alternative Facility proposed site access layout presented in RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application, to ensure that appropriate stopping sight distances (SSD) can be achieved for road users. The proposed site access design is described in further detail in Section 3.6.

Table 2.3: A671 Pimlico Link Road 7-day Average Vehicle Speeds, July 2024

Direction	7-Day Average Speed (mph)	7-Day 85 th Percentile Speed (mph)
Northbound	44.3	50.9
Southbound	42.2	48.7
Combined	43.4	50.0

2.5 Queue Lengths

- 23) 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 (on Tuesday 2 July 2024), covering the commuter network peak hours.
- 24) Graph 2.1 below shows the recorded queue lengths over the surveyed hours, showing a maximum queue length of 195 m in the morning peak period and 260 m in the evening peak period. These maximum queue lengths occurred at 08:45 and 17:10 respectively.



Graph 2.1: Recorded Queue Lengths at the A59/A671 Pimlico Link Road Junction

- 25) The distance between the A59/A671 Pimlico Link Road junction and the Alternative Facility proposed new site access is approximately 400 m. The maximum queue lengths are shorter than this distance, meaning the queue is not anticipated to extend to the proposed new site access.
- 26) With regard to the morning peak hour (08:00 to 09:00), in all phases of the Alternative Facility it is anticipated that all commuting movements would occur before 08:00. Furthermore, HGV movements in the operational phase would not occur before 09:15. In the construction phase, HGV movements in the morning peak would be limited to movements related to time-limited construction activities, such as asphalt laying. Therefore, the Alternative Facility is anticipated to have little to no effect on the queue lengths at the A59/A671 Pimlico Link Road junction between 08:00 and 09:00.

- 27) With regard to the evening peak hour (17:00 to 18:00), in all phases of the Alternative Facility it is anticipated that all commuting movements would occur between 18:00 to 20:00. HGV movements would occur during the evening peak hour during all phases of the Alternative Facility; however this is limited to a maximum hourly flow of four southbound HGVs to the A59/A671 Pimlico Link Road junction in the construction phase and five southbound HGVs in the operational phase. Therefore, the Alternative Facility is anticipated to have no likely significant effect on the queue lengths at the A59/A671 Pimlico Link Road junction between 18:00 to 19:00. It is not anticipated that these HGV flows would cause the queue to extend back to the Alternative Facility proposed site access.

2.6 Non-Motorised Users

- 28) There is an existing PRoW, FP0348005 which traverses the location of the Alternative Facility proposed new site access and crosses A671 Pimlico Link Road adjacent to the proposed site. The location of the PRoW is illustrated in Figure 10.2.
- 29) An NMU survey conducted at this location on 2 July (weekday) and 6 July (weekend) 2024 indicated that there is minimal activity associated with this route. A total of five pedestrian movements (two travelling eastbound, three travelling westbound) were recorded across Tuesday 2 July 2024 and 16 pedestrian movements (nine travelling eastbound, seven travelling westbound) were recorded over Saturday 6 July 2024. No cyclists or equestrians were recorded using this PRoW on either of these surveyed days. These movements are summarised in Table 2.4.

Table 2.4: Summary of Results of NMU Survey on A671 Pimlico Link Road, July 2024

Daily Pedestrian Flows	Weekday One-Way	Weekend One-Way
Eastbound Movements	2	9
Westbound Movements	3	7

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

2.7 Personal Injury Collision Analysis

- 31) Road collision and safety statistics for a seven-year period have been obtained from the Department for Transport (DfT) Road Accidents and Safety Data (2017-2023)¹. This dataset comprises road collision statistics collected from information about personal injury road collisions, and their consequent casualties in Great Britain to a common national standard. To establish a baseline position, a 200 m buffer around A671 Pimlico Link Road, its junctions, and West Bradford Road, up to 200 m beyond the consented facilities, was analysed.
- 32) The DfT Accidents and Road Safety Data have been used to identify any collisions that have occurred along the proposed routes. This dataset is advised by IEMA guidance² and is consistent with the dataset used as part of the consented schemes. The dataset does include a

¹ Department for Transport (2025). Road Safety Data. [Online] Available at: <https://www.data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-accidents-safety-data>

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/>

mid-year collisions summary for 2024, but these data are unvalidated and have hence been excluded from the analysis.

- 33) Analysis of any clustering of collisions has also been undertaken and it is noted that where collision clusters occur around the proposed accesses to the sites, further investigation and highways design would be required.
- 34) Collision analysis of the 200 m buffer around A671 Pimlico Link Road, its junctions, and West Bradford Road, up to 200 m beyond the consented facilities, identified a total of 24 collisions over the seven-year data period. These consisted of six collisions of 'serious' severity and 18 collisions of 'slight' severity, whilst there were no fatal collisions that occurred during this period. Four of the collisions involved HGVs. None of the collisions occurred in close proximity to the Alternative Facility. Table 2.5 shows a summary of the number of collisions and their severity classification.

Table 2.5: Summary of Results of NMU Survey on the A671 Pimlico Link Road, July 2024

Severity	Number of Collisions (HGVs)
Slight	18 (3)
Serious	6 (1)
Total	24 (4)

- 35) Of the 24 collisions that were recorded over the seven-year period, 22 occurred at give-way junctions or roundabouts and 12 collisions were associated with side-impact collisions. There is a collision cluster at the A671 Pimlico Link Road/Chatburn Road roundabout with ten collisions occurring within a 30 m radius of the roundabout, three of which were of serious severity and seven of them slight. However, this low number of collisions over a seven-year study period does not suggest a notable safety issue at the junction.
- 36) The times of the day in which construction and operational traffic are expected to be present on the public highway network are set out in Appendix F.2 CTMP Addendum and are summarised in Section 3.5.1 of this document. Table 2.6 identifies that of the 24 collisions that have occurred over the seven-year period, 15 occurred during the times of day when commuters and HGVs would be present on the public highway network.

Table 2.6: Summary of Collisions by Time Period

Time of Day	Traffic Movements	Number of Collisions
06:00-08:00 weekday	Construction commuter traffic	3
09:15-15:00 weekday	Construction HGV movements	10
16:00-18:45 weekday*	Construction HGV movements	2
18:00-20:00 weekday*	Construction commuter traffic	1
08:00-13:00 Saturday	All construction movements	0
*1 collision that occurs in 18:00 to 18:45 time period overlaps between the HGV/commuter evening periods and is therefore double counted in this table.		

- 37) The data suggest that there is no pre-existing safety issue on the public highway network and there is no reason to expect that the additional commuter and HGV movements generated by the construction and decommissioning of the Alternative Facility would create a road safety issue.
- 38) There are no apparent additional road safety concerns during adverse weather conditions as only nine of the 24 collisions over the seven-year period occurred on wet or damp road

surfaces. There are also no apparent road visibility concerns during darkness as only four of the 24 collisions occurred outside daylight hours.

- 39) None of the 24 collisions occurred within 200 m (nearest approximately 375 m) of the Alternative Facility site entrance. This highlights that a new temporary junction off A671 Pimlico Link Road for the proposed new site access is unlikely to exacerbate any pre-existing safety issues, whilst the new junction would be designed to acceptable highways safety standards.

2.8 Policy Review

- 40) Table 2.7 sets out key legislation, policy and guidance of relevance for traffic and movement.

Table 2.7: Key Legislation and Guidance for Traffic and Movement

Applicable Legislation and Guidance	Description
National Policy	
National Planning Policy Framework (NPPF) ³	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 National Planning Policy Framework and other changes to the planning system' webpage⁴. 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 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, which consists of a Park and Ride facility and HGV marshalling area, aligns with the objectives of the NPPF and with the latest revisions. The Park and Ride facility promotes a more sustainable transport solution, by reducing staff's dependency on single-occupancy car journeys and reduces the impact on the road network by reducing the number of vehicles associated with the Alternative Facility on the network. The 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. Mitigation strategies, such as a CTMP, to reduce the impact of the Alternative Facility on the

³ Ministry of Housing, Communities and Local Government (2024). National Planning Policy Framework. [Online] Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf

⁴ Ministry of Housing, Communities and Local Government (2024). 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>

Alternative Temporary Park and Ride and Heavy Goods Vehicle Marshalling Area –
Environmental Statement
Volume 4 Appendix F.1: Transport Statement

Applicable Legislation and Guidance	Description
	road network are detailed in Environmental Statement Chapter 10 Traffic and Movement, and Appendix F.2 CTMP Addendum.
Planning Practice Guidance – Environmental Impact Assessment ⁵	This guidance webpage details the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. ⁶ 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	
RVBC Core Strategy ⁷	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
LCC Creating Civilised Streets ⁸	This policy is based on the DfT publication Manual for Streets ⁹ and focuses on the changes that can be made to existing street environments to achieve the objectives of street design. This document defines these objectives as follows: ▪ 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.
LCC Infrastructure and Planning ¹⁰	This policy was produced to identify how LCC will engage and inform outcomes of the planning process. It describes how investment will be focussed on plans that promote sustainable transport modes and minimise development related impacts on the environment and on road networks.
LCC Business Travel Plans ¹¹	This webpage discusses business travel plans, development travel plans and the support which LCC 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> '.

