REF 504_2

From: Warren Hilton
To: Planningpolicy
Cc: Lindsay Alder
Subject: NH Response - Hyndburn Local Plan 2040 Regulation 19 Consultation
Date: 22 March 2024 14:01:03
Attachments: Statement of Representations Procedure.pdf
NH Letter - Publication Version Hyndburn Local Plan Regulation 19 Consultation 2024.pdf
NH Comments on WSP Response to NH Comments on LP Transport Study.pdf
Hyndburn Local Plan Transport Study Report v4.0.pdf
Local Plan Transport Study - WSP Response to NH Comments.pdf
Stage 1_Evidence Baseline Report V8_FINAL_TRANSPORT ONLY.pdf

FAO: Planning Policy, Hyndburn Borough Council

Please find attached letter containing comments from National Highways in response to the Hyndburn Local Plan (Strategic Policies and Site Allocations) 2040 Publication Plan at Regulation 19 stage consultation.

This response also includes comments on the latest version of the Hyndburn Local Plan Transport Study by WSP, response by WSP to our previous comments on the transport study and also the Baseline Evidence Report by ARCADIS for the Huncoat Garden Village Masterplan and Delivery Strategy (all documents attached for completeness).

If you need to discuss anything about this email, please contact me.

Kind regards,

Warren Hilton, Assistant Spatial Planner
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For information and guidance on planning and the Strategic Road Network in England please visit:

https://nationalhighways.co.uk/our-work/planning-and-the-strategic-road-network-in-england/

From: Planningpolicy <Planningpolicy@hyndburnbc.gov.uk>
Sent: Monday, February 12, 2024 8:00 AM
To: Planningpolicy <Planningpolicy@hyndburnbc.gov.uk>
Subject: FW: Hyndburn Local Plan 2040 Regulation 19 Consultation

Hyndburn Borough Council has published the Hyndburn Local Plan (Strategic Policies and Site Allocations) 2040 Publication Plan at Regulation 19 stage and is inviting representations (comments) on it. The consultation will commence on Monday 12th February until 5pm Monday 25th March 2024.

More information can be found on the Council's website here: https://www.hyndburnbc.gov.uk/localplan/ where you will find the Local Plan, Policies Map and other supporting and evidence base information, as well as an online comment form. A Statement of Representations, outlining how and when to respond, is also attached.

If you made comments to the consultation held between November 2022-January 2023 please note that your previous comments remain valid and will be sent to the Planning Inspectorate for consideration. However, as some changes have been made to the previous consultation version of the Local Plan, you may wish to review the new document and provide further comments.

You are receiving this email as you have previously expressed an interest in being kept informed of progress on the Hyndburn Local Plan. If you no longer wish to receive these notifications, please respond to this email with the subject heading "Unsubscribe".

Please do not hesitate to contact the Planning Policy team should you require any further information.

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Hyndburn Borough Council

LOCAL PLAN TRANSPORT STUDY

Study Report

001
NOVEMBER 2022

CONFIDENTIAL

Hyndburn Borough Council

LOCAL PLAN TRANSPORT STUDY

Study Report

V4.0 CONFIDENTIAL

PROJECT NO. 70077206

OUR REF. NO. 001

DATE: NOVEMBER 2022

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft	Final	Final	Final
Date	September 2021	January 2022	February 2022	November 2022
Prepared by	AB/ML	AB/LB/ML	AB/LB/ML	AB/LB/ML
Signature				
Checked by	JR	JR	JR	JR
Signature				
Authorised by	NM	NM	NM	NM
Signature				
Project number	70077206	70077206	70077206	70077206
Report number	001	001	001	001

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Hyndburn Borough Council (HBC) is progressing with the preparation of a new Local Plan to cover the period to 2037, with adoption anticipated in 2023. To date, the Council has produced and commissioned evidence on a wide range of matters including housing and employment development. The Council has also commissioned consultants to develop a masterplan for Huncoat Garden Village, an area where significant housing growth is proposed.

HBC has commissioned WSP to undertake a Local Plan Transport Study to evaluate the future transport implications of development proposals set out in the emerging Local Plan. The purpose of the study is to directly inform the preparation of the Local Plan and associated infrastructure planning.

A key requirement of the evidence base to support the Local Plan is to show that allocated sites are deliverable, this includes showing that the necessary physical infrastructure is in place, or can be delivered, and will not constrain development coming forward. The efficient operation of the local and strategic highway networks is critical in the successful delivery of the growth strategy.

HBC has prepared a draft set of proposed site allocations. This report aims to assess the impact of the proposed development sites on the highway network over the Local Plan period to 2037.

The aims of the study are to:

- Assess the potential traffic impacts of the proposed site allocations;
- Make recommendations as to how these impacts can be effectively mitigated; and
- Suggest potential highway improvement schemes and/or sustainable transport options with indicative costs.

At the time of undertaking the baseline work for this Study, traffic was impacted by the COVID-19 pandemic and its resulting effects on employment and travel. Whilst overall traffic levels fluctuated as national and local restrictions tightened and eased, the general pattern was one of traffic being lower than typical conditions i.e. the corresponding period in previous years.

The extent to which the effects of the pandemic on travel patterns and increased home-working will continue into the future remains to be seen, but consideration has been given to this issue throughout the study. There may be an opportunity to drive a permanent shift to reduced car dependency within the borough and bring forward initiatives to support this.

HBC has prepared a draft set of proposed site allocation options for the purposes of preparing its Regulation 19 Local Plan. These comprise a mix of residential, employment, and one mixed-use site. It is important to note that not all these sites will end up being allocated for development in the new Local Plan. Some sites (or parts of sites) may be more appropriate for development beyond the new Local Plan period. The findings of the transport evidence and other evidence base reports will inform final decisions on any allocations for the next stage of the Local Plan.

Analysis of the proposed site allocations has been undertaken, including a site access analysis; review of existing walking, cycling and public transport provision; and accessibility appraisal. In terms of the accessibility appraisal, based on the overall site rating, three sites are considered to have below average accessibility and therefore potential for improvement: Site 60 Land lying to the west of Altham Lane, south of Barnfield Way, Site 49 Houghton Barn Farm, and Site 218 Land to west of Altham Lane. Particular focus will be placed on these sites when considering sustainable mitigation measures. Four sites have good accessibility, and the remaining sites have average accessibility.

Based on these findings, the following recommendations can be made to further improve the accessibility of the sites:

- Target walking, cycling and bus improvements for sites identified as having potential for improvement;
- Improve walking and cycling links between sites and existing rail stations;
- Consider provision of new convenience stores, healthcare facilities and education facilities as part of the build-out of site allocations.

As per the Transport Evidence Bases in Plan Making and Decision Taking guidance produced by MHCLG, opportunities have been identified for encouraging a shift to more sustainable transport usage, to mitigate the traffic impact of the Local Plan site allocations, and which are proportionate to the forecast scale of impact. This includes suggested measures to improve facilities for walking, cycling and public transport, along with other measures relating to Travel Plans and demand management.

A highways impact assessment has been undertaken to understand the potential traffic impact from the Local Plan site allocations on the local and strategic road network in the borough. It can be noted that at the commencement of this study, the Local Plan period was due to end in 2036 and hence the assessments have been undertaken in line with that forecast year. The current proposal is for the Local Plan period to end in 2037. However, given the length of time period and potential effects of a variety of factors over that period, the 2036 assessments are considered to provide a suitable proxy for traffic conditions in 2037.

WSP developed a sifting methodology to determine which junctions would require further assessment and possible mitigation and which junctions are not forecast to experience any significant impacts as a result of the Local Plan growth. The sifting methodology was to focus on the future year of 2026, and junctions where 60 or more additional trips generated by the Local Plan sites were forecast on any one arm. 60 additional trips on an arm equates to 1 additional trip per minute.

The junctions taken forward for assessment are listed below:

- M65 Junction 6
- M65 Junction 7
- A678 Blackburn Road / A6185 Dunkenhalgh Way
- M65 Junction 8
- A678 Blackburn Road / A6068 Shuttleworth Mead
- A678 Blackburn Road / Altham Lane
- A678 Blackburn Road / B6535 Harwood Road
- A678 Blackburn Road / Cut Lane
- A678 Blackburn Road / Sidebeet Lane

As a result of the junction capacity assessments undertaken, the following junctions have been identified for consideration of potential highway mitigation measures:

- A678 Blackburn Road / A6185 Dunkenhalgh Way

- A678 Blackburn Road / A6068 Shuttleworth Mead
- A678 Blackburn Road / Altham Lane
- A678 Blackburn Road / B6535 Harwood Road
- A678 Blackburn Road / Cut Lane – highway improvements required to enable access to proposed site allocations
- A678 Blackburn Road / Sidebeet Lane – highway improvements required to enable access to proposed site allocations

The concept layouts for the highway mitigation measures are provided in Appendix D. As a recommended next step from this study, a Stage 1 Road Safety Audit should be undertaken for each of the proposed layouts. Further investigation of land requirements and statutory undertakers' equipment should also be undertaken.

The table below provides a schedule for the identified mitigation measures, including indicative cost estimates, an indication of when the mitigation measures would be required, and the estimated lifespan of the measures, based on the assessments undertaken which assume no modal shift.

Cost Estimates for Highway Mitigation Measures

Junction	Scheme	Cost	Timeframe/Lifespan
A678 Blackburn Road / B6535 Harwood Road	This option comprises amendments to the signal arrangements, and associated amendments to road markings	£10,000 to £15,000	May be required in advance of Local Plan build-out Lifespan of scheme identified is up to 2026
A678 Blackburn Road / A6068 Shuttleworth Mead	This option comprises amendments to the signal arrangements, and associated amendments to road markings	£10,000 to £15,000	May be required in advance of Local Plan build-out Lifespan of schemes identified is up to 2026
M65 J7 / A678 Blackburn Road / A6185 Dunkenhalgh Way	Option 1: at A678 Blackburn Road / A6185 Dunkenhalgh Way junction, amendment to white lining at the northern arm to provide two ahead movements on the Junction 7 Business Park egress	£10,000 to £15,000	May be required in advance of Local Plan build-out Lifespan of option 2 scheme is up to 2036
	Option 2: as option 1 but including changes to lane allocations to allow two lanes for south to east and west to east movements. This change involves the reduction in lanes from 3 to 2 on the westbound approach, to accommodate the two-lane eastbound exit. (drawing ref: 7206-MJ7-001)	£35,000	
A678 Blackburn Road / Sidebeet Lane	Option 1: (drawing ref: 7206-SID-001) is a priority-controlled crossroads	£1.44m	May be required in advance of Local Plan build-out Lifespan of schemes identified is up to 2036
	Option 2: is signal-controlled (7206-SID-002).	£1.73m	

A678 Blackburn Road / Cut Lane	This scheme is a priority-controlled T-junction (drawing ref: 7206-CUT-001)	£293,000	May be required in advance of Local Plan build-out Lifespan of scheme identified is up to 2036
A678 Blackburn Road / Altham Lane	Option 1: is a signal-controlled T-junction (drawing ref: 7206-ALT-001),	£622,000	May be required before 2032. Lifespan of schemes identified is beyond 2036
	Option 2: is a signal-controlled T-junction with additional cyclist provision (drawing ref: 7206-ALT-002)	£721,000	
	Option 3: is a priority-controlled roundabout (drawing ref: 7206-ALT-003).	£970,000	

Funding sources for the mitigation measures identified may include the Levelling Up Fund, Active Travel Fund and/or other funding sources, along with developer contributions. In order to better inform HBC when seeking developer contributions for the proposed highway mitigation schemes, analysis has been undertaken of the site allocations which produce the greatest impacts on each junction, i.e. those which generate the highest number of new trips which are forecast to use the junctions. This analysis is presented below and can be used to inform the future collection of developer contributions as the sites are brought forward through the planning process. The analysis focuses on the proportional impact from each site in the AM and PM peak periods.

Proportional Impact of Local Plan Site Allocations on Junctions identified for Highway Mitigation Measures

Junction	Sites with ≥10% impact of new trips in 2036 AM or PM weekday peak hour
M65 J7 / A678 Blackburn Road / A6185 Dunkenhalgh Way	• Site 250 (27% new trips AM; 27% new trips PM) • Site 230 (10% new trips AM; 10% new trips PM) 13 other sites have minor impacts <10%
A678 Blackburn Road / A6068 Shuttleworth Mead	• Site 218 (31% new trips AM; 31% PM) • Site 60 (31% new trips AM; 31% PM) • Site 49 (27% new trips AM; 34% PM) • 2 other sites have minor impacts <10%
A678 Blackburn Road / Altham Lane	• Site 49 (35% new trips AM; 35% new trips PM) • Site 218 (32% new trips AM; 32% new trips PM) • Site 60 (32% new trips AM; 32% new trips PM) • 2 other sites have minor impacts <10%
A678 Blackburn Road / B6535 Harwood Road	• Site 230 (26% new trips AM; 25% PM) • Site 103 (19% new trips AM; 19% PM) • Site 229 (16% new trips AM; 16% PM) • Site 102 (16% new trips AM; 16% PM) • 11 other sites have minor impacts <10%
A678 Blackburn Road / Cut Lane	• Site 103 (32% new trips AM; 32% new trips PM) • Site 230 (29% new trips AM; 29% new trips PM) • Site 229 (17% new trips AM; 17% new trips PM) • 7 other sites have minor impacts <10%

A678 Blackburn Road / Sidebeet Lane	• Site 230 (58% new trips AM; 58% new trips PM) • Site 103 (17% new trips AM; 17% new trips PM) • Site 229 (14% new trips AM; 14% new trips PM) • 5 other sites have minor impacts <10%

It is important to note that the junction modelling is largely based on traffic data collected prior to the COVID-19 pandemic. As such, for junctions where mitigation has been identified, the findings of the assessments should be verified and, where required, updated using up-to-date traffic counts to confirm the need for the mitigation scheme identified prior to progressing design works.

The delivery of the necessary highway mitigation schemes alongside the complementary sustainable transport and the required travel demand management measures will ensure that the first five years' of Local Plan growth can be delivered in a sustainable manner.

The following additional recommendations can be made for the course of the Local Plan period:

- Highway mitigation measures identified in Table 10-1 to be included in the Infrastructure Delivery Plan, with delivery via the funding strategy set out in 10-2. The design of the layouts should be developed through further consideration of potential walking and cycling measures; completion of a Stage 1 Road Safety Audit; further investigation of land requirements and statutory undertakers' equipment;
- Further collaborative working with National Highways to better understand the future performance of the M65 links and junctions in the borough;
- Undertake an updated set of assessments at the mid-point of the Local Plan, to provide an updated understanding of the current traffic conditions; the extent of the effects from the COVID-19 pandemic; and the impacts of completed improvement schemes, to understand the impacts of the development delivered at that point in time and to assist in the planning of future planned growth;
- Ensure that as development proposals on the site allocations are brought forward through the planning process, the accompanying Transport Assessments and Travel Plans build on the assessments and mitigation proposals identified in this study to undertake updated assessments based on current data, and identification of site-specific mitigation measures.

Paragraphs 110 and 111 of NPPF state:

"In assessing sites that may be allocated for development in plans, it should be ensured that any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree. 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 would be severe."

Through a combination of highway mitigation measures and sustainable transport mitigation measures, this study demonstrates that the impacts of the proposed Local Plan development can be mitigated to an acceptable degree, and that the Local Plan is therefore deliverable in a sustainable manner in transport terms, in accordance with NPPF.

1

INTRODUCTION

INTRODUCTION

1.1 BACKGROUND

1.1.1. Hyndburn Borough Council (HBC) is progressing with the preparation of a new Local Plan to cover the period to 2037, with adoption anticipated in 2023. To date, the Council has produced and commissioned evidence on a wide range of matters including housing and employment development. The Council has also commissioned consultants to develop a masterplan for Huncoat Garden Village, an area where significant housing growth is proposed.

1.1.2. The existing Local Plan consists of the Core Strategy DPD (2012), the Accrington Area Action Plan DPD (2012), and the Development Management DPD (2018). The emerging Local Plan will replace the 2012 Core Strategy with updated strategic policies and specific site allocations. Three rounds of consultation on the Local Plan have already been carried out as part of the Regulation 18[1] stage of the process. As of November 2022, the Council is currently undertaking a Regulation 19 consultation on the Local Plan which represents the version of the Plan which the Council intends to submit for Examination in 2023, with adoption later that year.

1.2 STUDY AREA

1.2.1. The borough of Hyndburn is situated in north-west England. The borough has an estimated population of 80,734. Together with Burnley, Blackburn with Darwen, Pendle and Rossendale, it forms part of the Pennine Lancashire sub-region.

1.2.2. The principal town in Hyndburn is Accrington, which includes the townships of Oswaldtwistle, Church, Clayton-le-Moors, Baxenden and Huncoat. Other distinct settlements located within the Borough boundary include Great Harwood, Rishton, and Altham.

1.2.3. The M65 motorway runs through the centre of the borough in an approximate east-west alignment, connecting the borough directly to Blackburn and Burnley. Junction 8 provides the borough with direct access into Greater Manchester via the A56.

1.2.4. The emerging Local Plan is supporting a growth strategy intended to boost the local economy and improve the range and type of homes being provided. This is to be achieved by identifying ambitious but achievable development requirements, including the identification of new allocations to deliver sustainable growth.

1.2.5. Figure 1-1 shows the geographical context of the borough.

[1] References to “Regulations” relate to the Town and Country Planning (Local Planning) (England) Regulations 2012

Figure 1-1 - Context of Hyndburn Borough

1.3 PURPOSE OF THE REPORT

1.3.1. HBC has commissioned WSP to undertake a Local Plan Transport Study to evaluate the future transport implications of development proposals set out in the emerging Local Plan. The purpose of the study is to directly inform the preparation of the Local Plan and associated infrastructure planning.

1.3.2. A key requirement of the evidence base to support the Local Plan is to show that allocated sites are deliverable, this includes showing that the necessary physical infrastructure is in place, or can be delivered, and will not constrain development coming forward. The efficient operation of the local and strategic highway networks is critical in the successful delivery of the growth strategy.

1.3.3. HBC has prepared a draft set of proposed site allocations. This report aims to assess the impact of the proposed development sites on the highway network over the Local Plan period to 2037.

1.3.4. The aims of the study are to:

- Assess the potential traffic impacts of the proposed site allocations;
- Make recommendations as to how these impacts can be effectively mitigated; and
- Suggest potential highway improvement schemes and/or sustainable transport options with indicative costs.

1.4 OVERVIEW OF METHODOLOGY

1.4.1. WSP will take the following approach to understand the impact of the proposed site allocations at the local and strategic highway networks:

- **Baseline Assessment –** This stage will establish the baseline position for the study, identifying the key existing characteristics of the borough and existing operational and safety issues on the highway network.
- **Impact Assessment –** informed by the baseline review, an assessment will be undertaken of the impact of the development of the proposed site allocations on the links and junctions of the highway network. Junction capacity modelling will be undertaken for locations which are forecast to experience significant impacts.
- **Identification of Mitigation Measures –** using the outputs from the impact assessment stage, potential mitigation measures will be developed. The measures may be physical changes to the highway infrastructure or non-physical measures in line with sustainable travel such as encouraging change in travel behaviour.

1.5 IMPACTS OF COVID-19

1.5.1. At the time of undertaking the baseline work for this Study, traffic was impacted by the COVID-19 pandemic and its resulting effects on employment and travel. Whilst overall traffic levels fluctuated as national and local restrictions tightened and eased, the general pattern was one of traffic being lower than typical conditions i.e. the corresponding period in previous years.

1.5.2. The extent to which the effects of the pandemic on travel patterns and increased home-working will continue into the future remains to be seen, but consideration has been given to this issue throughout the study. There may be an opportunity to drive a permanent shift to reduced car dependency within the borough and bring forward initiatives to support this.

1.6 FEEDBACK ON REPORT

1.6.1. An earlier draft of this study report was provided to Lancashire County Council (LCC) and National Highways in February 2022 for comment. Comments were provided by the LCC sustainable transport team working on the Lancashire Local Cycle and Walking Infrastructure Plan (LCWIP) for Hyndburn and Rossendale, and from National Highways. Where appropriate, comments have been addressed and incorporated into this version of the study report. A separate response was also provided to National Highways, along with agreement of further assessment work at M65 Junction 8.

1.7 REPORT CONTENTS

1.7.1. The remainder of the report encompasses the following chapters:

- **Chapter 2:** Emerging Local Plan and Proposed Site Allocations
- **Chapter 3:** Policy Context
- **Chapter 4:** Previous Studies
- **Chapter 5:** Baseline Analysis
- **Chapter 6:** Sustainable Transport Assessment
- **Chapter 7:** Sustainable Transport Mitigation Measures
- **Chapter 8:** Traffic Forecasting
- **Chapter 9:** Highway Impact Assessment
- **Chapter 10:** Highway Mitigation Measures

- **Chapter 11:** Conclusions & Recommendations
- **Glossary**

2

EMERGING LOCAL PLAN AND PROPOSED SITE ALLOCATIONS

2 EMERGING LOCAL PLAN AND PROPOSED SITE ALLOCATIONS

2.1 HYNDBURN'S NEW LOCAL PLAN

2.1.1. HBC is progressing with the preparation of a new Local Plan to cover the period from 2021 to 2037, with adoption anticipated in 2022.

2.2 PROPOSED SITE ALLOCATIONS

2.2.1. HBC has prepared a draft set of proposed site allocation options for the purposes of preparing its Regulation 19 Local Plan. These comprise a mix of residential, employment, and one mixed-use site. The spatial distribution of the sites can be seen in Figure 2-1 and the characteristics of each site are shown in Tables 2-1 to 2-3.

2.2.2. It is important to note that not all these sites will end up being allocated for development in the new Local Plan. Some sites (or parts of sites) may be more appropriate for development beyond the new Local Plan period. In addition, the site capacity and the number of dwellings shown in this study are indicative at this stage and could change depending on final development proposals / layout. The findings of the transport evidence and other evidence base reports will inform final decisions on any allocations for the next stage of the Local Plan.

Figure 2-1 – Spatial Distribution of Proposed Site Allocations

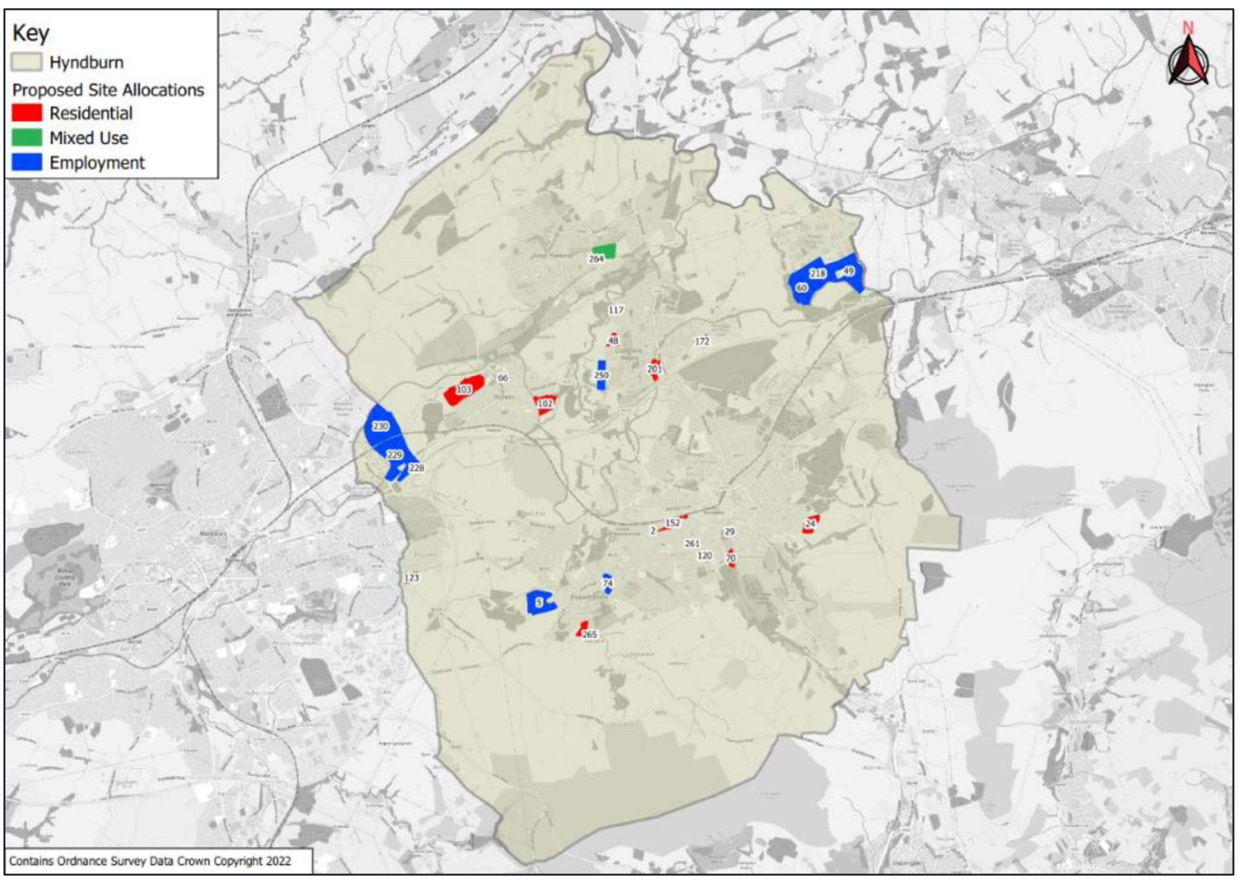


Table 2-1 – Proposed Site Allocations - Employment

Ref	Location	Settlement	*Area (Ha)*	Proposed Development	Estimated Site Capacity (2016-2036)		
					(Net Area sqm)	*B2 (40%) (sqm)*	*B8 (60%) (sqm)*
49	Houghton Barn Farm	Altham	15.31	B2 / B8	24,960	9,984	14,976
60	Land lying to the west of Altham Lane, south of Barnfield Way	Altham	13.39	B2 / B8	51,080	20,432	30,648
218	Land to west of Altham Lane	Altham	12.40	B2 / B8	45,920	18,368	27,552
172	Moorfield Industrial Estate	Altham	1.68	B2 / B8	4,880	1,952	2,928
250	Land west of J7 Business Park	Clayton-le-Moors	4.40	B2 / B8	17,600	7,040	10,560
228	Land between Blackburn Rd and M65 slipway	Rishton	4.04	B2 / B8	16,156	6,462	9,694
229	Land between Blackburn Rd, Sidebeet Lane, L&L Canal and railway	Rishton	18.14	B2 / B8	38,132	15,253	22,879
230	Land north of railway line between Sidebeet Lane and L&L Canal	Rishton	20.69	B2 / B8	69,000	27,600	41,400

Table 2-2 - Proposed Site Allocations - Residential

Ref	Location	Settlement	*Total No. of Dwellings*
2	The Steel Works, Charter Street, Accrington	Accrington (Central)	9
24	Land north of Sandy Lane	Accrington (Central)	45
29	Union Works and Union St Garage	Accrington (Central)	9
70	Woodnook Works, Bath St	Accrington (Central)	51
120	Land at Hopwood St	Accrington (Central)	50

Ref	Location	Settlement	*Total No. of Dwellings*
152	Land at Charter Street	Accrington (Central)	58
261	Pendle Street	Accrington (Central)	20
48	Ringstonhalgh Farm	Clayton-le-Moors (incl Altham)	31
117	Lower Barnes Street	Clayton-le-Moors (incl Altham)	15
201	Clayton Triangle	Clayton-le-Moors (incl Altham)	61
78	Land south east of Moorfield Avenue	Huncoat	54
123	Land south of Stanhill Road, Knuzden	Oswaldtwistle and Knuzden	61
5	Land off Brookside Lane/Nook Lane, Oswaldtwistle	Oswaldtwistle and Knuzden	62
74	Land south of Rhyddings Street and north of Stone Bridge Lane	Oswaldtwistle and Knuzden	37
265	Land off Rhoden Road/Roe Greave Road	Oswaldtwistle and Knuzden	58
66	York Mill, Livesey St, Rishton	Rishton	21
102	land off Fielding Street and Barn Meadow Crescent	Rishton	101
103	land to the northeast of Cut Lane	Rishton	225

Note: Excludes Huncoat Garden Village sites, which are covered separately by the Huncoat Masterplan

Table 2-3 - Proposed Site Allocation - Mixed Use

Ref	Location	Settlement	*Total No. of Dwellings*
264	Land bounded by Park Rd., Balfour St., Wood St. and Heys Lane	Great Harwood	81 + and other uses (likely retail, light commercial uses)

2.3 SITE ACCESS ANALYSIS

2.3.1. As part of this study, desktop analysis has been undertaken of the potential to access the site allocations. The purpose of the exercise is to identify where the logical entry/exit points to the site are and whether there are any obvious constraints or potential issues with accessing the site. An indicative red-amber-green (RAG) rating has been given to each site, with a red rating indicating a higher likelihood of issues in terms of accessing the site.

Table 2-4 – Site Access Analysis

Land Use	Site No.	Site Name	Site Access Comments
Employment Sites	49	Houghton Barn Farm	Primary site access likely to be direct from Altham Lane. It should be noted that Public right of way (PROW) 11-7-FP 28 runs east-west to the south of the site.
	60	Land lying to the west of Altham Lane, south of Barnfield Way	Primary access likely to be direct from Altham Lane through site 218, or potentially off Barnfield Way in existing Altham Business Park (depending on land ownership).
	218	Land to west of Altham Lane	Primary site access likely to be direct from Altham Lane, or site 60 and site 218 could share an access route off Barnfield Way.
	172	Moorfield Industrial Estate	Primary access could be taken from the access adjacent to the Howard Bashford site. It should be noted that public right of way (PROW) 11-7 – FP 10 runs north-south through the site.
	250	Land west of J7 Business Park	Primary access could be taken from an extension of the internal access roads of the Junction 7 Business Park. PROW 11-3-FP11 runs to the north of the site in a north east-south west direction.

Land Use	Site No.	Site Name	Site Access Comments
	228	Land between Blackburn Rd and M65 slipway	Primary access could be taken from a new junction at or near to Sidebeet Lane / Blackburn Road A678.
	229	Land between Blackburn Rd, Sidebeet Lane, L&L Canal and railway	Primary access could be taken from a new junction at or near to Sidebeet Lane / Blackburn Road A678. An additional pedestrian/cycle access point could be provided on Whitebirk Drive (A6119)
	230	Land north of railway line between Sidebeet Lane and L&L Canal	Primary access is likely to be required from A678 via site 229 due to constraints to north and west of site, including L&L canal (with listed bridge). Would require the construction of a bridge over the railway line. It should be noted that Sidebeet Lane is narrow and would require widening to support LGVs and HGVs. An additional access point, potentially for pedestrians & cyclists, could be provided via Trident Way but this would require the construction of another bridge over the L&L canal.
Residential Sites	24	Land north of Sandy Lane	Primary access could be via Sandy Lane or turning head on Austwick Lane. Sandy Lane is narrow and access is adjacent to a primary school. Running east-west along Sandy Lane is PROW 11-1-FP-135.
	70	Woodnook Works, Bath St	Primary access could be via the previous access point on Mount Street (opposite Victoria Business Centre) with a potential secondary access point off Bath Street.
	120	Land at Hopwood St	Primary access point to the site could be on Hopwood Street near to the junction with Clifton Street at Hopwood Street is narrow and would require widening to support an access route Two PROWs are located in the vicinity of this site – one to the south (11-1-FP 342) and one to the south east (11-1-FP 341)
	152	Land at Charter Street	A primary access point could be provided on Crossland Street with the option of a further access point provided on Howard Close to the west of the site or on Charter Street.

Land Use	Site No.	Site Name	Site Access Comments
	201	Clayton Triangle	The primary access point could be the existing site entrance from Mill Entrance which directly leads onto A680 Whalley Road via a T-junction. It is likely this junction would need to be widened and the visibility splays adjusted to accommodate the anticipated site traffic. A secondary access could be provided from Canal Street, or potentially directly onto A680 Whalley Road.
	264	Land bounded by Park Rd., Balfour St., Wood St. and Heys Lane	Primary access to the site could be from the existing site access on Balfour Street or Heys Lane. Access to the site could also be from one of the existing site access points on Wood Street. For the access point to the south of Wood Street it should be noted that there appears to be a utilities substation adjacent to the junction with Wood Street.
	123	Land south of Stanhill Road, Knuzden	Primary access could be taken from the existing access on Haslingden Road (B6236) or from Mount St James (B6234). It should be noted no pedestrian footway is provided along the eastern extents of Haslingden Road between the site access and the junction with Standen Road.
	5	Land off Brookside Lane/Nook Lane, Oswaldtwistle	Primary access could be provided from the existing access point on Brookside Lane. Secondary access could be via Nook Lane (depending on land ownership as Nook Lane is narrow and may require widening to accommodate the likely site traffic).
	265	Land off Rhoden Road/Roe Greave Road	Primary site access could be via the existing site access on Rhoden Road opposite Rhoden Road/Roe Green Road T-junction with Brear Vale
	102	Land off Fielding Street and Barn Meadow Crescent	Access could be provided from the southern end of Wharf Street at the junction with Fielding Street (dependent on land ownership). There is a gate which provides access to a series of garages, but the existing access would require widening to support the anticipated site traffic.
	103	Land to the northeast of Cut Lane	Primary access would likely come from Cut Lane which is currently a farm access and PROW 11-6-FP-8. Secondary access could potentially be provided via Ulverston Drive. There is a pedestrian link along the northern extent of the Leeds and Liverpool Canal to the north of the site.

3

POLICY CONTEXT

3 POLICY CONTEXT

3.1 INTRODUCTION

3.1.1. Legislation and policy have an important role to play in shaping and guiding the location, form, and function of new growth and development. This section of the report considers the transport implications of national, regional, and local policy for this Local Plan Transport Study.

3.2 NATIONAL PLANNING POLICY

3.2.1. A full review of the relevant policies and guidance set out in the National Planning Policy Framework (NPPF) and the Government guidance on Transport Evidence Bases in Plan Making and Decision Taking is provided in Appendix A, with the key point summarised below:

KEY POINT – NATIONAL PLANNING POLICY:

- In order to conform with the NPPF, it is essential that the Local Plan has a robust transport evidence base, to ensure that the proposed site allocation can maximise the uptake of sustainable transport options, and where required provide new sustainable transport measures.

3.3 REGIONAL PLANNING POLICY

TRANSPORT FOR THE NORTH

3.3.1. A full review of the documents produced by Transport for the North (TfN) is provided in Appendix A, with the key points summarised below:

KEY POINTS – TRANSPORT FOR THE NORTH:

- TfN aims to drive a more productive and competitive northern economy through a more accessible and more sustainable northern transport network. Through its Strategic Transport Plan, it aims to increase efficiency, reliability, integration and resilience in the transport system, and ensure that opportunities are accessible to all.
- TfN aims to improve rail connectivity, frequency and journey times. The Long-term Rail Strategy sets out the ambitions for the North and will be supported by studies and wider industry programmes.

ADJACENT BOROUGHS

3.3.2. A review has also been undertaken of the relevant growth proposals of the neighbouring local planning authorities to Hyndburn: Blackburn with Darwen, Burnley, Rossendale, and Ribble Valley. The key points are summarised below:

3.3.3. **Blackburn with Darwen – Emerging Local Plan 2018-2037**

- Total Allocated Sites – 51
- Total Allocated Dwellings & Employment GFA - 4,045 Dwellings, 312,246m^2 employment land
- Key Adjacent Allocations - North East Blackburn Strategic Housing Site - 750 dwellings.

3.3.4. **Burnley Local Plan - 2012–2032**

- Total Allocated Sites - 43
- Total Allocated Dwellings & Employment GFA - 2118 dwellings, 33Ha of employment land
- Key Adjacent Allocations - Land South of Network 65 - 13.32Ha of employment land - just south of M65 junction 9, and also links to the Hyndburn highway network via A679 Accrington Road.

3.3.5. **Rossendale - Emerging Local Plan 2019-2034**

- Total Allocated Sites - 139
- Total Allocated Dwellings & Employment GFA - 3,180 dwellings, 28Ha of employment land (subject to change following Main Modifications consultation).

3.3.6. **Ribble Valley Local Plan - 2008-2028**

- Total Allocated Dwellings - 5,600 dwellings

KEY POINTS – ADJACENT BOROUGHS:

- There are significant growth aspirations in the neighbouring boroughs which is set out within the respective adopted and emerging Local Plans, including sites of a significant scale in close proximity to the border with Hyndburn, in north-east Blackburn and south of M65 junction 9 in Burnley.

LANCASHIRE LOCAL TRANSPORT PLAN (LTP3) (2011-2021)

3.3.7. The Lancashire LTP3 strategy presents the transport priorities for Lancashire over the next ten years. It sets out a commitment to support the Lancashire economy, to tackle deep-seated inequalities in people's life chances and to revitalise communities and provide safe high-quality neighbourhoods.

3.3.8. The 2021 vision for Transport and Travel in Lancashire includes the following aims and objectives:

- *Support sustainable economic growth and provide better access to education and employment;*
- *By 2021 particular problems of traffic congestion and road capacity that have previously limited economic growth in key areas will have been resolved or mitigated;*
- *Our work with public transport operators will have provided better connections and links with areas inside and outside Lancashire;*
- *Lancashire's main centres for employment and education will be served by attractive, reliable, profitable, accessible and well used bus and rail services,*
- *The safety and attractiveness of the public realm that links our homes to local services and employment, including bus and rail services, will have been improved.*

JOINT LANCASHIRE LOCAL TRANSPORT PLAN (LTP4) (2021-2046)

3.3.9. Work is progressing between the three Transport Authorities of Lancashire, Blackburn with Darwen, and Blackpool in relation to the joint Lancashire Local Transport Plan 4 which is likely to cover a twenty-five-year period from 2021-2046.

3.3.10. The Strategic Context for the plan is set by:

- The Northern Powerhouse and Lancashire's place within it;
- Establishment of Transport for the North as the first statutory sub-national transport body in April 2018 and the adoption of the Strategic Transport Plan in 2019;
- Strategic Economic Plan / Local Industrial Strategy;
- Spatial Planning and Local Development Plans; and
- Highways and Transport Masterplans.

3.3.11. Emerging key themes are:

- Improving access into, between and within areas of economic growth and regeneration;
- Improving people's health, safety, quality of life and wellbeing;
- Reducing the environmental impact of transport;
- Maintaining our assets; and
- Decarbonisation of local transport systems.

3.3.12. Public health considerations including the direct health impacts of air pollution; road transport emissions; and an invigorated focus on active travel modes are likely to feature prominently within the plan.

NATIONAL HIGHWAYS ROUTE STRATEGIES

3.3.13. National Highways (previously Highways England) has produced 18 route strategy documents which cover the extent of the SRN across England. The aim of the documents is to outline priorities for the upcoming road period and beyond.

3.3.14. Whilst work has recently commenced on the new Route Strategies, the current relevant Route Strategy to Hyndburn is the South Pennines Route Strategy. A review has been undertaken and is summarised in Appendix A, with the key points summarised below:

KEY POINTS – HIGHWAYS ENGLAND ROUTE STRATEGIES:

- As one of the few routes that supports east-west travel across the north of England, the M65 has a key role in facilitating economic growth in the region and further afield.
- The two-lane section of the M65 between junctions 2 and 6 is identified as a bottleneck, with poor journey reliability which could impede growth.

3.4 CURRENT ADOPTED LOCAL PLANNING POLICY

HYNDBURN ADOPTED LOCAL PLAN (2012)

3.4.1. The current adopted Hyndburn Local Plan comprises 4 key Development Plan Documents (DPD):

- The Core Strategy DPD (first adopted 19 January 2012, this is due to be replaced by the new Local Plan, including strategic policies and site allocations – currently in preparation);
- The Accrington Area Action Plan DPD (adopted 19 January 2012); and
- The Development Management DPD (adopted 11 January 2018).

3.4.2. The preparation stages of the Core Strategy document and Site Allocations DPD are outlined below (whilst consulted on separately at Regulation 18 stage, the Strategic Policies and Site Allocations are to be amalgamated into one Local Plan).

- Regulation 18(1) consultation completed April 2018: included Core Strategy Policies scoping assessment; Core Strategy Review: Growth Options and Spatial Options; and Site Allocations DPD: Scoping and Site Assessment Methodology;
- Regulation 18(2) consultation completed April 2019: included Core Strategy Review: Regulation 18 Consultation Draft; and Site Allocations DPD: Regulation 18 Consultation Draft;
- Regulation 18(3) consultation December 2019 – January 2020: included further, more focused, consultation on Gypsy and Traveller policy and site options. During consultation the Council also issued a final "Call for Sites"

3.4.3. Despite the preparation of a new Site Allocations section of the Local Plan, it is useful to look at the current Site Allocations within the Core Strategy document (2012).

3.4.4. The current Core Strategy had ambitions for two strategic employment sites: Strategic Employment site at Whitebirk (Policy KW1) and Employment Site at Huncoat (Policy A9).

3.4.5. The strategic employment site at Whitebirk is currently under construction and approaching completion. Access is provided directly off M65 Junction 6. A petrol and service station with shop, a drive-through restaurant and a coffee shop were constructed initially and a new hotel opened more recently. Four phases of industrial/warehousing units have been delivered, with units ranging in size from 50,000 to 175,000 sq ft for B2/B8 use, comprising a total of 650,000sq. ft. These are occupied or available for occupation. A further phase of 200,000 sq. ft B2/B8 use is under construction along with a final phase of 14,000 sq ft starter units. Land remains for a conference facility in close proximity to the hotel but this has yet to be developed.

3.4.6. The Employment Site at Huncoat was part of a wider plan for the area of Huncoat which included developing the former colliery site for housing and the construction of Whinney Link Road which would connect the new developments to the A56. Employment land is no longer proposed at Huncoat, which will be a residential led development.

3.5 THE IMPACT OF FUTURE MOBILITY

3.5.1. A key challenge for HBC will be meeting its future needs and continuing to grow in a rapidly changing, globalised world. An overview is presented in Appendix B of how changes in transport provision and technology over the coming decades may influence travel in the borough, and indeed globally. This work is informed by WSP's significant expertise in this area, including reference to our White Paper, New Mobility Now (WSP, 2017). Whilst the influence of New Mobility is yet to be truly understood, let alone quantified, Appendix B presents a number of recommendations that could influence the emerging Local Plan, or potentially guide the creation of new SPDs in the future.

3.5.2. The key points are summarised below:

KEY POINTS – THE IMPACT OF FUTURE MOBILITY:

- A key challenge for HBC will be meeting its future needs and continuing to grow in a rapidly changing, globalised world. The impacts of New Mobility, while currently uncertain, are likely to be realised over the proposed Plan period.
- HBC will need to be proactive rather than reactive to these changes in travel and transport demands to ensure the borough is at the forefront of modern transportation.
- An immediate opportunity is to require electric car charging infrastructure in new development and public car parks, plus promotion for shared transport infrastructure (bays for car clubs, etc).

4

PREVIOUS STUDIES

4 PREVIOUS STUDIES

4.1 INTRODUCTION

4.1.1. This section of the report provides an overview of previous studies which have been carried out on the SRN in the borough. The aim of this chapter is to understand the outcomes of the studies, and to ensure this transport study captures and considers any key issues which have not been addressed through subsequent improvement schemes.

4.2 M65 CORRIDOR STUDIES (2007 & 2010)

4.2.1. In 2007 National Highways commissioned Halcrow Group Limited (Halcrow) to undertake a study of the M65 Corridor.

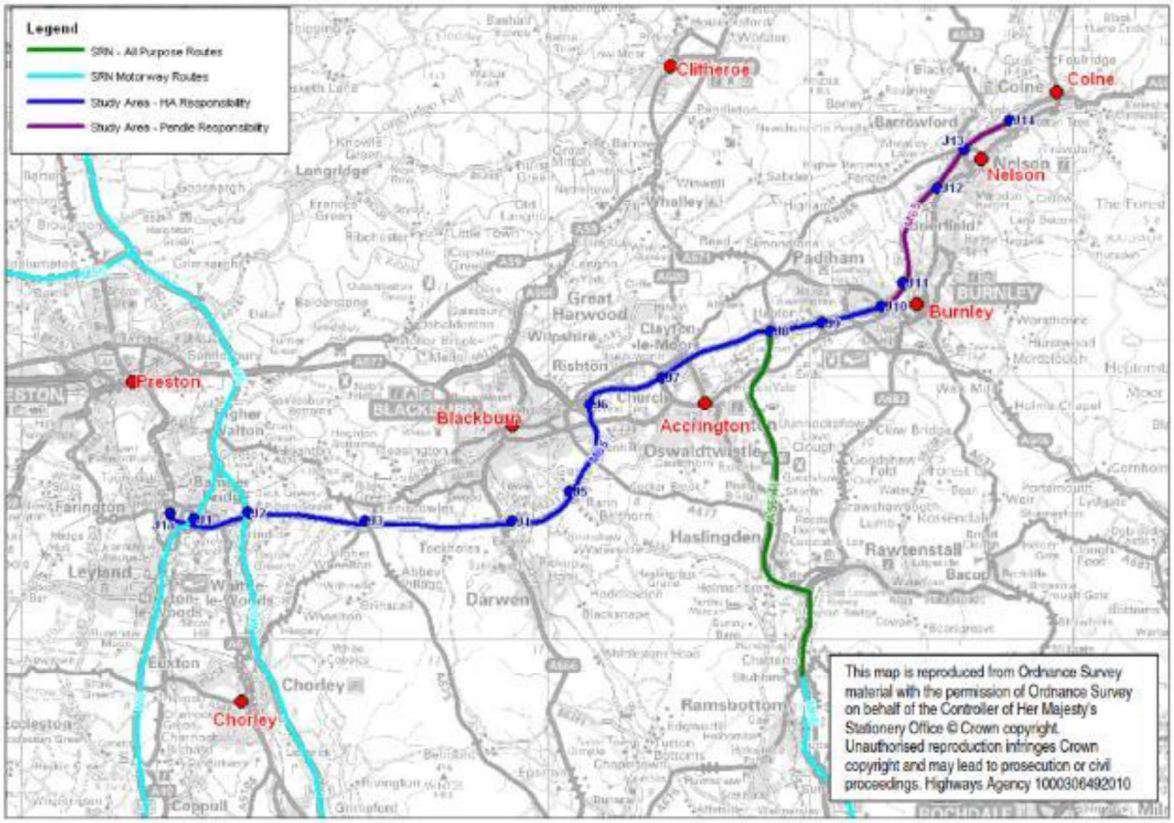
4.2.2. The objective of the study was to investigate existing issues on the M65 corridor and highlight likely future issues. The study considered a range of issues and provided a foundation which further work could build upon. The outcomes of the study highlighted three key areas where further studies could be focused:

- Detailed consideration of the impacts of sites and Local Development Framework proposals as they come forward;
- Detailed consideration of existing safety issues on the corridor, with a view to considering the implications on safety of future levels / patterns of traffic;
- Influencing Travel Behaviour (ITB) through targeted ITB measures to ensure that the need to travel by private car is reduced, particularly on the SRN.

4.2.3. Following the study in 2007, Halcrow Group Limited (Halcrow) was commissioned to undertake an operational and safety study of the M65 Corridor on behalf of National Highways, Lancashire County Council and Pendle Borough Council.

4.2.4. The study was commissioned to address concerns that the inconsistent lane configuration on the corridor could cause congestion and higher incident rates. The study also looked to identify strategic development sites where the increase in traffic demand may also contribute to the congestion. The study area is shown in Figure 4-1, overleaf.

Figure 4-1 – M65 Corridor Study, Study Area (2010)



4.2.5. Within the study area, two strategic sites were identified: Whitebirk located in Hyndburn adjacent to M65 J6, and Cuerden Strategic Regional Investment site in South Ribble. The study also identified that the additional traffic demand generated by proposed development over the Local Development Framework period would be fairly evenly distributed across the corridor, however M65 Junctions 5-6 would see the greatest increase in growth due to the housing growth in Blackburn.

4.2.6. Amongst the conclusions drawn from the study was the identification that M65 junction 6 is expected to experience increased demand from housing and employment growth and is seen to be approaching capacity in future assessment years.

4.3 M65 JUNCTION 4-6 VISSIM MODEL DEVELOPMENT (2014)

4.3.1. In 2014, National Highways, then the Highways Agency, commissioned AECOM to test a proposed scheme between M65 Junctions 4-6. The scheme comprised:

- Widening of several sections of the motorway by the addition of an extra lane (providing three lanes); and
- Modification of merges and diverges

4.3.2. A microsimulation VISSIM model was developed to test the proposed improvement scheme. The future network changes included:

- Widening between Junction 3 and Junction 4 eastbound and lane drop diverge;
- Widening between Junction 3 and Junction 4 eastbound to three lanes;

- Ghost island and lane gain merge from Junction 4 westbound;
- Widening Junction 5 to Junction 4 westbound with lane drop diverge at junction 4;
- Widening through Junction 5 eastbound;
- Lane gain merge from Junction 5 westbound;
- Widening Junction 5 to Junction 6 eastbound, with lane drop at Junction 6; and
- Lane gain at Junction 6 merge eastbound and lane drop at Junction 5 diverge.

4.3.3. The outcome of the modelling exercise showed that in the 2020 future year, M65 junction 4-6 did not have sufficient capacity to accommodate the proposed increases in traffic. The additional growth caused increased congestion which appeared to be focused on the merge and diverge at each SRN junction, however sections of the mainline were also impacted. The widening of sections of the mainline appeared to remove some of the mainline congestion.

4.4 M65 JUNCTION 2 TO JUNCTION 6 SCHEME REVIEW REPORT (2015)

4.4.1. In November 2014 National Highways, then the Highways Agency, commissioned Mouchel to undertake a review of the proposals to date along the M65 Corridor between Junctions 2-6.

4.4.2. Outline proposals in principle had been developed to widen the M65 to three lanes in both directions and to provide the most appropriate merges and diverges. In addition to this proposal, Junctions 3 and 4 were being considered for future pinch point schemes and improvements at Junction 5 were programmed for completion the same year.

4.4.3. The purpose of this exercise was to review the proposals that had been developed to date and hence provide an evidence base to support the outline proposals for widening of the M65. The report reviews the evidence used to develop the proposed solutions, scheme costs, affordability, delivery programmes, project risks and future recommendations.

4.4.4. The review considered the proposed widening to three lanes and a previous alternative option which prioritised the junction needs rather than the mainline, resulting in a new proposed hybrid solution which prioritises both mainline and junction needs. This scheme was shown to achieve a Benefit Cost Ratio (BCR) of 4.2. Ultimately, the study recommended that further study work should be undertaken in the future.

4.4.5. The report acknowledges that the M65 suffers from delay and congestion during peak periods, with traffic issues identified between Junctions 4 to 5 and 5 to 6, which are likely to increase due to the delivery of significant planned business and residential development by 2025. This reflects the conclusion of the National Highways 2010 corridor study, that M65 Junctions 4, 5 and 6 are all expected to experience increased demand from housing and employment growth and are forecast to be approaching capacity in future assessment years.

4.5 M65 JUNCTION 8 STUDY (2020-2021)

4.5.1. National Highways has undertaken a study of M65 junction 8 and the Shuttleworth Mead junction to the north. The initial stage of the study was to collect baseline information to establish any existing issues at the junction, this included producing a Vissim microsimulation model of the 2019 junction operation. This was followed by a review of the drivers for demand growth in the vicinity of the junction and potential concept interventions to address existing and future issues were identified. Cost estimates were produced for the proposed interventions and then assessed in a forecast version of the Vissim model.

4.5.2. WSP tested four improvement scheme options using Vissim, as follows:

- Option 1 **–** M65 J8: full signal control with entry widening as per the 2018 scheme, but without the splitter island on the southern circulatory. Shuttleworth Mead junction improvement scheme.
- Option 2 **–** As option 1 but with the splitter island on the southern circulatory.
- Option 3 **–** A Diverging Diamond Interchange (DDI).
- Option 4 **–** Partial signal control with the M65 west off slip and circulatory only under signal control. No intervention beyond signal timings at Shuttleworth Mead. This option was added post a review with National Highways in March 2021.

4.5.3. The existing layout and Options 1, 2 and 4 were assessed in the Vissim model for both 2025 and 2035 future year scenarios with forecast demand growth. Option 4 was also assessed at 2019 due to it potentially benefiting from a faster delivery timescale.

4.5.4. The modelling results indicated that both M65 J8 improvement schemes Option 1 and 2, along with the Shuttleworth Mead junction improvement scheme are forecast to reduce congestion significantly in both AM and PM peaks in the forecast years compared with the Do Minimum scenarios. Queues and delays are more evenly spread across the approach arms with minimal risk of blocking back to the M65 mainline.

4.5.5. Results for Option 4 indicated that the scheme is forecast to be able to contain queues within the M65EB off slip in both 2019 and 2025. Although due to the lack of intervention at Shuttleworth Mead it would be necessary to adjust signal timings to reduce the potential for queues extending back to M65 J8, this is likely to result in increased queues on the A678 approaches.

4.5.6. All options were considered to warrant progressing to further stages of design and assessment.

5

BASELINE ANALYSIS

5 BASELINE ANALYSIS

5.1 INTRODUCTION

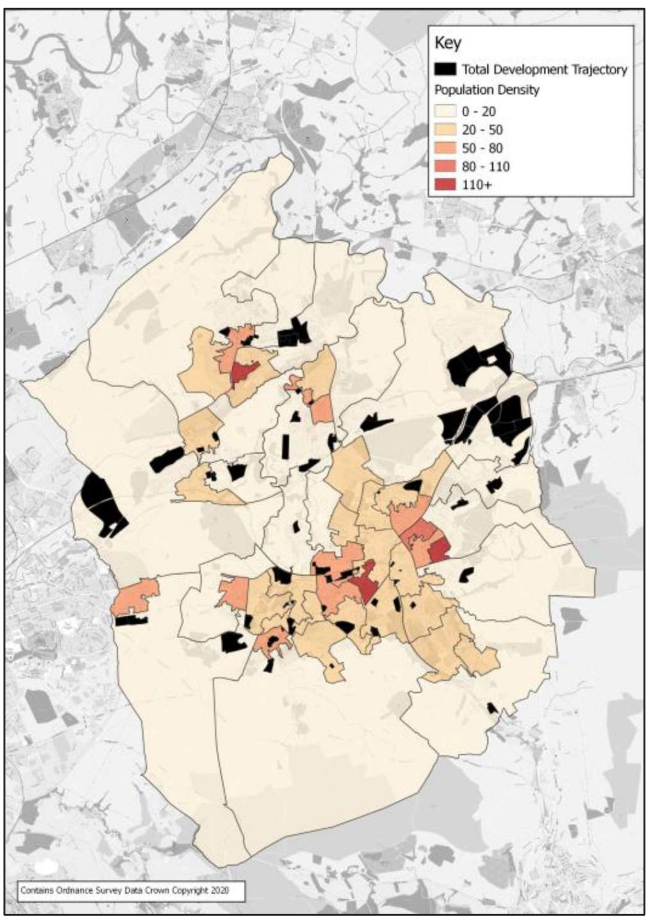
5.1.1. A comprehensive review of baseline information is necessary to establish any existing issues, needs and opportunities in the borough. This section of the report presents a review of the existing transport provision and analysis of key statistics relating to demographics, transportation and travel.

5.2 DEMOGRAPHIC DATA

POPULATION DENSITY

5.2.1. Figure 5-1 shows the population density in the borough, for each Lower Super Output Area (LSOA). The borough has a relatively low population density overall, with large parts of the rural areas of Hyndburn having a population density of 0-20 people per hectare. Areas of higher population density are situated around towns such as Great Harwood and Accrington. It can be noted that the 'Total Development Trajectory' shown on the maps in this chapter includes some sites which are no longer proposed allocations, along with some sites which are now committed developments and may be under construction.

Figure 5-1 - Population Density



5.2.2. Many of the larger proposed employment sites are situated in areas of low population density and as such there is a need to ensure that there is suitable provision for journeys by public transport, cycling or walking, to avoid a dependency on private car use. This is especially true for the sites in Rishton to the west and Huncoat to the east.

5.2.3. A number of smaller site allocations are located in areas of higher population density, in and around Accrington. These locations present an opportunity to develop sites with a reduced dependence on private car journeys, arising from their close proximity to key facilities and employment sites, as well as public transport and active travel infrastructure.

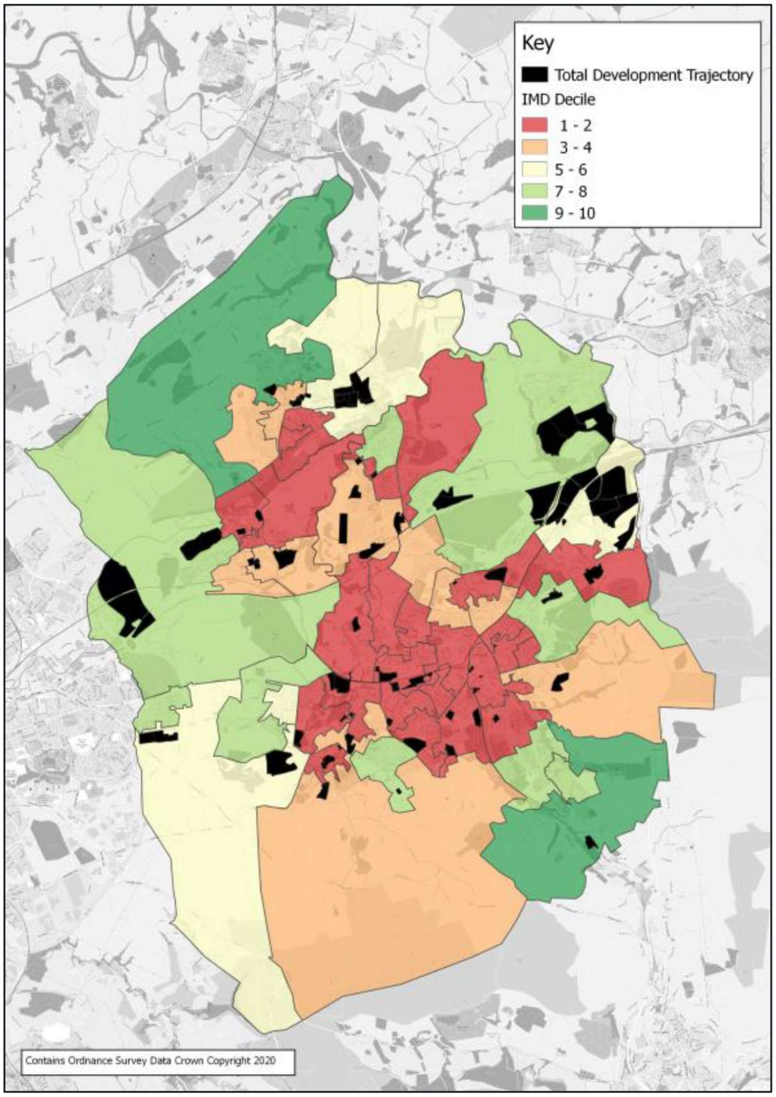
DEPRIVATION

5.2.4. The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation for neighbourhoods (classified as LSOAs) in England. The IMD Deciles are calculated by ranking every LSOA in England from 1 (as the most deprived area) to 32,844 (the least deprived area). They are then divided into 10 equal groups. These range from 1 being 10% most deprived to 10 which symbolises 10% least deprived. The IMD measures deprivation across seven domains: Income; Employment; Health Deprivation & Disability; Education, Skills Training; Crime; Barriers to Housing and Services; and Living Environment.

5.2.5. The IMD can be a useful indicator of the propensity to travel by particular modes of transport within a given neighbourhood. More deprived areas of the borough may have lower levels of access to privately owned vehicles and therefore have a greater propensity to use public transport or active travel modes for a higher proportion of their journeys.

5.2.6. Figure 5-2 shows the IMD levels within the borough. The figure shows that the borough contains some of the least and most deprived areas in England. The most deprived areas are located in the centre of Accrington, with the outskirts of the borough being amongst the least deprived.

Figure 5-2 – Index of Multiple Deprivation

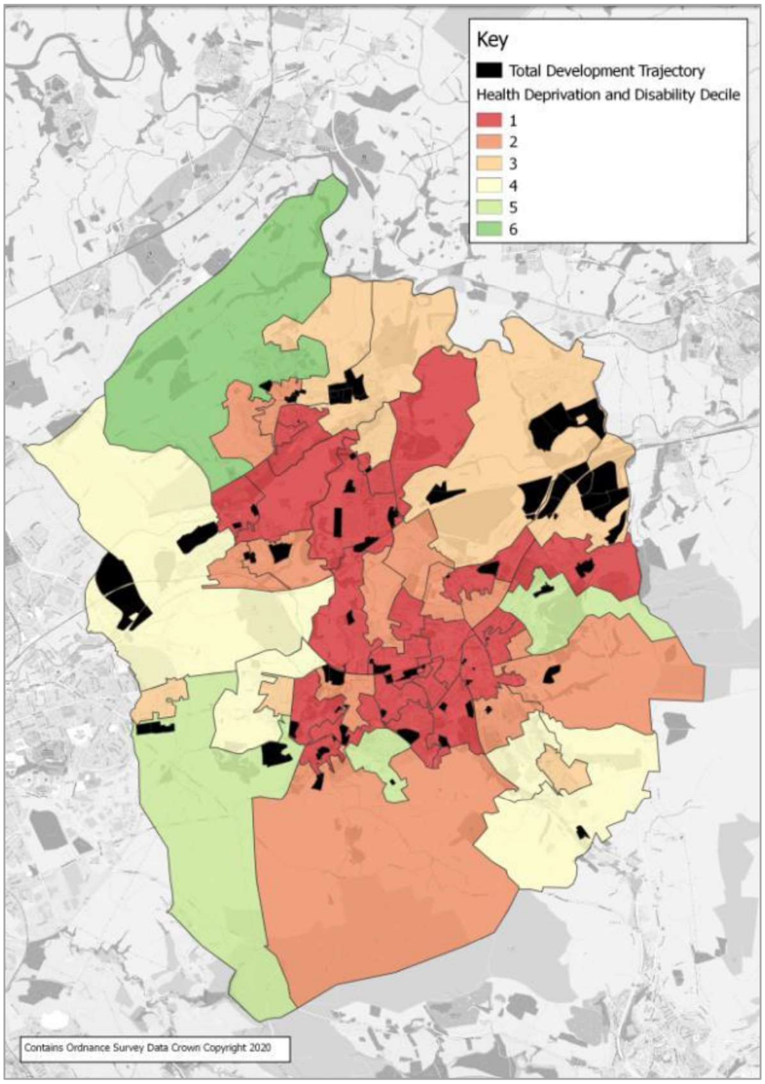


5.2.7. The proposed residential site allocations are located within a mix of deprivation levels, ranging from 1 to 10 in decile range. This has the potential to influence mode choice, with higher deprivation areas tending to be consistent with lower levels of private vehicle ownership, which may result in an increased reliance on public transport or residents being more likely to walk or cycle to work. Lower deprivation areas are more likely to travel by car due to higher uptake of this mode, with active travel often used for leisure trips instead of commuting.

HEALTH DEPRIVATION AND DISABILITY

5.2.8. Figure 5-3 shows the Index of Health Deprivation and Disability by decile, where 1 is most deprived 10% of LSOA's. This Index analyses those living in poor physical and mental health. The analysis shows that when analysing this IMD factor in isolation, it can be seen that the towns of Accrington and Rishton rank within the 20% most deprived areas in the country.

Figure 5-3 – Index of Health Deprivation and Disability



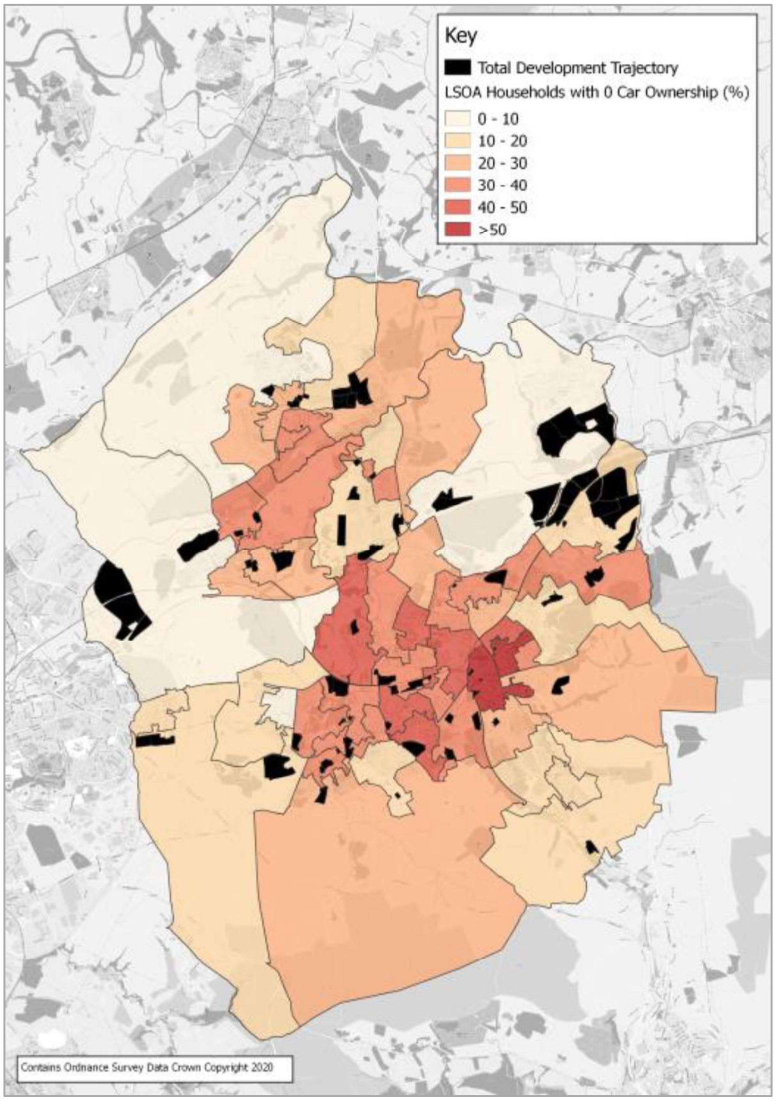
5.2.9. The above figure shows that no LSOA within the borough reaches the top 40% least deprived decile. Ensuring good accessibility in areas of high health deprivation and disability is important so as to not socially exclude a proportion of the vulnerable population. Some physical health issues prevent the ability to use a car, as such there could be linkages between health and car ownership in these areas. Good public transport networks and well lit, well maintained, wide footpaths are desirable for all of the population, but for the vulnerable population, these measures provide independence and essential accessibility to and from their home.

CAR OWNERSHIP

5.2.10. Vehicle ownership levels within an area can have a significant influence on travel patterns. High levels of vehicle ownership typically have positive correlation with high levels of vehicle usage, potentially reducing the uptake of travel by active or sustainable methods.

5.2.11. Figure 5-4 shows the percentage of households that do not own a car, by LSOA. Similar to typical trends evident in the majority of UK towns and cities, car ownership levels decrease with increased proximity to town and city centres. It can be seen that the proportion of households that do not own a car increases towards the centre of Hyndburn with over half the number of households in LSOAs around Accrington not owning a car.

Figure 5-4 – Percentage of Households with Zero Car Ownership



5.2.12. Outside of town centre locations, where car ownership is less necessary for travel, car ownership is often an indication of levels of income. Higher levels of car ownership can be an indication of more affluent areas and areas of lower car ownership can indicate lower income households.

5.2.13. The majority of the proposed residential site allocations are located in areas where car ownership is above 50%. For those developments located in the suburbs, the public transport facilities are sometimes less extensive and the ability to walk and cycle as a mode may not always be feasible. Therefore, residents should have access to a range of travel options, to reduce the reliance on private car use. For those developments towards the town centre, public transport links should enable residents to travel between areas without the use of a car, with active travel playing a part in local journeys too.

5.2.14. As part of this baseline work, analysis has been undertaken of the level of ownership of Ultra Low Emission Vehicles (ULEVs) in the borough, compared to the figures for Lancashire, the North-West, and the UK. An Ultra-Low Emission Vehicle is defined as a low emission car or van that emits 75g/km CO_2 or less, based on the NEDC test. ULEVs include pure electric vehicles, electric range-extender vehicles, and plug-in hybrids (PHEVs). The data is presented in Table 5-1 below.

Table 5-1 - ULEV Ownership[2]

Area	Plug-in Cars and Light Goods Vehicles	Total ULEVs	Total vehicles	ULEVs as % of all vehicles	Total Public Charging Devices	Total Public Rapid Charging Devices
Hyndburn	75	79	43,100	0.18	15	5
Lancashire	2,796	2,982	860,600	0.35	317	92
North West	13,227	13,979	3,945,800	0.35	-	-
UK	253,956	269,377	39,890,500	0.68	17,947	3,107

5.2.15. The data above shows that Hyndburn has a lower proportion of ULEVs as a percentage of its total vehicles in comparison with all Lancashire authorities, as well as being below the average for the North-West and UK. This highlights potential opportunities to increase the percentage of ULEV uptake within the borough.

[2] DfT Vehicle Licensing Statistics

KEY POINTS – BASELINE DEMOGRAPHIC DATA:

- Hyndburn has a relatively low population density overall, and there is a need to ensure that site allocations outside of the more densely populated town centres are well-served by public transport and walking & cycling provision;
- There is a broad spectrum in terms of deprivation. Areas of higher deprivation are generally the town centres, and this may influence how residents choose to or are able to travel, with a tendency towards public transport, walking or cycling modes.
- In the town centre locations, car ownership is lower, with over half of households in Accrington town centre not owning a car. This indicates a reliance on public transport, walking and cycling.
- There is a potential opportunity to increase uptake of Ultra-Low Emission Vehicles, which is below average when compared to the wider region and UK.

5.3 EXISTING UPTAKE OF WALKING & CYCLING

5.3.1. The Institute of Highways and Transportation sets out guidance on walking distances for different trip purposes, as set out in Table 5-2.

Table 5-2 – IHT Preferred Walking Distances

	Town Centres (m)	Commuting / School / Sight-seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

5.3.2. The National Travel Survey data, 2017, sets out average cycling distances for difference trip purposes, these are set out in Table 5-3.

Table 5-3 – National Cycle Survey Average Cycle Distances (2017)

Trip Purpose	KM per Trip
Commuting	5.6
Business	4.4
Education / escort education	2.9
Shopping	2.7
Other escort	2.6
Personal business	3.4

Leisure	7.4
Other including just walk	0.0
All purposes	5.5

5.3.3. On average, cyclists are willing to travel longer distances for leisure trips. The survey showed shorter distances for education and shopping purposes, likely due in part to the proximity of residential areas to schools and shopping centres. People are willing to travel further for employment, with average cycle distances of 5.6km for commuting trip purposes.

5.3.4. Table 5-4, below, presents data showing the proportion of residents who walk or cycle at least once per month. As shown, the figures for Hyndburn are below average when compared to figures for Lancashire, the North-West, and England. The full dataset shows that cycling rates varied across Lancashire, but were also below 10% in the East Lancashire authorities of Burnley, Blackburn with Darwen, Pendle and Rossendale.

Table 5-4 - Residents Walking or Cycling at Least Once per Month[3]

Area	Walk %	Cycle %
Hyndburn	65.9	9.6
Lancashire	76.2	13.9
North West	76.3	13.8
England	78.2	16.1

5.3.5. Whilst factors such as the natural topography of the region may limit the uptake of cycling, the data still suggests that there is an opportunity to increase cycle uptake in line with regional and national averages.

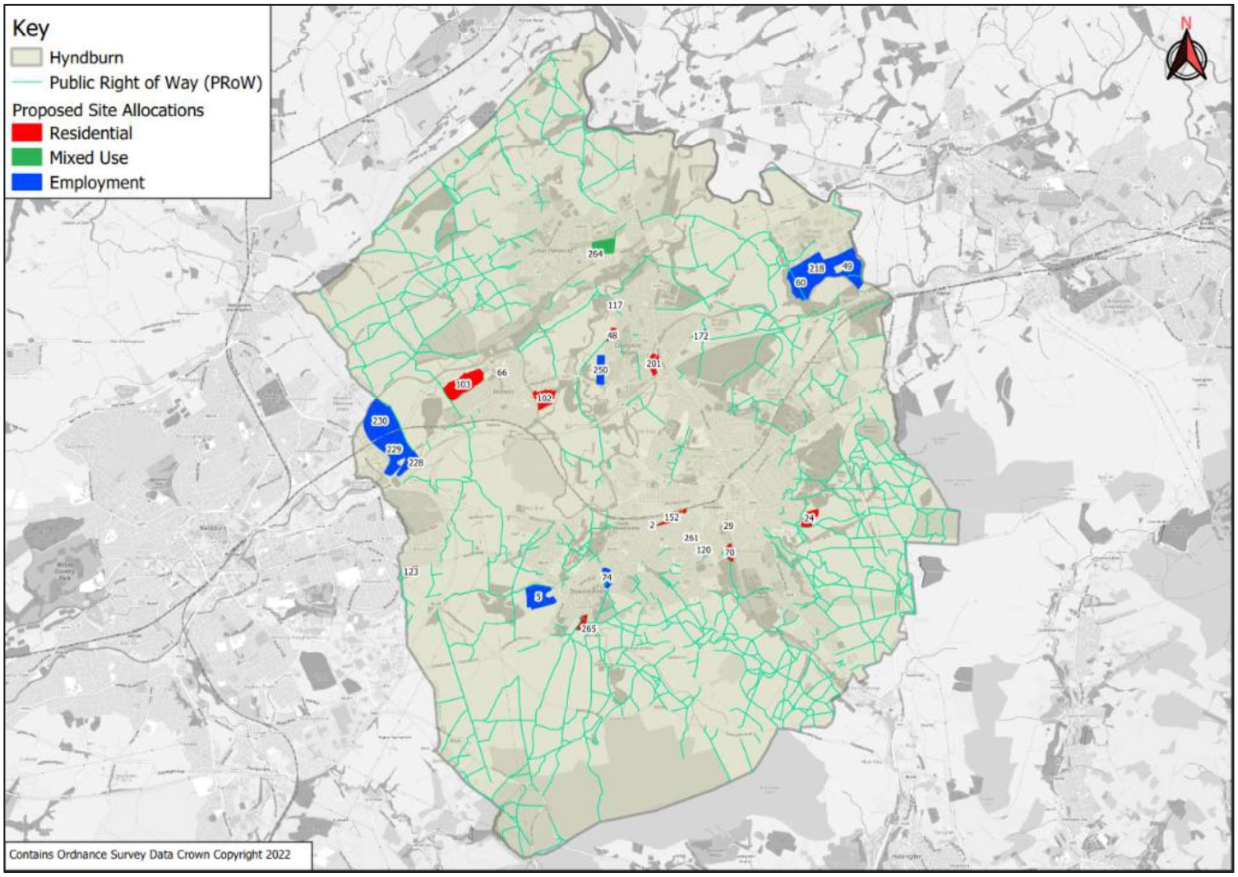
5.4 PUBLIC RIGHTS OF WAY NETWORK

5.4.1. Walking is promoted through CONNECT, East Lancashire's platform for promoting smarter travel choices and sustainable travel around East Lancashire.

5.4.2. Figure 5-5 illustrates the public rights of way in the borough, shown in green.

[3] DfT 2017/18 Active Lives Survey for Sport England

Figure 5-5 – Public Rights of Way



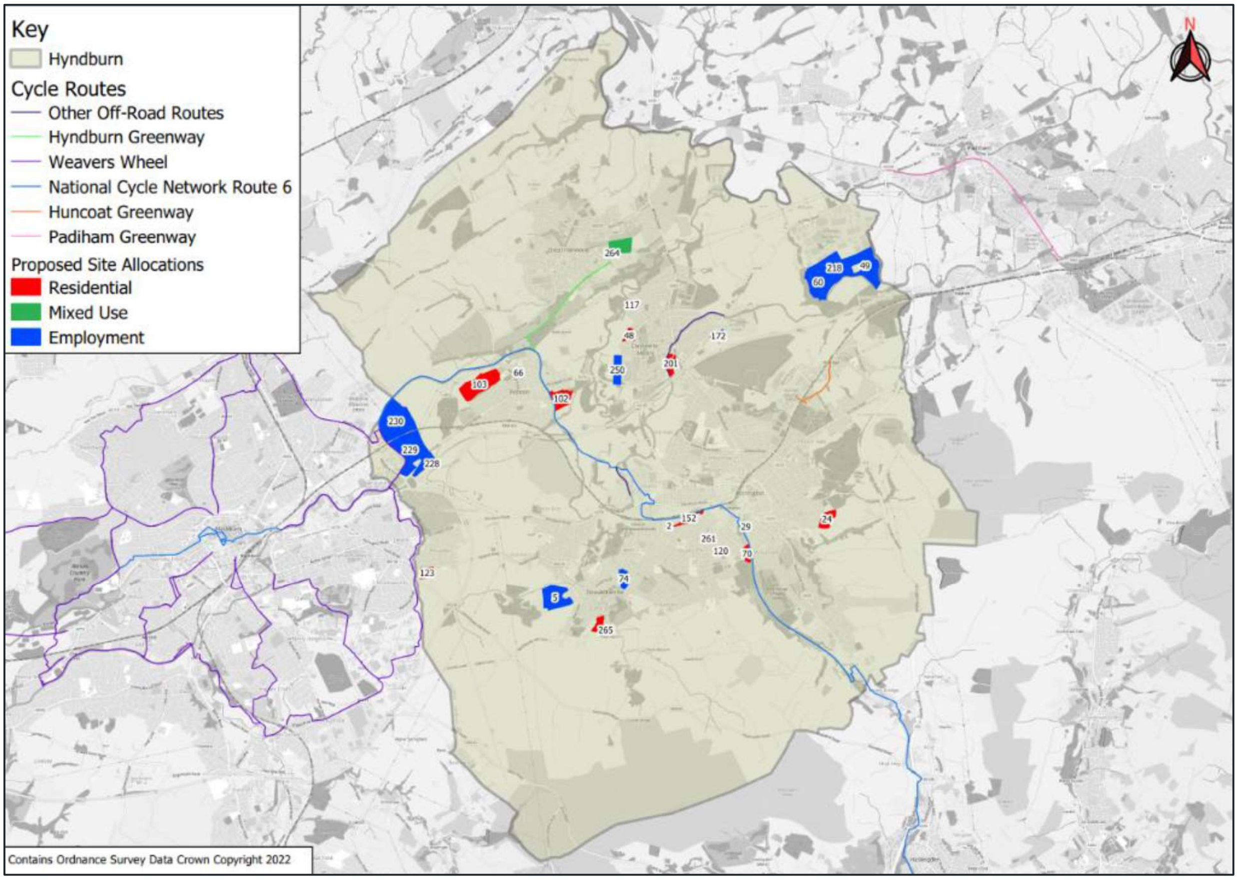
5.5 EXISTING CYCLE NETWORK

5.5.1. Like walking, cycling is promoted through the CONNECT campaign as both a leisure and commuting mode.

5.5.2. Figure 5-6 shows the existing cycle routes throughout the borough. National Cycle Network Route 6 crosses the borough and passes in close proximity to several site allocations, including the large employment allocations north east of M65 junction 6, the sites in Rishton, Scaitcliffe, Accrington and Rising Bridge. The cycle route is a mixture of traffic-free and on-road routing.