⁵ 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>

⁶ The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. [Online] Available at: <https://www.legislation.gov.uk/uksi/2017/571/contents>

⁷ 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>

⁸ Lancashire County Council (2010). Creating Civilised Streets. [Online] Available at: https://www.lancashire.gov.uk/media/81455/creating_civilised_streets.pdf

⁹ Department for Transport (2007). Manual for Streets. [Online] Available at: <https://assets.publishing.service.gov.uk/media/5a7e0035ed915d74e6223743/pdfmanforstreets.pdf>

¹⁰ Lancashire County Council (2017). Infrastructure and Planning. [Online] Available at: <https://www.lancashire.gov.uk/media/903323/infrastructure-and-planning.pdf>

¹¹ Lancashire County Council (n.d.). Business Travel Plans. [Online] Available at: <https://www.lancashire.gov.uk/business/business-services/business-travel-plans/>

3. Proposed Development

3.1 Development Description

- 41) The Alternative Facility would be constructed on open agricultural land which occupies an area of approximately 3.0 ha. The total area of the Alternative Facility site is approximately 3.78 ha (this figure includes the highway). The Alternative Facility has been sized to carry out the same function as the equivalent temporary facilities that form part of the consented schemes. The Alternative Facility combines the temporary P&R and HGV marshalling area facilities on a shared site off A671 Pimlico Link Road. Marshalled HGVs and workers transported in minibuses would then proceed north via the consented Ribble Crossing and Waddington village to the Marl Hill and Newton-in-Bowland construction compounds.
- 42) The Alternative Facility comprises three phases which are outlined below.

3.2 Construction Phase

- 43) The enabling works would involve site clearance including stripping and stockpiling topsoil and subsoil. Access to the site would be at the location of an existing field gate access on A671 Pimlico Link Road. The existing access would be improved to accommodate the types and size of vehicles which are anticipated to use the Alternative Facility. One tree needs to be felled at the site access and some trees may need to be coppiced near the entrance to the site to provide appropriate sight lines for vehicles entering and exiting the site from A671 Pimlico Link Road.
- 44) The HGV marshalling area, car park surface and internal circulation routes would be laid using tarmac. The PRoW FP0301005 along the northern boundary of the site would be temporarily closed and locally diverted for approximately up to one week, to enable the construction of a small diameter discharge pipe. The pipe would be laid in a trench and would connect the Site Drainage Attenuation Area to the proposed Worston Brook outfall. The PRoW FP0348005 which crosses A671 Pimlico Link Road at the site access would be temporarily closed during the construction, operation and decommissioning phases and diverted further north via a dedicated crossing point incorporated into the highways access design providing NMUs with better visibility and including tactile paving and dropped kerbs.
- 45) A security office would be installed with barriers at the entrance of the site for safety and security reasons. There would also be green weldmesh Paladin-type fencing or solid plywood panel hoarding installed around the perimeter of much of the site to a height of approximately 2.4 m to prevent unauthorised access. There would also be welfare facilities provided for the construction workers and site operatives. These would comprise single-storey, prefabricated units that would include kitchen, washing and office facilities. There would also be a car parking area for the site operatives.
- 46) A lighting system would be installed on site as per applicable standards. It is anticipated that lighting columns would be placed around the site, at the site access and along Pimlico Link Road and powered by a temporary generator. Directional lighting would be used to reduce glare (refer to the Lighting Strategy, planning application document RVBC-P&R-APP-RP-004).
- 47) It is anticipated that the following type of equipment would be used to construct the Alternative Facility:
- General bulk excavation equipment: e.g. dump truck, 360° excavator, mini excavator, bulldozer and eight-wheel tipper wagon, etc

- Asphalt-laying equipment: asphalt paver and white-lining vehicle, etc
- General equipment: low loader transport vehicle, crane wagon, etc.

48) Tankers would be used to bring clean water to the site for use in the welfare facilities and for wheel washing and no surface water or groundwater abstractions are proposed at the site. Wastewater would be removed off site in tankers for treatment at a licensed wastewater treatment facility. It is anticipated that the facilities would be maintained/serviced at least once a week.

3.3 Operational Phase

49) The Alternative Facility would serve the consented construction traffic required for the construction of the consented schemes.

50) The Alternative Facility is designed to be a vehicle hub for HGV and commuting workers supporting the construction of the consented schemes, as a way of reducing the number of commuting vehicles and controlling the construction vehicles on the local road network. The HGV marshalling area would control construction vehicles leaving the A59 prior to using the local road network. This would allow the use of escorted convoys and directional control of vehicles greater than circa 2.55 m width. Additionally, the Alternative Facility provides a place to hold construction vehicles during the hours of school restrictions.

51) Construction workers using the Alternative Facility would leave their personal vehicles in the car park before travelling to the HARP construction compounds by minibus to reduce the number of vehicle movements on the local road network. The estimated operational vehicle numbers and daily scheduling over the duration of the construction programme would be the same as for the original consented planning application.

52) Tankers would be used to bring clean water to the site for use in the welfare facilities. Wastewater would be removed off site in tankers for treatment at a licensed wastewater treatment facility. It is anticipated that the facilities would be maintained/serviced at least once a week.

3.4 Decommissioning Phase

53) The Alternative Facility would be decommissioned and reinstated once construction, commissioning and reinstatement works at the consented schemes are complete and the Alternative Facility is no longer required. This would involve removing the welfare buildings and hardstanding areas, reinstating the subsoil then the topsoil and removing any site fencing or other temporary works. The site would be returned to agricultural use in consultation with the landowner and tenant farmer.

3.5 Alternative Facility Programme

54) Prior to the appointment of a contractor, the exact construction programme is not known at this stage. The indicative construction dates described in this TS and applied in the traffic and movement assessment presented in Environmental Statement Chapter 10 Traffic and Movement, are based on an indicative programme using current best estimates and may be subject to change. Therefore, all traffic volumes and timescales should be considered provisional and may be revised prior to the commencement of works on appointment of the contractor and confirmation of their programme.

- 55) Subject to planning consent being granted, construction is anticipated to commence in early 2026, to allow operation to commence towards the end of 2026. Operation of the site would be for approximately seven years between 2026 and 2033. The site is anticipated to be decommissioned by late 2034 once the HARP is complete and the Alternative Facility is no longer required. Decommissioning of the site is anticipated to take approximately 12 months.

3.5.1 Traffic Impact Assessment Method

- 56) The Alternative Facility would serve the 'Main Project Stage' of the consented schemes during its operational phase. 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.
- 57) 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 workers and HGVs as follows:
- 06:45 to 08:00 and 18:45 to 20:00 (two shifts) – light vehicle 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.
- 58) 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.
- 59) The above operating hours have been applied to the construction and operational traffic of the Alternative Facility for the purposes of the traffic impact assessment presented in Section 4. These hours are similarly adopted for the assessment of traffic and movement impacts within Chapter 10 Traffic and Movement.

3.5.2 Anticipated Vehicle Operating Hours by Phase

- 60) As part of the subsequent planning permissions granted for the consented schemes, the planning decision notice (Application Reference: 3/2021/0660 and Application Reference: 3/2021/0661) included Condition 41 which stated:
- "For the 'Main Project Stage', during school term times, no HGV movements, associated with the development hereby approved, will be permitted along Route 2b (as defined in Condition 34) during the following hours:*
- 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."*
- 61) 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 (C571), 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 and would therefore not impact any schools concerned with Condition 4.1.

- 62) In addition, United Utilities has identified that there may be a 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 vehicle movements (private car/minibus/vans) for commuting movements.
- 63) 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.
- 64) 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 have confirmed 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.

3.6 Proposed New Site Access

- 65) The site is currently accessed via an agricultural field gate, which is unsuitable to serve the Alternative Facility. It has been agreed with LCC that the access would be upgraded to a priority-controlled junction. The agreed junction layout is illustrated in RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application. From a junction geometry perspective, the layout features:
- Minimum 7.3 m carriageway width
 - 15.0 m entry corner radii and 12.0 m minimum exit corner compound radii
 - 160 m visibility splay.
- 66) Site access vehicle swept path analysis has been undertaken and is illustrated in 80061155-01-JAC-TR3-00100-DR-C-00002 contained in Appendix F.3 Swept Path Analysis. The swept path analysis illustrates that the largest HGV expected to visit the site, a 34.3 m Tunnel Boring Machine Articulated Heavy Load Mover, can safely access/egress the site in a forward gear.
- 67) Stopping sight distances (SSD) have also been considered as part of the junction design and are represented in the visibility splays illustrated in RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application. The SSD is based on an 85 kph design speed to account for the observed 85th percentile vehicle speeds recorded on A671 Pimlico Link Road during the July 2024 traffic surveys as described in Section 2.4. The visibility splays demonstrate that the desirable minimum SSD of 160 m is achieved in accordance with Design Manual for Roads and Bridges CD 109 Highway Link Design.¹²

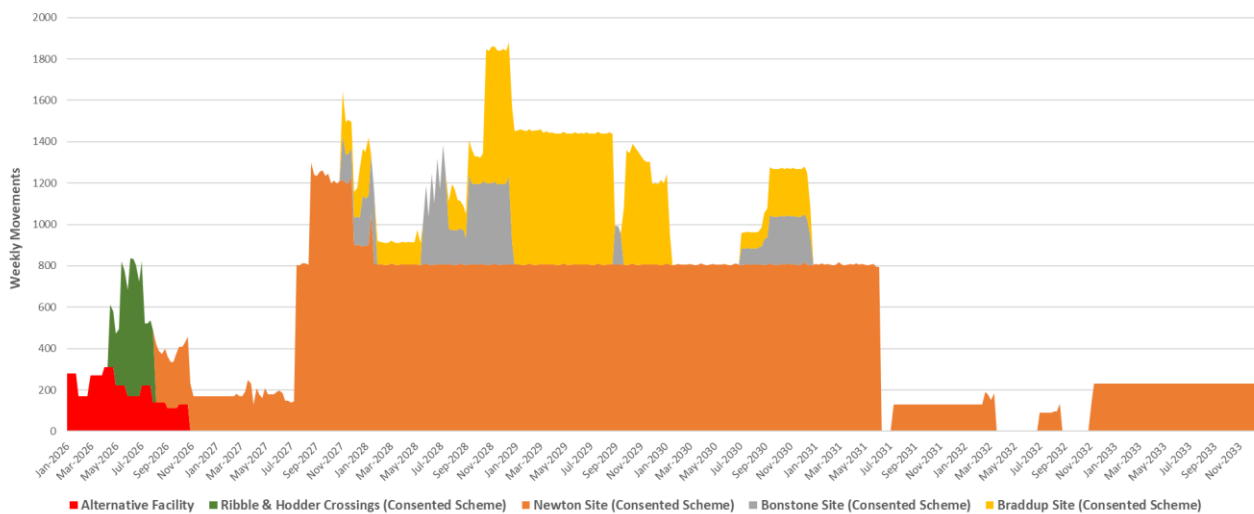
¹² Highways England (2020). Design Manual for Roads and Bridges, CD 109 Highway Link Design. Revision 1. Table 2.10: Design speed related parameters. [Online] Available at: <https://www.standardsforhighways.co.uk/search/c27c55b7-2dfc-4597-923a-4d1b4bd6c9fa>

4. Traffic Impact

- 68) This section outlines the traffic impact analysis covering the study area defined in Chapter 10 Traffic and Movement and shown in Figure 10.1:
- 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.
- 69) The subsequent analysis considers traffic impacts for the weekday peak periods expressed in relation to percentage change in two-way traffic flows. It should therefore be read in conjunction with Chapter 10 Traffic and Movement which explains the likely significance of these effects. In addition, this section provides commentary on the proposed new site access layout operational performance.

4.1 Assessment Year

- 70) As outlined in Section 3, the Alternative Facility comprises three phases:
- Construction
 - Operation
 - Decommissioning.
- 71) A high-level construction programme for the Alternative Facility has been used to identify the key parameters for assessment of traffic. This construction programme is based upon United Utilities' current understanding of the Proposed Programme of Works; however, it is noted that it may be subject to change post-determination when further detail is available from the contractor(s). With regard to the operational phase, the construction programme which was adopted for the consented schemes, and which supported the associated planning applications for the Marl Hill (planning application reference: 3/2021/0661) and Bowland (planning application reference: 3/2021/0660) Sections, has been used to determine the peak traffic that would use the Alternative Facility. It should be noted that the original construction programme assumed that works would commence in 2023, and therefore it has been necessary to reflect a revised anticipated start date of 2026 in line with United Utilities' current aspirations. Notwithstanding, the components of the original construction programme, including the construction activities, their durations and timings, and the forecast traffic generation, remain unchanged and are therefore reflected in the operational traffic forecasts presented in this appendix and Chapter 10 Traffic and Movement.
- 72) Consistent with Chapter 10 Traffic and Movement, both the construction and operational phases have been assessed within this appendix. The number of vehicle movements generated during the decommissioning phase is expected to be similar to those required during the construction phase, and significantly 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, and therefore, have not been considered separately. Graph 4.1 shows the concurrent weekly vehicle movements for the Alternative Facility and the consented schemes, used to determine the Construction Phase and Operational Phase peaks of vehicular activity for the study area.



Graph 4.1: Concurrent Alternative Facility and Consented Schemes Weekly Vehicle Movements

- 73) During the spring months of 2026, it is anticipated that construction activity would achieve its concurrent peak period regarding workforce, plant and vehicle requirements. For that reason, and to produce the most representative scenario, 2026 was chosen as the construction peak year. The Alternative Facility would serve the Newton-in-Bowland, Bonstone and Braddup compounds but not the Lower Houses compound, which would be accessed via an alternative route in Lancaster City Council's administrative area. The peak construction traffic and associated peak year in which this would occur 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 3/2021/0661) and the Bowland Section (planning application reference 3/2021/0660) considered a wider study area relative to the HARP proposals and therefore traffic associated with all four compounds was used to determine the peak traffic generation. As can be seen in Graph 4.1, 2028 is identified as the peak year for assessment of the Operational Phase; peak traffic generation occurs in late 2028.

4.2 Assessment Scenarios

- 74) The potential environmental impacts associated with the Alternative Facility have been assessed using the scenarios set out in Table 4.1 below.

Table 4.1: Future Traffic Assessment Scenarios

Construction Phase		Operational Phase	
2024 Existing Scenario	Current traffic position (2024)	2024 Existing Scenario	Current traffic position (2024)
2026 Construction 'Do Nothing' Scenario	TEMPro ¹³ 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 + Park and Ride/HGV Marshalling Area construction activities	2028 Operational 'Do Something' Scenario	TEMPro traffic growth + cumulative development + consented schemes

- 75) 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. Furthermore, the traffic generated by the consented schemes would utilise the Alternative Facility during its operational phase and is therefore not deemed to be cumulative development. Further detail on the cumulative assessment methodology is provided in Sections 4.4.2 and 4.5.2 for the construction and operational phases respectively.

4.3 Vehicle Operating Hours for Traffic Impact Assessment

4.3.1 Traffic Impact Assessment

- 76) As described in Section 3.5.1, to maintain consistency with the traffic methodology agreed with LCC Highways for assessment of the consented schemes, the following traffic movement hours have been applied to both the construction and operational phases of the Alternative Facility to assess traffic impacts:

- 06:45 to 08:00 and 18:45 to 20:00 (two shifts) – light vehicle 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.

- 77) The resulting traffic generation for the construction and operational phases is presented in Section 4.4.4 and Section 4.5.4. These underpin the traffic impact assessment results subsequently presented in Section 4.4.5 and Section 4.5.5.

4.3.2 Sensitivity Test

- 78) In addition, a sensitivity test has been undertaken based on the revised HGV restriction hours and revised commuter hours described in Section 3.5.2. This has been undertaken to determine whether these revised hours would alter the conclusions of the traffic impact assessment. The hourly distribution of the construction and operational phase traffic has been modified accordingly within the excel traffic tool used for the main assessments.

¹³ Department for Transport (2023). Trip End Model Presentation Program. [Online] Available at: <https://www.gov.uk/government/publications/tempro-downloads>

- 79) A comparison of the 12-hour two-way flows accessing/egressing the Alternative Facility is presented in Table 4.2 below.

Table 4.2: Sensitivity Test Differences (Alternative Facility Site Access – 12-Hour Flow, Two-Way)

Phase	Consented Scheme Method (12-Hour, Two-Way Flow)	Revised Method (12-Hour, Two-Way Flow)	Difference
Construction Phase	86	86	0
Operational Phase	191	191	0

- 80) Table 4.2 shows that adjusting the hourly distribution of the construction and operational phase trips to reflect the extended worker movement hours, combined with the revised vehicle restriction hours, would not see a change in the overall vehicle numbers generated across the daytime period when compared to the consented traffic methodology adopted for the main traffic impact assessment presented in Sections 4.4 and 4.5. From an hourly traffic perspective, the HGV restrictions shift forward by 15 minutes and therefore there is negligible change in the distribution of HGVs across the daytime hours. Therefore, the conclusions of the traffic and movement assessment presented within this appendix would not differ.