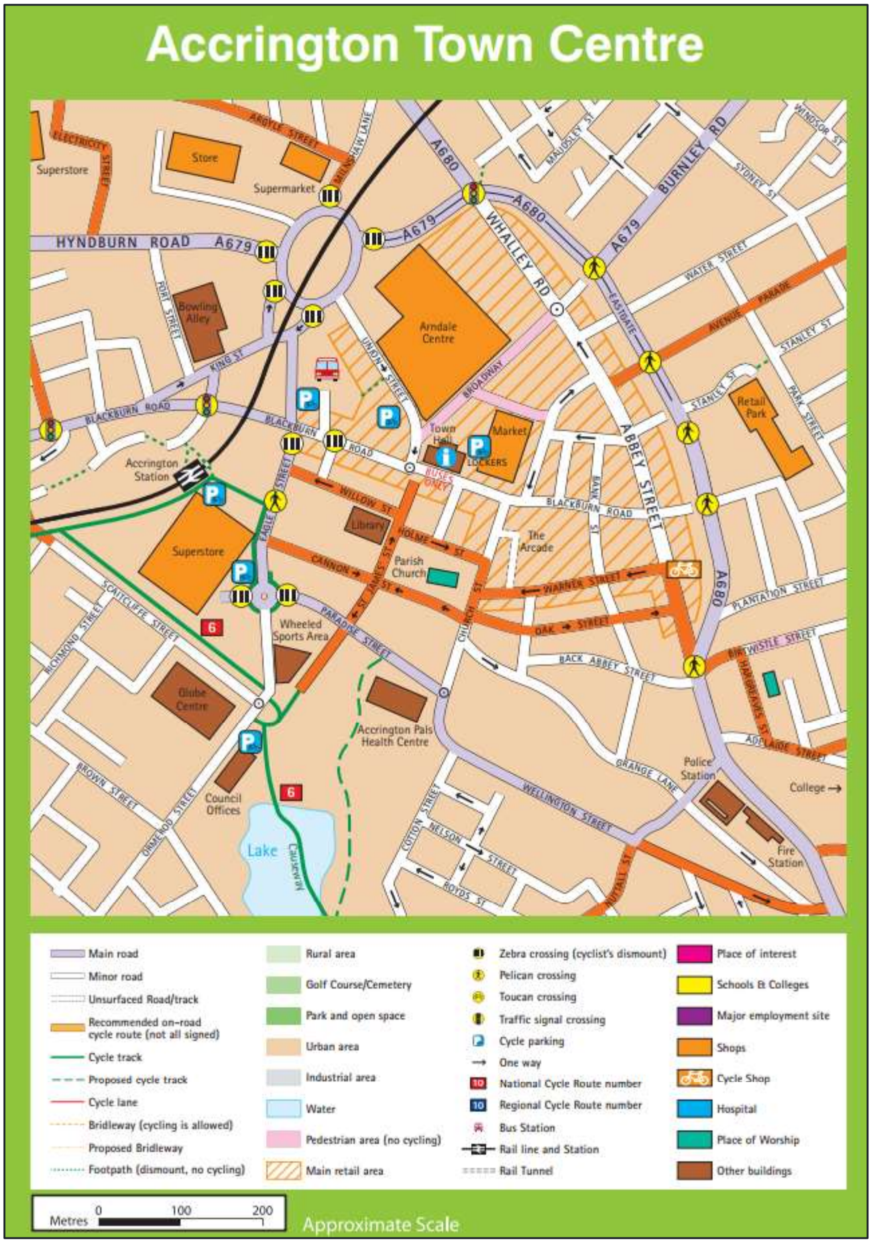
5.5.3. The large employment allocations north east of M65 junction 6 and residential site allocation near Intack are located in close proximity to the Weavers Wheel, which surrounds Blackburn. The Huncoat residential allocations are in close proximity to the Huncoat Greenway route.

Figure 5-6 – Cycle Routes



5.5.4. To promote cycling in Accrington town centre, Visit Lancashire provides information on cycle routes and parking locations in the town centre. This encourages trips by multiple modes, for example travelling by rail to the town and then cycling around the town centre. Figure 5-7, overleaf, taken from Visit Lancashire, shows the locations of car parks, railway stations and cycle stores.

Figure 5-7 – Walking and Cycling Facilities in Accrington Town Centre



5.6 EXISTING PUBLIC TRANSPORT FACILITIES

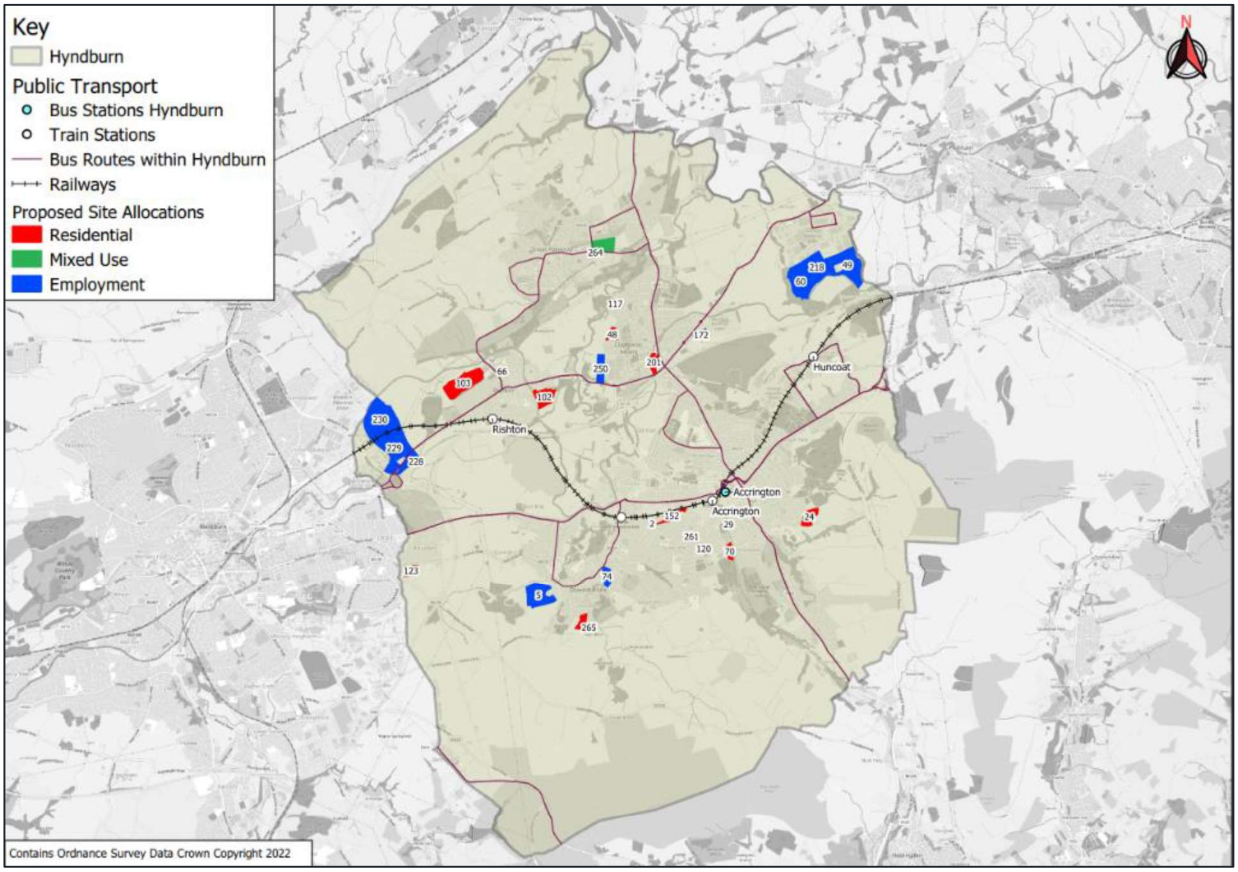
5.6.1. As with cycling and walking, bus and rail usage are also actively promoted through the CONNECT campaign.

5.6.2. As part of the recent Pennine Reach scheme, bus services were improved within the borough, including an upgrade of the Accrington Town Centre bus station, which has significantly improved public transport interchange infrastructure in the heart of Accrington Town Centre through the delivery of a modern, covered, safe bus station facility including the latest technology.

5.6.3. Figure 5-8 shows the existing network of bus routes across Hyndburn. In Accrington there is good bus provision in the majority of the town via a number of radial routes from the town centre.

5.6.4. There are four railway stations located in the borough: Accrington, Church & Oswaldtwistle, Huncoat and Rishton. These stations are served by the East Lancashire line, which runs east-west between Preston and Colne via Accrington, Blackburn and Burnley.

Figure 5-8 – Public Transport Routes, Hyndburn



RAIL PATRONAGE

5.6.5. Table 5-5, below, sets out the number of passengers boarding and alighting services at railway stations in Hyndburn in 2019-20.

Table 5-5 – Rail Patronage at Hyndburn Stations

Station Name	Patronage – 2019-2020
Accrington	465,758
Church & Oswaldtwistle	37,920
Huncoat	24,918
Rishton	45,082
Total	**573,678**

5.6.6. Accrington rail station has the highest number of passengers within the borough, with the other stations having significantly fewer passengers. While Huncoat currently serves the fewest passengers, there is a cluster of large residential site allocations located close to Huncoat station, as such it is likely that passenger numbers at this station would grow as these sites are built out.

RAIL STATION ACCESSIBILITY

5.6.7. Table 5-6, below, presents an evaluation of available facilities and accessibility at each rail station within the borough.

Table 5-6 - Rail Accessibility (National Rail data)

Rail Station	Toilets	Accessible Toilets	Waiting Room	Staff Help	Ramp	Step-free Access	Wheelchairs	Cycle Parking	Car Parking
Accrington	✓	✓	×	✓	✓	✓	×	✓	33 Spaces (6 accessible)
Church & Oswaldtwistle	×	×	×	×	✓	×	×	✓	×
Rishton	×	×	×	×	✓	×	×	✓	12 Spaces (2 accessible)
Huncoat	×	×	×	×	✓	✓	×	✓	×

5.6.8. As shown, Accrington Railway Station provides the most facilities and the highest level of accessibility of all the stations in the borough. The remaining stations within the borough offer a more limited provision of facilities and accessibility, which could limit the number of potential users.

5.7 EXISTING HIGHWAY NETWORK

STRATEGIC ROAD NETWORK

5.7.1. The SRN within the borough extends to 10km in total and comprises the M65, including junctions 6, 7 and part of the western slips at junction 8. In addition, junctions 5 and 9 of the M65 are located to the south-west and east of the borough in Blackburn with Darwen and Burnley respectively and connect to key local roads in the borough. The SRN within the borough also includes the A56 which runs north-south from M65 junction 8 through Rising Bridge and Haslingden, before merging with the M66 at Edenfield.

5.7.2. The M65 bisects the borough west to east between the towns of Accrington and Clayton-le-Moors and is a major artery within Central and Pennine Lancashire, providing links between Preston in the west and the East Lancashire towns of Burnley, Nelson and Colne. The role of the M65 is a key inter–urban route whose principal function is to link the main population and employment centres of Preston, Blackburn, Burnley and Colne with routes of strategic national and regional importance as well as destinations in other regions.

5.7.3. As summarised in the Chapter 4 of this report, previous studies have shown that the M65 motorway is operating at capacity at peak times.

LOCAL ROAD NETWORK

5.7.4. Major roads in and around Hyndburn include the A680, A678, A679. The A680 runs south from the A671 south of the village of Whalley, located approximately 9km to the north of Accrington. It passes through Clayton-le-Moors, through Accrington town centre and continues south towards Rising Bridge, where it meets the A56 and continues into Haslingden.

5.7.5. The A678 runs in and east-west route through Hyndburn, commencing at M65 junction 6 in the west, passing to the south of Rishton and Clayton-le-Moors, through to Altham to the north-east of the borough. The A679 Blackburn Road also runs in an east-west route through Hyndburn, starting at the A6119 junction at Intack in the west, passing through Church & Oswaldtwistle, through Accrington town centre, and routing towards the A56 interchange, and subsequently towards Burnley in the east.

5.8 TRAFFIC DATA

5.8.1. To establish baseline traffic conditions, a data review exercise was undertaken to determine where existing traffic information was available.

5.8.2. At the commencement of this study, traffic patterns were impacted by the ongoing COVID-19 pandemic and its resulting effects on employment and travel. To understand the level of effect, WSP engaged in a review of monitored traffic levels within the borough using data from permanent traffic counter sites. This confirmed that, whilst overall traffic levels fluctuated as national and local restrictions tightened and eased, the general pattern was one of traffic being lower than typical conditions i.e. when compared to the corresponding period in previous years. It was therefore concluded that any new traffic data collected during this time may be atypical and as such may not be representative.

5.8.3. An approach was therefore taken to utilise existing traffic data sources to understand the current traffic conditions on the highway network; with data obtained from a number of sources:

- Webtris Traffic counters;
- Local Traffic counters;
- Previously commissioned traffic surveys; and
- Submitted and approved Transport Assessments.

5.8.4. Traffic data from the above sources has been used to inform the junction assessments undertaken as part of this study.

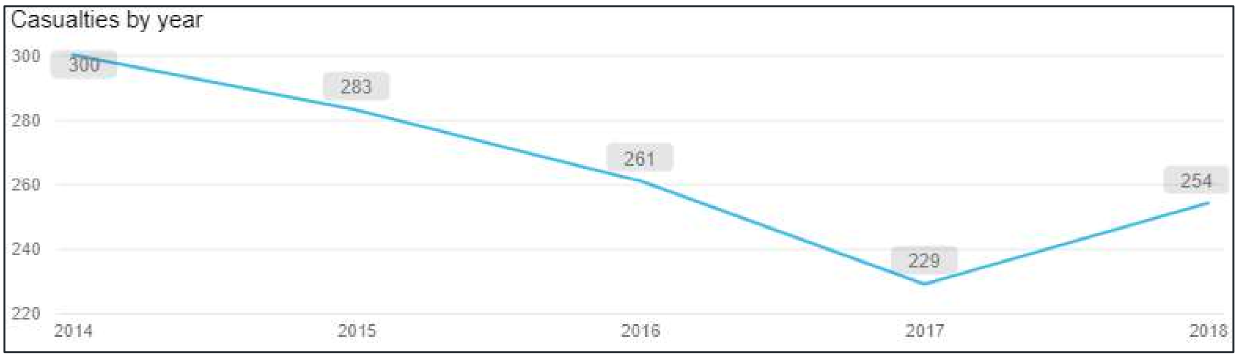
5.8.5. As part of the junction assessment stage of the study, data was required for the key junctions which were identified for capacity assessments. Data for the majority of junctions was obtained from the above sources and was collected prior to the COVID-19 pandemic, and therefore unaffected by recent changes in traffic conditions which have arisen due to lockdown restrictions.

5.8.6. The exception was the A678 / Altham Lane junction where no existing count data was available. As this was identified as a key junction which needed detailed assessment, the decision was taken to collect new traffic data for the junction, with surveys undertaken on 27th May 2021. The manual classified turning count of the junction was supplemented by an ATC counter placed further south on Altham Lane – this ATC data was compared to a 2018 traffic count undertaken by Tracsis to establish any difference in traffic flows that may have arisen from COVID-19 restrictions. The conclusion was that during the AM peak, the 2021 surveyed traffic flows were around 17% lower than the 2018 traffic flows, while during the PM peak the 2021 surveyed traffic flows were around 15% higher than the 2018 traffic flows. On this basis it was concluded that the 2021 survey data was appropriate to use without any further adjustments.

5.9 ACCIDENT DATA

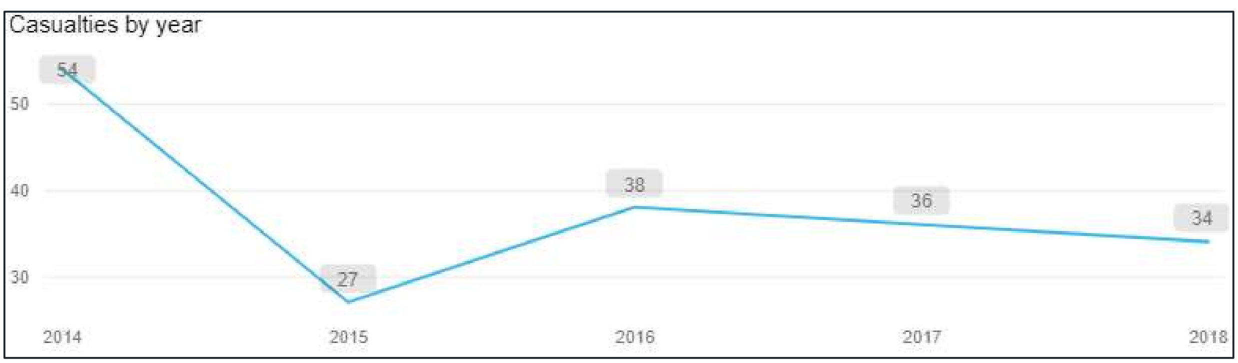
5.9.1. WSP has reviewed collision data collated for the Neighbourhood Joint Strategic Needs Assessment for Lancashire. This data covers a five-year study period of 2014 to 2018. Figure 5-9 presents the total casualties for Hyndburn over this period, which shows a general decrease in casualties up to 2017, followed by an increase in 2018 back to levels similar to 2016.

Figure 5-9 - Total Casualties in Hyndburn 2014-2018



5.9.2. Figure 5-10, below, presents the number of casualties which resulted in fatal or serious injuries (KSI Casualties) during the same five-year period. Again, this shows a generally decreasing trend in the overall number of KSI casualties in recent years.

Figure 5-10 - Hyndburn KSI Casualties 2014-2018



5.9.3. The KSI data for the borough has been compared to the UK National Average KSI Rate[4] across the same time period. This broad comparison is considered to be appropriate as the borough contains a mix of road and junction types alongside A-roads and a section of motorway. The data is shown in Table 5-7, overleaf.

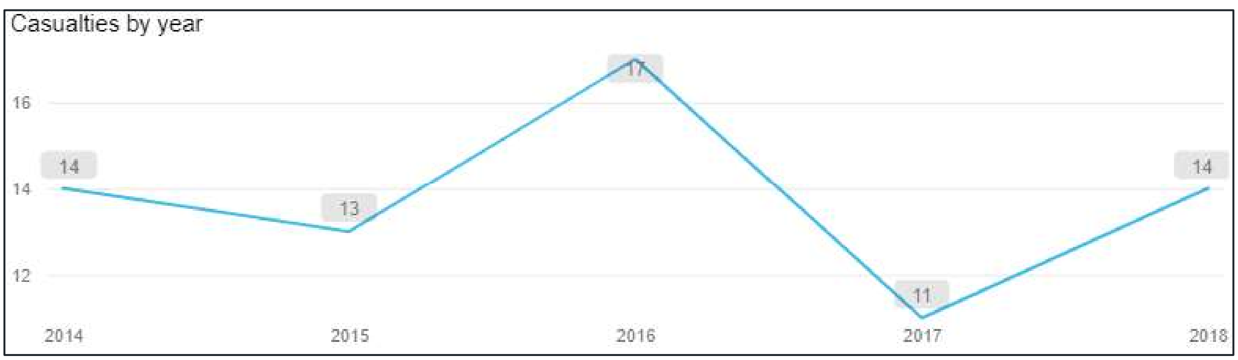
Table 5-7 - Hyndburn KSI Rate

		Year					Total
		2014	2015	2016	2017	2018	
Severity	Fatal	6	1	1	1	1	10
	Serious	48	26	37	35	33	179
	Slight	246	256	223	193	220	1,138
Total		300	283	261	229	254	1,327
KSI Rate		18%	9.54%	14.56%	15.72%	13.39%	14.24%

5.9.4. The borough has an average KSI rate of 14.24% over the five-year period, which is below the national average of 17.35% for the same period. Throughout this period (excluding 2014), the KSI rate within the borough is consistently below that of the UK national average.

5.9.5. Figure 5-11, below, presents the number of cyclist casualties in the borough from 2014-2018.

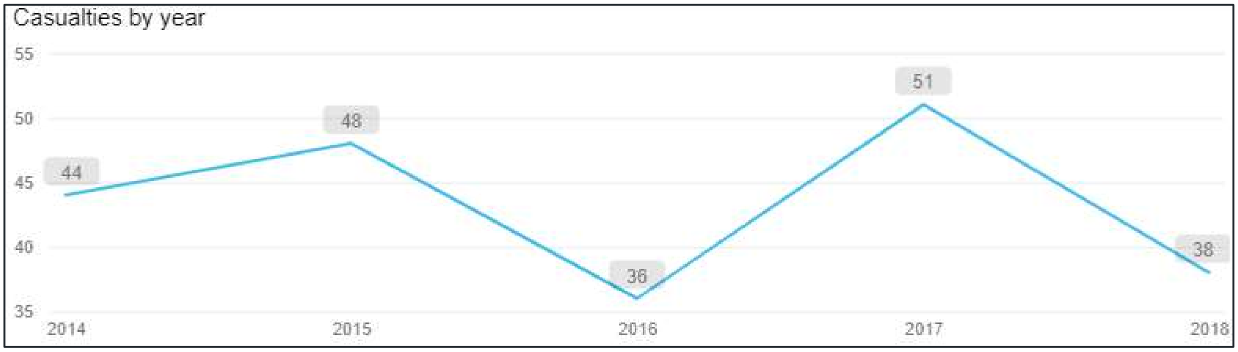
Figure 5-11 - Cyclist Casualties in Hyndburn 2014-2018



5.9.6. Figure 5-12, below, presents the number of pedestrian casualties in the borough from 2014-2018.

[4] DfT Reported Road Accidents Table RAS10002

Figure 5-12 - Pedestrian Casualties in Hyndburn 2014-2018



5.9.7. The NMU casualty rate within the borough was 21.75% during the study period, which is slightly lower, but broadly in line with, the NMU casualty rate for the wider Lancashire region, at 22.06%.

5.9.8. As part of the assessment stage of this study, following the identification of particular links or junctions where detailed assessment is required, a review of accident data for each location will be undertaken to ensure that any mitigation proposals take account of any relevant road safety considerations.

5.10 AIR QUALITY MANAGEMENT AREAS

5.10.1. The Department for Environment, Food and Rural Affairs summarises the latest air quality statistics in an annual document, which shows trends and changes in air quality from 1987. The publication summarises concentrations of key air pollutants such as:

- Particulates (PM10 and PM2.5);
- Nitrogen dioxide (NO2); and
- Ozone (O3).

5.10.2. Hyndburn Borough Council's 2017 Air Quality Annual Status Report summarises the following key findings:

- Hyndburn currently has no Air Quality Management Areas;
- The results for 2016 showed no exceedances during 2016 and when compared with the previous four years a steady decline in atmospheric concentration of NO_2 in the air;
- The major source of the pollutant NO_2 in Hyndburn is traffic. However levels of pollution are declining as improvements in technology mean that vehicles are becoming cleaner and less polluting.

6

SUSTAINABLE TRANSPORT ASSESSMENT

6 SUSTAINABLE TRANSPORT ASSESSMENT

6.1 INTRODUCTION

6.1.1. The NPPF clearly sets out that the planning system should aim to create sustainable and healthy communities; this can partly be achieved through the management of growth patterns in order to make the best possible use of public transport, walking and cycling opportunities, and focussing significant development in locations which either are, or can be made to be, sustainable.

6.1.2. This section of the report presents analysis of the proposed site allocations in terms of their accessibility via sustainable and active modes of travel.

6.2 AREA PLANS OF SUSTAINABLE TRANSPORT PROVISION

6.2.1. Figures 6-1 to 6-5 build on the work presented in chapter 5 and provide focussed area plans showing the existing sustainable transport provision in the five key areas of development: Accrington; Altham; Clayton; Great Harwood; and Rishton.

Figure 6-1 - Accrington Existing Sustainable Transport Provision

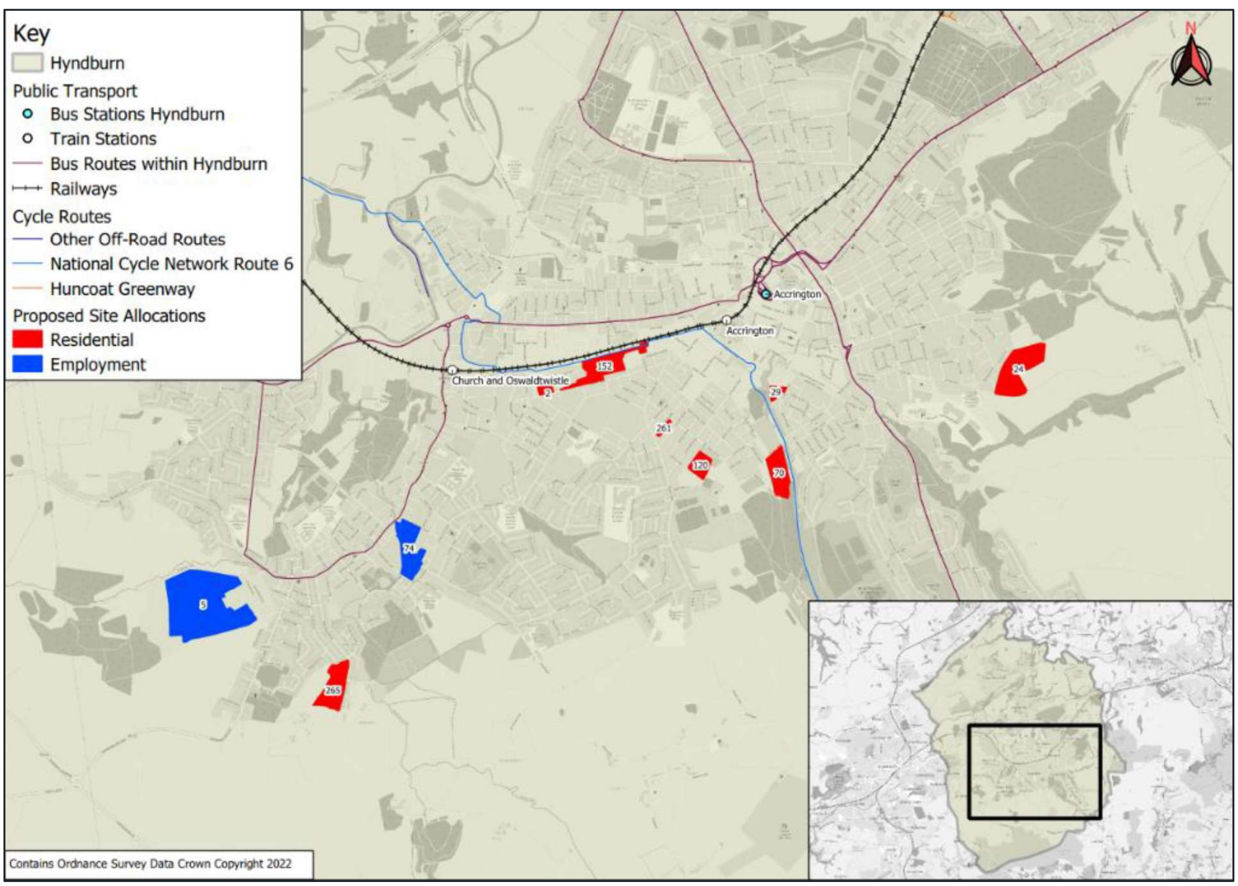


Figure 6-2 - Altham Existing Sustainable Transport Provision

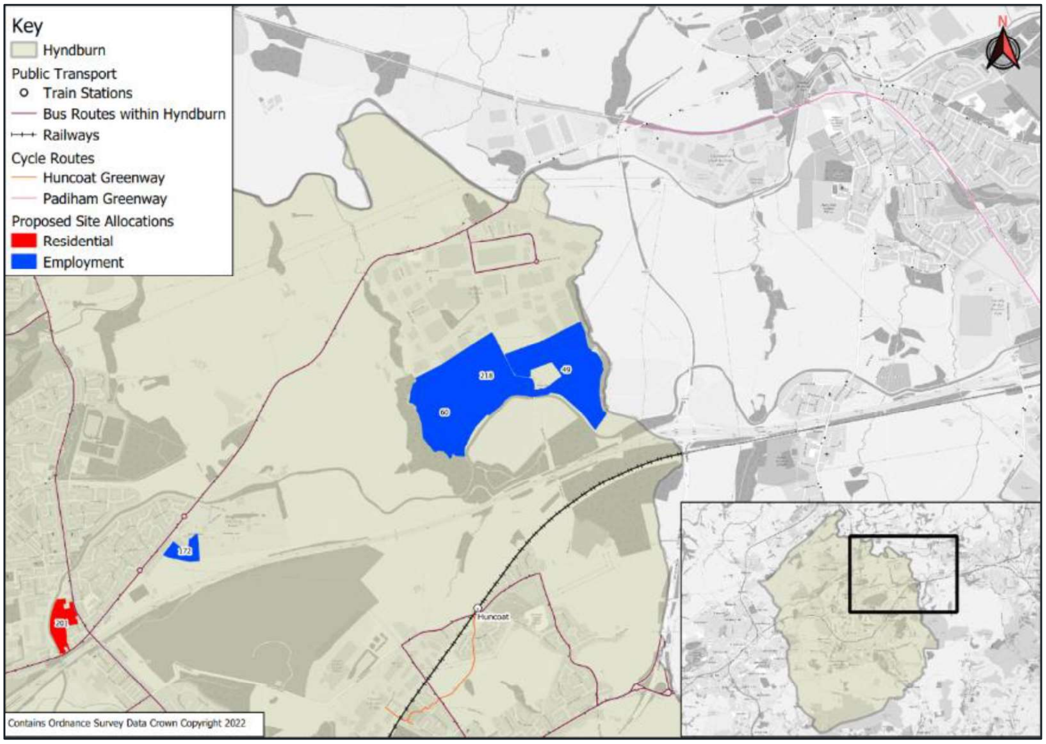


Figure 6-3 - Clayton Existing Sustainable Transport Provision

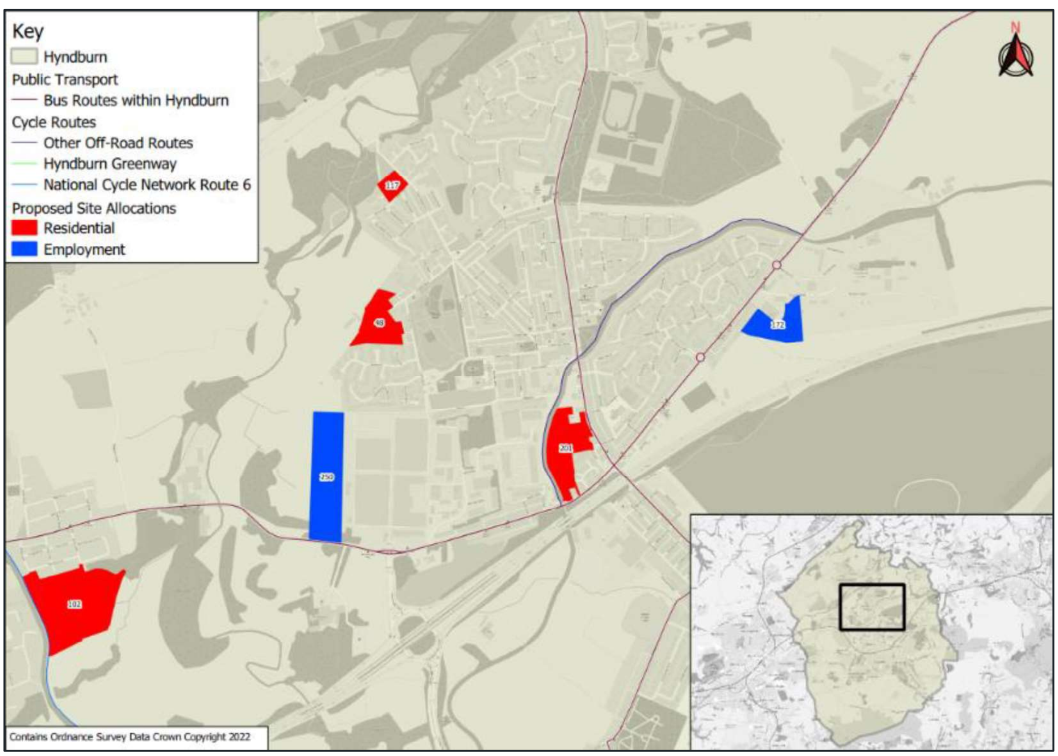


Figure 6-4 - Great Harwood Existing Sustainable Transport Provision

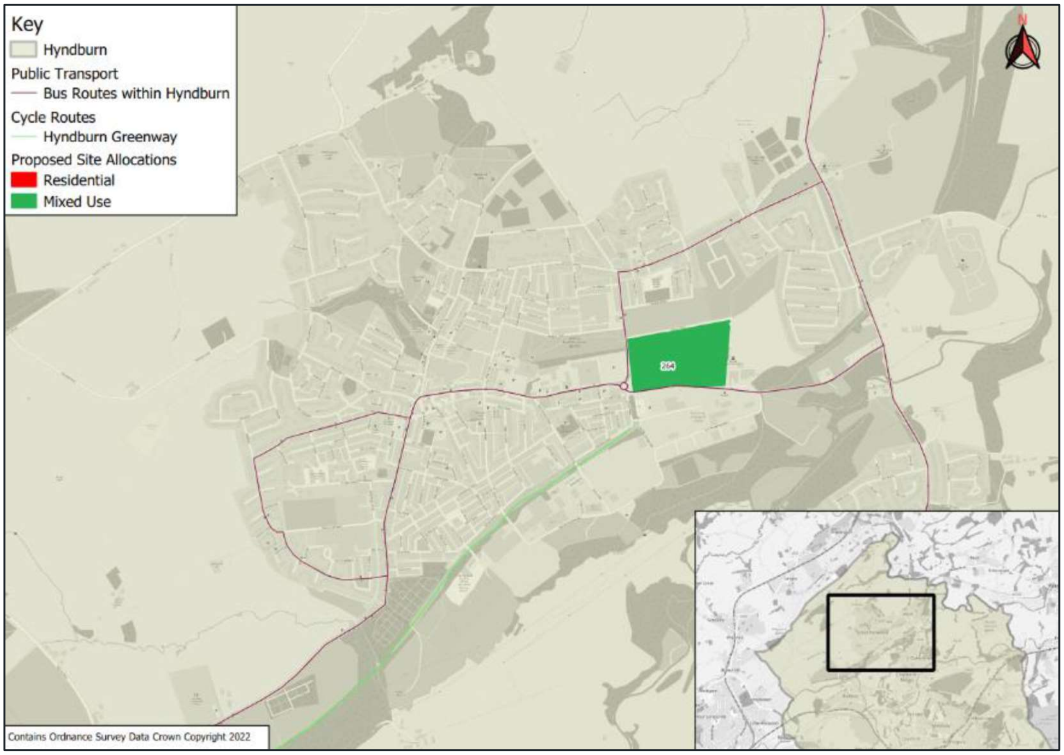
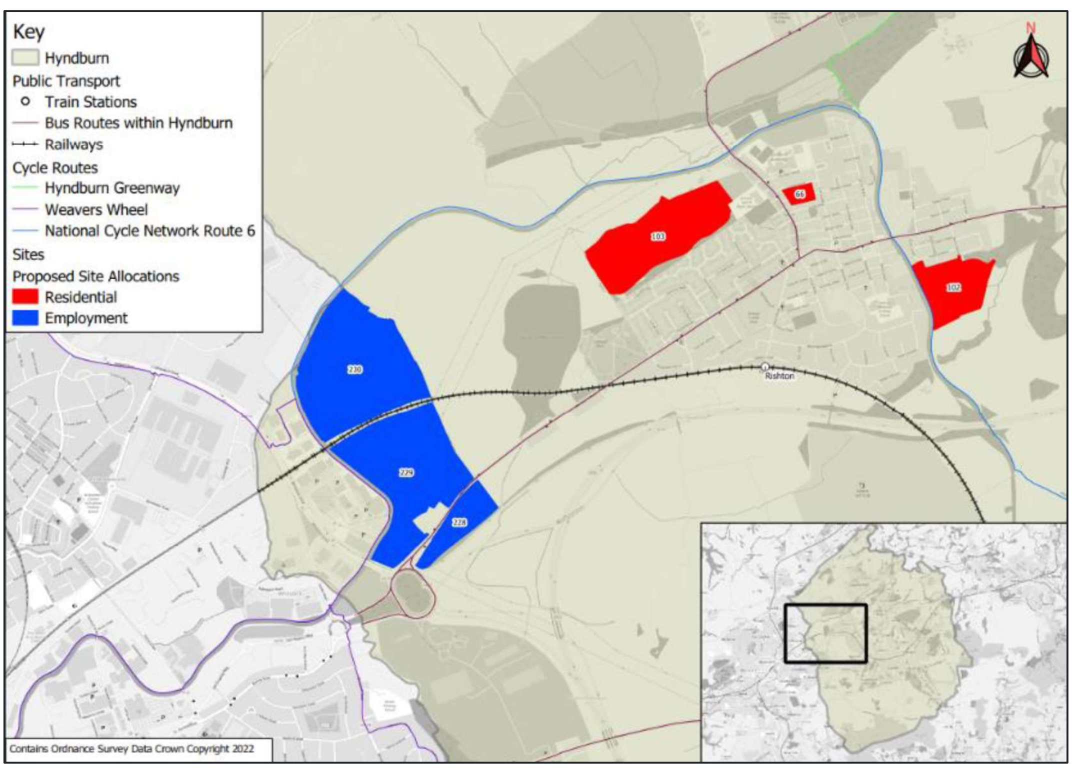


Figure 6-5 - Rishton Existing Sustainable Transport Provision



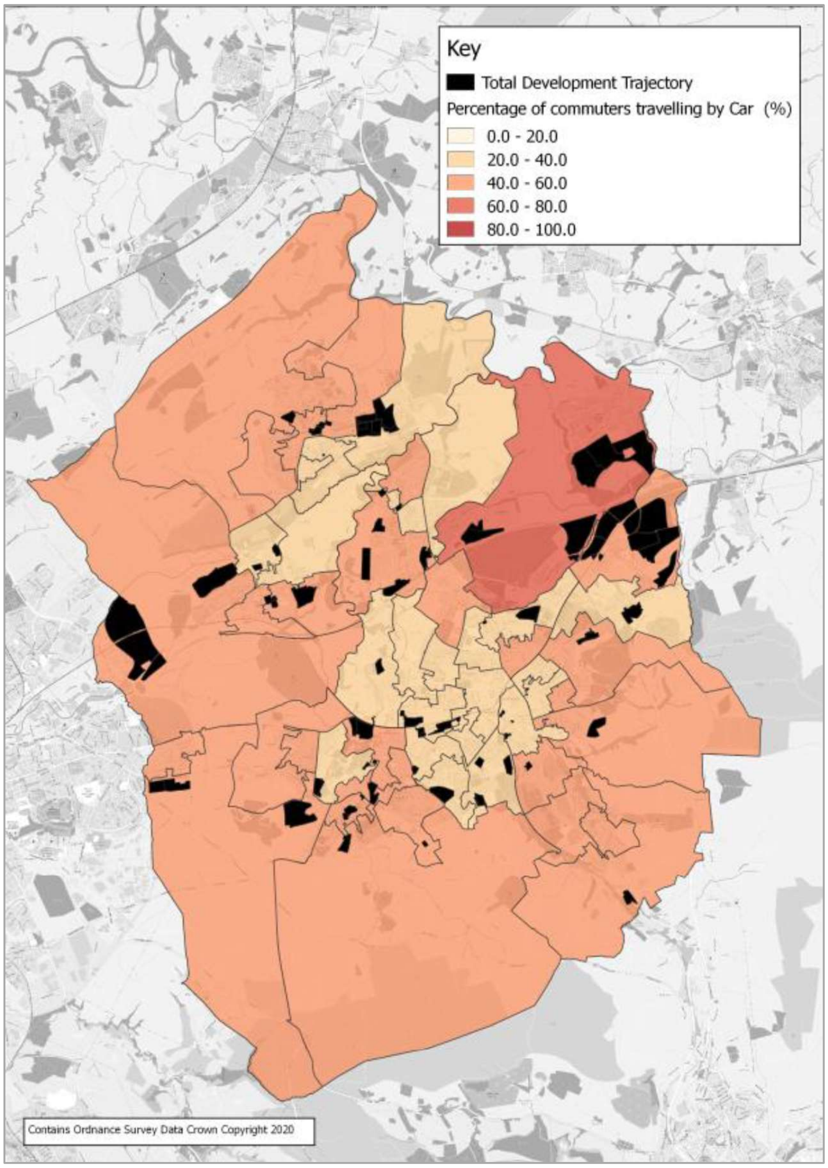
6.3 JOURNEY TO WORK ANALYSIS

6.3.1. 2011 Census data was used to understand the modal split for journey to work trips in the borough.