4.4 Construction Phase

4.4.1 2026 Construction 'Do Nothing' Scenario

- 81) The baseline year was identified as 2026, with the highest level of concurrent construction activity occurring across the development area between January 2026 and October 2026.
- 82) Calculation of 'background' traffic estimates has been undertaken using an appropriate growth factor to uplift 2024 background network traffic levels to the 2026 peak time of construction, using appropriate factors from the National Transport Model¹⁴ (NTM), locally adjusted for the Ribble Valley area and South Ribble areas, using the TEMPro (V8.1)¹³ software. This equates to circa 1.6% growth in traffic across the network for the Ribble Valley area and 1.4% for the South Ribble area.

4.4.2 2026 Construction 'Do Minimum' Scenario

- 83) The 2026 Construction Do Minimum scenario incorporates any planned major development applications that can be expected to be present on the local highway network during the peak of the construction phase. This includes any traffic generated by the consented schemes that would not directly interact (i.e. access/egress the site) with the Alternative Facility.

4.4.2.1 Other Nearby Major Developments

- 84) Assessments of baseline network conditions incorporate the consideration of cumulative local development schemes, and other major schemes within the planning process that have the potential to coincide with the relevant assessment periods of the Proposed Programme of Works. Trip generation and distribution assumptions have been obtained from documents published on the planning websites of RVBC¹⁵. This process is considered to be robust as it

¹⁴ Department for Transport (2020). National Transport Model (NTMv2R): overview of model structure and update. [Online] Available at: <https://www.gov.uk/government/publications/national-transport-model-ntmv2r-overview-of-model-structure-and-update>

¹⁵ Ribble Valley Borough Council (2024). Planning Applications. [Online] Available at: https://www.ribblevalley.gov.uk/info/200361/planning_applications

quantifies schemes on top of the background growth that is derived from growth rates obtained from TEMPro¹³.

- 85) A review of the planning portal has identified four major planning applications of interest. The application details along with commentary justifying their inclusion/exclusion in the Do Minimum scenario are summarised in Table 4.3.

Table 4.3: Other Nearby Major Developments

Application Reference	Site Location	Application Description	Outcome of Review
LCC/2018/0060	Bankfield Quarry, Clitheroe (Located approximately 1.4 km north of the Alternative Facility)	Continuation of mining operations until 31 December 2033 and completion of restoration by 31 December 2035.	Continuation of existing operations through to 2033, trips associated with the site are already on the highway network and will have been counted in the July 2024 traffic count surveys – No Further Assessment Required.
LCC/2023/0021	Ribblesdale Works, West Bradford Road, Clitheroe (Located approximately 1.75 km north-west of the Alternative Facility)	Installation of a solid recovered fuel facility including two trailer docking stations, two buildings, bag filter structure, dosing unit building, conveyors and pipeline linking the dosing unit to the main burner.	Supporting Statement submitted with the planning application indicates that once operational, the net change in HGV trips associated with the site will be one additional delivery per day and that the proposal will not result in any additional staff. No information has been submitted regarding trip generation associated with the construction phase, thus, traffic impact is considered non-material – No Further Assessment Required.
LCC/2023/0017	Ribblesdale Cement Works, West Bradford Road, Clitheroe (Located approximately 1.4 km north of the Alternative Facility)	Installation of replacement main filter and by-pass filter to The Kiln.	The Supporting Statement submitted with the application makes no reference to trip generation associated with the proposal, so it is assumed to be non-material. The Supporting Statement, however, states: <i>'it is anticipated that work will commence during the second half of 2023, with installation and commissioning taking place across 2024 and into 2025. Following this the old filters will be demolished'</i> . It is therefore concluded that a proportion of the trip generation associated with the proposal may have been counted in the July 2024 traffic surveys undertaken for the Alternative Facility planning application (see Section 2.3). It could be expected that any traffic generated beyond the July 2024 survey period will arguably be a continuation of construction activities and therefore be represented in the traffic already recorded – No Further Assessment Required.
LCC/2016/0027	Bankfield Quarry, Pimlico Link Road, Clitheroe (Located approximately 1.4 km north of the Alternative Facility)	Importation and processing of construction and demolition waste including road planing and reclaimed asphalt pavement (RAP) including the regularisation of the RAP hopper.	The application Decision Notice dated March 2016 states <i>'activities authorised by this permission shall cease not later than 31st December 2018. All stockpiles of waste and recycled materials shall thereafter be removed, and the site restored by not later than 31st December 2019'</i> – No Further Assessment Required.

- 86) The outcome of the major planning applications review detailed in Table 4.3 above confirms that, for the purpose of the assessment of the Alternative Facility, A671 Pimlico Link Road is not materially affected by any of the identified applications.

4.4.2.2 HARP Consented Schemes

- 87) Trip generation arising from the construction phase of the consented schemes has also been considered as cumulative committed development to form part of the 2026 Construction Do Minimum scenario. As shown in Graph 4.1, the construction of both the Ribble and Hodder Crossings is planned to run in parallel with the construction of the Alternative Facility. Therefore, the consented schemes traffic associated with the construction of the crossings would likely be present on the highway network during the 2026 construction year. The associated traffic required for the construction of the Ribble and Hodder Crossings which travels through the study area for the Alternative Facility has therefore been accounted for in the 2026 Construction Do Minimum scenario.

4.4.3 2026 Construction 'Do Something' Scenario

- 88) The 2026 Construction Do Something scenario represents the operation of the highway network in 2026 including background traffic levels, committed developments, plus traffic associated with the construction of the Alternative Facility. Traffic-related construction movements tend to have variations in peak staffing times and delivery levels. Based on construction programme estimates shown in Graph 4.1, the Alternative Facility is anticipated to begin in early 2026, becoming operational in late 2026, and reaching its peak of construction activity in spring of 2026.
- 89) To represent the construction period, discussions have been held with United Utilities to quantify construction-related traffic amongst both staff and construction-related HGVs. Based on the current construction programme, the following assumptions have been made.

4.4.3.1 Working Hours During Construction

- 90) The hours presented in Section 3.5.1 for commuter and HGV movements have been applied in the construction phase traffic impact assessment. It is anticipated that the commuting hours proposed in Section 3.5.2 would supersede those presented in Section 3.5.1. Furthermore, the HGV restricted hours would not apply to the construction phase since Route 2b relates to West Bradford Road (C571), which lies further north of the Alternative Facility, and HGVs during the construction phase would all arrive/depart the site via the A59/A671 Pimlico Link Road junction to the south.
- 91) The sensitivity test presented in Section 4.3.2 confirms that for the purposes of the traffic impact assessment, there is no material difference between the two sets of hours and therefore, the traffic methodology used for the assessment of the consented schemes, which uses the hours presented in Section 3.5.1, is still applicable.
- 92) It is not possible at this stage to fully predict the detailed arrival and departure of HGVs at the Alternative Facility; however, liaison with United Utilities, professional judgement and the methodology used as part of the consented schemes has been used to develop a profile of arrivals and departures.
- 93) In reality, there is potential that the construction phase would follow more typical daytime working hours, however this cannot be confirmed until the contractor is in place.

4.4.3.2 HGV Trip Generation and Distribution Assumptions

- 94) The assessment of traffic impacts has been based on technical assumptions provided by United Utilities, as well as applied professional judgement. This accounts for all HGVs in terms of material movements and equipment required at the site for construction across the 10-month duration. As previously highlighted, the peak in construction activity occurs in spring 2026. This represents a peak total of seven HGVs (two-way) per hour during the hours of HGV movements.
- 95) The distribution of HGV traffic associated with the construction phase of the Alternative Facility has aligned to the methodology agreed for the consented schemes. This is presented in the Transport Assessments for the Marl Hill Section (planning application reference: 3/2021/0661) and Bowland Section (planning application reference: 3/2021/0660) where it is assumed that all HGVs and abnormal loads travelling to the Newton-in-Bowland compound would arrive/depart via M6 Junction 31, along the A59 and A671 Pimlico Link Road. Since the Alternative Facility is intended to cater for construction traffic accessing these compounds, it is reasonable to assume that HGVs required for the construction of the Alternative Facility would also utilise the A59 to access the SRN. Therefore, 100% of HGV traffic generated during the construction phase would travel via the A59/A671 Pimlico Link Road junction to the south of the proposed new site access, with no HGVs required to travel north of the proposed new site access for the Alternative Facility during this phase of works.
- 96) Since there is no requirement for HGVs to travel north of the Alternative Facility during the construction phase, the HGV movement restrictions, which specifically apply to West Bradford Road (Route 2b), as defined in Condition 4.1 of the decision notice for Application Reference 3/2021/0660 and Application Reference: 3/2021/0661, do not apply to the construction phase.