CAR

6.3.2. Figure 6-6 shows the percentage of commuters travelling to work by car, for each LSOA in the borough.

Figure 6-6 – Percentage of commuters travelling to work by car



6.3.3. The majority of journeys to work within the borough are taken by car, compared to alternative modes of transport. The percentage of commuters that travel to work by car decreases towards the town centre of Accrington and Great Harwood. The town centres have the lowest percentage of commuting by car, which is likely to be influenced by better access to other modes of transport such as bus and rail, and potentially shorter distances to places of work.

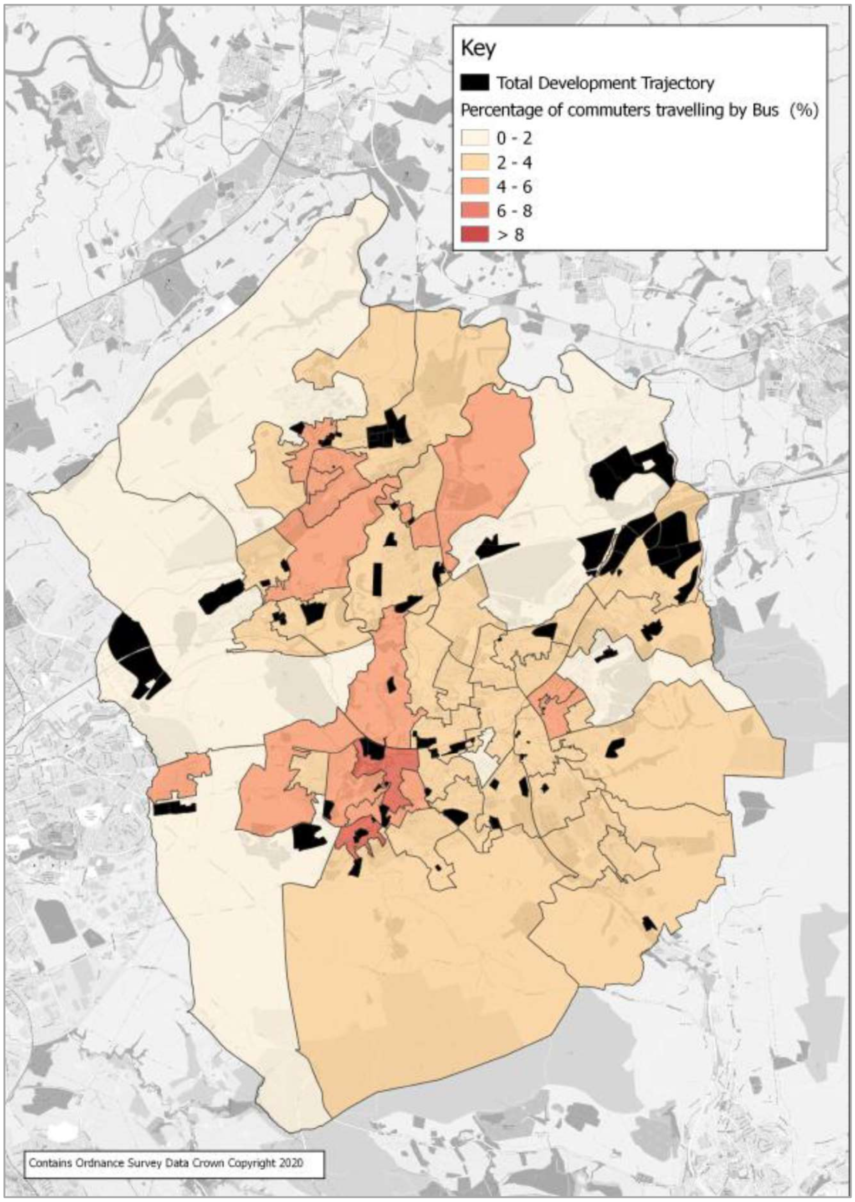
6.3.4. The more rural areas of the borough typically have higher percentages of car commuters, which could be due in part to limited availability of public transport. These areas include Huncoat and south of Oswaldtwistle.

6.3.5. It is noted that most residential site allocations are located in areas with typically high car usage, this presents an opportunity to encourage sustainable travel for all new residents and decrease and reduce car usage. To ensure this is feasible, it is important to provide regular and well-connected public transport services and safe walking & cycling infrastructure.

BUS

6.3.6. Bus travel is the third most popular mode for travel to work in the borough. Figure 6-7 shows the percentage of commuters travelling to work by bus.

Figure 6-7 – Percentage of commuters travelling to work by bus



6.3.7. The highest percentage of bus commuters is focused around Oswaldtwistle and Great Harwood / Rishton. The area of Oswaldtwistle shows some of the highest percentages of bus commuters. This is usually reflective of frequent and reliable bus services which are accessible to commuters.

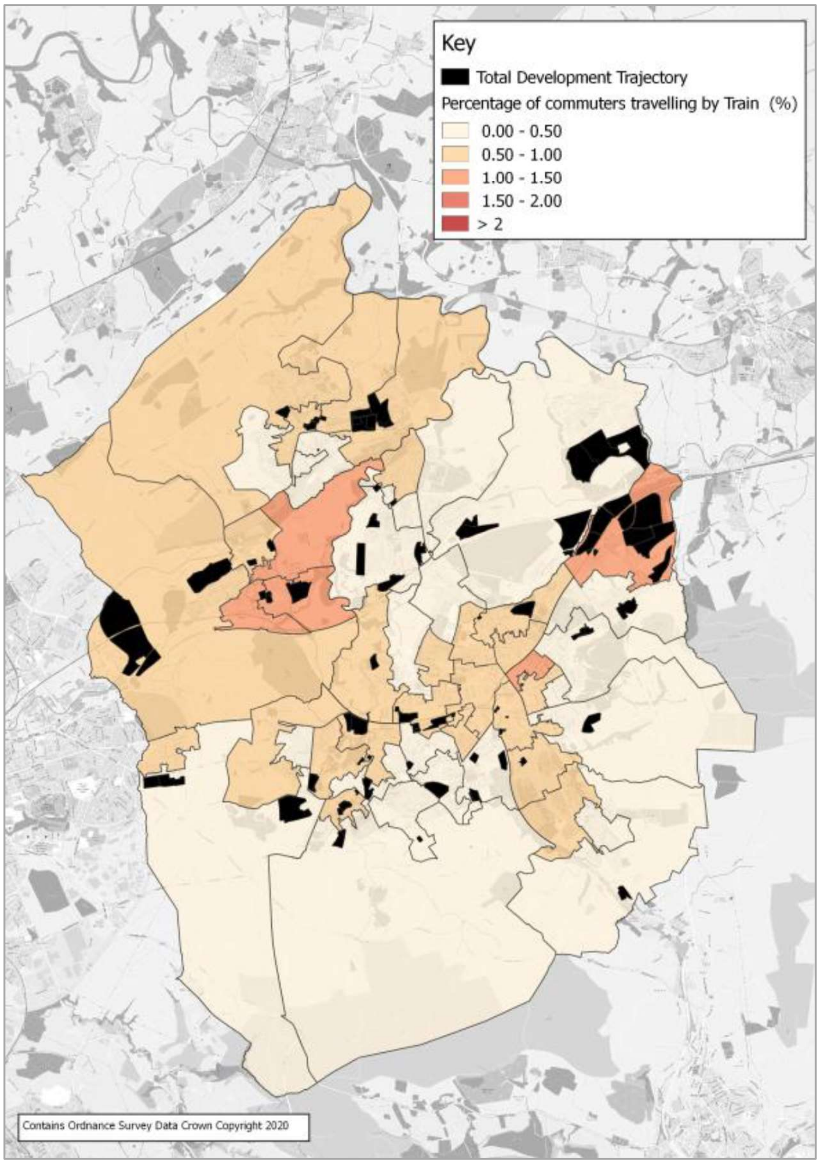
6.3.8. Accrington town centre sees a convergence of a number of high quality, high frequency bus routes. The percentage of commuters travelling by bus is relatively low, however this may be indicative of the proximity to employment sites which can be accessed by walking or cycling. Bus usage is known to be higher for shopping and education trips.

6.3.9. The majority of residential site allocations are located within the LSOAs showing the highest percentages of bus commuting. This should enable residents to use bus as a preferred mode of travel as opposed to car. Bus usage appears to be lower in rural areas, therefore investment may be required in these areas to enable residents to use this mode. It may be that more frequent services are required in these areas, services that coincide with typical commuting times, or new services and routes need to be provided to connect the sites to key employment or shopping locations.

RAIL

6.3.10. Figure 6-8 shows the percentage of commuters travelling to work by rail.

Figure 6-8 – Percentage of commuters travelling to work by rail



6.3.11. Overall, the percentage of travel to work by rail in the borough is low. As expected, the highest rail mode share is found near to the railway stations of Church & Oswaldtwistle, Accrington and Huncoat. The large rural area to the east of the borough, around Huncoat railway station, has a higher percentage of rail commuters. Whilst the mode share here is around 2%, the actual number of users will be relatively low due to the lower population in this part of the borough.

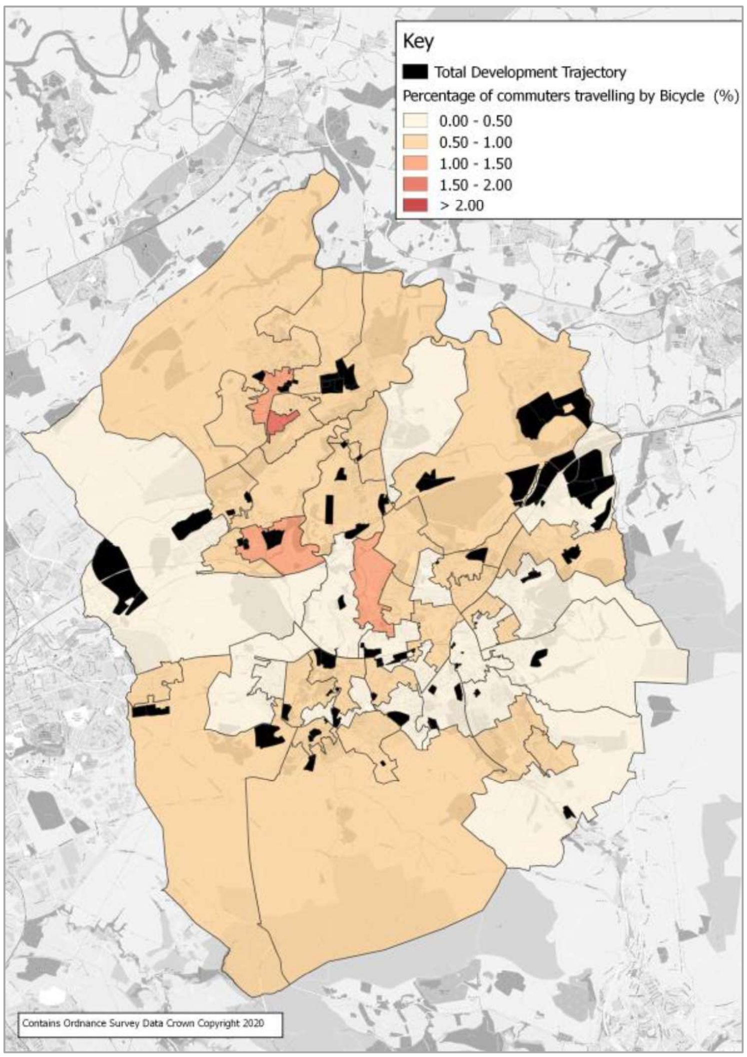
6.3.12. To encourage travel to work by rail, consideration must be given to the quality of accessibility for commuters reaching the nearest railway station and by what mode. Rail trips are usually accompanied by a secondary mode due to proximity of home and work locations to a railway station. For those commuters whose home and work are near to a railway station, walking is often the secondary mode. However, for those who live or work outside of a reasonable walking distance, the car is the preferred choice of secondary mode.

6.3.13. To encourage sustainable travel choices for rail users' secondary mode, railway stations should be accessible to residential areas via frequent bus services and safe, well-connected cycle routes.

CYCLE

6.3.14. Figure 6-9 shows the percentage of commuters travelling to work by cycling.

Figure 6-9 – Percentage of commuters travelling to work by cycling

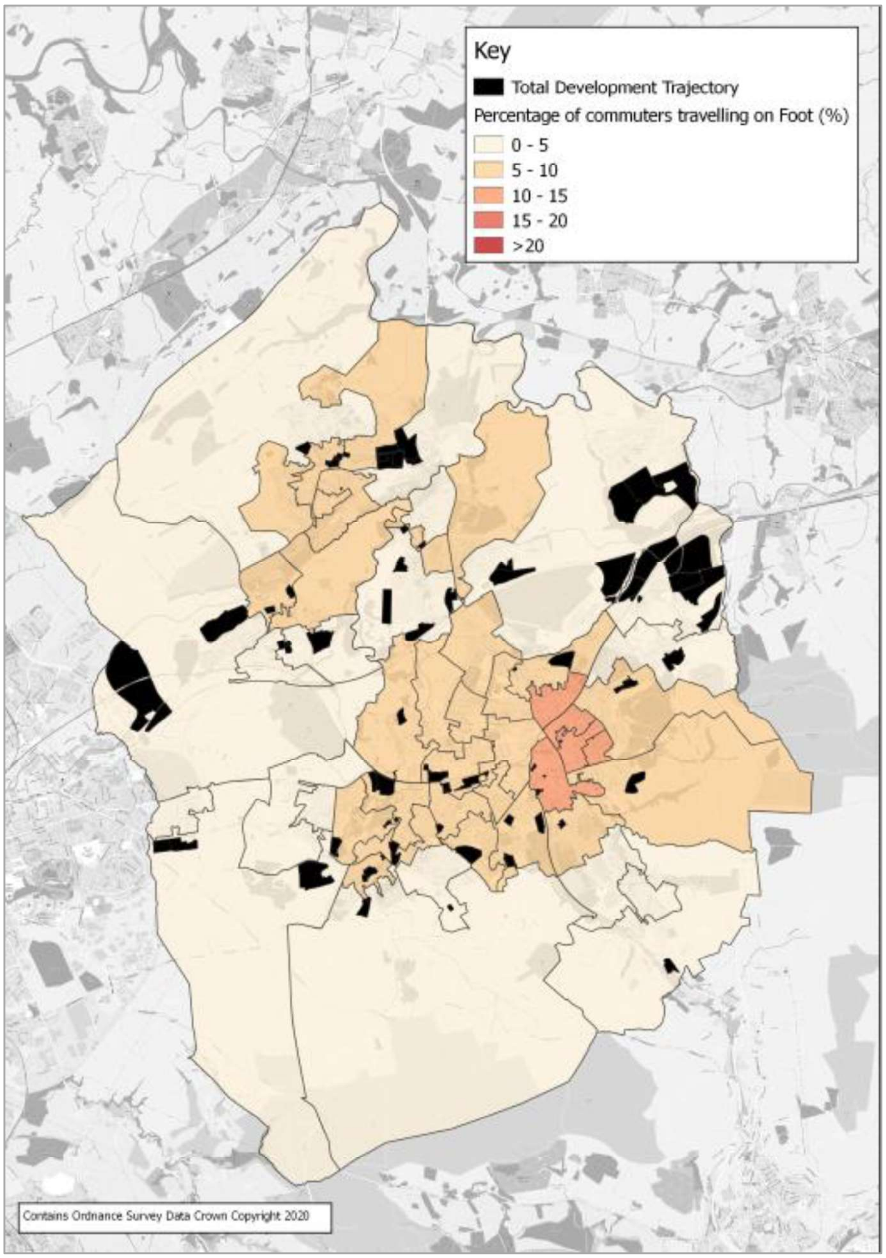


6.3.15. Compared to other modes, there is a low number of commuters currently cycling to work. The areas with the highest percentage of cycling are located in Great Harwood, Rishton and Church. This is usually indicative of good cycle provision and relative proximity of residential areas to employment land uses. It may also be due to commuters undertaking linked trips to work, via cycling and rail. This may be occurring in the borough, as the highest cycle usage is located in areas where rail station accessibility is good, such as Rishton.

WALK

6.3.16. Figure 6-10 shows the percentage of commuters travelling to work on foot.

Figure 6-10 – Percentage of commuters travelling to work by foot



6.3.17. As expected, the neighbourhoods with higher percentages of walking commuters are located in urban areas where the proximity of residential areas to employment opportunities is closer than in rural areas. Accrington town centre shows the highest percentage of commuters travelling on foot.

6.3.18. Few residential site allocations are located in town centres which indicates commuting by walking may be less popular. However, the proposed employment sites may provide new local employment opportunities for the existing residential areas nearby.

KEY POINTS – EXISTING JOURNEY TO WORK DATA

- The majority of journeys to work within the borough are taken by car, and most residential site allocations are located in areas with typically high car usage. This presents an opportunity to encourage sustainable travel for all new residents and decrease and reduce car usage. To ensure this is feasible, it is important to provide regular and well-connected public transport services and safe walking & cycling infrastructure.
- Bus travel is the third most popular mode for travel to work in the borough, however the percentage of commuters travelling by bus is relatively low. This may be indicative of the proximity to employment sites which can be accessed by walking or cycling. Bus usage is known to be higher for shopping and education trips. The majority of residential site allocations are located within the LSOAs showing the highest percentages of bus commuting. This should enable residents to use bus as a preferred mode of travel as opposed to car.
- Overall, the percentage of travel to work journeys by rail is low. To encourage travel to work by rail, consideration must be given to the quality of accessibility for commuters reaching the nearest railway station and by what mode.
- A relatively low number of commuters currently cycle to work. The areas with the highest percentage of cycling are located in Great Harwood, Rishton and Church. This is usually indicative of good cycle provision and relative proximity of residential areas to employment land uses. It may also be due to commuters undertaking linked trips to work, via cycling and rail. This may be occurring currently, as the highest cycle usage is located in areas where rail station accessibility is good, such as Rishton.
- As expected, the neighbourhoods with higher percentages of walking commuters are located in urban areas where the proximity of residential areas to employment opportunities is closer than in rural areas. Accrington town centre shows the highest percentage of commuters travelling on foot.
- Few residential site allocations are located in town centres which indicates commuting by walking may be less popular. However, the proposed employment sites may provide new local employment opportunities for the existing residential areas nearby.

6.4 SITE ACCESSIBILITY APPRAISAL

This methodology used to assess each of the sites is based on a combination of guidance documents, including the following core publications:

- Guidance on Accessibility Planning in Local Transport Plans – DfT, 2004;
- Manual for Streets 1 & 2 – DfT, 2007, 2010
- Providing for Journeys on Foot, CIHT, 2000;
- Designing for Walking / Planning for Walking – CIHT, 2015;
- Designing for Cycling / Planning for Cycling – CIHT, 2015;
- Bus Services and New Residential Developments – Stagecoach, 2017;
- Buses in Urban Developments – CIHT, 2018;
- Streetscape Guidance (3rd Edition) – TfL, 2016.

CORE ACCESSIBILITY INDICATORS

6.4.1. A key element of the Site Accessibility Appraisal is the consideration of ease of access to services, facilities and amenities considered necessary for day-to-day needs from each of the proposed site allocations. Table 6-1 sets out a list of services considered to meet the needs of potential residents (and, to some extent, employees) of the potential sites. This list is based on best practice guidance, and includes services such as healthcare, education, food, social, community, and cultural uses.

Table 6-1 – Core Accessibility Indicators

Key Services and Facilities	Datasets used for Analysis
Food and Retail Facilities	Food stores: Location of supermarket stores for 11 major chains. Including: Aldi, Asda, Co-op, Iceland, Lidl, Morrisons, Netto, Sainsburys, Somerfield, Tesco and Waitrose. Data is from 2010 for England and 2009 for Scotland and Wales. In each case, this is the most recent government Open Data published.
Health Facilities	NHS Choices: This dataset contains the location of GPs, dentists, pharmacists, opticians, hospitals (including A & E), walk-in centres, and sport and fitness facilities.
Community Facilities / Local Centres	These are local centres, as defined in the Local Plan
Education Facilities	Educational Establishments (England & Wales): Location of nurseries, primary schools, secondary schools, and further education institutions in England and Wales.
Employment Opportunity	Location of existing employment areas (as per Local Plan), town and district centres, major commercial areas, and proposed employment allocations.

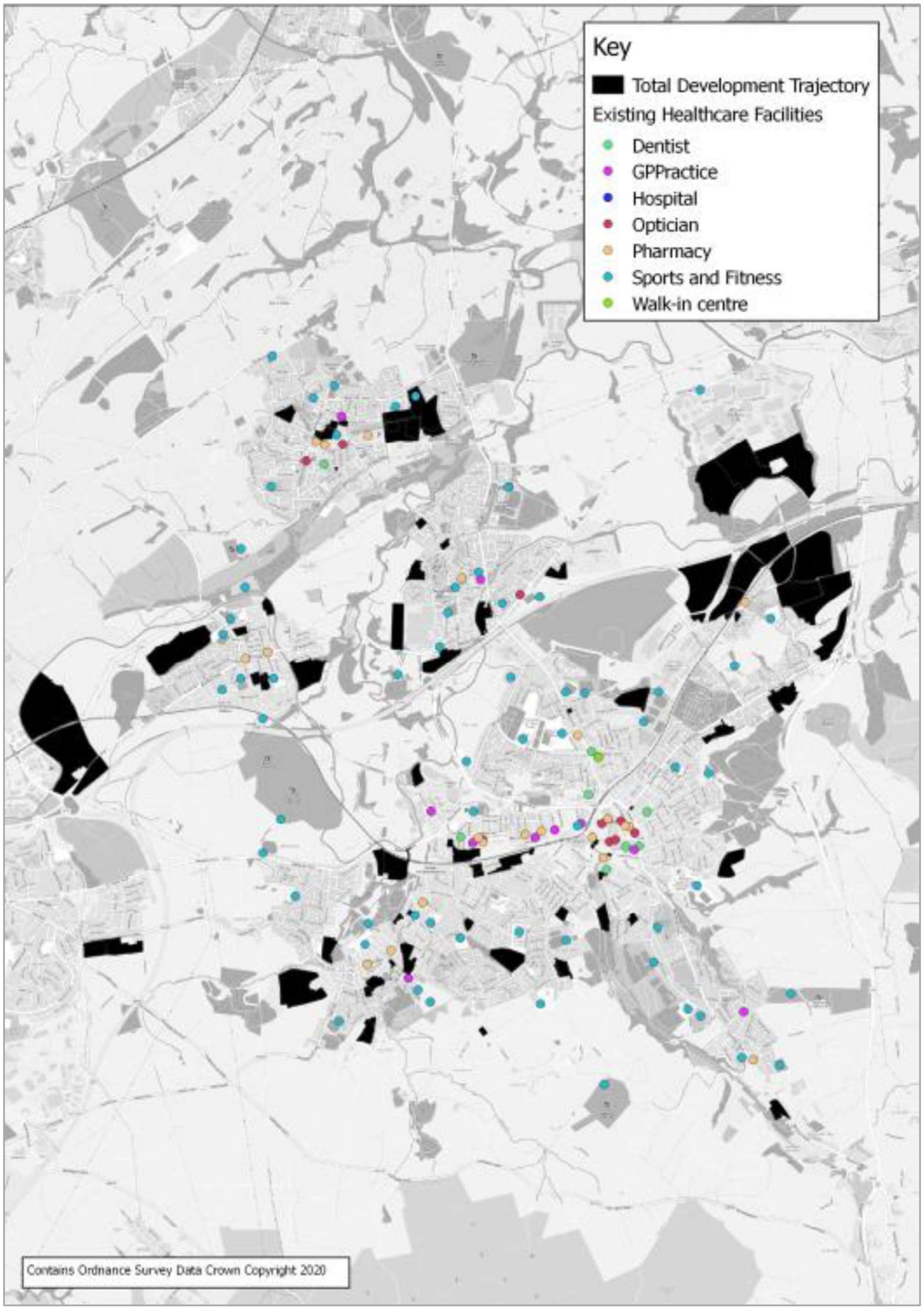
KEY FACILITIES AND SERVICES

6.4.2. The location of key facilities and services in relation to the proposed site allocations is a key indicator of the level of accessibility of the site. The location of key services can also be analysed against other relevant data, including existing or proposed cycle and public transport infrastructure. This analysis can be used to quantify the existing level of accessibility to these services from the potential sites, as well as to determine the potential success of any intervention.

6.4.3. While the location of key services in relation to the site and accessibility between the two is essential in regard to the proposed housing site allocations, these indicators have less relevance when considering the proposed employment site allocations. Nevertheless, the locations of such destinations can have an influence of travel patterns, such as where trips between home, work, and school or leisure activities can be linked, or where the proximity of food stores can limit the need to travel by car at lunchtimes. GP appointments and errands can be run during break times, or leisure activities pursued, lessening the need to travel at peak times and by private vehicle.

6.4.4. Figures 6-11 to Figure 6-13 show the locations of the various Core Accessibility Indicators, including GP practices, food and retail stores, schools, and employment opportunities in relation to the site allocations.

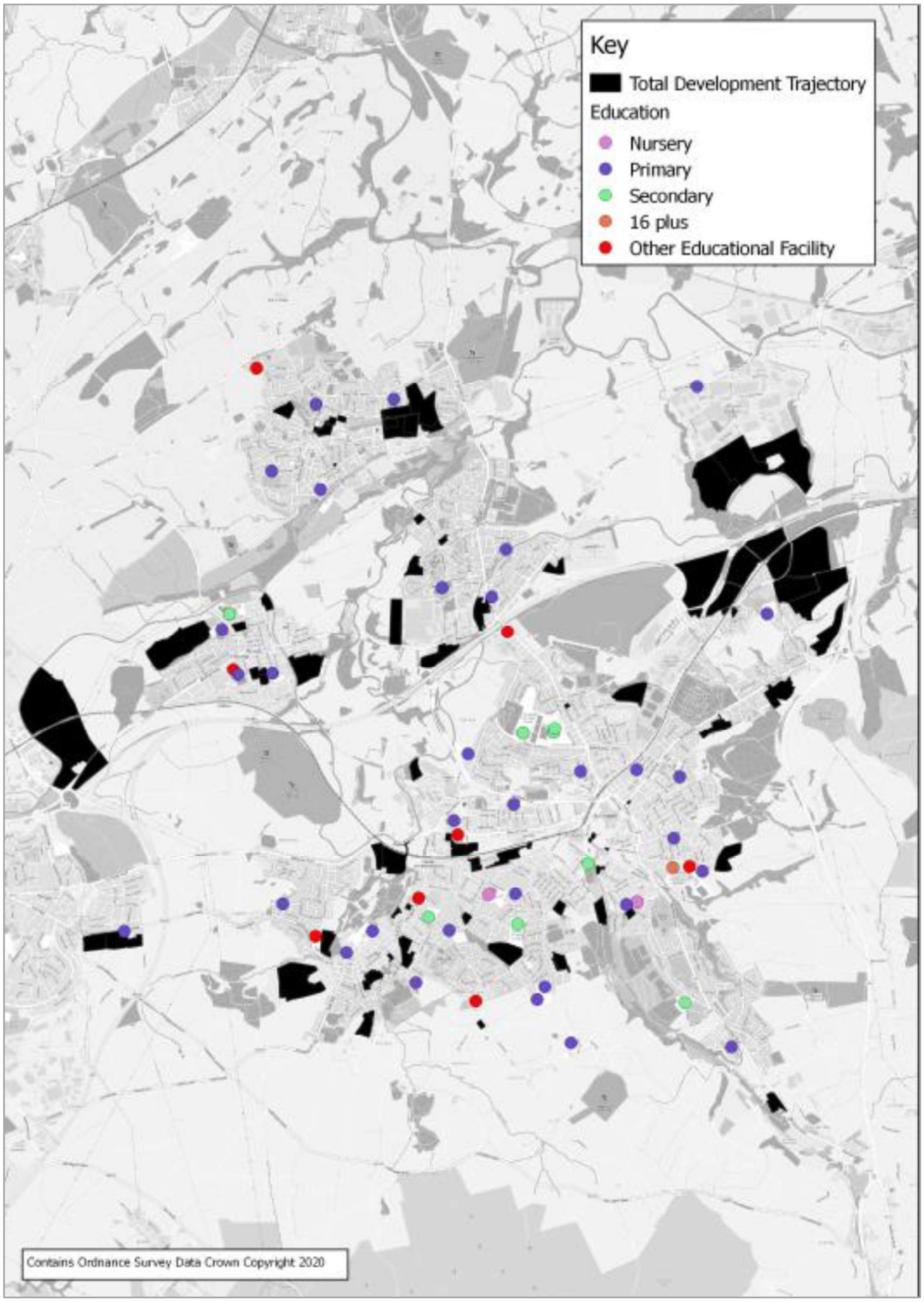
Figure 6-11 – Existing Healthcare Facilities



6.4.5. Overall, the built-up areas of the borough are well served by GPs, pharmacies and sports & fitness centres. There is one main hospital, located in Accrington, which serves the borough. Accrington Victoria Community Hospital also has associated service centres located around the town to support the main hospital function.

6.4.6. Figure 6-12 shows the locations of educational establishments within the borough.

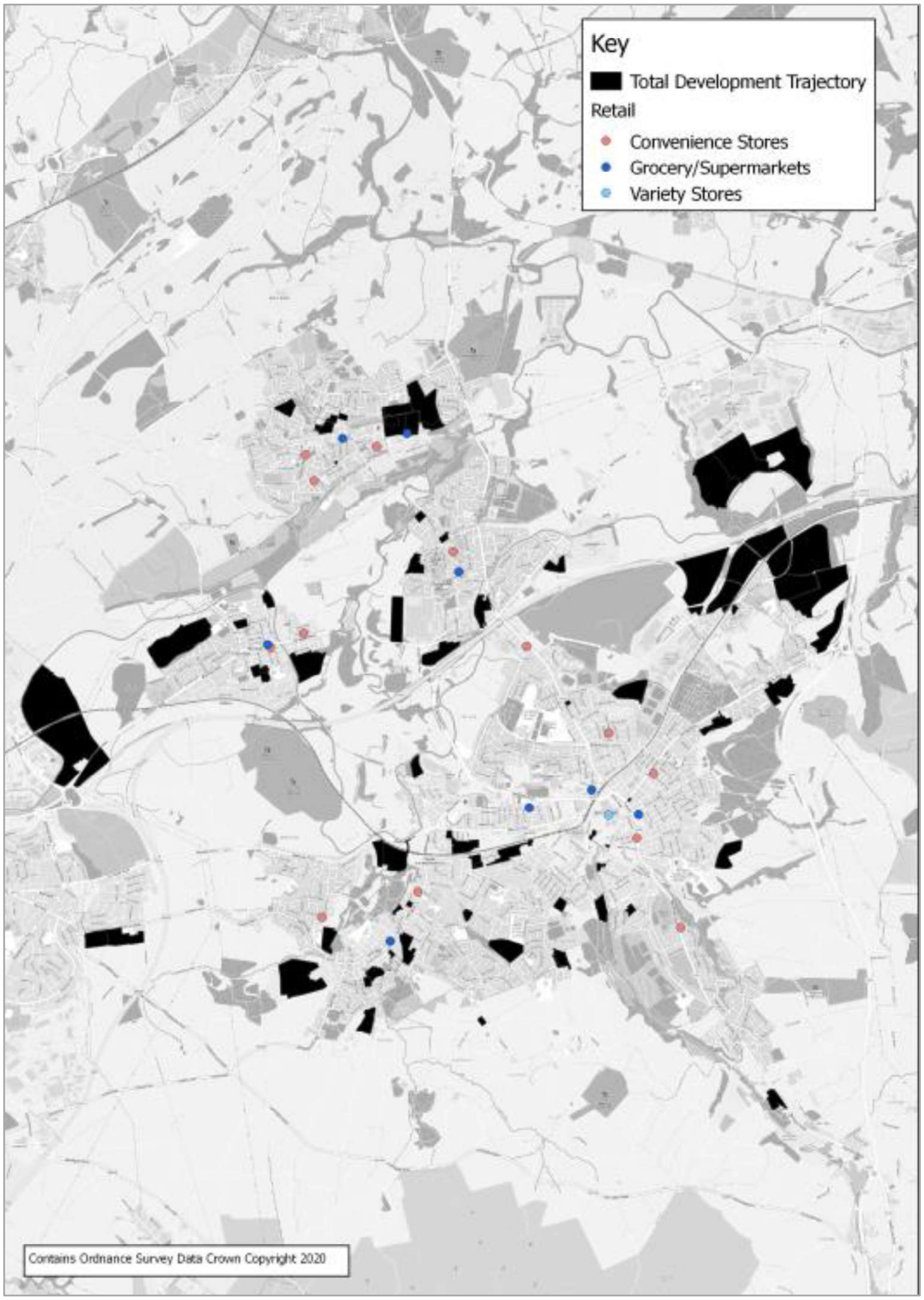
Figure 6-12 – Existing Educational Establishments



6.4.7. In general, there is relatively even distribution of primary schools throughout the borough, however there are some areas where secondary school provision is less prevalent, including the north and east of Hyndburn in areas such as Great Harwood and Huncoat.

6.4.8. Figure 6-13 shows the locations of existing food and retail stores within the borough.

Figure 6-13 – Existing Food and Retail Stores



6.4.9. Overall, this shows that the distribution of shops in Hyndburn is broadly even throughout the borough, with a particular focus in town centres such as Accrington. The food stores are typically located in areas of high residential density, with Accrington showing the highest concentration of Grocery / Supermarket stores (three within the vicinity). The majority of shops within the borough are smaller convenience stores, these are located within the same areas of Grocery / Supermarket stores and reflect a variety of services within areas. Suburban areas lack facilities and convenience stores and this may provide reasoning for high car ownership in these areas in order to reach key facilities.

SITE ACCESSIBILITY CRITERIA

6.4.10. The accessibility analysis is summarised in a Site Accessibility Matrix, allowing a comparison of the relative accessibility between sites and quantifying the accessibility of each site on a five-point scale. Each site's accessibility is considered against a set of accessibility criteria derived from best practice guidance, assessing each site on its level of accessibility to key services and public amenities. Each site is then ranked based on a set of criteria against each amenity, with an 'excellent' scoring indicating the most positive level of accessibility.

6.4.11. For simplicity, the categories were given equal weighting. The overall site rating is an average of the scores across all categories. This was calculated by assigning a numeric score of 1-5 for the five RAG colours, then summing all scores for a site and dividing by the number of categories to calculate the average score.

6.4.12. Table 6-2 below presents these accessibility indicators, and the associated criteria.

Table 6-2 – Site Accessibility Criteria

Accessibility Indicator	Excellent Accessibility	Good Accessibility	Average Accessibility	Below Average Accessibility: Potential for Improvement	Limited Accessibility: Potential for Improvement
Town or Local centre (on foot)	<400m / 0-5 mins	400m - 800m / 5-10 mins	800m – 1.2km / 10-15 mins	1.2km – 2km / 15- 25 mins	>2km / >25 mins
Major Food Store (on foot)	<400m / 0-5 mins	400m - 800m / 5-10 mins	800m – 1.2km / 10-15 mins	1.2km – 2km / 15- 25 mins	>2km / >25 mins
Employment (on foot)	<400m / 0-5 mins	400m - 800m / 5-10 mins	800m – 1.2km / 10-15 mins	1.2km – 2km / 15- 25 mins	>2km / >25 mins
Employment (by cycle - average speed of 15kph)	<1km / 4mins	2km / 8mins	4km / 16mins	6km / 24mins	8km / 32mins
Education (Primary/ Secondary) (on foot)	<400m / 0-5 mins	400m - 800m / 5-10 mins	800m – 1.2km / 10-15 mins	1.2km – 2km / 15- 25 mins	>2km / >25 mins
Healthcare (Local GP / Dentist / Pharmacy – ex. Hospitals) (on foot)	<400m / 0-5 mins	400m -800m / 5-10 mins	800m – 1.2km / 10-15 mins	1.2km – 2km / 15- 25 mins	>2km / >25 mins
Distance to nearest cycle route	<400m	400m - 800m	800 - 1500m	1.5km – 2km	>2km
Bus Route	Multiple bus routes & stops within 250m	Multiple bus routes and stops within 400m	Singular bus route within 300m / multiple	Singular bus route within 800m	No immediate bus route (i.e. within 800m)

			routes within 500m		
Railway Station (on foot)	<400m	400m - 800m	800m - 1500m	1.5km – 2km	>2km
Railway Station (by cycle -average speed of 15kph)	<1km / 4mins	2km / 8mins	4km / 16mins	6km / 24mins	8km / 32mins

SITE ACCESSIBILITY APPRAISAL

6.4.13. A high-level classification has been undertaken for each of the residential, employment and mixed-use sites based on the accessibility criteria outlined above. The classifications are supported by data including the facilities mapping for the borough (presented earlier), and web-based route mapping software. This analysis has informed the classification of allocated sites, considering the proximity of each site to the various indicators of accessibility.

6.4.14. This distance-based assessment considers the proximity of the site to each indicator, and has been calculated using web-based route mapping software, using routes for pedestrians or cyclists as appropriate to the accessibility indicator being analysed. This therefore calculates actual distances based on available routes, however it does not consider other barriers to movement, such as severance or safety issues, or the overall desirability of the area in regards to ease of travel. It should be noted that the assessment does not consider the destinations or frequency of bus and rail services in detail, with accessibility classified solely based on distance.

6.4.15. At this stage, the information regarding the proposed site allocations does not include details to indicate the exact location of site accesses. As such, professional judgement has been applied to establish the likely location of site accesses in relation to the road network, from which the distances to key facilities were measured.

6.4.16. Table 6-3 presents the results of this analysis, allowing the relative accessibility of each site to be easily identified and compared. By identifying those sites with relatively low levels of accessibility, measures can be tailored to each site (or area, where multiple sites are likely to benefit).