4.4.3.3 Peak Construction Staff Activity

- 97) Spring 2026 has been identified as the busiest construction period and the associated traffic generation has therefore been applied for the construction phase assessment. Consistent with the travel patterns adopted in the consented schemes, it is assumed that the workforce would arrive by private car/minibus/vans to the Alternative Facility site.
- 98) The traffic impact assessment methodology assumes that the general working hours for the construction of the Alternative Facility would be from 07:00 to 19:00, with all commuting trips conducted outside of the peak network hours, prior to 08:00 for inbound movements, and after 18:45 for outbound movements. The distribution of the workforce was based on a consistent methodology agreed for the consented schemes using labour market statistics for the Lancaster, Preston, Blackburn and Darwen, Ribble Valley and South Ribble areas from the 2011 census, obtained from the Nomis website¹⁶. The main areas identified as likely to be where workers would live are Lancaster, Preston, Burnley, Blackburn, and Clitheroe.

4.4.4 Summary of Construction Traffic

- 99) Table 4.4 to Table 4.6 provide a summary of the traffic impact assessment results for the total construction traffic (HGV and staff) of the three peak periods in the morning (07:00 to 08:00, 08:00 to 09:00 and 09:00 to 10:00). Table 4.7 and Table 4.8 provide a summary of the two peak periods of activity in the evening (17:00 to 18:00 and 18:00 to 19:00).

¹⁶ Office for National Statistics (2011). Nomis – 2011 Census. [Online] Available at: https://www.nomisweb.co.uk/sources/census_2011

100) Details of the location of the link reference numbers can be seen in Figure 10.1.

Table 4.4: Total Construction Traffic AM Peak Period (07:00-08:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	4	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	12	0.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	7	0.0%
120	A59 (north of A671 junction)	2	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	3	0.0%
126	West Bradford Road	3	0.0%
149	A59 (south of A671 junction)	10	0.0%
150	Chatburn Road	0	0.0%

Table 4.5: Total Construction Traffic AM Peak Period (08:00-09:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	0	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	0	0.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
120	A59 (north of A671 junction)	0	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
126	West Bradford Road	0	0.0%
149	A59 (south of A671 junction)	0	0.0%
150	Chatburn Road	0	0.0%

Table 4.6: Total Construction Traffic AM Peak Period (09:00-10:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	0	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	7	100.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
120	A59 (north of A671 junction)	0	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
126	West Bradford Road	0	0.0%
149	A59 (south of A671 junction)	7	100.0%
150	Chatburn Road	0	0.0%

Table 4.7: Total Construction Traffic PM Peak Period (17:00-18:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	0	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	7	100.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
120	A59 (north of A671 junction)	0	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
126	West Bradford Road	0	0.0%
149	A59 (south of A671 junction)	7	100.0%
150	Chatburn Road	0	0.0%

Table 4.8: Total Construction Traffic PM Peak Period (18:00-19:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	1	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	8	64.9%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	2	0.0%
120	A59 (north of A671 junction)	1	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	1	0.0%
126	West Bradford Road	1	0.0%
149	A59 (south of A671 junction)	8	68.6%
150	Chatburn Road	0	0.0%

- 101) The trip generation figures presented above represent the peak construction traffic present on the local highway network to occur in the hour 07:00 to 08:00, when the majority of the workforce would arrive at the Alternative Facility.
- 102) In accordance with the anticipated hours defined in Section 3.5.2, it is the intention that workers would have arrived to site by 08:00 thereby avoiding coinciding with the traditional morning peak. Similarly, workers would depart the site from 18:00 onwards, and therefore not coincide with the traditional evening peak.
- 103) As described in Section 3.5.1, it has been assumed for traffic impact modelling purposes that HGVs would operate on the public highway network between 09:00 to 14:45 and 16:00 to 18:45, avoiding typical school drop-off periods in the morning and afternoon, as per the consented schemes.
- 104) Since all HGV traffic would arrive at the Alternative Facility via the A59, no HGVs would travel north of the Alternative Facility and use Route 2b, therefore the restrictions from Condition 41 of the decision notice do not apply to the construction phase. It should be noted that there may be a small number of HGVs present on the road network during these hours, such as those related to time-limited construction activities such as asphalt laying; however, as described, these vehicles would not need to travel north of the Alternative Facility.

4.4.5 Assessment of Construction Traffic Impacts

- 105) This section summarises the percentage traffic changes by link for the following scenarios:
- 2024 Existing Scenario
 - 2026 Construction 'Do Nothing' Scenario
 - 2026 Construction 'Do Minimum' Scenario
 - 2026 Construction 'Do Something' Scenario.
- 106) Table 4.9 and Table 4.10 provide a summary of the comparative change between the traffic scenarios mentioned above for the morning hours of 07:00 to 08:00 and 09:00 to 10:00 (excluding 08:00 to 09:00 where the traffic impact assessment method has assumed there will be no vehicles associated with the construction of the Alternative Facility on the highway network). Table 4.11 provides a summary of the 17:00 to 18:00 peak hour in the evening, considered representative of the traditional evening peak.

Table 4.9: Comparative Change Between 2026 Construction Do Minimum and Do Something Scenarios – AM Peak Period (07:00 to 08:00)

Link Ref	Link Name	2024 Existing		2026 Construction DN		2026 Construction DM		2026 Construction DS		Two-Way Link Flows % Change DM vs DS
		Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	
56	A671 Chatburn Road	521	4.2%	527	4.2%	533	4.2%	537	4.1%	0.8%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	440	14.8%	446	14.8%	452	14.6%	464	14.2%	2.6%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	440	14.8%	446	14.8%	452	14.6%	459	14.3%	1.6%
120	A59 (north of A671 junction)	776	10.7%	785	10.7%	786	10.7%	788	10.7%	0.3%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	171	12.3%	173	12.3%	178	12.0%	181	11.8%	1.7%
126	West Bradford Road	171	12.3%	173	12.3%	178	12.0%	181	11.8%	1.7%
149	A59 (south of A671 junction)	1,038	10.4%	1,051	10.4%	1,056	10.3%	1,066	10.2%	0.9%

Table 4.10: Comparative Change Between 2026 Construction DM and DS Scenarios – AM Peak Period (09:00 to 10:00)

Link Ref	Link Name	2024 Existing		2026 Construction DN		2026 Construction DM		2026 Construction DS		Two-Way Link Flows % Change DM vs DS
		Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	
56	A671 Chatburn Road	685	2.2%	693	2.2%	701	3.2%	701	3.2%	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	453	22.0%	458	22.0%	468	23.6%	476	24.8%	1.6%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	453	22.0%	458	22.0%	468	23.6%	468	23.6%	0.0%
120	A59 (north of A671 junction)	777	14.0%	786	14.0%	786	14.0%	786	14.0%	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	210	14.9%	213	14.9%	214	15.5%	214	15.5%	0.0%
126	West Bradford Road	210	14.9%	213	14.9%	214	15.5%	214	15.5%	0.0%
149	A59 (south of A671 junction)	998	15.3%	1,010	15.3%	1,020	16.2%	1,028	16.8%	0.7%

Table 4.11: Comparative Change Between 2026 Construction DM and DS Scenarios – PM Peak Period (17:00 to 18:00)

Link Ref	Link Name	2024 Existing		2026 Construction DN		2026 Construction DM		2026 Construction DS		Two-Way Link Flows % Change DM vs DS
		Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	
56	A671 Chatburn Road	894	0.9%	905	0.9%	912	1.7%	912	1.7%	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	486	5.6%	492	5.6%	502	7.5%	510	8.9%	1.5%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	486	5.6%	492	5.6%	502	7.5%	502	7.5%	0.0%
120	A59 (north of A671 junction)	952	4.6%	963	4.6%	963	4.6%	963	4.6%	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	226	3.8%	228	3.8%	230	4.5%	230	4.5%	0.0%
126	West Bradford Road	226	3.8%	228	3.8%	230	4.5%	230	4.5%	0.0%
149	A59 (south of A671 junction)	1,203	4.5%	1,218	4.5%	1,228	5.3%	1,235	5.8%	0.6%

- 107) The results show that the comparative change between the 2026 Construction Do Minimum scenario and the 2026 Construction Do Something scenario is typically 0.3 – 2.6% across the morning and evening peak periods assessed, with most of the links experiencing no change in two-way link flows. Overall, the changes are relatively slight and considered to be not significant within the context of the background flows. They are therefore unlikely to have a significant bearing on the operation of the network for the periods at which this level of construction traffic would occur. It is considered that there are no permanent physical measures (such as a capacity enhancement) required to mitigate against this change during the temporary construction period across the existing road network.

4.5 Operational Phase

4.5.1 2028 Operational 'Do Nothing' Scenario

- 108) As shown in Graph 4.1, the operational phase is expected to start in late 2026 until 2033, with the peak activity associated with the construction of the consented schemes occurring in late 2028. This therefore reflects the peak traffic accessing/egressing the Alternative Facility during its operational phase.
- 109) A calculation of 'background' traffic estimates has been undertaken using an appropriate growth factor to uplift 2024 background network traffic levels to the 2028 peak time of the operational phase. These estimates use appropriate factors from the National Transport Model¹⁴ (NTM), locally adjusted for the Ribble Valley area and South Ribble areas, applied to TEMPro (V8.1)¹³ software. This indicates circa 4.0% growth in traffic across the network for the Ribble Valley area and 3.5% for the South Ribble area.

4.5.2 2028 Operational 'Do Minimum' Scenario

- 110) The 2028 Operational Do Minimum scenario incorporates any planned major development applications expected on the local highway network during the operational phase peak. This includes any traffic generated by the consented schemes that would not directly interact (i.e. access/egress the site) with the Alternative Facility.

4.5.2.1 Other Nearby Committed Developments

- 111) The outcomes of the major planning application review described in Section 4.4.2.1 are also applicable to the 2028 Operational Do Minimum scenario, where no applicable committed or emerging developments relevant to the study area have been identified for this period.

4.5.2.2 Consented Schemes

- 112) Furthermore, this scenario does not include any elements of the consented schemes since a robust case has been taken whereby all traffic associated with the construction of the Newton-in-Bowland, Bonstone and Braddup compounds is assumed to utilise the Alternative Facility during its operational phase and therefore is not considered as cumulative traffic, to avoid double counting.

4.5.3 2028 Operational 'Do Something' Scenario

- 113) This 2028 Operational Do Something scenario represents the operation of the highway network in 2028 including background traffic levels, plus traffic associated with operation of the Alternative Facility.

- 114) As part of the consented schemes a theoretical vehicle movements spreadsheet was previously produced by United Utilities which informed the Transport Assessments for the Marl Hill Section (planning application reference: 3/2021/0661) and Bowland Section (planning application reference: 3/2021/0660). These forecasts have been used to calculate the construction vehicle movements associated with the consented schemes on the A671 Pimlico Link Road accessing/egressing the Alternative Facility.
- 115) As highlighted in Section 4.1, it should be noted that the peak construction traffic forecasts marginally differ to those contained in the Transport Assessments for the consented schemes. This is due to the geographical scope of the study areas between the Alternative Facility and the wider study area agreed for the consented schemes. The study area for the Alternative Facility considers the A671 Pimlico Link Road/West Bradford Road corridor where differences in traffic patterns would occur from the alternative siting of the temporary P&R and HGV marshalling area facilities. It was therefore necessary to reflect the peak traffic forecast for this section of the public highway network which is based on the consented scheme traffic associated with the Newton-in-Bowland, Bonstone and Braddup sites utilising the Alternative Facility as these sites are accessed via this corridor. In contrast, the Transport Assessments for the consented schemes assessed a wider study area relative to the HARP proposals and therefore traffic associated with all four compounds, including the Lower Houses compound, was used to determine the peak traffic generation.
- 116) The hours presented in Section 3.5.1 for commuter and HGV movements have been applied in the operational phase traffic impact assessment. It is anticipated that the commuting hours proposed in Section 3.5.2 and the hours of HGV movements informed in Condition 41 would supersede those presented in Section 3.5.1. The sensitivity test presented in Section 4.3.2 confirms that for the purposes of the traffic impact assessment, there is no material difference between the two sets of hours and therefore, the traffic methodology used for the assessment of the consented schemes, which uses the hours presented in Section 3.5.1, is still applicable.

4.5.4 Summary of Operational Traffic

- 117) Tables 4.12 to 4.14 provide a summary of the traffic impact assessment results (HGV and staff) of the three peak periods in the morning (07:00 to 08:00, 08:00 to 09:00 and 09:00 to 10:00). Table 4.15 and Table 4.16 provide a summary of the two peak periods of activity in the evening (17:00 to 18:00 and 18:00 to 19:00).

Table 4.12: Total Operational Traffic AM Peak Period (07:00 to 08:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	18	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	40	0.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	35	0.0%
120	A59 (north of A671 junction)	5	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	21	0.0%
126	West Bradford Road	21	0.0%
149	A59 (south of A671 junction)	35	0.0%
150	Chatburn Road	0	0.0%

Table 4.13: Total Operational Traffic AM Peak Period (08:00 to 09:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	0	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	0	0.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
120	A59 (north of A671 junction)	0	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	0	0.0%
126	West Bradford Road	0	0.0%
149	A59 (south of A671 junction)	0	0.0%
150	Chatburn Road	0	0.0%

Table 4.14: Total Operational Traffic AM Peak Period (09:00 to 10:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	0	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	11	100.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	11	100.0%
120	A59 (north of A671 junction)	0	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	11	100.0%
126	West Bradford Road	11	100.0%
149	A59 (south of A671 junction)	11	100.0%
150	Chatburn Road	0	0.0%

Table 4.15: Total Operational Traffic PM Peak Period (17:00 to 18:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	0	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	11	100.0%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	11	100.0%
120	A59 (north of A671 junction)	0	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	11	100.0%
126	West Bradford Road	11	100.0%
149	A59 (south of A671 junction)	11	100.0%
150	Chatburn Road	0	0.0%

Table 4.16: Total Operational Traffic PM Peak Period (18:00 to 19:00)

Link Ref	Link Name	Two-Way Link Flow	% HGV
56	A671 Chatburn Road	5	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	18	44.7%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	17	47.9%
120	A59 (north of A671 junction)	1	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	13	61.1%
126	West Bradford Road	13	61.1%
149	A59 (south of A671 junction)	17	47.9%
150	Chatburn Road	0	0.0%

- 118) The trip generation figures presented above represent the peak construction traffic present on the local highway network to occur in the hour 07:00 to 08:00, when the majority of the workforce would arrive for the daytime shift.
- 119) In accordance with the anticipated hours defined in Section 3.5.2, it is the intention that workers would have arrived to site by 08:00 thereby avoiding coinciding with the traditional morning peak. Similarly, workers would depart the site from 18:00 onwards, and therefore not coincide with the traditional evening peak.
- 120) As described in Section 3.5.1, it has been assumed for traffic impact modelling purposes that HGVs would operate on the public highway network between 09:00 to 14:45 and 16:00 to 18:45, avoiding typical school drop-off and pick-up periods in the morning and afternoon.

4.5.5 Assessment of Operational Traffic Impacts

- 121) This section summarises the changes in traffic volume by link within the study area, expressed as a percentage increase against baseline flows, for the following scenarios:
- 2024 Existing Scenario
 - 2028 Operational 'Do Nothing' Scenario
 - 2028 Operational 'Do Minimum' Scenario
 - 2028 Operational 'Do Something' Scenario.
- 122) Table 4.17 and Table 4.18 provide a summary of the comparative change between the scenarios mentioned above for the morning hours of 07:00 to 08:00 and 09:00 to 10:00 (excluding 08:00 to 09:00 where the traffic impact assessment method has assumed there will be no vehicles associated with the construction of the Alternative Facility on the highway network). Table 4.19 provides a summary of the 17:00 to 18:00 peak hour in the evening, considered representative of the traditional evening peak.

Table 4.17: Comparative Change Between 2028 Operational DM and DS Scenarios – AM Peak Period (07:00 to 08:00)

Link Ref	Link Name	2024 Existing		2028 Operational DN		2028 Operational DM		2028 Operational DS		% Change against DM
		Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	
56	A671 Chatburn Road	521	4.2%	537	4.2%	537	4.2%	555	4.1%	3.4%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	440	14.8%	454	14.8%	454	14.8%	494	13.6%	8.9%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	440	14.8%	454	14.8%	454	14.8%	489	13.7%	7.8%
120	A59 (north of A671 junction)	776	10.7%	800	10.7%	800	10.7%	805	10.7%	0.6%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	171	12.3%	177	12.3%	177	12.3%	197	11.0%	11.7%
126	West Bradford Road	171	12.3%	177	12.3%	177	12.3%	197	11.0%	11.7%
149	A59 (south of A671 junction)	1,038	10.4%	1,071	10.4%	1,071	10.4%	1,106	10.1%	3.3%
150	Chatburn Road	137	12.8%	143	12.8%	143	12.8%	143	12.8%	0.0%

Table 4.18: Comparative Change Between 2028 Operational DM and DS Scenarios – AM Peak Period (09:00 to 10:00)

Link Ref	Link Name	2024 Existing		2028 Operational DN		2028 Operational DM		2028 Operational DS		% Change against DM
		Two-Way Link Flows	%HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	
56	A671 Chatburn Road	685	2.2%	706	2.2%	706	2.2%	706	2.2%	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	453	22.0%	467	22.0%	467	22.0%	478	23.7%	2.3%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	453	22.0%	467	22.0%	467	22.0%	478	23.7%	2.3%
120	A59 (north of A671 junction)	777	14.0%	801	14.0%	801	14.0%	801	14.0%	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	210	14.9%	217	14.9%	217	14.9%	228	18.9%	5.0%
126	West Bradford Road	210	14.9%	217	14.9%	217	14.9%	228	18.9%	5.0%
149	A59 (south of A671 junction)	998	15.3%	1,029	15.3%	1,029	15.3%	1,040	16.2%	1.1%
150	Chatburn Road	239	10.9%	251	10.9%	251	10.9%	251	10.9%	0.0%