Table 6-3 – Site Accessibility Appraisal

Site No.	Site Name	Town or Local centre (on foot)	Major Food Store (on foot)	Employment		Education (on foot)	Healthcare (on foot)	Distance to nearest cycle route	Bus Route	Railway Station		Overall Site Rating
				On foot	By Cycle					On foot	By Cycle	
49	Houghton Barn Farm											
60	Land lying to the west of Altham Lane, south of Barnfield Way											
218	Land to west of Altham Lane											
172	Moorfield Industrial Estate											
250	Land west of J7 Business Park											
228	Land between Blackburn Rd and M65 slipway											
229	Land between Blackburn Rd, Sidebeet Lane, L&L Canal and railway											
230	Land north of railway line between Sidebeet Lane and L&L Canal											
24	Land north of Sandy Lane											

Site No.	Site Name	Town or Local centre (on foot)	Major Food Store (on foot)	Employment		Education (on foot)	Healthcare (on foot)	Distance to nearest cycle route	Bus Route	Railway Station		Overall Site Rating
				On foot	By Cycle					On foot	By Cycle	
70	Woodnook Works, Bath St											
120	Land at Hopwood St											
152	Land at Charter Street											
201	Clayton Triangle											
264	Land bounded by Park Rd., Balfour St., Wood St. and Heys Lane											
123	Land south of Stanhill Road, Knuzden											
5	Land off Brookside Lane/Nook Lane, Oswaldtwistle											
265	Land off Rhoden Road/Roe Greave Road											
102	Land off Fielding Street and Barn Meadow Crescent											
103	Land to the northeast of Cut Lane											

6.5 CONCLUSIONS ON SITE ACCESSIBILITY APPRAISAL

6.5.1. The following conclusions can be drawn from the site accessibility appraisal:

- In total, of those sites assessed, based on the overall site rating, three sites are considered to have below average accessibility and therefore potential for improvement:
  - Site 60 Land lying to the west of Altham Lane, south of Barnfield Way;
  - Site 49 Houghton Barn Farm; and
  - Site 218 Land to west of Altham Lane.
- Particular focus will be placed on these sites when considering sustainable mitigation measures.
- Four sites have good accessibility, and the remaining sites have average accessibility.
- The majority of sites scored favourably in terms of proximity to bus routes, as well as proximity to employment areas via walking or cycle. Conversely, a large number of sites scored lower in terms access to rail stations on foot, although access to rail stations by cycle scored more favourably.

Based on these findings, the following recommendations can be made to further improve the accessibility of the sites:

- Target walking, cycling and bus improvements for sites identified as having potential for improvement;
- Improve walking and cycling links between sites and existing rail stations;
- Consider provision of new convenience stores, healthcare facilities and education facilities as part of the build-out of site allocations.

7

SUSTAINABLE TRANSPORT MITIGATION MEASURES

7 SUSTAINABLE TRANSPORT MITIGATION MEASURES

7.1 INTRODUCTION

7.1.1. As per the *Transport Evidence Bases in Plan Making and Decision Taking* guidance produced by MHCLG, this chapter identifies opportunities for encouraging a shift to more sustainable transport usage, to mitigate the traffic impact of the Local Plan site allocations, and which are proportionate to the forecast scale of impact. This includes suggested measures to improve facilities for walking, cycling and public transport, along with other measures relating to Travel Plans and demand management.

7.1.2. Over the course of the Local Plan period, the anticipated technological advancements, and potential for permanent changes to travel behaviour resulting from the COVID-19 pandemic, e.g. through increased flexible or hybrid working arrangements, may significantly change how, and to what extent, sustainable travel modes are used. By implementing effective sustainable transport measures from the start of the Plan period, there is an opportunity to further encourage and sustain an uptake in sustainable travel modes and reduction in reliance on private car use.

7.2 WALKING AND CYCLING

7.2.1. The following strategy has been identified, to support a continued and increased uptake in walking and cycling trips, ensuring walking and cycling is inclusive for all:

- Develop new Public Rights of Way links throughout the Borough to encourage increased uptake of walking trips and to improve public health, well-being, and the attractiveness of the local area for residents and visitors;
- Provide effective linkages between the site allocations and existing Public Rights of Way in the area;
- Continue investment in cycling facilities both on-road and off-road to build on the recent major investment in cycling made via the East Lancashire Strategic Cycleway and the Weavers Wheel project;
- Improve linkages to National Cycle Network infrastructure within Hyndburn;
- Improve linkages to Green Infrastructure including woodlands, parks and open spaces;
- Improve walking and cycling linkages to other transport modes e.g. bus stations and rail stations;
- Ensure that the internal layout of the site allocations is conducive to sustainable travel, through the provision of well-planned and well-designed walking and cycling routes through the site that adhere to the new LTN 1/20 Cycle Infrastructure Design Guidance (July 2020); cycle parking provision in line with relevant standards; and facilities for users travelling by active modes including showers, lockers and changing facilities.

7.2.2. Lancashire County Council is currently developing an East Lancashire Local Cycle and Walking Infrastructure Plan (LCWIP) for Hyndburn and Rossendale and is working closely with District Officers at HBC. The work undertaken to date includes the identification a key strategic routes across the District, Greenway improvements/creations, Low Traffic Neighbourhoods, walking zones, and the development of a network that brings together new developments identified in the Local Plan. The LCWIP will therefore be a key document in terms of identifying new and improved infrastructure for walking and cycling to support the Local Plan proposals.

7.2.3. As development proposals on the site allocations are brought forward through the planning process, the accompanying Transport Assessments and Travel Plans should use the above strategy to identify site specific mitigation measures.

7.2.4. The extent to which the introduction of walking and cycling measures will reduce the reliance on private car use will vary depending on the number and range of any such measures. However, as an example of potential success, a study undertaken by TRL[5] assessed the effects of the implementation of a range of measures introduced in 2004 in Darlington, Peterborough and Worcester as part of the Sustainable Travel Towns (STT) demonstration project. The analysis concluded that the investment has contributed to long-term increases in walking and cycling levels, and potentially helped to sustain traffic levels in all three towns at a lower level than when the work started. During the STT period, walking and cycling levels increased in all three towns, with quantified increases in walking trips of 13% in Worcester and 18% in Peterborough, and in cycle trips of 50-100% in Darlington and 16% in Worcester. During the same period, car mileage or car trips per person fell by 10% in Peterborough, 10% in Worcester, and 7% in Darlington, compared to 1% nationally.

7.3 PUBLIC TRANSPORT

7.3.1. The key recommendations for public transport can be summarised as follows:

- To encourage the uptake of journeys made by bus to access the proposed site allocations, the provision of new or improved bus routes and services should be considered, particularly for the larger sites and sites which identified as having the most potential for improvement in the Site Accessibility Appraisal;
- Discuss with the relevant bus operators potential changes to routing or service frequencies, including consideration to improve services in the early morning and late evening to improve access to employment sites;
- Further investigation of new high-quality bus routes akin to the Pennine Reach i.e. a fleet of modern buses, dedicated bus priority in the most congested areas, gold standard bus shelters, RTPI, smart ticketing, signal improvements at junctions including linked SCOOT technology;
- Further investigation of the potential for new Mobility Hubs at key locations, including large site allocations; existing public transport interchanges; and key employment areas;
- Consideration of new opportunities around Demand Responsive Transport;
- Build-on the recent Pennine Reach major transport scheme investment through continued investment in quality bus shelters (including locations identified in the table above); further roll-out of level boarders; introduction of contactless payments for the Borough's smaller sized bus operators; introduction of local elements of Transport for the North's Integrated and Smart Travel programme including better public transport data, disruption messaging and smart ticketing rollout; and utilising developer contributions to improve local bus service provision;

[5] PUBLISHED PROJECT REPORT PPR776 Sustainable travel towns: An evaluation of the longer term impacts, TRL 2016

- Investigation of rail station improvements and rail improvements included in the emerging LTP4 to improve East / West rail connectivity, including faster services, journey time improvements, and increased service frequencies.

7.3.2. The extent to which improvements to public transport services will reduce the reliance on private car use will vary depending on the number and range of any such measures. However, as an example of potential success, the aforementioned study by TRL[6] highlights a significant growth in bus use in throughout the STT period, of up to 29% in Peterborough and similar levels in Worcester. The study attributes this success to a combination of good services alongside effective publicity and promotion.

7.4 TRAVEL DEMAND MANAGEMENT

7.4.1. Travel Demand Management (TDM) involves the application of strategies and policies to reduce travel demand, or to redistribute this demand in space, mode or in time. The changes to travel behaviour resulting from the COVID-19 pandemic, e.g. through increased flexible or hybrid working arrangements, have presented a renewed focus on the use and importance of TDM, to better understand and provide for people's travel needs.

7.4.2. The following specific options, applicable to the Local Plan impacts, are discussed in further detail below:

- Travel Plans for businesses, schools and residential sites, including parking policies; and
- Area-wide behaviour change programmes to promote sustainable travel options.

7.4.3. The planning and implementation of these measures will require collaboration with local employers, schools and developers in order to ensure their effectiveness.

Figure 7-1 – Five Steps for an Effective TDM Action Plan

Source: Mott MacDonald & Department for Transport (2021) Travel Demand Management Toolkit – Managing Network Demand. London.

[6] PUBLISHED PROJECT REPORT PPR776 Sustainable travel towns: An evaluation of the longer term impacts, TRL 2016

7.4.4. The successful delivery of TDM measures will support the other interventions identified within the study, particularly junction improvement schemes where design options are constrained by land availability. Other benefits include a reduction in carbon emissions, greenhouse gases and noise due to the transfer of trips from car to other travel modes.

7.4.5. When delivered well, TDM plans are proven to be very effective in managing travel demand during periods of additional stress on the network. For example, 14% of drivers changed their behaviour as a result of a TDM project supporting the major reconstruction of the A406 in north London, whilst the City of Sydney achieved an 11% mode shift of private vehicle movements as a result of a TDM project that was introduced to mitigate the impacts of long-term redevelopment of the city centre[7].

TRAVEL PLANS

7.4.6. A Travel Plan (TP) is a long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through active management and is articulated in a document that is regularly reviewed. A thoroughly developed Travel Plan can assist in the mitigation of any adverse traffic impacts of a development, and national government recognises their importance in achieving improvements in transport conditions at the local level.

7.4.7. Travel Plans adopt a travel hierarchy (see example in figure below) which prioritises reducing the need to travel and sustainable travel options above single occupancy car trips. As such, Travel Plans can help to reduce local traffic congestion and therefore offer significant potential for mitigating the impact of the Local Plan sites.

[7] Travel Demand Management Toolkit Managing Network Demand, DfT/Mott MacDonald, March 2021

Figure 7-2 – Travel Hierarchy

7.4.8. Travel Plans should where possible, be considered in parallel to development proposals and readily integrated into the design and occupation of new sites rather than retrofitted after occupation. As part of future planning applications for development of all of the site allocations, Travel Plans will need to be produced and monitored where required by HBC and national planning policy.

7.4.9. Each Travel Plan will include a range of bespoke initiatives, tailored to the site through engagement with residents or staff as appropriate, and led by a genuinely invested Travel Plan Coordinator. Potential initiatives that could be deployed at different sites are listed in the table below.

Table 7-1 – Potential Travel Plan Initiatives

Travel Option	Businesses	Residential Sites
Reducing the need to travel	• Local recruitment • Flexible and agile working practices • Relocation of staff	• Digital infrastructure to enable virtual working • Co-location of local amenities and services

Travel Option	Businesses	Residential Sites
Walking	• Provision of information on walking routes • Organise lunchtime walks • Walking challenges and incentives	• Provision of convenient walking routes that reflect desire lines
Cycling	• Installation of shower and changing facilities • Provision of secure cycle parking and maintenance facilities • Cycle hire scheme • Cycle to work scheme	• Provision of convenient cycling routes • Provision of secure cycle parking and maintenance facilities • Cycle hire scheme
Public Transport	• Information about public transport services • Taster tickets	• Information about public transport services • Taster tickets • Improved public transport links • Improvements to, or introduction of new on-demand services to provide access to key employment areas.
Driving	• Car sharing scheme • Provision of car share bays • Guaranteed ride home • Parking policies to manage access	• Car sharing scheme • Car club • Managed car parking

7.4.10. It is important to note that Travel Planning initiatives should not unfairly penalise drivers and reduce provision for cars in a way that is unsustainable and could negatively impact other locations as a result of redistributed parking.

7.4.11. Where possible, monies should be sought in order to provide long-term monitoring and evaluation of the Travel Plan, while contributions could be secured against the success of the Travel Plan measures and achievement of the stated targets. Effective monitoring, including the annual travel surveys, is crucial to understanding the true effect of the Travel Plan initiatives/measures and understanding travel patterns and behaviours, allowing diversification and adaptation to implemented Travel Plans when required.

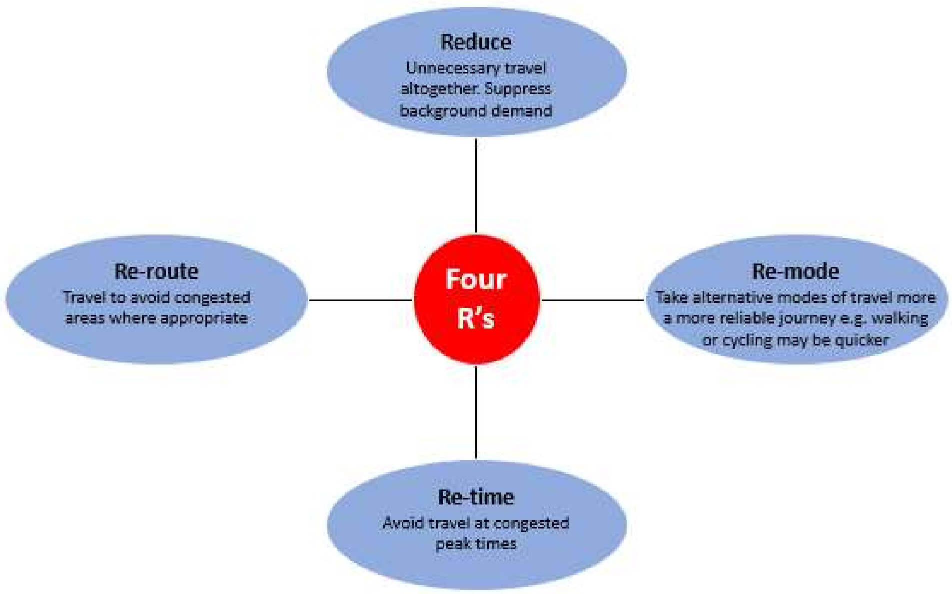
BEHAVIOUR CHANGE PROGRAMME

7.4.12. Behaviour Change programmes aim to change people's behaviour, by reducing the number of single occupancy car trips that are made by residents, employees and visitors.

7.4.13. There are a number of successful behaviour change interventions which are currently being undertaken elsewhere, with a focus on engagement with employers, residents, schools and tourists to illicit a wider modal shift to more sustainable and active modes. Examples include the 'Access Fund' which is a DfT fund for local authorities, aimed at increasing the use of sustainable modes.

7.4.14. Behaviour change interventions can be grouped into the four categories identified in the figure below.

Figure 7-3 – Behaviour Change Interventions



7.4.15. The following strategy should be adopted for the delivery of this intervention:

- Review best practice recommendations from previous studies;
- Consider the focus of the behaviour change programme;
- Set out measures which will be implemented as part of the behaviour change programme (examples set out below);
- Implement measures, and review progress of active mode uptake through surveying businesses / residents etc;
- Review results and amend strategy accordingly.

7.4.16. Examples of specific Behaviour Change interventions are listed below:

Table 7-2 – Potential Behaviour Change Interventions

Example Measures	Potential Benefits
Cycle Training – confidence building cycle sessions to encourage those in the area, who may lack confidence cycling on the carriageway to re-engage within cycling as a travel mode.	• Builds confidence on the road (particularly on busy roads) • Help with route planning • Encourages individuals to reconsider cycling for their regular journeys e.g. commuting • Encourages modal shift to cycling for shorter journeys
Electric Bike Hire – short- or longer-term loans of electric bikes to employees, residents and tourists to encourage an uptake in cycling. Could also run in parallel with local health service providers to encourage less mobile/active members to trial.	• Provides a feasible option for people who want to cycle, but find the topography challenging due to the local terrain. • Builds greater confidence in cycling • Encourages a healthier lifestyle and makes cycling a viable option to those with lower fitness ability.
Public Transport Taster Tickets – free tickets to try bus or train services for regular journeys.	• Allows residents and businesses/employees to try public transport free of charge and with no commitment – this can be key for cross district trips which can be accessed via the train.
Community led transport hubs – Transport hubs ran by the local community to offer various sustainable travel services and resource, in addition to a meeting point/hub – could be located in key tourist locations.	• Can embed sustainable travel within the local community acting as a central, accessible point for resources, services, advice and information for both locals and visitors alike • 'One stop shop' to encourage switch to more sustainable travel modes, and ensure visitors are directed towards more sustainable intervention • Can be utilised by employers to promote cycling as a mode of transport for commuters.
Matched funding grants for businesses - Grants provided on a 50/50 matched fund basis for businesses to improve facilities to encourage sustainable travel (showers, cycle parking etc).	• Can act as a major incentive for businesses to deliver sustainable travel improvements, contributing to a shift to more sustainable modes amongst the workforce. • Walking and cycling become more attractive and feasible travel intervention for employees.
Marketing Programme – Aimed at marketing the available initiatives to residents, businesses and Visitors. Visitor Tourism website to be promoted before visitors arrive.	• Promotes existing sustainable transport infrastructure, facilities and resource to the wider area. • Can be used to sign post tourists to sustainable travel options.

7.4.17. The Travel Demand Management proposals outlined represent a high-level strategy for addressing reducing traffic on the road network. No delivery programme is provided due to the wide range of parameters influencing the scope and scale of the interventions that might be implemented.

7.5 FUTURE MOBILITY MEASURES

7.5.1. A key challenge for HBC will be meeting its future needs and continuing to grow in a rapidly changing, globalised world. In order for HBC to achieve its growth aspirations, the borough will need an integrated transport network that not only meets its existing needs, but more importantly meets and accommodates the future needs of those that will live, work, learn, and visit the area.

7.5.2. At this point in time, many of the 'future mobility' technologies are in their infancy and only just emerging. The uptake of electric vehicles, use of Mobility as a Service (MaaS), and use of autonomous vehicles is essentially market-driven at the present time, although as the adoption of national targets for the end of traditionally fuelled vehicles continues across the globe, local and national governments are likely to have to consider their role in facilitating such change. New legislation is likely to be required in order to facilitate truly autonomous vehicles across the highway network, while the potential for shared use models to replace traditional bus and taxi business models could have significant impacts on travel patterns.

7.5.3. With such technology very much in the early stages of adoption, there is no current framework or methodology for measuring the potential impact of such changes on transportation networks.

7.5.4. For Hyndburn, potential outcomes that could influence the development of strategy and investment in the transport network include those described under the subheadings below.

ELECTRIC VEHICLES

7.5.5. To further encourage an increased uptake in the ownership and use of electric vehicles, it is recommended that the provision of additional electric vehicle charging points are provided in local centres, public car parks, existing residential areas, and existing employment areas.

7.5.6. The options for new charging points are summarised below:

- Fast charge (7.4kW): approximately £4,000 to £6,000 per unit. May be suitable for locations with longer dwell times due to slower charge time than rapid charge;
- Rapid charge (43kW): approximately £50,000 per unit. Suitable for locations with short to medium dwell times such as local centres and public car parks.

7.5.7. Further measures which could be considered include the following:

- Encourage electrification for authority-owned/leased fleet vehicles unless limited by operational requirements;
- Support developers and fleet operators in bringing through creative electric vehicle solutions;
- Consideration of new targets for ultra-low emission zones in congested urban locations, for example Accrington town centre;
- Explore policy/pricing measures to encourage smart charging and new business models for the installation of new charging infrastructure.

MOBILITY HUBS

7.5.8. Consideration should be given to the creation of new Mobility Hubs at key locations in the borough, which could provide attractive and effective facilities for users of the site allocations to travel by sustainable travel modes. Mobility Hubs can be designed with bespoke specifications depending on the proposed mix of provision, available space and other constraints. Suggested options for inclusion are listed below:

- Private Modes: Designated pick-up/drop-off zone; Car parking with electrical charging points; Motorcycle parking;
- Publicly Available Modes: Cycle hub & cycle parking; Bus shelter; Taxi & Shared Demand Responsive Travel; Car club parking bays with electrical charging points; E-scooter share;
- Traveller Facilities: Emergency help point and defibrillator; information point;
- Services: Delivery locker.

7.5.9. In terms of indicative sizes and costs, a Primary / Core Hub comprising most or all of the above measures could range from 2,000-5,000m² in size and cost from £0.4-0.6m. A Secondary Hub situated remotely from the Primary Hub and comprising fewer of the above measures could range from 500-2,000m² and cost from £0.2-0.4m. Further consideration would be needed of the proposed approach to delivery in terms of the roles of HBC and commercial operators.

AUTOMATED DRIVING

7.5.10. To support a future shift to automated driving, consideration should be given to the following measures:

- Create local guidance, as appropriate, to bring through new policies and potential new business models to include capital and revenue funding;
- Collaborate with others to identify changes to planning policy requirements that will consider the effects of automated vehicles and their impacts on mobility. Identify what the borough requires and engage with the relevant providers; and
- Consider a 'mobility index' in place of a public transit accessibility rating, recognizing that the gap between public and private transport is likely to narrow.

CONNECTED VEHICLES, TRANSPORT SYSTEMS, AND NETWORKS

7.5.11. To support a future shift to connected vehicles, transport systems, and networks, consideration should be given to the following measures:

- Understand the potential and appetite to support long-run investment in transport and mobility connectivity, perhaps through new business models;
- Recognize and investigate the opportunity to tap into new sources of data that might support local planning, place-making and operation. These could be beneficial at the day-to-day level or more strategically;
- Encourage links between strategic landowners and connected technology providers, and look for ways to collaborate for long-run community benefit; and
- Support and/or seek national government decisions around connectivity and data standards.

SHARED USE / MOBILITY AS A SERVICE (MAAS)

7.5.12. To support a future shift to shared use transport provision, consideration should be given to the following measures:

- Incentivize collaboration between public and private sector operators in the shared mobility space, and seek consensus around common objectives that benefit each;

- Consider how 'Mobility Orientated Development' might be measured against planning and mobility objectives, explicitly enabling shared mobility to drive development planning processes and support uplifts in development densities;
- Linked to this, investigate the creation of a New Mobility index to measure accessibility levels (considering access to public transport, electric charging, multiple shared mobility options, time mapping and walk/cycle options);
- Develop policy and quality targets for the range of sharing mobility models. These could relate to reliability, cleanliness, affordability service indicators applied to carsharing (car clubs, fractional ownership), ridesharing, public transport and bike sharing in order to achieve specific modal shares and reduction in private car usage; and
- Consider policy incentives for shared mobility options such as preferential parking/drop-off locations, high occupancy lanes or signal prioritisation.

7.6 SITE-SPECIFIC SUSTAINABLE TRANSPORT MITIGATION MEASURES

7.6.1. Drawing upon the preceding sections of this chapter, the following potential site-specific sustainable transport mitigation measures have been identified.

Table 7-3 – Site-Specific Sustainable Transport Mitigation Measures

Site Ref.	Site Name	Potential Site Accessibility Mitigation Improvements
49	Houghton Barn Farm	- Cycle infrastructure along/parallel to Blackburn/Burnley Road (A678) to connect with the Padiham Greenway - Towpath improvements on Leeds-Liverpool canal to provide cycle route - Potential link to Huncoat train station to be investigated - Investigate potential of a cycle route between Altham business park and Hapton train station - Footways along Altham Lane between junction with Shorten Brook Lane and the junction with Barnfield Way
60	Land lying to the west of Altham Lane, south of Barnfield Way	- See site above plus measures listed below - Route 152 hotline bus along Altham Lane, Barnfield Way and Metcalf Lane after serving north eastern section of Altham Business Park - Provide new bus stop(s) on Barnfield Way with shelter, seating, timetables and real time passenger information (RTPI)
218	Land to west of Altham Lane	- See two sites above
172	Moorfield Industrial Estate	- Maintain link to PROW - Look into providing a quiet-way link to National Cycle Network (NCN) Route 6 (possibly via Dill Hall). Link should have lighting - Provide footway with street lighting along Moorfields Road to the site

Site Ref.	Site Name	Potential Site Accessibility Mitigation Improvements
		- Look into extending cycle infrastructure from A678 / Bold Venture Way roundabout to the site. - Provide crossing near the A678/Mount Street junction to enable safer routing by foot to Mount Pleasant Primary School - Create Copenhagen style pedestrian priority crossings at all side road junctions along A678 from site entrance/exit to Clayton-le-Moors with a continuous footway raised to level of footways
250	Land west of J7 Business Park	- Provide advanced stop lines for cyclists on each arm of the Blackburn Road (A678)/ Dunkenhalgh Way (A6185) junction - Create Copenhagen style pedestrian priority crossings at all side road junctions along A678 from site entrance/exit to Clayton-le-Moors with a continuous footway raised to level of footways - Look into providing cycle infrastructure between the site and Rishton to provide onward travel to NCN Route 6 and also multi-modal travel via Rishton Station (i.e. possible narrowing of A678 to provide protected cycle lane) [subject to land ownership] - Looking providing a pedestrian/cycle line to the north of the site to connect with the Hyndburn Greenway to enable a more direct and shorter access route to the amenities within Clayton-le-moors. Ensure any footway is lit (+ with CCTV) to enable safer access 24/7
228	Land between Blackburn Rd and M65 slipway	- Improved pedestrian provision could be provided at the Whitebirk Drive / Blackburn Road / M65 / A6119 roundabout to allow for onward travel to local amenities - Cycle infrastructure could be provided at the Whitebirk Drive / Blackburn Road / M65 / A6119 roundabout such as toucan crossings to enable safer access to NCN Route 6. - Footways could be provided along the A6119 between the Whitebirk Drive / Blackburn Road / M65 / A6119 roundabout and the A6119 / A678 roundabout to enable onward travel towards local amenities - Bus stands near the site could be upgraded to include RTPI - If the site 229 is brought forward the informal crossing outside the site entrance on Blackburn Road could be upgraded to a zebra or pelican crossing (dependent on anticipated pedestrian flow) to enable safer pedestrian access between the sites - Provide a footway along the southern extents of Blackburn Road between the site and Rishton
229	Land between Blackburn Rd, Sidebeet Lane, L&L Canal and railway	- Improved pedestrian provision could be provided at the Whitebirk Drive / Blackburn Road / M65 / A6119 roundabout to allow for onward travel to local amenities - Cycle infrastructure could be provided at the Whitebirk Drive / Blackburn Road / M65 / A6119 roundabout such as toucan crossings to enable safer access to NCN Route 6. - Footways could be provided along the A6119 between the Whitebirk Drive / Blackburn Road / M65 / A6119 roundabout and the A6119 / A678 roundabout to enable onward travel towards local amenities

Site Ref.	Site Name	Potential Site Accessibility Mitigation Improvements
		- Provide a direct access point from the site on to the NCN route 6 which passes the site to the north (although this would require the construction of a bridge across the Liverpool & Leeds canal) - Provide a pedestrian access point from the site onto Blackburn Road to improve access between the site and the two bus stops on Blackburn Road near the site - Bus stands near the site could be upgraded to include RTPI
230	Land north of railway line between Sidebeet Lane and L&L Canal	- Provide a pedestrian/cycle bridge across the Liverpool & Leeds canal to enable pedestrians/cyclists to access the walking/cycling route (NCN Route 6) - If both this site and site 229 are brought forward – one of the local bus services (6 or 152) could re-route via the industrial site to encourage staff/visitors to access the site via bus
24	Land north of Sandy Lane	- Look into feasibility on routing the 9 bus via Wensley Drive and to increase service frequency (currently 1 per hour between 8:49am and 2:49pm) - If re-routed – look to provide a bus stop on Wensley drive between the junction with Austwick Way and the Epsom Way / Wensley Drive / Sandy Lane roundabout - Look into providing a cycle route between the site and NCN Route 6 (Sandy Lane, Adelaide Street, Manchester Road, Spring Gardens, Nuttall Street and Mount Street – look into providing a cycle crossing east-west across Manchester Road)
70	Woodnook Works, Bath St	- Provide direct access from the site onto the Hyndburn Greenway / NCN Route 6 - Provide lighting/CCTV along Hyndburn Greenway to make the route feel safe for pedestrians using the route to access Accrington town centre - Provide a north-south crossing point on Mount Street (zebra/pelican) - Convert the following junctions to Copenhagen Style crossings to provide priority to pedestrians crossing the side streets to access Accrington town centre via foot (Bellfield Street/Nuttall Street , unnamed street / Bellfield Road / Cotton Street, Royds Street / Cotton Street, unnamed street / Cotton Street, Nelson Street / Cotton Street, unnamed street / Cotton Street, Grange Street / Cotton Street, unnamed street / Cotton Street, Back Wellington Street / Church Street) - Upgrade informal crossing point on the Church Street arm of the Church Street / Paradise Street roundabout to a zebra crossing
120	Land at Hopwood St	- Provide quietway cycle route between the site and NCN Route 6 (via Hopwood Street, Perth Street, Carter Street, Victoria Street and Mount Street)

Site Ref.	Site Name	Potential Site Accessibility Mitigation Improvements
		- Look to convert all junctions with side streets to Copenhagen style pedestrian priority crossings between the site and Accrington town centre along the most likely pedestrian desire route - Increase frequency of the 4b and 11 bus route (8: services roughly every hour between 1pm and 4pm, 11: services once an hour between 9am and 11am) - Provide a shelter, stand and RTPI at the nearest bus stop(s) to the site on Ormerod Street
152	Land at Charter Street	- Provide direct access from the site onto the NCN Route 6 to the north of the site - Provide lighting and CCTV along section of NCN Route 6 between the site and Accrington Station to enable users to feel safer using the route - Look to convert all junctions with side streets to Copenhagen style pedestrian priority crossings between the site and Accrington town centre along the most likely pedestrian desire route - Provide bus stand, seating and RTPI at the nearest bus stops to the site on Willows Lane and Lonsdale Street
201	Clayton Triangle	- Look at providing improved cycle infrastructure between the site and Rishton to enable onward connections to Rishton Station and NCN Route 6 - Provide RTPI, stand and shelter at the two nearest stops to the site on Blackburn Road - Provide a controlled crossing on Blackburn Road between the bus stops to enable safer access from the site to the eastbound bus stop - Provide a controlled crossing on Whalley Road A680 north of the junction with Victoria Road and south of the Whalley Street A680 junction with Wellington Street to enable safer access for pedestrians to the canal - Convert all junction with side streets along Whalley Road A680 between the Whalley Street A680 / Burnley Road / Blackburn Road and the Whalley Road A680 junction with Pickup Street to Copenhagen style pedestrian priority crossings
264	Land bounded by Park Rd., Balfour St., Wood St. and Heys Lane	- Bus stops on Heys Lane could be provided with RTPI and lighting - Look into providing a bus service along Heys Lane as current services to these stops are school only services such as the 7 or 7a - Improve attractiveness along the main pedestrian desire line towards Great Harwood town centre (Heys Lane, Princess Street, Queens Street) including along this route providing Create Copenhagen style pedestrian priority crossings at all side road junctions - Look into providing Copenhagen style pedestrian priority crossings at all side road junctions between the site and the centre of Great Harwood - Provide RTPI at the bus stop closest to the site on Park Road
123	Land south of Stanhill	- Provide a pedestrian footway along the eastern extents of Haslingden Road between the site access and the junction with Standen Road

Site Ref.	Site Name	Potential Site Accessibility Mitigation Improvements
	Road, Knuzden	- Provide a crossing along or near the pedestrian desire line across the Standen Road arm of the Haslingden Road/Standen Road junction - Provide on-street cycle infrastructure from the site entrance to the entrance to the Weavers Wheel on Haslingden Road (north of the site) - Increase frequency of the 6A bus which serves the nearest bus stop to the site as the latest departure from the stop to the centre of Blackburn is 5:52pm on a weekday - Increase the frequency of the 7A bus which serves the nearest bus stop to the site as the latest departure from the stop to the centre of Accrington is 6:06pm on a weekday - Provide a crossing on Mount James Road between the east and west bound Moss Lane bus stops - Add seating and RTPI to the two Moss Lane bus stops
5	Land off Brookside Lane/Nook Lane, Oswaldtwistle	- Look into the viability of provide cycle infrastructure along Stanhill Road / Union Road to connect the Weavers Wheel, the site and NCN Route 6. - Look into providing Copenhagen style pedestrian priority crossings at all side road junctions between the site and the New Lane / Nook Lane junction
265	Land off Rhoden Road/Roe Greave Road	- If possible, provide footways along the western extents of Roe Green Road north of the site access. - Increase frequency of the 1 bus service which serves the Rowan Avenue bus stop near the site - Look into provide cycle infrastructure along Roe Green Road and Union Road up the entrance to the NCN Route 6 near Church and Oswaldtwistle Station - Look to extend Copenhagen style pedestrian priority crossings at all side road junctions in the centre of Oswaldtwistle
102	land off Fielding Street and Barn Meadow Crescent	- Look to extend Copenhagen style pedestrian priority crossings at all side road junctions between the site access and the centre of Rishton including to the nearest bus stops and Rishton train station - Look at providing cycle infrastructure between the site access and the NCN Route 6
103	land to the northeast of Cut Lane	- Provide footways along Cut Lane - Provide pedestrian/cycle link to tie in with the Liverpool & Leeds canal - Ensure the nearest bus stops to the site have RTPI, a shelter, stand, flag and pole and timetable information. - Look to extend Copenhagen style pedestrian priority crossings at all side road junctions between the site access and the centre of Rishton including to the nearest bus stops and Rishton train station

8

TRAFFIC FORECASTING

8 TRAFFIC FORECASTING

8.1 TRAFFIC GROWTH METHODOLOGY

8.1.1. The purpose of this section is to describe the methodology which has been applied in the assessments to account for future traffic growth.

8.1.2. It can be noted that at the commencement of this study, the Local Plan period was due to end in 2036 and hence the assessments have been undertaken in line with that forecast year. The current proposal is for the Local Plan period to end in 2037. However, given the length of time period and potential effects of a variety of factors over that period, the 2036 assessments are considered to provide a suitable proxy for traffic conditions in 2037.

8.2 TRAFFIC SURVEY DATA

8.2.1. Due to the ongoing effects of the COVID-19 pandemic on travel behaviour, the preference was to avoid collecting new data for the purposes of the study. As such, WSP has worked with HBC to source traffic survey data from a variety of sources, including:

- Previously commissioned traffic surveys;
- Previous Transport Studies;
- Submitted and approved Transport Assessments;
- Webtris Traffic counters; and
- DfT Traffic counters.

8.2.2. To provide a consistent base year dataset, the various traffic survey data have been growthed to a base year of 2021 where required. For this, TEMPRO v7.2 has been used to extract suitable growth factors for Hyndburn borough, for the weekday AM and PM peak period, as per the table below.

Table 8-1 – TEMPRO Growth Factors for Hyndburn to 2021

Period	Weekday AM Peak	Weekday PM Peak
2015 - 2021	1.0707	1.0666
2017 - 2021	1.0470	1.0434
2018 - 2021	1.0337	1.0311

8.2.3. Whilst there will be some off-peak and weekend traffic impacts arising from the proposed site allocations, the assessments in this study have been undertaken for the weekday AM and PM peak hours, which represent the periods where traffic demand on the highway network is highest and when the cumulative traffic impact from all proposed site allocations will be greatest.

BACKGROUND TRAFFIC GROWTH TO FUTURE ASSESSMENT YEARS

8.2.4. HBC provided WSP with a comprehensive development trajectory from 2021 to beyond the end of the Local Plan period. This includes committed development sites where planning permission has been granted, or which are currently under construction, and 26 proposed sites for the new Local Plan (excluding Huncoat Garden Village), including employment, residential allocations and one mixed-use allocation.

8.2.5. Along with the overall quantum of development and proposed land uses, the information includes an estimated build out period and earliest commencement year for the build out. Using this information, WSP has calculated the trip generation from all committed developments and proposed allocations for each year of this period of 2021-2036.

8.2.6. The assessments in this study have been undertaken for 2021, 2036 (representing the end of Local Plan period), 2026 (interim year five years post-adoption of the new Local Plan). As the traffic generated by significant committed developments and the planned development from the Local Plan site allocations will be added on manually, to avoid the double counting of trips, it would therefore not be appropriate to use standard TEMPRO growth factors to calculate background traffic flows for the future assessment years.

8.2.7. TEMPRO provides functionality for 'alternative assumptions' to be inputted in terms of the total number of households and number of jobs in the base year and future year selected. WSP has used the alternative assumptions method to deduct the calculated future year no. households and no. jobs associated with the committed and planned development. The resulting growth factors are shown in the table below.

Table 8-2 – TEMPRO Growth Factors for Hyndburn with Alternative Assumptions 2021-2036

Period	Weekday AM Peak	Weekday PM Peak
2021 – 2026	1.0182	1.0161
2021 – 2036	1.0515	1.0454

8.2.8. To account for background traffic growth at each of the assessment years, the growth factors set out above have therefore been applied.

8.2.9. Given the changes in travel behaviour arising from the COVID-19 pandemic, and in advance of an updated National Trip End Model (NTEM) dataset being released later in 2021, the above approach is considered to be appropriate.

COMMITTED DEVELOPMENT

8.2.10. As referenced above, the assessment traffic flows included committed developments which were provided by HBC to cover the period 2021 to 2036.

8.2.11. WSP undertook an exercise to sift out committed developments that would not have a notable impact on the assessment study area. For committed employment sites, two sites were discounted on the basis that their impact on the study network would not be discernible ((Former Coach House, Metcalf Drive, Altham Business Park (app ref: 11/18/0107) & Land off Shorten Brook Way (app ref: 11/19/0088)).

8.2.12. For committed housing sites, WSP sifted out sites that would not have a notable impact on the assessment study area. Initially, any housing site that would generate no more than 20 trips during the AM or PM peak hour was discounted. Then a further exercise was undertaken to consider the location of remaining sites in comparison to the study network. This exercise found that all remaining sites were located some distance from the nearest junctions included in the study area, and were discounted on the basis that these trips would dissipate across a number of different routes before reaching a junction included in the study area.

8.2.13. Table 8-3 below presents the committed developments included.

Table 8-3 – Committed Developments

Site	App Ref	Total Floorspace (GFA)	AM Peak Trips	PM Peak Trips
Frontier Park	11/15/0154	93,353m^2	371	398
Land at rear of Whatmore UK Ltd (Altham Business Park)	11/17/0536	18,588m^2	33	29

8.2.14. Where possible, the trip generation and distribution for committed developments have been calculated based on the information detailed in their respective Transport Assessments. However, in one instance the TA for the development did not include a distribution, and as such this site (Land to rear of Whatmore UK Ltd – app ref: 11/17/0536) has been assigned to the highway network using WSP's distribution calculated for the proposed employment sites located at Altham Business Park.

8.3 TRIP GENERATION METHODOLOGY

APPROACH TO DERIVING TRIP RATES

8.3.1. The trip generation calculations are based on trip rates extracted from the TRICS database. TRICS is a database of surveys undertaken at development sites across the UK and is used to forecast the trip generation of a proposed development through the selection of similar sites in the database, based upon land use, size and location. The output provides a trip rate which can be used to calculate the traffic trip generation for the proposed development.

8.3.2. The TRICS database has been used to extract trip rates for the weekday AM and PM peak hours for the land uses associated with the proposed developments. For robustness, the AM and PM hourly time period was determined by the highest trip rate within the AM and PM peak periods of 07:00-10:00 and 16:00-19:00 for each individual land use.

8.3.3. As of the 1st September 2020, some alterations were made to the land use classes. These changes revoked Class A and Class B1 Business and created a new Class E – Commercial, Business and Service. Class A1/2/3 and B1 would now sit within Class E, and Class A4/5 would now sit within Sui Generis. As this study was underway at the time of this change, it was agreed with HBC to continue to refer to the previously accepted Use Classes. Notwithstanding, the re-definition of land use classes for planning purposes does not affect the traffic generation associated with different types of development for transport planning purposes.

TRIP RATE DEVELOPMENT ASSUMPTIONS

8.3.4. Based on the analysis undertaken above, this section sets out the assumptions applied by WSP when calculating the trip generation for the proposed site allocations.

8.3.5. In February 2021, the TRICS Consortium published a guidance note on 'The Practical Implementation of the Decide & Provide Approach'. It sets out a new approach to using TRICS, using historic surveys in the database to determine a trend line of how trip rates for similar developments have changed over time, with these supply-led projections potentially resulting in lower trip rates for proposed developments. As the guidance was published during the study preparation, this approach has not been adopted and hence the trip rates used are potentially higher than those which could be derived from a 'Decide & Provide' approach.

8.3.6. The TRICS trip rates used in this study are based on traffic surveys undertaken before the COVID-19 pandemic. As such, they do not account for any permanent changes to travel patterns, specifically a potential permanent reduction in commuter car trips which is expected to be realised. In addition, further technological advancements throughout the Local Plan period, such as increased levels of automation, have the potential to result in a reduction in vehicle trip generation in the future. As such, it is considered that the approach to trip generation used in this study is robust.

Residential Sites

8.3.7. For all residential sites, the TRICS average trip rates extracted by WSP were applied.

Employment Sites

8.3.8. For all employment sites, through discussion with HBC, an assumption was made on the use class which would be likely to be delivered on each site, based on the size and location of the site. These assumptions are included in Table 8-3 further below. The appropriate B2/B8 TRICS trip rates were then applied.

Mixed-Use Site

8.3.9. For assessment purposes, Site 264 *Land bounded by Park Rd, Balfour St, Wood St and Heys Lane,* has been treated as a residential development of 81 dwellings, with the other potential uses undefined at this stage.

Trip Rates

8.3.10. The trip rates are set out in Table 8-3 below and have been verified against those used in recent planning applications in the borough, with the conclusion being that they are broadly similar and therefore fit for purpose.

Table 8-4 – TRICS Trip Rates

TRICS Trip Rates		AM			PM		
Land Use	**Calculation Factor**	**Arrival**	**Departure**	**Total**	**Arrival**	**Departure**	**Total**
C: Residential	Per dwelling	0.127	0.362	0.489	0.333	0.152	0.485
B2: Industrial	100sqm	0.354	0.166	0.52	0.145	0.372	0.517
B8: Warehousing	100sqm	0.188	0.078	0.266	0.073	0.184	0.257

8.3.11. The following parameters have been used to inform the trip rate exercise:

- **Regions:** Greater London, Wales, Scotland and Ireland have been excluded from the selected regions as these locations were not considered to be representative of the study area.
- **Date**: Surveys were considered over the most recent ten-year period.
- **Days of the week:** only weekdays, Monday to Friday, were selected.
- **Location:** the location type was selected based on the distribution of Local Plan sites across the borough e.g. residential sites were not located in the town centre, therefore the trip rate was

calculated based on an average of Suburban, Edge of Town Centre and Neighbourhood locations.

PROPOSED TRIP GENERATION

8.3.12. Table 8-4 presents the total trip generation for the new site allocations, based on the methodology presented in this section. The trip generation is shown for 2021-2036, however further calculations were undertaken to determine the trip generation at 2026 using the information provided by HBC on commencement year and build-out profile for the sites.

Table 8-5 – Trip Generation for Site Allocations

Site Ref.	Site Name	Proposed Use	Use Class Order	Former Use Classes	Trip Rate Use Class Assumption	Gross Area (HA)	Sqm	No. dwellings	TOTAL Trips 2021-2036					
									Weekday AM Peak			Weekday PM Peak		
									Arr	Dep	Total	Arr	Dep	Total
49	Houghton Barn Farm	Employment	B/E	B	B2 (40%) & B8 (60%)	15.31	34,150	-	87	39	126	35	89	123
60	Land lying to the west of Altham Lane, south of Barnfield Way	Employment	B/E	B	B2 (40%) & B8 (60%)	13.39	30,735	-	78	35	113	31	80	111
218	land to west of Altham Lane	Employment	B/E	B	B2 (40%) & B8 (60%)	12.40	30,735	-	78	35	113	31	80	111
172	Moorfield Industrial Estate	Employment	B/E	B	B2 (40%) & B8 (60%)	1.68	4,880	-	12	6	18	5	13	18
250	land west of J7 Business Park	Employment	B/E	B	B2 (40%) & B8 (60%)	4.40	17,600	-	45	20	65	18	46	64
228	land between Blackburn Rd and M65 slipway	Employment	B/E	B	B2 (40%) & B8 (60%)	4.04	16,156	-	41	18	59	16	42	58
229	land between Blackburn Rd, Sidebeet Lane, L&L Canal and railway	Employment	B/E	B	B2 (40%) & B8 (60%)	18.14	38,132	-	97	43	140	39	99	138
230	land north of railway line between Sidebeet Lane and L&L Canal	Employment	B/E	B	B2 (40%) & B8 (60%)	20.69	69,000	-	176	78	254	70	179	249
2	The Steel Works, Charter Street, Accrington	Residential	C	C	C	-	-	9	1	3	4	3	1	4
24	Land north of Sandy Lane	Residential	C	C	C	-	-	45	6	16	22	15	7	22

Site Ref.	Site Name	Proposed Use	Use Class Order	Former Use Classes	Trip Rate Use Class Assumption	Gross Area (HA)	Sqm	No. dwellings	TOTAL Trips 2021-2036					
									Weekday AM Peak			Weekday PM Peak		
									Arr	Dep	Total	Arr	Dep	Total
29	Union Works and Union St Garage	Residential	C	C	C	-	-	9	1	3	4	3	1	4
70	Woodnook Works, Bath St	Residential	C	C	C	-	-	51	6	18	25	17	8	25
120	Land at Hopwood St	Residential	C	C	C	-	-	50	6	18	24	17	8	24
152	Land at Charter Street	Residential	C	C	C	-	-	58	7	21	28	19	9	28
261	Pendle Street	Residential	C	C	C	-	-	20	3	7	10	7	3	10
48	Ringstonhalgh Farm	Residential	C	C	C	-	-	31	4	11	15	10	5	15
117	Lower Barnes Street	Residential	C	C	C	-	-	15	2	5	7	5	2	7
201	Clayton Triangle	Residential	C	C	C	-	-	61	8	22	30	20	9	29
78	Land south east of Moorfield Avenue	Residential	C	C	C	-	-	54	7	20	26	18	8	26
123	Land south of Stanhill Road, Knuzden	Residential	C	C	C	-	-	61	8	22	30	20	9	29
5	Land off Brookside Lane/Nook Lane, Oswaldtwistle	Residential	C	C	C	-	-	62	8	22	30	21	9	30
74	Land south of Rhyddings Street and north of Stone Bridge Lane	Residential	C	C	C	-	-	37	5	13	18	12	6	18

Site Ref.	Site Name	Proposed Use	Use Class Order	Former Use Classes	Trip Rate Use Class Assumption	Gross Area (HA)	Sqm	No. dwellings	TOTAL Trips 2021-2036					
									Weekday AM Peak			Weekday PM Peak		
									Arr	Dep	Total	Arr	Dep	Total
265	Land off Rhoden Road/Roe Greave Road	Residential	C	C	C	-	-	58	7	21	28	20	9	29
66	York Mill, Livesey St, Rishton	Residential	C	C	C	-	-	21	3	8	10	7	3	10
102	land off Fielding Street and Barn Meadow Crescent	Residential	C	C	C	-	-	101	13	37	50	34	15	49
103	land to the northeast of Cut Lane	Residential	C	C	C	-	-	225	29	81	110	75	34	109
264	Land bounded by Park Rd., Balfour St., Wood St. and Heys Lane	Mixed-use	C	C	C	-	-	81	10	29	39	27	12	39

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8.3.13. As with the committed development sites, an exercise was undertaken to sift out sites that would not have a significant impact on the study junctions. Initially, this involved removing all sites which generated no more than 30 trips during the AM or PM peak hour. However, a further exercise was undertaken to identify which individually generated fewer than 30 trips, but were located close to other housing allocations which when considered cumulatively, had the potential to result in an impact on one of the study junctions. As a result of this exercise, site allocations 152 and 2 were combined and included in the assessment flows.

8.4 TRIP DISTRIBUTION AND ASSIGNMENT

8.4.1. The methodology for trip distribution and assignment involves the use of Census (2011) journey to work data to calculate the distribution of trips generated by significant committed developments and the proposed site allocations within Hyndburn on a site-by-site basis, to ensure that they are accurately assigned to the highway network.

8.4.2. The methodology is summarised below:

- Census journey to work data has been obtained for Middle Super Output Area (MSOA) level across the borough. GIS software has been used to determine the MSOA in which each site is located. The majority of sites have been examined individually, however in some instances, sites within close proximity and considered likely to use the same routes have been grouped together with the same trip distribution applied.
- The relevant MSOA census journey to work data has been extracted from Data Shine. Data Shine is an interactive website that clearly displays Census data. It allows the user to display journey to work data from home, to work, or both, and select the origin and destination MSOA. For the purposes of this exercise, Traveller sites were classed as residential sites and mixed-use sites were categorised as employment sites.
- The extracted data from Data Shine provides the number of trips to/from the MSOA the site was located in, to/from all the work or home locations that access the site. To apply this data to the Hyndburn site allocations, the data has been converted into the percentage of trips to/from each MSOA.
- Online mapping has been used in order to determine the route between the origin (the likely access point of a site) and destination MSOA. If multiple routes were shown, the fastest route has been chosen.
- Once all routes were calculated, the turning proportions at each junction have been summed and plotted in a network diagram for each individual site trip distribution.
- To assign the trips to the highway network, WSP has created a spreadsheet model to apply the appropriate site distribution to the corresponding trip generation of that site.

9

HIGHWAY IMPACT ASSESSMENT

9 HIGHWAY IMPACT ASSESSMENT

9.1 INTRODUCTION

9.1.1. This chapter seeks to understand the potential traffic impact from the Local Plan site allocations on the local and strategic road network in the borough.

9.2 IDENTIFICATION OF JUNCTIONS FOR FURTHER ASSESSMENT

9.2.1. Using the spreadsheet model developed for the borough, WSP undertook a sifting exercise to understand the key junctions which may be impacted by traffic generated by the Local Plan site allocations.

9.2.2. WSP developed a sifting methodology to determine which junctions would require further assessment and possible mitigation and which junctions are not forecast to experience any significant impacts as a result of the Local Plan growth.

9.2.3. The sifting methodology was to focus on the future year of 2026, and junctions where 60 or more additional trips generated by the Local Plan sites were forecast on any one arm. 60 additional trips on an arm equates to 1 additional trip per minute.

9.2.4. The junctions identified for assessment are listed below:

- M65 Junction 6
- M65 Junction 7
- A678 Blackburn Road / A6185 Dunkenhalgh Way
- M65 Junction 8
- A678 Blackburn Road / A6068 Shuttleworth Mead
- A678 Blackburn Road / Altham Lane
- A678 Blackburn Road / B6535 Harwood Road
- A679 / A6185 / B6231 / A679*
- A678 Blackburn Road / Cut Lane
- A678 Blackburn Road / Sidebeet Lane

9.2.5. *Following discussion with HBC, it was agreed that detailed assessment of the A679 / A6185 / B6231 / A679 junction was not required due to a recent significant upgrade scheme being delivered. It is therefore recommended that this junction is monitored throughout the Local Plan period, with a view to further modelling work in the future if required.

9.3 JUNCTION ASSESSMENTS

9.3.1. WSP has undertaken junction capacity assessments for the junctions identified for further assessment.

9.3.2. The signal-controlled junctions have been modelled in LINSIG, the industry standard software. The results tables report Degree of Saturation (DoS) and Mean Maximum Queue (MMQ). The definitions of the summary statistics are as follows:

- The DoS is defined as the ratio of flow to capacity for the lane. Lanes operating at a DoS below 90% are considered to be operating within capacity. Lanes operating above 100% are considered

to be over capacity. 90% is used as a threshold to allow for variations in day-to-day traffic demand at the junction.
- MMQ is the sum of the maximum back of uniform queue and the random and oversaturation queue. It represents the maximum queue within a typical cycle averaged over all the cycles within the modelled time period.

9.3.3. Priority-controlled junctions have been modelled in Junctions 9, the industry standard software. The results tables report Ratio Flow to Capacity (RFC), Delay, Maximum Queue and Level of Service (LOS).

9.3.4. The results of the junction assessments are summarised in the following sections, with full results tables provided in Appendix C. The full set of junction modelling output reports is available on request.

9.3.5. It is important to note that the junction modelling is based on traffic data collected prior to the COVID-19 pandemic (other than the A678 / Altham Lane where a traffic survey was commissioned). As such, particularly for junctions where mitigation has been identified, WSP recommend that new traffic surveys are undertaken at the earliest appropriate time to confirm the findings of the study and the appropriate level of mitigation needed.

M65 JUNCTION 6

9.3.6. The survey used to inform the base scenario for M65 J6 was undertaken prior to the development of Frontier Avenue. Demand flows for this arm have therefore been derived from the Transport Assessment which accompanied the approved outline planning application for development of the Frontier Park site (SJT/TM 16326-02-TA_FINAL, David Tucker Associates, 2015).

9.3.7. The M65 Junction 6 circulatory is forecast to operate within capacity in 2026 with the additional traffic generated by the Local Plan growth, with more spare capacity during the PM peak hour compared to the AM peak hour. In the 2026 AM peak, the maximum DoS reaches 89.5% on the M65 Northbound off-slip left-turn lane, while during the PM peak the maximum DoS reaches 62.8% on the same lane. This pattern carries through to 2036 where during the PM peak hour the junction is forecast to operate with spare capacity, and during the AM peak hour, the junction is forecast to approach absolute capacity with or without the inclusion of the Local Plan growth.

9.3.8. Based on the results of this modelling, no specific highway mitigation measures are required to support the proposed Local Plan growth. However, it is recommended that this junction undergoes continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken where required.

9.3.9. WSP are aware that National Highways commissioned a further study at M65 J6, informed by new traffic survey data, to look at the impacts of cross-boundary Local Plan growth in the area in greater detail, using microsimulation modelling. The conclusions of that study support the conclusions made in paragraph 9.3.8 above.

M65 JUNCTION 7 & A678 / A6185 DUNKENHALGH WAY JUNCTION

9.3.10. The M65 junction 7 circulatory is forecast to operate to an acceptable level in 2036 with the additional traffic generated by the Local Plan growth, with all lanes forecast to operate within 90% DoS, other than one lane on the internal gyratory which reaches 95.1% during the 2036 AM peak. However, the A678 / A6185 junction to the north is forecast to be approaching capacity in the 2026 base scenario, and the addition of the Local Plan traffic is forecast to cause the junction to exceed capacity, with the main issues found on the Blackburn Road west arm which reaches 98.1% DoS and A6185 which reaches 97.3% DoS during the 2026 AM peak period. Traffic growth up to 2036 causes these issues to be exacerbated, and the addition of Local Plan traffic results in an increase in queuing and DoS.

9.3.11. The A678 / A6185 junction will undergo further testing to understand if there are any proposed measures which can mitigate the impact at the junction. In addition, it is recommended that M65 junction 7 undergoes continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken where required.

9.3.12. WSP are aware that National Highways commissioned a further study at M65 J7, informed by new traffic survey data, to look at the impacts of cross-boundary Local Plan growth in the area in greater detail, using microsimulation modelling.

M65 JUNCTION 8

9.3.13. M65 Junction 8 has been modelled in TRL Junctions software using Lane Simulation mode to reflect the existing lane usage at the junction, and so the results in Appendix C are reported in terms of Queues, Delay and Level of Service (LOS). The modelling suggests the junction will experience increased operational issues in the 2026 Base + Committed Development scenario, with significant queues on the M65 eastbound off-slip in the PM peak period (31 PCUs) and A6068 arm in the AM peak period (29 PCUs) resulting in a LOS of 'F' on these arms. The addition of the Local Plan traffic results in only a slight increase in queuing, suggesting that it won't result in any significant detriment to the operation of the junction. This pattern of results continues in 2036, with the junction showing operational issues even without the additional Local Plan traffic, which has a minor effect when included.

9.3.14. WSP have undertaken an exercise to establish which Local Plan sites have the greatest impacts on this junction. This shows that allocations S49, S60 and S218, which are all part of the extension to Altham Business Park, are forecast to generate 106 two-way trips onto M65 J8 during the AM peak, and 103 two-way trips during the PM peak. S49 generates 38 trips, S60 generates 34 trips, and S218 generates 34 trips. This equates to 90% of the total Local Plan traffic impact at this junction during each peak hour. It is therefore recommended that an area-wide Travel Plan is produced for the Altham Business Park to encourage the greater uptake of sustainable modes and reduce the traffic impact accordingly.

9.3.15. Arcadis were appointed by Hyndburn Borough Council to undertake a transport study focussed on Huncoat Garden Village, to support the development of the masterplan. WSP have sought to use information from that study to enable the traffic forecast to be generated by the Huncoat proposals to be accounted for in the assessment of M65 J8. This exercise indicates that the Huncoat proposals would generate 178 trips in total at M65 J8 during the AM peak, and 127 trips in total during the PM peak. This shows that the Huncoat proposals would generate up to double the amount of traffic at this junction compared to the Local Plan allocations combined. It is therefore recommended that the impact of the Huncoat proposals on J8 is examined in further detail by the Huncoat transport consultants as the proposals develop.

9.3.16. National Highways has undertaken its own study of M65 J8 and Shuttleworth Mead using a VISSIM microsimulation model. Through recent discussions between HBC and National Highways, it has been agreed that this model will be used to undertake some additional scenario testing using the latest information on the Huncoat GV proposals and other Local Plan proposed site allocations, to examine the interaction between the two junctions in more detail and identify appropriate mitigation options.

A678 / A6068 SHUTTLEWORTH MEAD JUNCTION

9.3.17. The junction is forecast to exceed capacity in the 2026 Base + Committed Development scenario in both the AM and PM peaks, and is shown to further exceed capacity with the addition of the Local Plan traffic, with DoS exceeding 1In the 00% on four lanes during the AM peak, and two lanes in the PM peak. This junction has therefore undergone further testing to understand if there are any proposed measures which can mitigate the impact at the junction.

A678 / ALTHAM LANE JUNCTION

9.3.18. Other than the Altham Lane arm, all arms of the existing mini-roundabout are forecast to operate within capacity in future. However, the addition of the Local Plan traffic (in this case directly from the Altham employment allocations) leads the Altham Lane arm of the junction to exceed capacity during the 2026 PM peak (with an RFC of 1.14) as the traffic is unable to exit this arm. This junction will undergo further testing to understand if there are any proposed measures which can mitigate the impact at the junction.

A678 / B6535 HARWOOD ROAD JUNCTION

9.3.19. The A678 / B6535 signalised crossroads junction is shown to exceed capacity in both the AM and PM peak periods in 2021. By 2026, the addition of Local Plan traffic causes queues on the A678 and B6535 to increase in the region of 30-40 PCUs. It should be noted that on review of the signal specification, the intergreen times appear to be very short, at 5 seconds following pedestrian phases. As such, WSP have sought to clarify this with LCC signals engineers who have indicated that the specification is correct, WSP have therefore altered the pedestrian phase minimums to 10 seconds to make allowance for the likely time required. This therefore reduces the junction’s capacity reported in the model, but it is considered to form a robust worst-case scenario for its operation. Given the forecast capacity issues at this junction, WSP have explored mitigation options to increase capacity at this location.

A678 / CUT LANE AND A678 / SIDEBEET LANE JUNCTIONS

9.3.20. The A678 / Cut Land and A678 / Sidebeet Lane priority junctions are forecast to experience a significant increase in demand compared to the existing situation, due to the proximity of several large site allocations. As such, highway improvements have been explored in order to bring the junctions up to a suitable standard to provide vehicular access to the sites.

9.4 IDENTIFICATION OF LOCATIONS FOR HIGHWAY MITIGATION

9.4.1. As a result of the highway impact assessments presented in this chapter, the following junctions have been identified for consideration of potential highway mitigation measures, which are discussed further in chapter 10:

- A678 Blackburn Road / A6185 Dunkenhalgh Way
- A678 Blackburn Road / A6068 Shuttleworth Mead
- A678 Blackburn Road / Altham Lane

- A678 Blackburn Road / B6535 Harwood Road
- A678 Blackburn Road / Cut Lane – highway improvements required to enable access to proposed site allocations
- A678 Blackburn Road / Sidebeet Lane – highway improvements required to enable access to proposed site allocations

9.5 MERGE/DIVERGE ASSESSMENTS (SRN)

9.5.1. To better understand the locations and extent of traffic pressures on the SRN, WSP has undertaken merge/diverge assessments for M65 junctions 7 and 8, in accordance with the theoretical standards set out in DMRB CD122 *Geometric design of grade separated junctions*. Merge/diverge assessments consider the merge/diverge traffic flow and the downstream/upstream traffic flow to determine a design type that is appropriate in terms of capacity and safety. The results are provided below.

Table 9-1 – M65 J7 Merge/Diverge Assessments

Scenario	M65 J7 Merge Assessment			M65 J7 Diverge Assessment		
	Location	Current Provision	DMRB Recommended Provision	Location	Current Provision	DMRB Recommended Provision
2021 Base AM	M65 J7 EB On Slip	A	A	M65 J7 EB Off Slip	A	A/C
2021 Base PM			A			A
2036 Base + Committed AM			A/B			C
2036 Base + Committed PM			A			A/C
2036 Full Local Plan AM			A/B			C
2036 Full Local Plan PM			A			A/C
2021 Base AM	M65 J7 WB On Slip	C	D	M65 J7 WB Off Slip	A	A
2021 Base PM			B			A
2036 Base + Committed AM			D			C
2036 Base + Committed PM			D			A
2036 Full Local Plan AM			D			C
2036 Full Local Plan PM			D			A

9.5.2. For M65 J7, the results presented in Table 9-1 show that the current Type A provision (Type C for the westbound merge) generally meets the provision recommended by DMRB CD122, of Type A layouts on the diverges, Type A on the eastbound merge, and Type D/B on the westbound merge.

9.5.3. The results presented in the Table 9-1 also show that background traffic growth and committed developments will lead to a step-change in the recommended provision, particularly during the AM peak hour. However, the results show that the addition of the Local Plan traffic does not necessitate a further step change in the recommended provision.

Table 9-2 – M65 J8 Merge/Diverge Assessments

Scenario	M65 J8 Merge Assessment			M65 J8 Diverge Assessment		
	Location	Current Provision	DMRB Recommended Provision	Location	Current Provision	DMRB Recommended Provision
2021 Base AM	M65 J8 EB On Slip	A	B/D	M65 J8 EB Off Slip	A	A
2021 Base PM			E			A
2036 Base + Committed AM			D/E			A
2036 Base + Committed PM			E			A
2036 Full Local Plan AM			D/E			A
2036 Full Local Plan PM			E			A
2021 Base AM	M65 J8 WB On Slip	A	B/D	M65 J8 WB Off Slip	A	D
2021 Base PM			A			D
2036 Base + Committed AM			D			D
2036 Base + Committed PM			B/A			D
2036 Full Local Plan AM			D/E			D
2036 Full Local Plan PM			B			D

9.5.4. For M65 J8, the results presented in the table show that apart from the eastbound diverge, the current Type A provision does not meet the recommended requirements as per DMRB CD122. As shown, background traffic growth and committed developments lead to a step-change in the recommended provision for the merges (Type E for the eastbound merge and Type D for the westbound), but this does not lead to a change in the requirements for the diverge layouts. The addition of the Local Plan traffic does not necessitate a further step change in the recommended provision.

9.6 WEAVING ASSESSMENTS (SRN)

9.6.1. WSP has undertaken weaving assessments for the M65 between junctions 6 and 7, in accordance with the weaving formula set out in DMRB CD122 to better understand the number of traffic lanes required for weaving. The equation is as follows:

$$N = 1/D\ (Qnw + Qw1 + Qw2\ (2 \times Lmin/L + 1))$$

Table 9-3 – Description of Weaving Calculation Variables

Qnw	Total non-weaving flow in vph
Qw1	Major weaving flow in vph
Qw2	Minor weaving flow in vph
D	Maximum mainline flow 1) For motorways: 1,800 vph per lane 2) For all purpose roads: 1,600 vph per lane

Lmin	Minimum weaving length for the road class
L	Available (measured) weaving length available
N	Number of Traffic Lanes

9.6.2. A weaving assessment has not been undertaken for between junctions 7 and 8, as the distance between them exceeds 3km, which is outlined in DMRB CD122 as the threshold for requiring an assessment. The results of the assessments for J6-7 are summarised below.

Table 9-4 – Weaving Assessment

Scenario	M65 J6-J7 Weaving Assessment		
	Location	Current No. Lanes	DMRB Recommended No. Lanes
2021 Base AM	M65 J6-J7 EB	3	2.3
2021 Base PM			2.1
2036 Base + Committed AM			2.5
2036 Base + Committed PM			2.3
2036 Full Local Plan AM			2.5
2036 Full Local Plan PM			2.3
2021 Base AM	M65 J7-J6 WB	3	2.5
2021 Base PM			2.3
2036 Base + Committed AM			2.9
2036 Base + Committed PM			2.5
2036 Full Local Plan AM			3.0
2036 Full Local Plan PM			2.5

9.6.3. As shown, the weaving assessment indicates that the Local Plan traffic can be accommodated within the existing 3 lanes between M65 Junctions 6 & 7.

9.7 COLLISION DATA ANALYSIS

9.7.1. To inform the identification of any highway mitigation measures, analysis has been undertaken using Crashmap of the collisions which have occurred in the immediate vicinity of the site allocations, including any identified collision clusters, collisions which resulted in causalities with serious or fatal injuries (KSIs), and collisions which involved non-motorised users. The analysis is presented in the table below. The analysis was undertaken for all site allocations which are forecast to generate 30 or more new vehicle trips in either the AM or PM peak period.

Table 9-5 – Collision Data Analysis

	Site Ref.	Site Name	Identified Collision Clusters	KSI Collisions	NMU Collisions
Employment Allocations	49	Houghton Barn Farm	None identified	• 1 serious collision on Altham Lane at the bridge over the canal • 1 serious collision on Altham Lane to the south of the M65	None
	60	Land lying to the west of Altham Lane, south of Barnfield Way	None identified	• 1 serious collision on Altham Lane at the bridge over the canal • 1 serious collision on Altham Lane to the south of the M65	None
	218	Land to west of Altham Lane	None identified	• 1 serious collision on Altham Lane at the bridge over the canal • 1 serious collision on Altham Lane to the south of the M65	None
	172	Moorfield Industrial Estate	• Cluster at Blackburn Rd / Whalley Rd junction – 12 collisions	• 3 serious collisions at Blackburn Rd / Whalley Rd junction; • 1 serious collision closer to site access on Burnley Rd	• 1 serious collision at Blackburn Rd / Whalley Rd junction involved a pedestrian, 2 slight collisions at this location involved pedestrians
	250	Land west of J7 Business Park	• Cluster at Blackburn Rd / A6185 junction – 4 collisions • Cluster at eastbound approach to Blackburn Rd / A6185 junction – 5 collisions	None	None
	228	Land between Blackburn Rd and M65 Slipway	• Cluster at M65 J6 roundabout – 17 collisions • Cluster at A6119 / Carl Fogarty Way roundabout – 11 collisions	• 1 collision to the south of A6119 / Carl Fogarty Way roundabout resulted in a fatality • 1 serious collision at entrance of M65 eastbound on-slip	• The serious and fatal incidents at Carl Fogarty Way both involved cyclists

				• 1 serious collision at A6119 / Carl Fogarty Way roundabout	
	229	Land between Blackburn Rd, Sidebeet Lane, L&L Canal and railway	• Cluster at M65 J6 roundabout – 17 collisions • Cluster at A6119 / Carl Fogarty Way roundabout – 11 collisions	• 1 collision to the south of A6119 / Carl Fogarty Way roundabout resulted in a fatality • 1 serious collision at entrance of M65 eastbound on-slip • 1 serious collision at A6119 / Carl Fogarty Way roundabout	• The serious and fatal incidents at Carl Fogarty Way both involved cyclists
	230	Land north of railway line between Sidebeet Lane and L&L Canal	• Cluster at M65 J6 roundabout – 17 collisions • Cluster at A6119 / Carl Fogarty Way roundabout – 11 collisions	• 1 collision to the south of A6119 / Carl Fogarty Way roundabout resulted in a fatality • 1 serious collision at entrance of M65 eastbound on-slip • 1 serious collision at A6119 / Carl Fogarty Way roundabout	• The serious and fatal incidents at Carl Fogarty Way both involved cyclists
Residential Allocations	201	Clayton Triangle	Cluster at Blackburn Rd / Whalley Rd junction – 12 collisions	• 3 serious collisions at Blackburn Rd / Whalley Rd junction;	• 1 serious collision at Blackburn Rd / Whalley Rd junction involved a pedestrian, 2 slight collisions at this location involved pedestrians
	242	Land between Moorfield Industrial Estate and the M65	• Cluster at Blackburn Rd / Whalley Rd junction – 12 collisions	• 3 serious collisions at Blackburn Rd / Whalley Rd junction; • 1 serious collision closer to site access on Burnley Rd	• 1 serious collision at Blackburn Rd / Whalley Rd junction involved a pedestrian, 2 slight collisions at this location involved pedestrians
	5	Land off Brookside Lane/Nook Lane, Oswaldtwistle	None identified	• 1 fatal collision at Brookside Lane / B6234 junction • 1 serious collision on B6234 to the north of Brookside Lane	• Serious collision on B6234 involved a pedestrian
	16	Coach Rd Meadow, Coach Rd, Oswaldtwistle	• Cluster identified on B6231 between Foxhill Bank Brow and Moscow Mill St – 7 collisions	• 1 serious collision on B6231 south of Foxhill Bank Brow junction • 2 serious collisions on A679 Blackburn Rd to the west of the junction with Coach Rd	• 3 collisions B6231 involved pedestrians, 1 serious and 2 slight

	102	Land off Fielding St and Barn Meadow Crescent	• Cluster identified on A678 / George St / Commercial St junction – 5 collisions	• 1 serious collision at junction with Commercial St • 1 serious collision at junction with Spring St	• 1 serious collision at Commercial St involved a cyclist • 4 slight collisions at A678 / George St / Commercial St junction involved pedestrians • 1 serious collision at Spring St junction involved a pedestrian
	103	Land to the north east of Cut Lane	None identified	• 1 serious collision on the A678 to the west of Cut Lane • 1 fatal collision at A678 / B6535 / Eachill Rd junction	• 1 slight collision on A678 Blackburn Rd involved a cyclist • Fatal collision at A678 / B6535 / Eachill Rd junction involved a pedestrian
	123	Land south of Stanhill Rd, Knuzden	• Cluster identified at B6234 / Haslingden Rd junction – 3 collisions	• 2 serious collisions at B6234 / Haslingden Rd junction	• 2 serious collisions at B6234 / Haslingden Rd junction involved pedestrians
Mixed-Use Allocation	264	Land bounded by Park Rd., Balfour St., Wood St. and Heys Lane	• Cluster identified at B6535 / Queen St / Delph Rd roundabout – 3 collisions • Cluster identified at The Hyndburn Bridge pub – 4 collisions	• 1 serious collision at The Hyndburn Bridge pub • 1 serious collision at B6535 / Queen St / Delph Rd roundabout	• 6 collisions along Queen St between The Plough and B6535 roundabout involved pedestrians, 2 classed as serious, 4 as slight

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HIGHWAY MITIGATION MEASURES

10 HIGHWAY MITIGATION MEASURES

10.1 INTRODUCTION

10.1.1. This chapter draws together the findings of the baseline and assessment stages of the study and presents highway improvement measures which have been identified to mitigate the traffic impact of the Local Plan site allocations.

10.1.2. The concept layouts for the highway mitigation measures described below are provided in Appendix D. As a recommended next step from this study, a Stage 1 Road Safety Audit should be undertaken for each of the proposed layouts. Further investigation of land requirements and statutory undertakers' equipment should also be undertaken.

10.2 IDENTIFIED HIGHWAY MITIGATION MEASURES

M65 J7 & A678 BLACKBURN ROAD / A6185 DUNKENHALGH WAY

10.2.7. The junction modelling showed that the existing layout of the M65 J7 circulatory has sufficient capacity for all of the Local Plan traffic up to 2036. However, the A678 Blackburn Road / A6185 Dunkenhalgh Way junction immediately north of M65 J7 begins to exceed capacity in 2026 with the addition of the traffic generated by the Local Plan.

10.2.8. As such, WSP have devised two options to improve performance of the junction. Option one involves amending the white lining at the northern arm (J7 Business Park egress) to provide two ahead movements, which enables further alterations to the phasing and staging of the signal arrangements at the junction. This option would be relatively low cost, and provides capacity for the forecast Local Plan traffic in the PM peak hour in 2026. However, this option does not provide enough capacity for the 2026 Local Plan traffic during the AM peak.

10.2.9. Option two is of larger scale, and is as per option 1 but also including changes to lane allocations to allow two lanes for south to east and west to east movements. This involves a reduction in lanes from 3 to 2 on the westbound approach, to accommodate the two-lane eastbound exit. This is shown in drawing ref: 7206-MJ7-001 which is appended to this report. Modelling of this option shows that it would provide sufficient capacity for the Local Plan traffic up to 2036 during both peak hours, however it is acknowledged that this option would be more costly, and the junction has recently been upgraded.

10.2.9. In the recent National Highways study of M65 Junction 7 and the A678/A6185 Dunkenhalgh junction, an improvement scheme was identified for the latter junction which is broadly the same as the Option 2 mitigation scheme presented in this study. This is useful in that both studies have identified that a scheme is needed at the junction, and the use of two modelling software packages (LinSig and VISSIM) has reached similar conclusions and provides evidence that a scheme akin to that which is proposed in both studies would provide sufficient capacity to accommodate the full build out of the Local Plan allocations.

A678 BLACKBURN ROAD / A6068 SHUTTLEWORTH MEAD

10.2.5. A mitigation scheme has been tested to improve the forecast operation of the junction. This scheme involves altering the phasing of the signals on the A6068 north arm, altering the right turn lane from being a separate phase with its own green time, to an indicative phase allowing right turning vehicles to turn in gaps in traffic, which therefore gives more green time to other arms.

10.2.6. This alteration increases the capacity of the junction on the whole, and while the Blackburn Road West right turn lane, the A6068 right turn arm, and the A6068 south arm all exceed 100% DoS in 2026, the operation is improved overall. Following implementation of this measure, it is recommended that the junction undergoes continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken if required.

10.2.6. The forthcoming microsimulation modelling work described in paragraph 9.3.16 will include further testing of the forecast performance of the above scheme using traffic scenarios based on the latest development proposals for Huncoat GV and the other proposed Local Plan site allocations.

A678 BLACKBURN ROAD / ALTHAM LANE

10.2.13. The existing layout of the A678 Blackburn Road / Altham Lane junction exceeds capacity with the inclusion of Local Plan traffic in 2026, particularly during the PM peak hour where queues of traffic leaving Altham Lane Business Park are formed on Altham Lane (65 vehicles in 2026).

10.2.14. As such, WSP have devised three options for schemes at this junction; option one is a signal-controlled T-junction (drawing ref: 7206-ALT-001), option two is a signal-controlled T-junction with additional cyclist provision (drawing ref: 7206-ALT-002) and option three is a priority-controlled roundabout (drawing ref: 7206-ALT-003).

10.2.15. WSP have undertaken junction modelling of each option. Option one operates within capacity during the AM peak hour in both the 2026 and 2036 'with Local Plan' scenarios. In the 2026 PM peak, the Altham Lane arm approaches capacity but performs better than the existing layout. Option one slightly exceeds capacity in the 2036 PM peak.

10.2.16. Option two slightly exceeds capacity in the 2026 PM peak, as the additional intergreen time to allow cyclists to pass through the junction safely reduces the capacity of the junction, notwithstanding, the forecast queues of 32 vehicles on Altham Lane is around half the queues forecast in 2026 under the existing layout.

10.2.17. Option three is the best performing scheme, providing capacity for the junction up to 2036 and reducing queue lengths on Altham Lane to around 1 vehicle. However it should be noted that this option would require third-party land on the east side of Altham Lane, and would be the highest cost of the three options.

A678 BLACKBURN ROAD / B6535 HARWOOD ROAD

10.2.1. The base modelling of this junction shows that the junction is exceeding capacity in the 2021 base scenarios, i.e. without the inclusion of any Local Plan traffic. As such, WSP have looked into the highway boundary extents to establish if any additional land could be used to increase junction capacity, which has found that no additional land is available. Any physical improvements to the junction would have to be made using third-party land, as such WSP have explored amendments to the signal arrangements to increase capacity.

10.2.2. **Proposed Mitigation**: the signal arrangements have been amended, this comprises moving the 'all red' pedestrian phase to stage 4, converting phase E into an arrow phase (which enables traffic to utilise the stacking area during stage 1), and extending the right-turn storage into the existing hatching on the A678 eastern arm.

10.2.3. The proposed amendments to the signal timings improve performance at the junction to the extent that it can facilitate traffic in the '2026 Base + Committed Development' scenario, however the inclusion of the Local Plan traffic causes the junction as a whole to exceed absolute capacity.

10.2.4. It is therefore recommended that further improvements to the operation of the junction are sought through modal shift, encouraged from delivery of improvements to sustainable transport provision.

A678 BLACKBURN ROAD / CUT LANE

10.2.11. The existing layout of the A678 Blackburn Road / Cut Lane junction is not suitable to facilitate the traffic that would use Cut Lane to access the proposed residential allocation. WSP have tested two different options for the junction, option one (drawing ref: 7206-CUT-001) is a priority-controlled T-junction, option two is a mini-roundabout (drawing ref: 7206-CUT-002). Following testing, option one is the recommended scheme as it provides capacity for the Local Plan traffic up to 2036, while option two is forecast to exceed capacity in 2026.

10.2.12. On Cut Lane, the option one scheme provides a 1.5m width footway on the east side of the carriageway. Due to the narrow road width it is not possible to provide a footway on both sides of the carriageway, however there are potential alternatives for NMUs to access the residential allocation via the existing estate, potentially providing an access point through Ulverston Drive.

A678 BLACKBURN ROAD / SIDEBEET LANE

10.2.10. The existing layout of the A678 / Sidebeet Lane junction is not suitable to facilitate the traffic that would use Sidebeet Lane to access the proposed employment allocations. WSP have devised two options for the junction; option one (drawing ref: 7206-SID-001) is a priority-controlled crossroads, and option two is signal-controlled (7206-SID-002). Both of these options have been tested and can accommodate the Local Plan traffic in 2036. The priority-controlled junction provides more capacity than the signal arrangement, however the signals provide better safety conditions for non-motorised users, who would be able to safely cross the A678 while traffic waits at the stop line.

10.3 INDICATIVE COSTS

10.3.1. Table 10-1 below provides a schedule for the identified mitigation measures, including indicative cost estimates, an indication of when the mitigation measures would be required, and the estimated lifespan of the measures, based on the assessments undertaken which assume no modal shift. The indicative cost estimates include allowances for risk (20%), statutory undertakers (10%) and contingency (10%) but exclude any land acquisition and associated legal costs.