Table 4.19: Comparative Change Between 2028 Operational DM and DS Scenarios – AM Peak Period (17:00 to 18:00)

Link Ref	Link Name	2024 Existing		2028 Operational DN		2028 Operational DM		2028 Operational DS		% Change against DM
		Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	Two-Way Link Flows	% HGV	
56	A671 Chatburn Road	894	0.9%	922	0.9%	922	0.9%	922	0.9%	0.0%
57a	A671 Pimlico Link Road (between Alternative Facility site access and A59 junction)	486	5.6%	502	5.6%	502	5.6%	512	7.6%	2.2%
57b	A671 Pimlico Link Road (between Alternative Facility site access and Pimlico Link Road/Chatburn Road roundabout)	486	5.6%	502	5.6%	502	5.6%	512	7.6%	2.2%
120	A59 (north of A671 junction)	952	4.6%	982	4.6%	982	4.6%	982	4.6%	0.0%
125	Pimlico Link Road (north of Pimlico Link Road/Chatburn Road roundabout)	226	3.8%	233	3.8%	233	3.8%	244	8.1%	4.6%
126	West Bradford Road	226	3.8%	233	3.8%	233	3.8%	244	8.1%	4.6%
149	A59 (south of A671 junction)	1,203	4.5%	1,241	4.5%	1,241	4.5%	1,252	5.3%	0.9%
150	Chatburn Road	249	8.7%	262	8.7%	262	8.7%	262	8.7%	0.0%

- 123) The results show that the comparative changes between the 2028 Operational DM scenario and the 2028 Operational DS scenario are relatively slight in the 09:00 to 10:00 morning hour and 17:00 to 18:00 evening peak where these range between 0.9% and 5.0%. The largest changes occur in the 07:00 to 08:00 morning hour when the daytime worker shift arrives/ departs the Alternative Facility and reflect up to 11.7% increase in total flows on Pimlico Link Road/West Bradford Road (Links 125 and 126). However, these links would see a reduction in traffic when compared against the consented schemes as a result of the P&R facility moving further south, as only commuters travelling via West Bradford Road need to travel on these links to access the Alternative Facility. It should also be noted that vehicle movements for the consented schemes are restricted between 08:00 and 09:00 to avoid any impacts during the traditional a.m. peak, therefore no change from the 2028 Operational DM scenario is expected.

4.5.5.1 Traffic Impact at A59/A671 Pimlico Link Road Junction and A671 Pimlico Link Road/Chatburn Road Roundabout

- 124) Given the location of the Alternative Facility in relation to the consented P&R and consented HGV marshalling area facilities, traffic movements associated with the Alternative Facility would not change at the A59/A671 Pimlico Link Road junction. Furthermore, whilst there would be a redistribution of turning movements at the Chatburn Road/A671 Pimlico Link Road roundabout (i.e. vehicles travelling south to access/egress the Alternative Facility as opposed to north to access/egress the consented facilities), there would be no net change in the volume of traffic associated with the Alternative Facility.

4.5.5.2 Junction Assessment: Proposed New Site Access/A671 Pimlico Link Road

- 125) A junction capacity assessment has been undertaken at the new priority junction providing access to the Alternative Facility from A671 Pimlico Link Road. The operational phase traffic accessing/egressing the Alternative Facility during the morning and evening peak hours has been assessed using the traffic forecasts utilised for the main traffic impact assessment presented above, in line with the operating hours described in Section 3.5.1.
- 126) The capacity of the junction has been assessed using industry standard Junctions 9 software. The agreed junction layout is illustrated in RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application. The PICADY¹⁷ module has been used to model priority-controlled junctions.
- 127) There are two metrics that describe the overall performance of a junction modelled through PICADY: the Ratio of demand Flow to Capacity (RFC) and Queues. RFC is an indicator of the performance of a junction in comparison to the flows passing through it: the higher the RFC is, the worse the junction is performing. An RFC less than 0.85 is considered to indicate that the modelled junction has a satisfactory performance and an RFC above 1 indicates the junction is operating over capacity. RFC thresholds are outlined in Table 4.20 below.

¹⁷ Transport Research Laboratory (n.d.). PICADY – Priority Intersection Capacity and Delay. [Online] Available at: <https://trlsoftware.com/software/junctions-signal-design/junctions/picady/>

Table 4.20: Ratio of Demand Flow to Capacity Thresholds

Rating	RFC Threshold	Junction Performance
Green	RFC below 0.85	The junction is operating within its practical operational capacity and no significant queuing would be expected.
Amber	RFC between 0.85 and 1	The junction is in excess of operational capacity and significant queuing may occur at times during the modelled period.
Red	RFC above 1	The junction is operating beyond theoretical capacity and significant queuing is likely to occur.

- 128) Queue is the value of the theoretical number of vehicles (in PCU) that would queue on the arm for the modelled junction, with 1 PCU = 5.75 m.
- 129) Additionally, PICADY provides other outputs such as Queue Delay and Level of Service (LOS). The Level of Service outputs show the level of service values for the time segment, based on the average delay per arriving vehicle. The transportation LOS system uses the letters A through F, with the following definitions:
- A – Free flow
 - B – Reasonably free flow
 - C – Stable flow
 - D – Approaching unstable flow
 - E – Unstable flow
 - F – Forced or breakdown flow.
- 130) The junction arms are assigned the letters A through C, with the following definitions:
- A – Left turn out of the Alternative Facility, onto A671 Pimlico Link Road northbound
 - B – Right turn out of the Alternative Facility, onto A671 Pimlico Link Road southbound
 - C – Right turn from A671 Pimlico Link Road, into the Alternative Facility.
- 131) Note: The left turn from A671 Pimlico Link Road into the Alternative Facility is not considered, as this movement does not give way to any other traffic.
- 132) The results of the modelling of the new priority-controlled junction are summarised below in Table 4.21. Full outputs can be found in Appendix F.4 PICADY Capacity Analysis Results.

Table 4.21: Proposed New Site Access/A671 Pimlico Link Road PICADY Modelling Results

Peak	Arm	Queue (Minutes)	Delay (Minutes: Seconds)	RFC	LOS
Commuters' Morning Peak (07:00-08:00)	A – Site Exit Left Turn	0.0	00:05	0.03	A
	B – Site Exit Right Turn	0.0	00:07	0.04	A
	C – A671 Pimlico Link Road Right Turn	0.6	00:06	0.04	A
Traditional Morning Peak (08:00-09:00)	A – Site Exit Left Turn	0.0	00:00	0	A
	B – Site Exit Right Turn	0.0	00:00	0	A
	C – A671 Pimlico Link Road Right Turn	0.0	00:00	0	A
HGV Morning Peak (09:00-10:00)	A – Site Exit Left Turn	0.0	00:09	0.02	A
	B – Site Exit Right Turn	0.0	00:00	0	A
	C – A671 Pimlico Link Road Right Turn	0.0	00:00	0	A

Peak	Arm	Queue (Minutes)	Delay (Minutes: Seconds)	RFC	LOS
Traditional	A – Site Exit Left Turn	0.0	00:09	0.02	A
Evening Peak (17:00-18:00)	B – Site Exit Right Turn	0.0	00:00	0	A
	C – A671 Pimlico Link Road Right Turn	0.0	00:00	0	A
Commuters' Evening Peak (18:00-19:00)	A – Site Access Left Turn	0.0	00:07	0.02	A
	B – Site Access Right Turn	0.0	00:07	0.02	A
	C – A671 Pimlico Link Road Right Turn	0.0	00:05	0.02	A

- 133) The results of the junction capacity assessment for the proposed new priority junction at A671 Pimlico Link Road during the commuters' morning peak (07:00 to 08:00) show that the junction performs very efficiently. The proposed new site access left turn and right turn both have an RFC of 0.03 and 0.04 respectively, with no queuing and minimal delays of five and seven seconds respectively. A671 Pimlico Link Road right turn has a slightly higher queue length of 0.6 m but still maintains an RFC of 0.04 and a delay of six seconds. All arms achieve a Level of Service (LOS) rating of 'A', indicating free flow conditions.
- 134) For completeness, the traditional morning peak (08:00 to 09:00) has been included in the analysis, however since construction vehicle movements associated with HARP are restricted from accessing the public highway network during this hour, the junction performs in free flow conditions.
- 135) In the HGV morning peak (09:00 to 10:00), the performance of the junction remains optimal. The proposed new site access left turn exhibits a RFC of 0.02 with a delay of nine seconds, while the proposed new site access right turn and A671 Pimlico Link Road right turn both have an RFC of 0, with no associated delays. Queue lengths are negligible, and all approach arms maintain an LOS rating of 'A', indicating that the junction is handling the traffic demand effectively.
- 136) The traditional evening peak (17:00 to 18:00) results show consistent performance with the earlier periods. The proposed new site access left turn has an RFC of 0.02 and a delay of nine seconds, while both the proposed new site access right turn and the A671 Pimlico Link Road right turn have an RFC of 0 and no associated delays. Queue lengths are again minimal, and all arms achieve an LOS rating of 'A', reflecting free flow conditions and efficient traffic management.
- 137) Finally, during the commuters' evening peak (18:00 to 19:00), the junction continues to operate efficiently. The proposed new site access left turns and right turn both show an RFC of 0.02 with delays of seven seconds each. The A671 Pimlico Link Road right turn has an RFC of 0.02 and a delay of five seconds. Queues are not expected to occur at any of the approach arms, and the LOS rating is 'A' across the board. This consistent performance throughout the day indicates that the junction is well designed to handle the traffic volumes without significant delays or queuing occurring.
- 138) Overall, the proposed site access junction is shown to perform efficiently with minimal queues, low RFC values, and a 'free-flow' LOS across all time periods. Therefore, the peak traffic generation associated with the operation of the Alternative Facility would not be expected to have a material impact on the safe operation of the adjacent highway network.