Table 10-1 – Cost Estimates for Highway Mitigation Measures

Junction	Scheme	Cost	Timeframe/Lifespan
A678 Blackburn Road / B6535 Harwood Road	This option comprises amendments to the signal arrangements, and associated amendments to road markings	£10,000 to £15,000	May be required in advance of Local Plan build-out Lifespan of scheme identified is up to 2026

A678 Blackburn Road / A6068 Shuttleworth Mead	This option comprises amendments to the signal arrangements, and associated amendments to road markings	£10,000 to £15,000	May be required in advance of Local Plan build-out Lifespan of schemes identified is up to 2026
M65 J7 / A678 Blackburn Road / A6185 Dunkenhalgh Way	Option 1: at A678 Blackburn Road / A6185 Dunkenhalgh Way junction, amendment to white lining at the northern arm to provide two ahead movements on the Junction 7 Business Park egress	£10,000 to £15,000	May be required in advance of Local Plan build-out Lifespan of option 2 scheme is up to 2036
	Option 2: as option 1 but including changes to lane allocations to allow two lanes for south to east and west to east movements. This change involves a reduction in lanes from 3 to 2 on the westbound approach, to accommodate the two-lane eastbound exit. (drawing ref: 7206-MJ7-001)	£35,000	
A678 Blackburn Road / Sidebeet Lane	Option 1: (drawing ref: 7206-SID-001) is a priority-controlled crossroads	£1.44m	May be required in advance of Local Plan build-out Lifespan of schemes identified is up to 2036
	Option 2: is signal-controlled (7206-SID-002).	£1.73m	
A678 Blackburn Road / Cut Lane	This scheme is a priority-controlled T-junction (drawing ref: 7206-CUT-001)	£293,000	May be required in advance of Local Plan build-out Lifespan of scheme identified is up to 2036
A678 Blackburn Road / Altham Lane	Option 1: is a signal-controlled T-junction (drawing ref: 7206-ALT-001),	£622,000	May be required before 2032. Lifespan of schemes identified is beyond 2036
	Option 2: is a signal-controlled T-junction with additional cyclist provision (drawing ref: 7206-ALT-002)	£721,000	
	Option 3: is a priority-controlled roundabout (drawing ref: 7206-ALT-003).	£970,000	

10.4 MITIGATION FUNDING STRATEGY

10.4.1. Funding sources for the mitigation measures identified in this chapter may include the Levelling Up Fund, Active Travel Fund and/or other funding sources, along with developer contributions. In order to better inform HBC when seeking developer contributions for the proposed highway mitigation schemes, analysis has been undertaken of the site allocations which produce the greatest impacts on each junction, i.e. those which generate the highest number of new trips which are forecast to use the junctions. This analysis is presented below and can be used to inform the future collection of developer contributions as the sites are brought forward through the planning process. The analysis focuses on the proportional impact from each site in the AM and PM peak periods.

Table 10-2 - Proportional Impact of Local Plan Site Allocations on Junctions identified for Highway Mitigation Measures

Junction	Sites with ≥10% impact of new trips in 2036 AM or PM weekday peak hour
M65 J7 / A678 Blackburn Road / A6185 Dunkenhalgh Way	• Site 250 (27% new trips AM; 27% new trips PM) • Site 230 (10% new trips AM; 10% new trips PM) 13 other sites have minor impacts <10%
A678 Blackburn Road / A6068 Shuttleworth Mead	• Site 218 (31% new trips AM; 31% PM) • Site 60 (31% new trips AM; 31% PM) • Site 49 (27% new trips AM; 34% PM) • 2 other sites have minor impacts <10%
A678 Blackburn Road / Altham Lane	• Site 49 (35% new trips AM; 35% new trips PM) • Site 218 (32% new trips AM; 32% new trips PM) • Site 60 (32% new trips AM; 32% new trips PM) • 2 other sites have minor impacts <10%
A678 Blackburn Road / B6535 Harwood Road	• Site 230 (26% new trips AM; 25% PM) • Site 103 (19% new trips AM; 19% PM) • Site 229 (16% new trips AM; 16% PM) • Site 102 (16% new trips AM; 16% PM) • 11 other sites have minor impacts <10%
A678 Blackburn Road / Cut Lane	• Site 103 (32% new trips AM; 32% new trips PM) • Site 230 (29% new trips AM; 29% new trips PM) • Site 229 (17% new trips AM; 17% new trips PM) • 7 other sites have minor impacts <10%
A678 Blackburn Road / Sidebeet Lane	• Site 230 (58% new trips AM; 58% new trips PM) • Site 103 (17% new trips AM; 17% new trips PM) • Site 229 (14% new trips AM; 14% new trips PM) • 5 other sites have minor impacts <10%

11

CONCLUSION & RECOMMENDATIONS

11 CONCLUSION & RECOMMENDATIONS

11.1.1. A key requirement of the evidence base to support the Local Plan is to show that allocated sites are deliverable. This includes showing that the necessary physical infrastructure is in place, or can be delivered, and will not constrain development coming forward. The efficient operation of the local and strategic highway networks is critical in the successful delivery of the growth strategy.

11.1.2. In line with the aims of this Local Plan Transport Study, the following have been completed:

- An assessment of the potential traffic impacts of the proposed site allocations, using the best available information at this point in time;
- Recommendations on how the identified impacts can be effectively mitigated; and
- Suggestions for potential highway improvement schemes and/or sustainable transport options with indicative costs.

11.1.3. It is important to note that the junction modelling is largely based on traffic data collected prior to the COVID-19 pandemic. As such, for junctions where mitigation has been identified, the findings of the assessments should be verified and, where required, updated using up-to-date traffic counts to confirm the need for the mitigation scheme identified prior to progressing design works.

11.1.4. The delivery of the necessary highway mitigation schemes alongside the complementary sustainable transport and the required travel demand management measures will ensure that the first five years' of Local Plan growth can be delivered in a sustainable manner.

11.1.5. The following additional recommendations can be made for the course of the Local Plan period:

- Highway mitigation measures identified in Table 10-1 to be included in the Infrastructure Delivery Plan, with delivery via the funding strategy set out in 10-2. The design of the layouts should be developed through further consideration of potential walking and cycling measures; completion of a Stage 1 Road Safety Audit; further investigation of land requirements and statutory undertakers' equipment;
- Further collaborative working with National Highways to better understand the future performance of the M65 links and junctions in the borough;
- Undertake an updated set of assessments at the mid-point of the Local Plan, to provide an updated understanding of the current traffic conditions; the extent of the effects from the COVID-19 pandemic; and the impacts of completed improvement schemes, to understand the impacts of the development delivered at that point in time and to assist in the planning of future planned growth;
- Ensure that as development proposals on the site allocations are brought forward through the planning process, the accompanying Transport Assessments and Travel Plans build on the assessments and mitigation proposals identified in this study to undertake updated assessments based on current data, and identification of site-specific mitigation measures.

11.1.6. Paragraphs 110 and 111 of NPPF state:

"In assessing sites that may be allocated for development in plans, it should be ensured that any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree. 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 would be severe."

Through a combination of highway mitigation measures and sustainable transport mitigation measures, this study demonstrates that the impacts of the proposed Local Plan development can be mitigated to an acceptable degree, and that the Local Plan is therefore deliverable in a sustainable manner in transport terms, in accordance with NPPF.

GLOSSARY

GLOSSARY

Abbreviation	Name
BCR	Benefit to Cost Ratio
BY	Base Year
DfT	Department for Transport
DPD	Development Plan Document
DS	Do Something
EB	Eastbound
GIS	Geographical Information System
GP	General Practitioner
ha	Hectares
HE	Highways England
HGV	Heavy Goods Vehicle
IMD	Index of Multiple Deprivation
KSI	Killed or Seriously Injured
LDF	Local Development Framework
LEP	Local Enterprise Partnership
LPA	Local Planning Authority
LSOA	Lower Layer Super Output Area
LTP	Local Transport Plan
MaaS	Mobility as a Service
MSOA	Middle Layer Super Output Area
NB	Northbound
NMU	Non-Motorised Users
NPPF	National Planning Policy Framework
PIC	Personal Injury Collision
PPG13	Planning Practice Guidance 13: Transport
RIS	National Highways' Road Investment Strategy
RTPI	Real Time Passenger Information
SDC	TfN Strategic Development Corridor
SPD	Supplementary Planning Documents
SPOC	TfN Strategic Programme Outline Case
SRN	Strategic Road Network

STP	Strategic Transport Plan
TA	Transport Assessment
TfN	Transport for the North
ULEV	Ultra-Low Emission Vehicles
WB	Westbound

Name	Description
Chartered Institute of Highways and Transportation (CIHT)	Transportation professional institution.
Core Strategy	A delivery plan document (DPD) that sets out the vision, spatial strategy and core policies for the spatial development of a Borough.
Corridors	Specified area where travel patterns can be analysed.
Degree of Saturation (DoS)	Is a ratio of demand to capacity on each approach to the junction where road demand is measured against the links total capacity.
Department for Transport (DfT)	Government department for transport
Development Plan Document (DPD)	A document part of the statutory development plan.
Do Minimum (DM)	Developments allocated/identified as having planning permission and/or are under construction.
Do Something (DS)	Developments allocated/identified as not having planning permission, but forecast to be a site for future development.
Geographical Information System (GIS)	A data management system designed to capture, store, retrieve, analyse and report geographic information.
Green Belt	The designation of land to be retained from development for areas of largely undeveloped, wild, or agricultural land surroundings.
Gross Value Added (GVA)	Gross Value Added is a measure of the value of goods and services produced in an area.
National Highways	Government-owned company charged with operating, maintaining and improving England's motorways and trunk roads.
Index of Multiple Deprivation (IMD)	The Index of Multiple Deprivation (IMD) is a measure of multiple deprivation at the small area level.
Journey Times	The total time of modelled journeys between known sets of origins and destinations.
Local Enterprise Partnership (LEP)	A body, designated by the Secretary of State for Communities and Local Government, established for the purpose of creating or improving the conditions for economic growth in an area.
Local Plan	A plan for the future development of a local area, drawn up by the Local Planning Authority.
Local Road Network (LRN)	Local Road Network
Local Transport Plan (LTP)	The strategy for dealing with transport matters in Lancashire, including the improvement of local transport provision
Lower Layer Super Output Area (LSOA)	Official measure of relative deprivation for neighbourhoods.
Manual for Streets (MfS)	This manual provides guidance about the design, construction, adoption and maintenance of new residential streets.
Middle Layer Super Output Area (MSOA)	Geographic hierarchy, built from groups of contiguous Lower Layer Super Output Areas

Mobility As A Service (MaaS)	Integration of various forms of transport services into a single mobility service, accessible on demand.
National Planning Policy Framework (NPPF)	Key planning document setting out the Government's planning policies for England and how they should be applied.
New Mobility 'Culture'	A transport system that provides genuinely sustainable options and supports the continuing regeneration and economic development of city regions.
Non-Motorised Users (NMU)	Pedestrians or cyclists.
Strategic Housing Land Availability Assessment (SHLAA)	A key evidence base document and establishes realistic assumptions about the availability, suitability and the likely economic viability of land to meet the identified housing need for housing over the plan period.
Strategic Road Network (SRN)	Strategic Roads under the responsibility of National Highways, essential to free and safe movement of traffic.
Supplementary Planning Documents (SPD)	Material consideration in determining planning applications but do not have the weight of development plan status.
Transport Assessment (TA)	A Transport Assessment provides detailed information on a range of transport conditions before, during and following the construction of a proposed development.
Transport for the North (TfN)	A local government body responsible for the transport system in Northern England.
Unitary Development Plan (UDP)	Planning policy document under previous legislation.

Appendix A: Planning Policy Review

NATIONAL PLANNING POLICY

NATIONAL PLANNING POLICY FRAMEWORK

The National Planning Policy Framework (NPPF), updated in 2019, replaces a number of planning guidance documents, including 'Planning Policy Guidance 13: Transport' (PPG13).

The overarching aim of the NPPF is to simplify and combine a number of previous planning guidance documents and to put planning decision-making back into the hands of local Councils and people.

The NPPF gives responsibility back to local people by providing a framework within which local authorities and local people can produce their own plans to reflect the needs and priorities of their communities.

Section 3 of the document sets out the plan-making process under the guiding principle that the planning system should be plan-led, through up-to-date plans and frameworks. Paragraph 16 states plans should:

- a) be prepared with the objective of contributing to the achievement of sustainable development;
- b) be prepared positively, in a way that is aspirational but deliverable;
- c) be shaped by early, proportionate and effective engagement between plan-makers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees;
- d) contain policies that are clearly written and unambiguous, so it is evident how a decision maker should react to development proposals;
- e) be accessible through the use of digital tools to assist public involvement and policy presentation; and
- f) serve a clear purpose, avoiding unnecessary duplication of policies that apply to a particular area (including policies in this Framework, where relevant).

The document stresses the importance of including both strategic and non-strategic policies to address the local planning authority's priorities.

For strategic policies, these should address any relevant cross-boundary issues, not just those that are limited to the immediate local authority area. The strategic policies should aim to cover a 15-year period from the time the plan is adopted and anticipate the need for major infrastructure improvements. The document stresses the importance of maintaining effective cooperation between Local planning authorities and county councils (in two-tier areas), with other prescribed bodies such as National Highways and across administrative boundaries.

The NPPF defines a Local Plan as:

"A Plan for the future development of a local area, drawn up by the local planning authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning & Compulsory Purchase Act 2004. A Local Plan can consist of either strategic or non-strategic policies, or a combination of the two."

The section *Preparing and reviewing plans states* Local Plans should be underpinned by relevant and up-to-date evidence. The plans should be informed through sustainability appraisals and show how the plan has addressed relevant economic, social and environmental objectives.

Where plan objectives cause significant adverse impacts, alternative options should be considered, or suitable mitigation measures should be proposed.

TRANSPORT EVIDENCE BASES IN PLAN MAKING AND DECISION TAKING

The government has set out guidance to help local planning authorities assess and reflect strategic transport needs in Local Plan making. The guidance sets out the importance of establishing a transport evidence base for the Local Plan to:

- Reduce costs and delays to the delivery of new development;
- Provide an opportunity to encourage modal shift to more sustainable transport;
- Identify future infrastructure needs and allow planning for funding.

The guidance states a robust transport evidence base could have the following benefits:

- Improving the sustainability of transport provision
- Enhancing accessibility
- Creating choice amongst different modes of transport
- Improving health and well being
- Supporting economic vitality
- Improving public understanding of the transport implications of development
- Enabling other highway and transport authorities/ service providers to support and deliver the transport infrastructure that conforms to the Local Plan
- Supporting local shops and the high street

The document also sets out when the assessment should be undertaken, what type of baseline information should be gathered and how detailed the information should be.

REGIONAL PLANNING POLICY

TRANSPORT FOR THE NORTH

Transport for the North (TfN) is a strategic organisation with a remit to transform the transport system across the North of England, providing the infrastructure needed to drive economic growth. TfN became a statutory body on April 5th, 2018, with a range of legal powers and duties.

TfN is driven by a number of distinct objectives, with a clear vision to:

“maximise the economic, social and environmental performance of the north of England by ensuring that it has the most effective forms of connectivity within and between its constituent parts, and extending out into national and international networks and markets.”

TfN’s key overarching objectives include the creation of:

- A more productive and competitive northern economy;
- A more accessible and accountable transport network in the North; and
- A more environmentally sustainable northern transport network.

TfN seeks to create an ethos for a combined northern powerhouse through the means of developing infrastructure and guided investment in strategic projects. Transport for the North sets out a framework which is intended to transform the northern city regions into a combined, interconnected ‘powerhouse’ for both personal travel and freight, further rebalancing the economy across the whole of the north and not just the larger city regions by improving the connectivity throughout the North.

TfN plans to drive growth through the means of improving business connectivity, competitiveness between city regions, innovation and boosting employment and productivity. TfN consulted on a draft of its Strategic Transport Plan in early 2018; with the consultation closing in April 2018. TfN published the final Strategic Transport Plan (STP) document in 2019. The STP is accompanied by an investment programme, future travel scenarios and appraisal.

The Strategic Transport Plan presents four pan northern transport objectives which shape TfN's vision for the STP; these are:

- Increasing efficiency, reliability, integration and resilience in the transport system;
- Transforming economic performance;
- Improving inclusivity, health and access to opportunities for all; and
- Promoting and enhancing the built, historic, and natural environment.

TfN adapted the cluster theory to develop the key aims for the STP:

Connecting People – improving access to leisure and tourism assets and work opportunities, whilst widening the labour market for businesses.

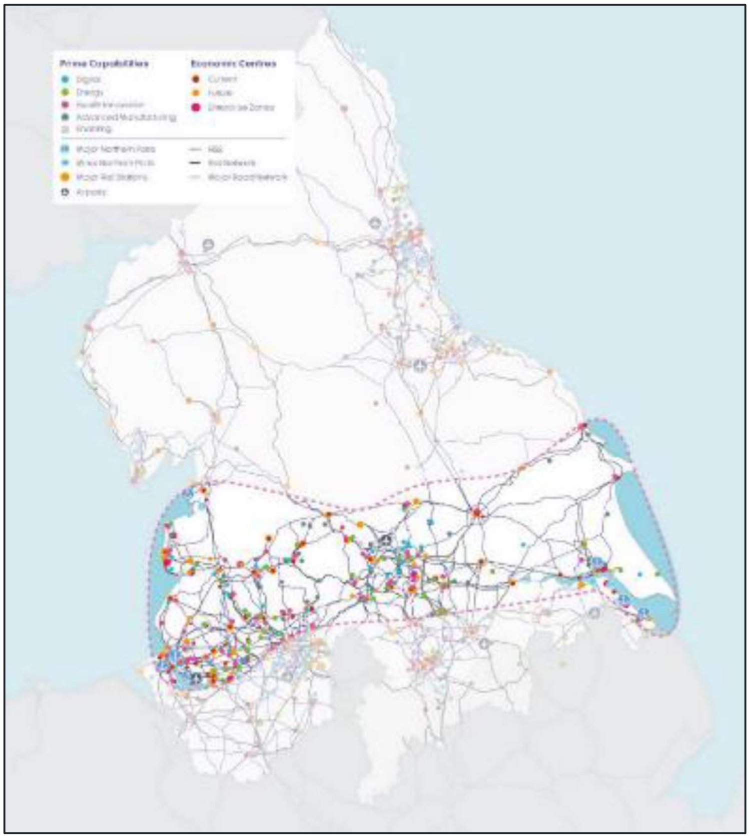
Connecting businesses – improving connections to collaborators, client and competitors, including those within the prime and enabling capabilities.

Moving goods – supporting businesses to move freight and goods efficiently and across modes.

Following the development of the Strategic Transport Plan, TfN produced Strategic Programme Outline Case (SPOC) and Environmental Appraisal documents for the TfN Strategic Development Corridors (SDC). The SDC's were developed to demonstrate the areas and routes which have the greatest economic potential. It also identified where improvements to connectivity would increase or unlock growth across boroughs.

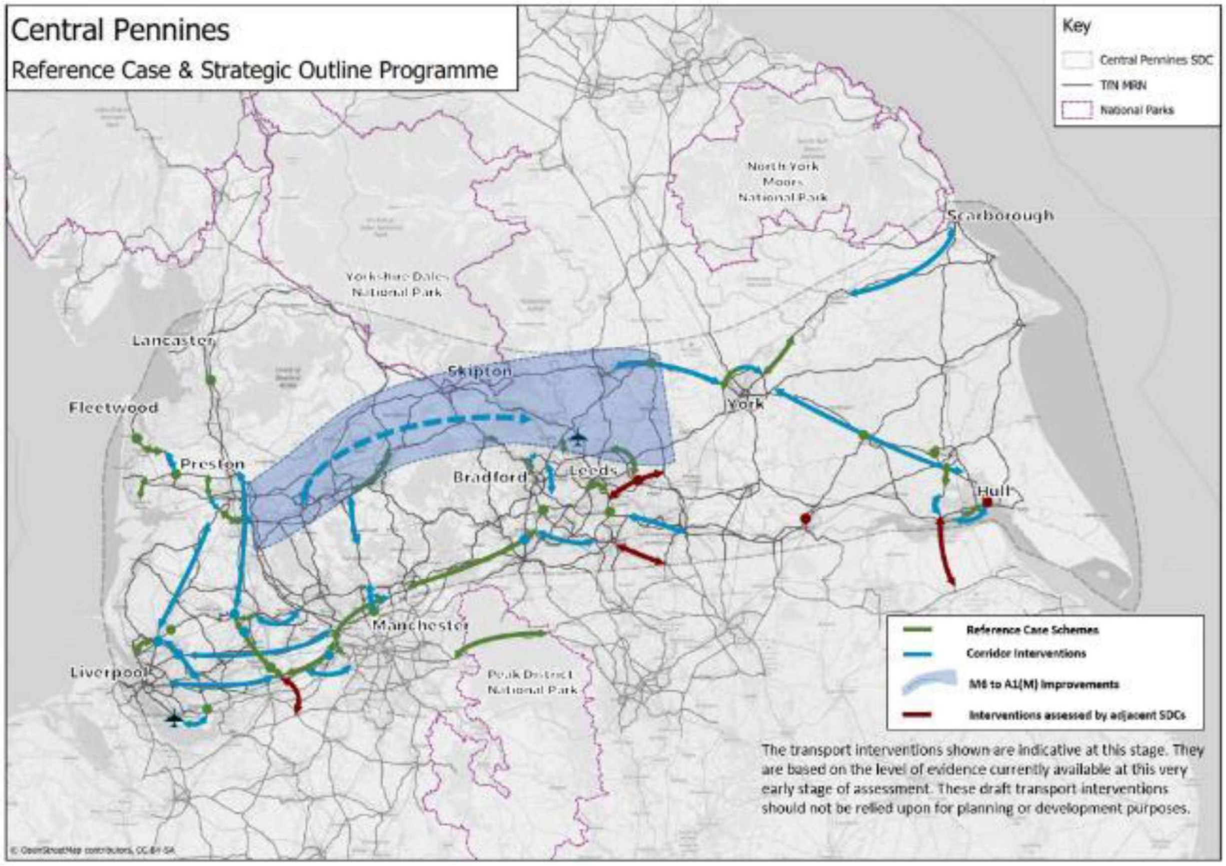
The Central Pennines SDC (Figure A-1) focuses on improvements to East-West connectivity between North Yorkshire, West Yorkshire, Hull and the Humber, Greater Manchester, Lancashire and Liverpool. This area boasts competitive automotive and other advanced manufacturing industries. With the corridor connecting the Port of Liverpool, ports on the Humber, Leeds Bradford Airport and Liverpool Airport, the effective movement of freight and logistics on this corridor is essential.

Figure A-1 - TfN Central Pennines SDC



The SPOC outlined a proposed programme of improvements to the area, as is illustrated in Figure A-2 taken from the Central Pennines SPOC (2019). Within the suggested improvements was a need to increase connectivity between the M6 to A1. Improvements along this corridor would directly benefit the borough by enhancing east-west movement across the central Pennines and providing better access to the city of Leeds.

Figure A-2 - Central Pennines SDC proposed improvement schemes



TfN has also produced a Long-Term Rail Strategy. The Draft Consultation document was published in 2018. The document sets out the long-term ambition for a transformation of railway in the North of England up to 2050. The strategy aims to support road improvements and facilitate economic growth by considering the needs of both passenger and freight services.

The strategy proposes changes centred around give key themes: connectivity, capacity, customers, communities and cost-effectiveness.

TfN next steps will be to identify and develop interventions needed and produce a series of Delivery Plans informed by ongoing TfN studies and other wider industry programmes. TfN continues to work on a freight and logistics strategy.

NATIONAL HIGHWAYS ROUTE STRATEGIES

National Highways has produced 18 route strategy documents which cover the extent of the SRN across England. The aim of the documents is to outline priorities for the upcoming road period and beyond. The priorities are guided by the Road Investment Strategy (RIS) periods which provides funding for the schemes. The current route strategy documents have informed the RIS plan for Road Period 1 (2015/16-2019/20).

The key strategic outcomes within this Road Period will be:

- Supporting economic growth;
- A safe and serviceable network;

- A more free-flowing network;
- An improved environment; and
- A more accessible and integrated network.

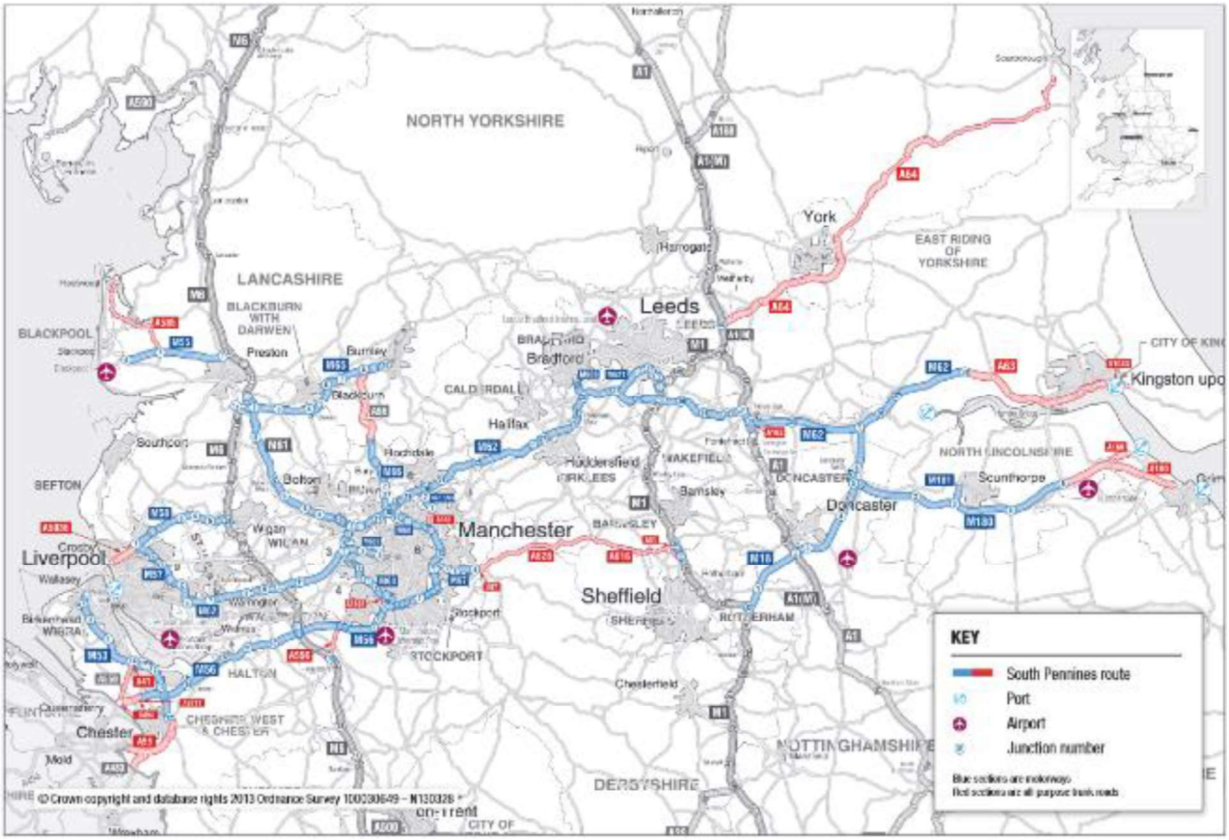
Figure A-3 - National Highways Route Strategies

South Pennines

The South Pennines route comprises a mix of motorways and A roads which is highlighted within the Route Strategy as supporting pan-regional travel across the north of England, and has a critical function to access important gateways including major ports in Liverpool, Bootle, Birkenhead and Humber, and Manchester Airport.

The figure below illustrates the route.

Figure A-4 - South Pennines Route Strategy Overview Plan

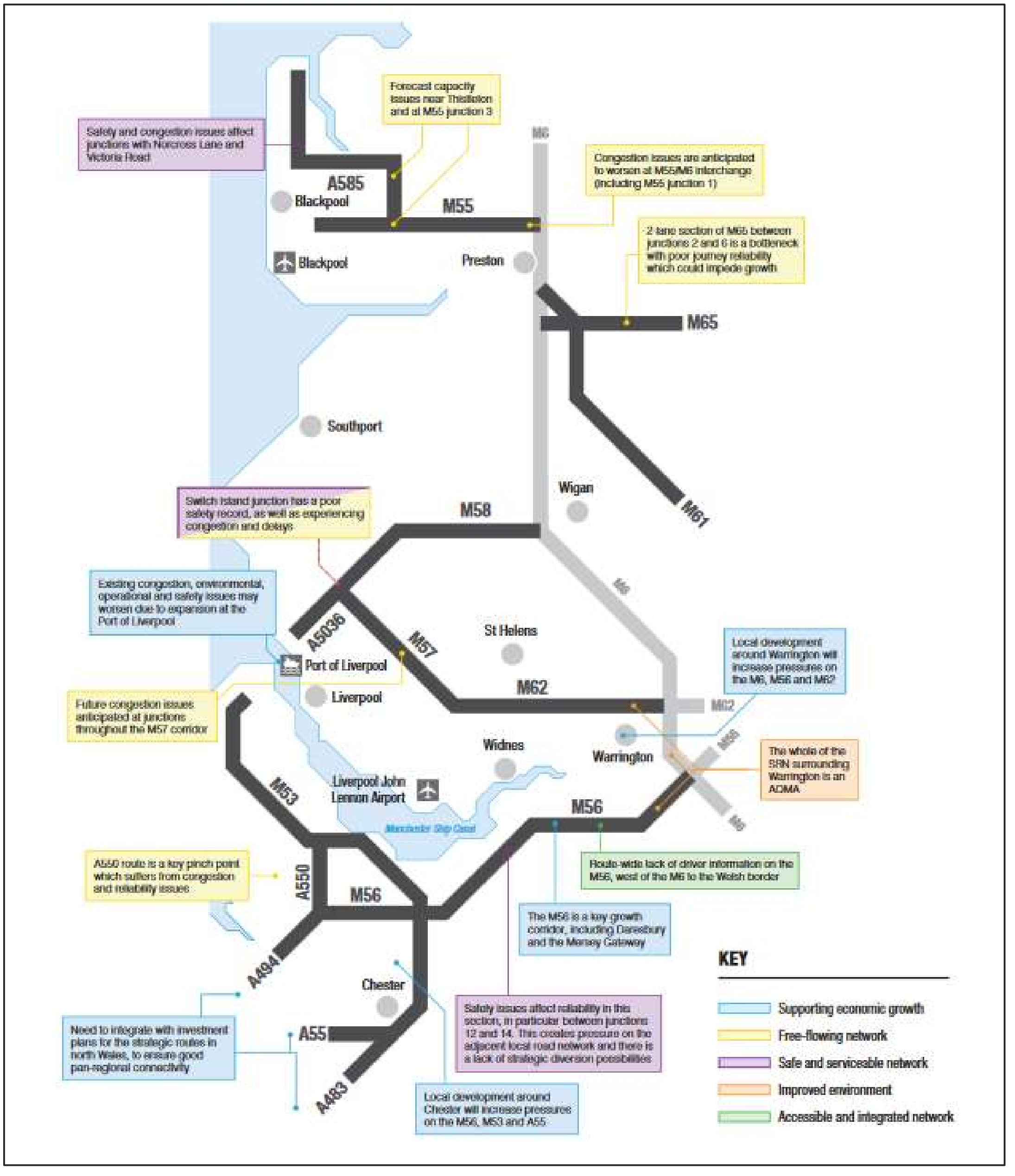


Research summarised within the Route Strategy demonstrates that 40% of users experienced problems using the route with Congestion and Traffic Queuing as the largest problem and Roadworks being the second largest problem.

The strategy sets out areas for consideration within the key strategic outcomes of the route. The following are those that relate to the study area:

- **A Safe and Serviceable Network –** The worst collision sites are found where major routes meet. The M65/A56 interchange near Burnley is noted to have high accident rates.
- **A More Free Flowing Network –** Congestion is noted on the M6 near to Preston where many motorways connect. M6 Junction 29 is where M65 interchanges with the M6, nearby to the east of this junction the M65 connects to the M61.
- **Supporting Economic Growth –** as one of the few routes that supports east-west travel across the north of England, the route has a key role in facilitating economic growth in the region and further afield. The route connects a number of economic centres such as Manchester, Liverpool, Leeds and Central Lancashire.

Figure A-5 - Key Challenges for the South Pennines Route



Appendix B: The Impact of Future Mobility

THE IMPACT OF FUTURE MOBILITY

INTRODUCTION

A key challenge for Hyndburn will be meeting its future needs and continuing to grow in a rapidly changing, globalised world. In order for Hyndburn to achieve its growth aspirations, the borough will need an integrated transport network that not only meets its existing needs, but more importantly meets and accommodates the future needs of those that will live, work, learn, and visit the area.

This section presents an overview of how the changes in transport provision and technology over the coming decades may influence travel in the borough, and indeed globally. WSP recently released a White Paper, New Mobility Now (WSP, 2017), covering this topic in more detail. The influence of New Mobility is yet to be truly understood, let alone quantified, and it is therefore impossible to discuss a way to measure the potential impacts. Nevertheless, this section presents a number of recommendations for next steps that could influence the emerging Local Plan and policies contained therein, or guide the creation of new SPDs in the future.

FUTURE MOBILITY: ENSURING THE BOROUGH LEADS THE WAY

There are currently a number of significant global trends which have the potential to impact on how, when and why movement will need to occur. Trends such as globalisation, climate change, and a growing and ageing population will have significant transport impacts right across the region.

Globally, the developed world is close to a significant change in transportation, facilitated by an on-going digital revolution, enabling unprecedented levels of connectivity, autonomous vehicles across all modes, clean propulsion, and new models of sharing (amongst many other things), altering the traditional models of transport access, ownership, and use. While Hyndburn can expect that private car usage will still remain an essential part of the transportation landscape in the near future, this is likely to change significantly over the coming decades, with automation of driving tasks becoming a reality and fossil fuels being phased out, both nationally and globally.

Transport is a derived demand, serving people and commerce through the provision of access to activities such as social interactions, employment opportunities, educational attainment, healthcare needs, leisure activities, tourism, markets, and distribution. Digital connectivity is increasingly helping individuals and organisations to reduce the need to travel, and while this trend is likely to continue, it is not considered to be a model applicable to all, and certainly not all the time.

Better transport connectivity will unlock resources for growth and act as a catalyst for productivity improvements through economies of scale and enhanced specialisation. This will promote enterprise, attract inward investment and ultimately increase value and choice for consumers. It should also be noted that increasingly digital access can meet the needs of some activities that traditionally required conventional transport (air, road, and rail) meaning that ‘virtual’ access is an important part of our future considerations.

NEW MOBILITY

These changes in transportation can be structured around four distinct strands of change, and one key enabler. Each strand is currently evolving across the globe, and each brings distinct benefits and opportunities; these strands are:

- Progress towards vehicle automation (including driverless vehicles);

- Distinct from this, the evolution towards connected vehicles, transport systems and networks;
- Increasing appetite for shared use (for example, via ‘mobility as a service’ models); and
- Increasing public interest in, and a shift towards, electric vehicles.

These four strands of change are considered likely to significantly alter Hyndburn transportation networks and places. Furthermore, it is considered that leaving the evolution of such systems wholly to the market is a high-risk strategy that may produce undesirable outcomes.

The fifth strand is considered necessary to create a transportation future that is popular, fair, and sustainable: business models and revenue generation. This strand is likely to play a core enabling role, encouraging collaboration between the public and private sectors, and influencing the direction and speed of change across the other four strands.

Together, these five strands are termed ‘New Mobility’- the overall package of transport, technology, and mobility changes that will create new transport systems and significantly change the way people move, live, and interact with each other. Each strand of New Mobility is considered essential, adding value to the overall concept, and without any one strand, the benefits of all are unlikely to be maximised.

The automated and connected strands are considered to be the two elements that will transform future network efficiency, safety and access to mobility, creating a single data-led multi-modal transport system. However, in isolation they are unlikely to reduce demand or associated congestion, or have any great impact on air quality or the quality of our places.

The electric strand (or potentially other alternative fuels) is the primary New Mobility element that holds the key to substantially cleaner air for communities in the long-run.

The sharing strand holds the transformational power around future place-making across our cities, towns and rural centres. A high quality, flexible and affordable mobility service that works as well as (or better than) today’s car ownership and lease models could create a substantial move away from private vehicle ownership, significantly reducing the numbers of vehicles using the network and parked across the Borough.

Finally, the business model strand, linked closely with road pricing, is anticipated to bring together the lessons from the various examples across the world to create a New Mobility ‘bundle’ that brings together the automated, connected and electric strands under one business model. The shared mobility strand already has various business models in operation, but it is anticipated that these will evolve and become better integrated with the wider New Mobility concept. In the interests of simplicity, but also to maximize returns and efficiency, it is anticipated that there will be a move towards integrated system operation where the cost of trip-making is clear and understandable, and where levels of use are maximized - but in a way that manages congestion and encourages efficiency.

New Mobility business models also hold the key to capturing commercial returns for both private sector participants (whose returns should increase through collaboration) and public sector bodies who are responsible for maintaining and investing in multi-modal transport networks over time. It is also the corner stone that will steer public engagement and opinion, with acceptability being dependant on quality of service and a perception that user costs are fair and affordable.

PUTTING NEW MOBILITY INTO A LOCAL CONTEXT

There is no easily defined single ‘package’ that will work everywhere. It will be the local application, and onward growth, of specific yet tailored solutions that will bring genuine benefit to Hyndburn. Some players have the power to generate widespread multi-national change, while others hold much more local influence as enablers and agents of change on the ground. Each needs the other if they want to maximize popularity, commercial returns and wider benefits.

At this point in time, the majority of these technologies are very much in their infancy and only just emerging. The uptake of electric vehicles, use of Mobility as a Service (MaaS), and use of autonomous vehicles is essentially market-driven at the present time, although as the adoption of national targets for the end of traditionally fuelled vehicles continues across the globe, local and national governments are likely to have to consider their role in facilitating such change. New legislation is likely to be required in order to facilitate truly autonomous vehicles across the highway network, while the potential for shared use models to replace traditional bus and taxi business models could have significant impacts on travel patterns.

With such technology very much in the early stages of adoption, there is no current framework or methodology for measuring the potential impact of such changes on transportation networks.

For Hyndburn, the move toward future mobility creates a number of possibilities. Each strand of New Mobility has a number of potential outcomes that could influence the development of strategy and investment in the transport network. These include those described under the subheadings below.

AUTOMATED DRIVING

- Create local guidance, as appropriate, to bring through new policies and potential new business models to include capital and revenue funding;
- Collaborate with others to identify changes to planning policy requirements that will consider the effects of automated vehicles and their impacts on mobility, in the context of all five pillars of change. Identify what the borough requires and engage with the relevant providers; and
- Consider a ‘mobility index’ in place of a public transit accessibility rating, recognizing that the gap between public and private transport is likely to narrow.

CONNECTED VEHICLES, TRANSPORT SYSTEMS, AND NETWORKS

- Understand the potential and appetite to support long-run investment in transport and mobility connectivity, perhaps through new business models;
- Recognize and investigate the opportunity to tap into new sources of data that might support local planning, place-making and operation. These could be beneficial at the day-to-day level or more strategically;
- Encourage links between strategic landowners and connected technology providers, and look for ways to collaborate for long-run community benefit; and
- Support and/or seek national government decisions around connectivity and data standards.

ELECTRIC VEHICLES

- Consider new targets for ultra-low emission zones in specific locations, especially in congested urban locations;
- Support developers and fleet operators in bringing through creative electric vehicle solutions, perhaps in combination with other aspects of New Mobility;

- Encourage electrification for authority-owned/leased fleet vehicles unless limited by operational requirements;
- Establish comprehensive policy standards for electric charging provision by location and land use, without incentivizing inner city private car ownership;
- Expand the availability of rapid charging stations across the on-street network and review parking policies to support the use of shared electric vehicles; and
- Explore policy/pricing measures to encourage smart charging and new business models for the installation of new charging infrastructure.