4.6 Summary and Conclusions

- 139) This TS supports a full planning application for the Alternative Temporary Park and Ride and Heavy Goods Vehicle Marshalling Area in Clitheroe, referred to as the 'Alternative Facility'. It accompanies Chapter 10 Traffic and Movement, of the Environmental Statement within which the environmental effects of traffic and movement are assessed.
- 140) The TS considers the traffic and transport implications of the development proposals on the surrounding highway network associated with the alternative siting of the P&R and HGV marshalling facilities that formed part of the consented schemes for the Marl Hill and Bowland Sections of HARP. The consented schemes received planning consent in 2024. The study area incorporates those sections of the public highway network where changes in traffic patterns are expected to occur between the consented facilities, located at the Ribblesdale Cement Works off West Bradford Road, and the Alternative Facility sited off A671 Pimlico Link Road.
- 141) The traffic impacts relating to the Alternative Facility have been assessed for both the Construction Phase, when the Alternative Facility would be constructed, and the Operational Phase, when the Alternative Facility would serve the worker and HGV construction traffic associated with the construction of the consented schemes. A decommissioning phase would also be required due to the temporary nature of the proposals, though traffic impacts associated with this phase have not been explicitly assessed since the volume of traffic generated during this phase is expected to be of a similar scale to that of the construction phase, and substantially less than the operational phase.
- 142) A high-level construction programme has been used to determine the peak traffic generation of the construction phase. Subject to planning consent being granted, construction is anticipated to commence in early 2026 and would be expected to be completed around October 2026, to allow operation to commence towards the end of 2026.
- 143) The same Programme of Works adopted for the consented schemes, which informed the associated planning applications for the Marl Hill (planning application reference: 3/2021/0661) and Bowland (planning application reference: 3/2021/0660) Sections, has been used to determine the peak traffic that would utilise the Alternative Facility during its operational phase. Operation of the site would be for approximately seven years between 2026 and 2033. The Alternative Facility would serve the HGVs required for construction of the Newton-in-Bowland, Bonstone and Braddup compounds. Peak operational traffic has therefore been based on HGV movements associated with all three compounds. Construction traffic associated with the Lower Houses compound on the consented Bowland Section of HARP has been discounted from this TS because it would use different roads to the north of the Bowland fells.
- 144) Therefore, with regard to the consented schemes traffic accessing/egressing the Alternative Facility during its operational phase, whilst the estimated operational traffic numbers and daily scheduling over the duration of the construction programme would be the same as for the original consented planning application, the peak traffic numbers accessing/egressing the Alternative Facility marginally differs from the peak numbers presented in the Consented Transport Assessments for the Marl Hill Section (planning application reference 3/2021/0661) and the Bowland Section (planning application reference 3/2021/0660) of HARP. This is because the Consented Transport Assessments considered a wider study area relative to the HARP proposals and the peak traffic generation was therefore based on traffic associated with all four compounds (Lower Houses, Newton-in-Bowland, Bonstone and Braddup).

- 145) The site is anticipated to be decommissioned by late 2034, once the HARP is complete and the P&R and HGV marshalling area is no longer required. Decommissioning of the site is anticipated to take approximately 12 months.
- 146) Changes in traffic flows compared to background levels have been examined for the weekday morning and evening peak hours during the 2026 Construction Peak Year and 2028 Operational Peak Year. These demonstrate that the largest volume of traffic generated on the public highway network would occur in the 07:00 to 08:00 period when the workers arrive/ depart the Alternative Facility in both phases. However, the changes are slight, representing between 0.9% and 5.0% increase in hourly traffic on a given link during the construction phase and are therefore unlikely to have a significant bearing on the operation of the network. The same conclusions are reached for the operational phase, with the largest increases in traffic representing an increase of 11.7%, occurring on Pimlico Link Road/West Bradford Road. However, these links would see a reduction in traffic when compared against the consented schemes as a result of the P&R facility moving further south, as only commuters travelling via West Bradford Road would need to travel on these links to access the Alternative Facility. It is therefore considered that there are no permanent physical measures (such as a capacity enhancement) required to mitigate against this change during the temporary construction, operation and decommissioning periods across the existing road network.
- 147) Observed queue lengths have been recorded and analysed at the A59/A671 Pimlico Link Road junction, which reveal that peak queues typically occur for a distinct period in the traditional weekday peaks of 08:00 to 09:00 and 17:00 to 18:00. However, based on the intended construction and operation traffic hours, it is anticipated that all commuting movements will occur before 08:00, whilst HGVs movements would not occur before 09:15, and therefore avoid coinciding with the morning peak observed queues. During the evening, it is anticipated that commuter traffic will not be present on the road network earlier than 18:00, and therefore similarly avoid peak queueing at the A59/A671 Pimlico Link Road junction. Whilst there are anticipated to be HGV movements present during the evening peak hour during both construction and operational phases, these represent a maximum hourly flow of approximately four and five HGVs respectively. Therefore, the Alternative Facility is anticipated to have no likely significant effect on the queue lengths at the A59/A671 Pimlico Link Road junction in either the weekday morning or evening peak hours. Furthermore, the distance between the A59/A671 Pimlico Link Road junction and the Alternative Facility proposed new site access is approximately 400 m. The maximum queue lengths are shorter than this distance for both traditional peak periods (08:00-09:00 and 17:00-18:00) and therefore it is not anticipated that queues occurring at this junction would extend to the proposed new site access.
- 148) It should be noted that for the purposes of the traffic impact assessment, and to remain consistent with the traffic methodology applied within the Consented Transport Assessments, construction vehicle movements have been excluded from the highway network for the hours of 08:00 to 09:00 and 14:45 to 16:00, to avoid school drop-off times. These vehicle restriction hours were subsequently revised as per the planning decision notice for Application Reference: 3/2021/0660 and Application Reference: 3/2021/0661 and specifically relate to traffic using Route 2b on West Bradford Road. A sensitivity test has therefore been conducted as part of the TS to understand the potential consequences of these changes on the traffic impact assessment. This analysis has confirmed that these revisions would not have a material impact on the conclusions presented within this TS.
- 149) Whilst the above vehicle restrictions apply to the operational phase of the Alternative Facility, the restrictions would not specifically apply to the construction phase, since in accordance with the traffic distribution method, all HGV construction traffic would arrive/depart the Alternative

- Facility via the A59/A671 Pimlico Link Road junction to the south and would therefore not require access to West Bradford Road where the school restrictions apply.
- 150) Additionally, United Utilities has identified that there may be a requirement to consider a wider worker commuting period for the construction phase. The effect of these potential changes is also considered in the sensitivity test outlined in this TS.
- 151) The analysis of recent collision history has shown that there are no significant historical road safety issues within the highway network of interest and the proposed development is therefore not expected to negatively affect road safety.
- 152) Vehicular access to the site is proposed via a priority-controlled junction with A671 Pimlico Link Road shown in RVBC-P&R-APP-DR-011 Proposed Site Access Layout Plan, attached to the planning application. The operational performance of the Alternative Facility site access layout has been tested using PICADY software. This demonstrates that the junction would perform efficiently across the weekday morning and evening peaks with minimal queues and delay and the Alternative Facility would therefore not be expected to have a material impact on the safe operation of the adjacent highway network.
- 153) The Alternative Facility would form part of HARP and would therefore be subject to the same mitigation strategy outlined as part of the consented schemes, which included the traffic control measures outlined in the original CTMP, and sustainable travel measures outlined in the Interim Travel Plan. Similarly, the Alternative Facility would also be subject to the recommended Highway Stakeholder Group identified to help coordinate network management across both HARP and other nearby developments, alongside any programmed maintenance works proposed by either LCC or RVBC. Based on the findings presented in this TS it is therefore concluded that no additional highways mitigation beyond that identified for the consented schemes is required.