SHARED USE

- Incentivize collaboration between public and private sector operators in the shared mobility space, and seek consensus around common objectives that benefit each;
- Consider how 'Mobility Orientated Development' might be measured against planning and mobility objectives, explicitly enabling shared mobility to drive development planning processes and support uplifts in development densities;
- Linked to this, investigate the creation of a New Mobility index to measure accessibility levels (considering access to public transport, electric charging, multiple shared mobility options, time mapping and walk/cycle options);
- Develop policy and quality targets for the range of sharing mobility models. These could relate to reliability, cleanliness, affordability service indicators applied to carsharing (car clubs, fractional ownership), ridesharing, public transport and bike sharing in order to achieve specific modal shares and reduction in private car usage; and
- Consider policy incentives for shared mobility options such as preferential parking/drop-off locations, high occupancy lanes or signal prioritization.

NEW BUSINESS MODELS

It is more complex to consider the next steps in business models and revenue in regard to New Mobility; certain models will be the result of uptake in the New Mobility strands, while some business models could influence the development of New Mobility in other areas.

Nevertheless, there is a still a need to consider how HBC could create a fair, sustainable and politically acceptable operating model that is self-maintaining and makes the most of all four aspects of New Mobility, recognizing their unique individual contributions to desirable wider outcomes. At this stage, this is likely to be little more than consideration of various elements, influences, and possible outcomes, although an initial step could be to start to set New Mobility targets and carry out scenario tests for a range of outcomes, reflecting different future values of mobility and time, and then to keep a close watch on the actual influencers of this value in the context of New Mobility change.

Appendix C: Junction Capacity Assessment Results

M65 JUNCTION 6 (EXISTING LAYOUT)

Arm	AM			PM		
	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)
2021 Base						
A6119 Whitebirk Dr	8.8	14.0	65.9%	12.7	15.7	79.3%
A6778 Blackburn Rd	10.2	40.6	70.9%	7.2	57.1	74.6%
M65 WB Off Slip	16.3	21.1	75.5%	12.0	33.7	64.5%
M65 NB Off Slip	7.6	32.5	60.4%	6.5	34.5	40.5%
Frontier Avenue	0.0	0.0	0.0%	0.0	0.0	0.0%
Red Lion	13.0	49.5	84.3%	8.7	21.4	61.5%
PRC / CT	6.8% / 90s			13.5% / 90s		
2026 Base + Com Dev						
A6119 Whitebirk Dr	9.8	15.8	69.9%	13.1	17.8	81.9%
A6778 Blackburn Rd	11.0	42.4	74.5%	7.9	60.5	78.2%
M65 WB Off Slip	17.1	20.4	77.8%	9.8	22.3	55.5%
M65 NB Off Slip	11.9	39.6	84.2%	6.4	35.4	54.2%
Frontier Avenue	2.8	58.4	50.9%	4.5	64.8	67.9%
Red Lion	13.5	51.4	85.8%	17.6	33.3	81.8%
PRC / CT	3.2% / 90s			9.8% / 90s		
2026 Base + Com Dev + Local Plan						
A6119 Whitebirk Dr	10.9	19.8	74.1%	14.9	21.3	84.0%
A6778 Blackburn Rd	12.2	37.9	73.7%	10.4	56.6	81.8%
M65 WB Off Slip	18.9	22.3	81.7%	9.6	22.3	54.6%
M65 NB Off Slip	11.1	41.4	89.5%	7.1	40.3	62.8%
Frontier Avenue	2.7	58.2	50.4%	4.4	64.4	67.5%
Red Lion	11.5	42.0	76.8%	14.1	32.6	83.0%
PRC / CT	0.3% / 90s			6.7% / 90s		

2036 Base + Com Dev						
A6119 Whitebirk Dr	13.2	25.5	82.3%	14.0	17.6	83.1%
A6778 Blackburn Rd	12.7	52.5	83.7%	8.3	62.9	80.4%
M65 WB Off Slip	19.1	26.5	82.1%	9.9	25.7	59.6%
M65 NB Off Slip	10.8	39.1	81.4%	7.3	32.4	47.2%
Frontier Avenue	2.8	58.4	50.9%	3.9	52.4	54.8%
Red Lion	13.0	56.9	88.6%	13.1	30.8	80.4%
PRC / CT	-1.1% / 90s			7.3% / 90s		
2036 Base + Com Dev + Local Plan						
A6119 Whitebirk Dr	11.4	20.5	76.5%	15.5	20.4	85.0%
A6778 Blackburn Rd	12.9	39.3	76.3%	10.9	59.3	84.0%
M65 WB Off Slip	19.5	22.1	82.8%	10.8	25.4	59.4%
M65 NB Off Slip	13.6	46.1	86.8%	7.6	35.0	51.9%
Frontier Avenue	2.8	58.4	50.9%	4.9	76.5	75.4%
Red Lion	15.3	59.0	90.0%	13.7	27.4	74.5%
PRC / CT	-0.1% / 90s			5.6% / 90s		

M65 JUNCTION 7 & A678 / A6185 JUNCTION (EXISTING LAYOUT)

Arm	AM			PM		
	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)
2021 Base						
A6185 Dunkenhalgh Wy (N)	10.3	27.1	79.9%	8.1	21.9	69.4%
M65 WB Off	7.7	38.9	79.1%	3.4	22.4	39.3%
A6185 Dunkenhalgh Wy (S)	8.2	14.8	61.4%	7.4	13.3	56.9%
M65 EB Off	9.8	19.6	68.5%	6.7	23.9	61.0%
Business Park	1.7	76.5	37.1%	5.8	94.4	76.3%
Blackburn Rd	17.2	32.3	71.2%	20.9	32.9	78.1%
A6185	28.7	47.5	89.6%	24.4	40.1	83.4%
Blackburn Rd (W)	15.9	87.5	91.1%	9.9	82.9	82.8%
2026 Base + Com Dev						
A6185 Dunkenhalgh Wy (N)	10.4	27.0	80.2%	8.3	21.0	68.9%
M65 WB Off	8.0	40.2	80.2%	9.5	36.3	81.2%
A6185 Dunkenhalgh Wy (S)	8.1	13.9	60.5%	7.5	13.4	57.7%
M65 EB Off	9.8	18.6	67.6%	6.3	23.1	59.5%
Business Park	1.7	76.5	37.1%	6.0	97.4	78.1%
Blackburn Rd (E)	17.8	32.9	72.6%	21.8	33.8	79.5%
A6185	30.2	51.0	91.4%	25.2	41.3	84.7%
Blackburn Rd (W)	16.8	93.6	92.8%	10.2	85.5	84.2%
2026 Base + Com Dev + Local Plan						
A6185 Dunkenhalgh Wy (N)	10.3	25.2	78.6%	8.5	21.3	70.4%
M65 WB Off	5.1	27.0	56.0%	9.6	36.9	81.9%
A6185 Dunkenhalgh Wy (S)	8.6	14.3	62.7%	7.7	13.7	59.2%
M65 EB Off	10.1	19.0	69.3%	7.2	23.2	62.1%
Business Park	1.8	76.8	37.9%	6.9	121.1	85.9%

Blackburn Rd (E)	8.1	126.1	89.0%	10.2	97.4	87.1%
A6185	37.9	73.5	97.3%	28.5	50.5	90.3%
Blackburn Rd (W)	21.7	120.4	98.1%	11.7	85.3	86.4%
2036 Base + Com Dev						
A6185 Dunkenhalgh Wy (N)	10.4	25.6	79.3%	8.1	18.7	65.5%
M65 WB Off	7.8	36.2	77.7%	10.1	38.7	83.7%
A6185 Dunkenhalgh Wy (S)	8.8	15.4	64.5%	7.8	13.7	59.4%
M65 EB Off	10.4	19.2	69.8%	6.7	23.5	61.4%
Business Park	1.9	77.5	39.5%	6.3	101.7	80.4%
Blackburn Rd (E)	19.1	35.5	76.4%	22.8	35.3	81.7%
A6185	35.7	66.9	96.1%	26.9	44.2	87.3%
Blackburn Rd (W)	17.1	90.2	92.4%	10.9	90.7	86.6%
2036 Base + Com Dev + Local Plan						
A6185 Dunkenhalgh Wy (N)	13.0	30.8	86.7%	9.3	21.1	72.9%
M65 WB Off	5.8	28.4	61.7%	11.4	43.9	87.7%
A6185 Dunkenhalgh Wy (S)	9.5	16.0	67.0%	8.2	14.0	61.0%
M65 EB Off	10.7	19.7	71.5%	7.2	22.1	61.1%
Business Park	2.7	85.3	54.1%	10.7	151.3	95.3%
Blackburn Rd (E)	9.3	144.5	93.1%	13.6	143.1	96.6%
A6185	57.3	139.3	103.7%	40.2	83.7	98.7%
Blackburn Rd (W)	28.3	170.1	102.9%	14.9	118.7	95.0%

M65 JUNCTION 7 & A678 / A6185 JUNCTION (MITIGATION OPTION ONE)

Arm	AM			PM		
	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)
2021 Base						
A6185 Dunkenhalgh Wy (N)	10.0	24.9	77.2%	9.2	21.6	72.4%
M65 WB Off	5.1	28.8	58.3%	9.0	34.9	79.3%
A6185 Dunkenhalgh Wy (S)	8.2	14.8	61.4%	7.0	12.4	55.1%
M65 EB Off	9.3	18.2	66.0%	6.3	20.9	55.1%
Business Park	1.0	72.1	21.6%	2.5	84.4	51.5%
Blackburn Rd (E)	6.2	127.1	85.3%	7.7	82.8	77.6%
A6185	27.7	44.2	88.0%	23.1	36.4	80.4%
Blackburn Rd (W)	14.8	76.6	87.6%	9.3	74.7	78.5%
2026 Base + Com Dev						
A6185 Dunkenhalgh Wy (N)	10.4	25.7	79.0%	9.3	21.8	73.1%
M65 WB Off	8.0	40.2	80.6%	8.7	31.7	76.4%
A6185 Dunkenhalgh Wy (S)	8.1	13.9	60.5%	7.5	13.4	57.7%
M65 EB Off	9.8	18.6	67.6%	6.3	23.1	59.5%
Business Park	1.0	72.1	21.6%	4.0	93.8	67.6%
Blackburn Rd (E)	6.5	132.1	86.7%	8.0	85.1	79.3%
A6185	29.3	47.0	89.8%	23.9	37.3	81.7%
Blackburn Rd (W)	14.9	73.0	90.6%	9.6	76.3	79.8%
2026 Base + Com Dev + Local Plan						
A6185 Dunkenhalgh Wy (N)	11.1	27.1	81.6%	11.0	24.5	79.7%
M65 WB Off	5.3	29.2	60.0%	9.6	36.9	81.9%
A6185 Dunkenhalgh Wy (S)	8.6	14.3	62.7%	8.1	14.7	61.1%
M65 EB Off	10.1	19.0	69.3%	7.2	23.2	62.1%
Business Park	0.9	68.8	17.5%	4.1	94.7	68.3%

Blackburn Rd (E)	8.1	126.1	89.0%	10.2	97.4	87.1%
A6185	37.9	73.5	97.3%	26.8	43.8	87.0%
Blackburn Rd (W)	21.7	120.4	98.1%	11.7	85.3	86.4%
2036 Base + Com Dev						
A6185 Dunkenhalgh Wy (N)	11.2	27.3	81.8%	10.8	24.2	78.9%
M65 WB Off	8.7	43.0	83.3%	9.3	33.1	78.8%
A6185 Dunkenhalgh Wy (S)	9.1	16.6	66.7%	8.2	14.8	61.3%
M65 EB Off	10.7	20.8	72.5%	6.5	21.9	58.5%
Business Park	1.0	72.6	23.3%	4.1	95.5	69.1%
Blackburn Rd (E)	7.1	143.6	89.6%	8.4	88.3	81.3%
A6185	31.9	53.0	92.6%	25.6	39.4	84.3%
Blackburn Rd (W)	17.0	81.4	93.4%	10.1	79.6	82.1%
2036 Base + Com Dev + Local Plan						
A6185 Dunkenhalgh Wy (N)	13.4	32.2	87.8%	11.3	23.1	79.3%
M65 WB Off	5.8	28.4	61.7%	11.4	43.9	87.7%
A6185 Dunkenhalgh Wy (S)	9.5	16.0	67.0%	8.9	16.3	65.1%
M65 EB Off	10.7	19.7	71.5%	7.2	22.1	61.1%
Business Park	1.2	70.6	24.8%	6.6	135.7	87.4%
Blackburn Rd (E)	13.5	238.1	103.4%	11.3	106.9	90.2%
A6185	51.1	114.0	101.8%	32.9	55.0	93.4%
Blackburn Rd (W)	28.3	168.0	102.9%	14.9	118.7	95.0%

M65 JUNCTION 7 & A678 / A6185 JUNCTION (MITIGATION OPTION TWO)

Arm	AM			PM		
	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DOS (%)
2021 Base						
A6185 Dunkenhalgh Wy (N)	10.0	24.9	77.2%	8.7	21.9	71.4%
M65 WB Off	5.1	28.8	58.3%	9.0	34.9	79.3%
A6185 Dunkenhalgh Wy (S)	7.3	11.9	56.0%	7.6	14.3	58.7%
M65 EB Off	8.1	13.7	57.4%	6.5	22.3	57.9%
Business Park	0.8	68.7	16.8%	3.8	91.5	65.4%
Blackburn Rd (E)	5.3	82.6	69.4%	8.1	80.0	77.5%
A6185	17.6	34.3	68.5%	21.5	31.5	73.7%
Blackburn Rd (W)	11.6	62.2	77.8%	8.1	82.2	79.1%
2026 Base + Com Dev						
A6185 Dunkenhalgh Wy (N)	11.0	28.4	82.1%	9.3	24.0	75.6%
M65 WB Off	8.0	40.2	80.6%	8.7	31.7	76.4%
A6185 Dunkenhalgh Wy (S)	7.5	12.0	57.0%	7.5	13.4	57.7%
M65 EB Off	8.8	14.9	60.8%	6.3	23.1	59.5%
Business Park	1.0	72.1	21.6%	4.0	93.8	67.6%
Blackburn Rd (E)	18.0	34.2	73.9%	8.4	82.0	79.0%
A6185	18.2	34.8	69.8%	20.0	33.7	76.2%
Blackburn Rd (W)	11.9	63.6	79.3%	8.3	84.0	80.4%
2026 Base + Com Dev + Local Plan						
A6185 Dunkenhalgh Wy (N)	11.2	27.3	81.8%	9.8	23.3	76.3%
M65 WB Off	5.5	32.0	64.6%	9.0	32.0	77.0%
A6185 Dunkenhalgh Wy (S)	7.9	12.3	59.0%	8.1	14.7	61.1%
M65 EB Off	9.0	15.2	62.3%	7.2	23.2	62.1%
Business Park	0.9	68.8	17.5%	4.1	94.7	68.3%

Blackburn Rd (E)	19.1	35.4	76.2%	21.2	28.9	77.0%
A6185	19.9	38.6	75.2%	24.6	37.6	81.1%
Blackburn Rd (W)	12.4	65.2	80.7%	8.3	78.7	78.2%
2036 Base + Com Dev						
A6185 Dunkenhalgh Wy (N)	11.2	27.3	81.8%	9.2	21.4	72.5%
M65 WB Off	8.7	43.0	83.3%	9.3	33.1	78.8%
A6185 Dunkenhalgh Wy (S)	7.7	12.3	58.8%	8.2	14.8	61.3%
M65 EB Off	8.9	14.2	60.8%	6.7	23.5	61.4%
Business Park	1.0	72.6	23.3%	4.1	95.5	69.1%
Blackburn Rd (E)	19.1	35.5	76.4%	8.7	84.8	80.9%
A6185	19.1	35.7	72.0%	20.9	34.9	78.3%
Blackburn Rd (W)	12.6	66.3	81.7%	8.8	88.2	82.8%
2036 Base + Com Dev + Local Plan						
A6185 Dunkenhalgh Wy (N)	14.2	32.7	88.5%	10.4	21.6	76.2%
M65 WB Off	6.0	31.1	66.1%	11.4	43.9	87.7%
A6185 Dunkenhalgh Wy (S)	8.0	11.8	59.4%	8.9	16.3	65.1%
M65 EB Off	9.6	15.6	64.3%	7.2	22.1	61.1%
Business Park	1.2	70.6	24.8%	6.6	135.7	87.4%
Blackburn Rd (E)	23.1	40.1	83.8%	24.0	30.9	81.4%
A6185	20.3	42.9	80.6%	23.9	41.4	84.8%
Blackburn Rd (W)	13.9	75.7	86.8%	9.3	92.3	84.8%

M65 JUNCTION 8 (EXISTING LAYOUT)

Arm	AM			PM		
	Queue	Delay	LOS	Queue	Delay	LOS
2021 Base						
M65 WB off-slip	3.2	40.11	E	1.5	20.21	C
A56 South	11.7	14.79	B	7.6	10.69	B
M65 EB off-slip	6.0	26.01	D	15.6	57.83	F
A6068	17.2	59.73	F	6.3	21.67	C
2026 Base + Com Dev						
M65 WB off-slip	3.4	39.44	E	1.7	20.80	C
A56 South	22.5	26.48	D	9.2	13.07	B
M65 EB off-slip	12.4	47.73	E	31.0	106.65	F
A6068	29.2	96.45	F	8.6	26.32	D
2026 Base + Com Dev + Local Plan						
M65 WB off-slip	6.9	70.04	F	1.7	25.80	C
A56 South	29.1	34.30	D	12.3	17.10	C
M65 EB off-slip	15.1	57.18	F	40.2	131.88	F
A6068	32.6	101.42	F	10.6	31.77	D
2036 Base + Com Dev						
M65 WB off-slip	4.1	46.91	E	1.8	22.64	C
A56 South	38.1	39.39	E	14.8	18.39	C
M65 EB off-slip	23.3	88.07	F	49.0	164.83	F
A6068	51.2	155.52	F	10.1	31.65	D
2036 Base + Com Dev + Local Plan						
M65 WB off-slip	7.7	77.75	F	2.5	29.79	D
A56 South	44.1	45.58	E	15.4	22.08	C
M65 EB off-slip	24.7	85.35	F	54.4	180.86	F
A6068	47.4	139.63	F	11.4	37.19	E

A678 / A6068 SHUTTLEWORTH MEAD JUNCTION (EXISTING LAYOUT V1)

Arm	AM			PM		
Model as per layout	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)
2026 Base + Com Dev						
Blackburn Road West Left Ahead	2.3	18.9	23.0%	6.2	21.9	54.0%
Blackburn Road West Right	9.2	54.8	84.7%	14.1	59.8	90.8%
A6068 North Left Ahead	14.2	45.8	84.0%	8.6	36.3	64.1%
A6068 North Right	4.7	66.1	70.2%	1.8	55.4	37.1%
Blackburn Road East Ahead Left	7.9	27.7	78.2%	4	30.4	71.9%
Blackburn Road East Right	0.3	33.1	3.8%	1.3	54.8	29.0%
A6068 South Left Ahead	11.5	23.2	82.0%	19	45.3	90.5%
A6068 South Right	7.5	82.5	85.0%	5.3	50.8	62.2%
2026 Base + Com Dev + Local Plan						
Blackburn Road West Left Ahead	2.3	17.3	24.3%	6.6	20.5	55.5%
Blackburn Road West Right	10.7	60.2	88.8%	20.3	84.2	97.4%
A6068 North Left Ahead	15.1	51.1	87.1%	8.9	38.2	66.7%
A6068 North Right	6.8	87.8	84.8%	2.2	57.7	44.2%
Blackburn Road East Ahead Left	9.1	32.4	82.8%	4.2	32	73.7%
Blackburn Road East Right	0.3	34.2	4.0%	1.3	54.9	29.1%
A6068 South Left Ahead	14.5	29.2	88.9%	28.3	85.9	99.3%
A6068 South Right	7.7	84.4	85.8%	5.5	55.2	67.0%
2036 Base + Com Dev						

Blackburn Road West Left Ahead	2.4	18.9	23.7%	6.5	22.4	55.6%
Blackburn Road West Right	10.1	60.2	87.8%	15.7	68.2	93.4%
A6068 North Left Ahead	15.3	49.3	86.8%	9.1	36.9	66.0%
A6068 North Right	5	68.3	72.6%	1.8	55.6	37.7%
Blackburn Road East Ahead Left	9.2	32.5	83.1%	4.2	31.4	73.8%
Blackburn Road East Right	0.3	34.2	4.3%	1.3	55.1	29.8%
A6068 South Left Ahead	12.8	25.7	84.8%	21	52	93.2%
A6068 South Right	8.2	90	87.9%	5.4	51.6	63.9%
2036 Base + Com Dev + Local Plan						
Blackburn Road West Left Ahead	2.5	17.1	25.6%	7	20.9	57.4%
Blackburn Road West Right	12.2	68.3	92.0%	24.5	107.6	100.3%
A6068 North Left Ahead	16.5	56.4	90.0%	9.6	41.3	71.6%
A6068 North Right	7.6	97.1	88.1%	2.4	59.1	47.7%
Blackburn Road East Ahead Left	12.6	50.2	92.0%	4.6	34.1	76.8%
Blackburn Road East Right	0.3	36.4	4.7%	1.3	55.2	29.9%
A6068 South Left Ahead	16.8	35.1	91.9%	36.4	120	102.4%
A6068 South Right	8.7	95.3	89.6%	5.6	52.1	64.8%

Upon review of the modelling presented above, it was noted that the length of lane 1 on arms 1, 3 & 4 required amending to reflect the number of vehicles queueing in the adjacent ahead lane that would starve the left-turn lane. WSP have therefore amended the model to incorporate this change, and the results of the amended version of the model are presented below. It is considered that these results represent a worst-case scenario, and the operational performance of the junction may be better in reality, however it is considered that the true performance of the junction will be more aligned to the amended model compared to the original model.

As presented below, the junction exceeds capacity in the Base + Committed Development scenario in both the AM and PM peaks, and is shown to further exceed capacity with the inclusion of Local Plan traffic. This junction has therefore undergone further testing to understand if there are any proposed measures which can mitigate the impact at the junction.

A678 / A6068 SHUTTLEWORTH MEAD JUNCTION (EXISTING LAYOUT V2)

Arm	AM			PM		
Model as worst-case	**MMQ (PCU)**	**Av. Delay per PCU(s)**	**DoS (%)**	**MMQ (PCU)**	**Av. Delay per PCU(s)**	**DoS (%)**
2026 Base + Com Dev						
Blackburn Road West Left Ahead	2.6	24.9	28.0%	6.8	25.6	59.1%
Blackburn Road West Right	22.9	190.6	105.1%	27.7	160.9	103.9%
A6068 North Left Ahead	11.2	28	65.3%	7.2	25.9	48.9%
A6068 North Right	6.5	108.7	87.80%	1.8	55.4	37.10%
Blackburn Road East Ahead Left	19.5	102.2	100.4%	4	29.8	71.9%
Blackburn Road East Right	0.3	41.3	5.40%	1.3	54.8	29.00%
A6068 South Left Ahead Right	58.6	182.8	106.3%	55.3	176	106.4%
2026 Base + Com Dev + Local Plan						
Blackburn Road West Left Ahead	2.7	25.1	31.4%	7.4	24.8	62.2%
Blackburn Road West Right	31.7	258.4	110.4%	53.5	312	115.3%
A6068 North Left Ahead	10.8	26.7	63.5%	7.2	25.8	48.9%
A6068 North Right	14.5	243.4	106.0%	2.2	57.7	44.2%
Blackburn Road East Ahead Left	53.5	329.2	117.8%	4.2	31.1	73.7%
Blackburn Road East Right	0.3	45.9	6.6%	1.3	54.9	29.1%
A6068 South Left Ahead Right	101.2	322.4	116.5%	82.6	279.6	113.3%

2036 Base + Com Dev						
Blackburn Road West Left Ahead	2.7	25	28.9%	7.1	26.1	60.9%
Blackburn Road West Right	27.6	234.6	108.5%	33.3	199.6	106.9%
A6068 North Left Ahead	11.7	28.7	67.5%	7.6	26.1	50.4%
A6068 North Right	7.2	120.3	90.7%	1.8	55.6	37.7%
Blackburn Road East Ahead Left	25.3	135.4	103.4%	4.2	30.8	73.8%
Blackburn Road East Right	0.3	41.4	5.9%	1.3	55.1	29.8%
A6068 South Left Ahead Right	73.8	235.3	109.8%	67.8	221.5	109.4%
2036 Base + Com Dev + Local Plan						
Blackburn Road West Left Ahead	2.8	25	33.1%	7.9	25.4	64.3%
Blackburn Road West Right	39.1	318.2	114.9%	61.9	358	118.7%
A6068 North Left Ahead	11.5	27.4	65.6%	7.6	26.1	50.4%
A6068 North Right	17.5	291.9	110.1%	2.4	59.1	47.7%
Blackburn Road East Ahead Left	64.3	387	122.2%	4.6	33.2	76.8%
Blackburn Road East Right	0.3	45.9	7.2%	1.3	55.2	29.9%
A6068 South Left Ahead Right	119.1	373.7	120.2%	99.4	333.7	117.1%

A678 / A6068 SHUTTLEWORTH MEAD JUNCTION (MITIGATION OPTION)

Arm	AM			PM		
Mitigation Scheme Results	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)
2026 Base + Com Dev						
Blackburn Road West Left Ahead	2.3	21.1	23.7%	5.9	20.7	51.1%
Blackburn Road West Right	11.2	63.6	88.3%	12.1	44.4	83.8%
A6068 North Left Ahead	13.2	38.9	78.4%	8.5	34.6	61.7%
A6068 North Right	10.5	226.9	103.5%	1.5	50.5	43.8%
Blackburn Road East Ahead Left	8.4	30.1	80.7%	4	30.3	71.9%
Blackburn Road East Right	0.3	34.2	4.0%	1.3	54.8	29.0%
A6068 South Left Ahead Right	21.6	47	93.5%	19.3	37.1	85.2%
2026 Base + Com Dev + Local Plan						
Blackburn Road West Left Ahead	2.5	22	26.5%	6.2	19.8	52.7%
Blackburn Road West Right	19.2	127.3	100.4%	15.4	52.5	90.4%
A6068 North Left Ahead	12.7	36.4	75.9%	13.6	82.8	92.9%
A6068 North Right	25.8	473.7	125.0%	2.1	62	52.1%
Blackburn Road East Ahead Left	12.1	50.5	91.9%	4.2	32.3	73.7%
Blackburn Road East Right	0.3	37.5	4.6%	1.3	54.9	29.1%
A6068 South Left Ahead Right	35.1	85.3	97.3%	24.5	49.3	93.2%
2036 Base + Com Dev						
Blackburn Road West Left Ahead	2.5	21.4	24.4%	6	20.5	51.2%

Blackburn Road West Right	11.3	72.4	91.5%	12.7	46.9	86.2%
A6068 North Left Ahead	14	40.8	81.0%	8.8	35.2	63.6%
A6068 North Right	12.4	265.1	107.0%	1.6	51.3	44.5%
Blackburn Road East Ahead Left	10	36.4	86.0%	3.4	22.8	60.2%
Blackburn Road East Right	0.3	35.3	4.5%	1.2	44.6	21.1%
A6068 South Left Ahead Right	25.1	56	96.7%	21.8	42.9	89.6%
2036 Base + Com Dev + Local Plan						
Blackburn Road West Left Ahead	2.6	21.9	28.0%	6.6	20.4	54.5%
Blackburn Road West Right	22.1	148.9	102.5%	17.2	60.2	93.1%
A6068 North Left Ahead	13.5	37.9	78.4%	15.5	95.9	95.7%
A6068 North Right	29.6	527.3	129.9%	2.3	67.1	56.3%
Blackburn Road East Ahead Left	18.6	88.3	99.0%	4.6	34.5	76.8%
Blackburn Road East Right	0.3	38.8	5.2%	1.3	55.2	29.9%
A6068 South Left Ahead Right	46.7	116	103.5%	28.6	60.3	96.3%

A678 / ALTHAM LANE JUNCTION (EXISTING LAYOUT)

Arm	AM			PM		
	Queue	Delay	RFC	Queue	Delay	RFC
2021 Base						
A678 Burnley Rd (WB)	1.5	9.71	0.61	0.5	5.58	0.35
Altham Ln	0.5	6.45	0.31	4.6	26.6	0.83
A678 Burnley Rd (EB)	0.7	7.35	0.42	0.6	8.42	0.37
Business Park	0	0	0	0	0	0
2026 Base + Com Dev						
A678 Burnley Rd (WB)	1.7	10.5	0.64	0.6	5.67	0.36
Altham Ln	0.5	6.63	0.33	6.0	33.78	0.87
A678 Burnley Rd (EB)	0.8	7.65	0.44	0.6	8.78	0.38
Business Park	0.0	0.00	0.00	0.0	0.00	0.00
2026 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	3.9	20.32	0.81	0.7	6.35	0.42
Altham Ln	0.8	7.98	0.44	65.1	259.15	1.14
A678 Burnley Rd (EB)	1.3	10.2	0.57	0.8	10.4	0.45
Business Park	0	0	0	0	0	0
2036 Base + Com Dev						
A678 Burnley Rd (WB)	1.9	11.18	0.66	0.6	5.78	0.37
Altham Ln	0.5	6.78	0.34	7.5	41.18	0.90
A678 Burnley Rd (EB)	0.8	7.91	0.46	0.7	9.09	0.40
Business Park	0.0	0.00	0.00	0.0	0.00	0.00
2036 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	4.7	23.87	0.84	0.8	6.57	0.44
Altham Ln	0.8	8.26	0.46	80.1	339.9	1.18
A678 Burnley Rd (EB)	1.5	10.99	0.6	0.9	10.72	0.47
Business Park	0	0	0	0	0	0

A678 / ALTHAM LANE JUNCTION (MITIGATION OPTION ONE)

Arm	AM			PM		
	Queue	Delay	Deg Sat	Queue	Delay	Deg Sat
2026 Base + Com Dev						
A678 Burnley Rd (WB)	12.5	27.5	64.9%	11.7	59.9	76.5%
Altham Ln	6.8	46.6	63.6%	19.0	35.7	79.7%
A678 Burnley Rd (EB)	5.8	23.7	46.1%	6.3	37.8	40.8%
Business Park	0.0	34.0	0.2%	0.1	18.8	0.5%
2026 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	17.6	35.2	80.3%	14.9	72.5	86.7%
Altham Ln	10.6	58.5	81.8%	27.9	40.7	90.1%
A678 Burnley Rd (EB)	12.7	47.2	80.9%	10.1	78.3	83.8%
Business Park	0.0	33.1	0.2%	0.0	14.3	0.5%
2036 Base + Com Dev						
A678 Burnley Rd (WB)	13.1	28.1	66.9%	12.9	67.2	82.5%
Altham Ln	7.1	47.5	65.6%	20.1	37.4	81.9%
A678 Burnley Rd (EB)	6.0	24.5	48.7%	6.6	38.0	42.0%
Business Park	0.0	34.0	0.2%	0.1	18.9	0.5%
2036 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	18.9	37.3	83.0%	16.2	77.5	89.4%
Altham Ln	11.1	60.9	83.6%	31.3	49.5	93.5%
A678 Burnley Rd (EB)	14.4	54.8	86.6%	12.1	97.8	91.2%
Business Park	0.0	33.1	0.2%	0.0	14.9	0.5%

A678 / ALTHAM LANE JUNCTION (MITIGATION OPTION TWO)

Arm	AM			PM		
	Queue	Delay	Deg Sat	Queue	Delay	Deg Sat
2026 Base + Com Dev						
A678 Burnley Rd (WB)	14.0	28.4	60.9	11.0	54.6	70.6%
Altham Ln	7.9	51.3	61.5%	16.0	25.3	70.5%
A678 Burnley Rd (EB)	9.0	29.2	47.0%	7.4	54.6	61.8%
Business Park	0.0	38.7	0.2%	0.0	14.5	0.4%
2026 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	18.8	33	73.7%	13	56	76.0%
Altham Ln	12.4	66.5	82.4%	31.9	54.4	94.4%
A678 Burnley Rd (EB)	15.8	60.6	85.0%	14.3	122.8	95.6%
Business Park	0.0	38.7	0.2%	0.0	15.9	0.5%
2036 Base + Com Dev						
A678 Burnley Rd (WB)	14.7	29.0	62.8%	11.7	56.3	73.4%
Altham Ln	8.2	52.2	63.5%	16.7	26.2	72.5%
A678 Burnley Rd (EB)	9.5	30.5	49.5%	7.6	55.3	63.1%
Business Park	0.0	38.7	0.2%	0.0	14.6	0.4%
2036 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	19.7	32.9	74.9%	13.6	55.6	77.0%
Altham Ln	13.6	75.7	87.0%	37.8	73.3	98.0%
A678 Burnley Rd (EB)	17.7	68.7	89.4%	15.9	134.6	97.7%
Business Park	0.0	39.6	0.2%	0.0	16.4	0.5%

A678 / ALTHAM LANE JUNCTION (MITIGATION OPTION THREE)

Arm	AM			PM		
	Queue	Delay	RFC	Queue	Delay	RFC
2026 Base + Com Dev						
A678 Burnley Rd (WB)	0.5	2.76	0.31	0.2	2.22	0.18
Altham Ln	0.2	2.63	0.16	0.7	3.90	0.43
A678 Burnley Rd (EB)	0.3	2.89	0.23	0.2	3.10	0.18
Business Park	0.0	0.00	0.00	0.0	0.00	0.00
2026 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	0.6	3.22	0.39	0.2	2.33	0.21
Altham Ln	0.3	2.82	0.22	1.2	5.05	0.56
A678 Burnley Rd (EB)	0.4	3.20	0.29	0.3	3.46	0.22
Business Park	0.0	0.00	0.00	0.0	0.00	0.00
2036 Base + Com Dev						
A678 Burnley Rd (WB)	0.5	2.81	0.32	0.2	2.24	0.19
Altham Ln	0.3	2.65	0.17	0.8	5.00	0.44
A678 Burnley Rd (EB)	0.4	2.93	0.24	0.2	3.15	0.19
Business Park	0.0	0.00	0.00	0.0	0.00	0.00
2036 Base + Com Dev + Local Plan						
A678 Burnley Rd (WB)	0.7	3.30	0.41	0.3	2.36	0.22
Altham Ln	0.3	2.85	0.23	1.3	5.27	0.57
A678 Burnley Rd (EB)	0.4	3.28	0.31	0.3	3.54	0.23
Business Park	0.0	0.00	0.00	0.0	0.00	0.00

A678 / B6535 HARWOOD ROAD JUNCTION (EXISTING LAYOUT)

Arm	AM			PM		
	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)
2021 Base						
A678 EB Left Ahead Right	22.6	136.8	101.30%	35.4	205.9	107.10%
B6535 SB Left	8.8	35.4	64.30%	4.2	38	43.80%
B6535 SB Right Ahead	28.2	179.2	104.80%	24.2	211.5	106.10%
A678 WB Left Ahead Right	19	143.7	101.7%	24.3	143	102.5%
Eachill Road Left Ahead Right	2.6	33.4	30.80%	2.1	36.6	24.30%
2026 Base + Com Dev						
A678 EB Left Ahead Right	31.5	202.3	106.60%	38.5	214.2	107.90%
B6535 SB Left	8.8	34.2	63.20%	4.3	38.1	44.50%
B6535 SB Right Ahead	32.5	201.4	106.50%	32.4	285	111.60%
A678 WB Left Ahead Right	30.9	252.8	110.2%	36.9	36.9	109.5%
Eachill Road Left Ahead Right	2.6	32.7	31.50%	2.1	36.8	25.10%
2026 Base + Com Dev + Local Plan						
A678 EB Left Ahead Right	56.1	343.6	117.10%	78.8	411.7	122.80%
B6535 SB Left	9.2	36.2	66.40%	4.4	38.4	46.00%
B6535 SB Right Ahead	64.4	407.9	121.70%	46.2	395.7	120.00%
A678 WB Left Ahead Right	47.7	345.1	117.4%	64	401.1	122.2%
Eachill Road Left Ahead Right	2.7	34.1	33.20%	2.1	36.8	25.10%
2036 Base + Com Dev						

A678 EB Left Ahead Right	38	247.4	109.90%	45.3	254.3	110.80%
B6535 SB Left	9.2	34.9	65.40%	4.4	38.4	45.70%
B6535 SB Right Ahead	41.2	259.8	110.70%	37.8	331.3	115.00%
A678 WB Left Ahead Right	36.9	298.9	113.6%	43.7	278.5	112.7%
Eachill Road Left Ahead Right	2.7	32.9	32.40%	2.2	36.9	25.70%
2036 Base + Com Dev + Local Plan						
A678 EB Left Ahead Right	65.5	395.8	121.20%	90.2	462.4	127.00%
B6535 SB Left	9.8	37.4	69.40%	4.7	39	48.20%
B6535 SB Right Ahead	77.1	477.9	127.40%	53.7	451.3	124.50%
A678 WB Left Ahead Right	58.8	416.9	123.1%	75.1	458.9	127.0%
Eachill Road Left Ahead Right	2.8	35	35.80%	2.2	37.1	25.70%

A678 / B6535 HARWOOD ROAD JUNCTION (MITIGATION OPTION)

Arm	AM			PM		
	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)	MMQ (PCU)	Av. Delay per PCU(s)	DoS (%)
2021 Base						
A678 EB Left Ahead Right	14.0	55.1	81.7%	13.9	37.6	68.8%
B6535 SB Left	8.8	29.7	51.0%	4.5	35.7	33.4%
B6535 SB Right Ahead	14.0	51.2	82.5%	11.6	62.0	81.5%
A678 WB Left Ahead Right	6.6	48.2	73.4%	10.2	48.7	81.1%
Eachill Road Left Ahead Right	2.6	29.1	22.4%	2.3	35.3	18.4%
2026 Base + Com Dev + Local Plan						
A678 EB Left Ahead Right	22.4	88.5	96.0%	22.3	59.4	90.8%
B6535 SB Left	9.3	31.2	53.9%	4.8	37.0	36.3%
B6535 SB Right Ahead	24.0	102.6	98.3%	17.3	100.8	95.3%
A678 WB Left Ahead Right	15.8	116.8	99.5%	18.4	101.2	98.6%
Eachill Road Left Ahead Right	2.8	30.4	24.4%	2.4	36.4	19.6%
2036 Base + Com Dev + Local Plan						
A678 EB Left Ahead Right	23.0	86.9	96.0%	23.4	60.0	91.5%
B6535 SB Left	10.1	32.9	57.7%	5.2	38.5	39.3%
B6535 SB Right Ahead	36.9	185.1	105.7%	24.4	161.5	102.4%
A678 WB Left Ahead Right	23.6	171.3	104.6%	24.8	142.6	102.6%
Eachill Road Left Ahead Right	2.9	32.0	26.8%	2.4	37.7	20.8%

A678 CUT LANE (MITIGATION OPTION)

Arm	AM			PM		
	Queue	Delay	RFC	Queue	Delay	RFC
2026 Base + Com Dev + Local Plan						
Cut Lane	0.9	18.77	0.47	0.3	16.63	0.26
A678 E	0.0	5.59	0.03	0.1	7.8	0.09
2036 Base + Com Dev + Local Plan						
Cut Lane	0.9	19.68	0.49	0.4	17.13	0.28
A678 E	0.0	5.58	0.04	0.1	7.89	0.09

A678 SIDEBEET LANE (MITIGATION OPTION ONE)

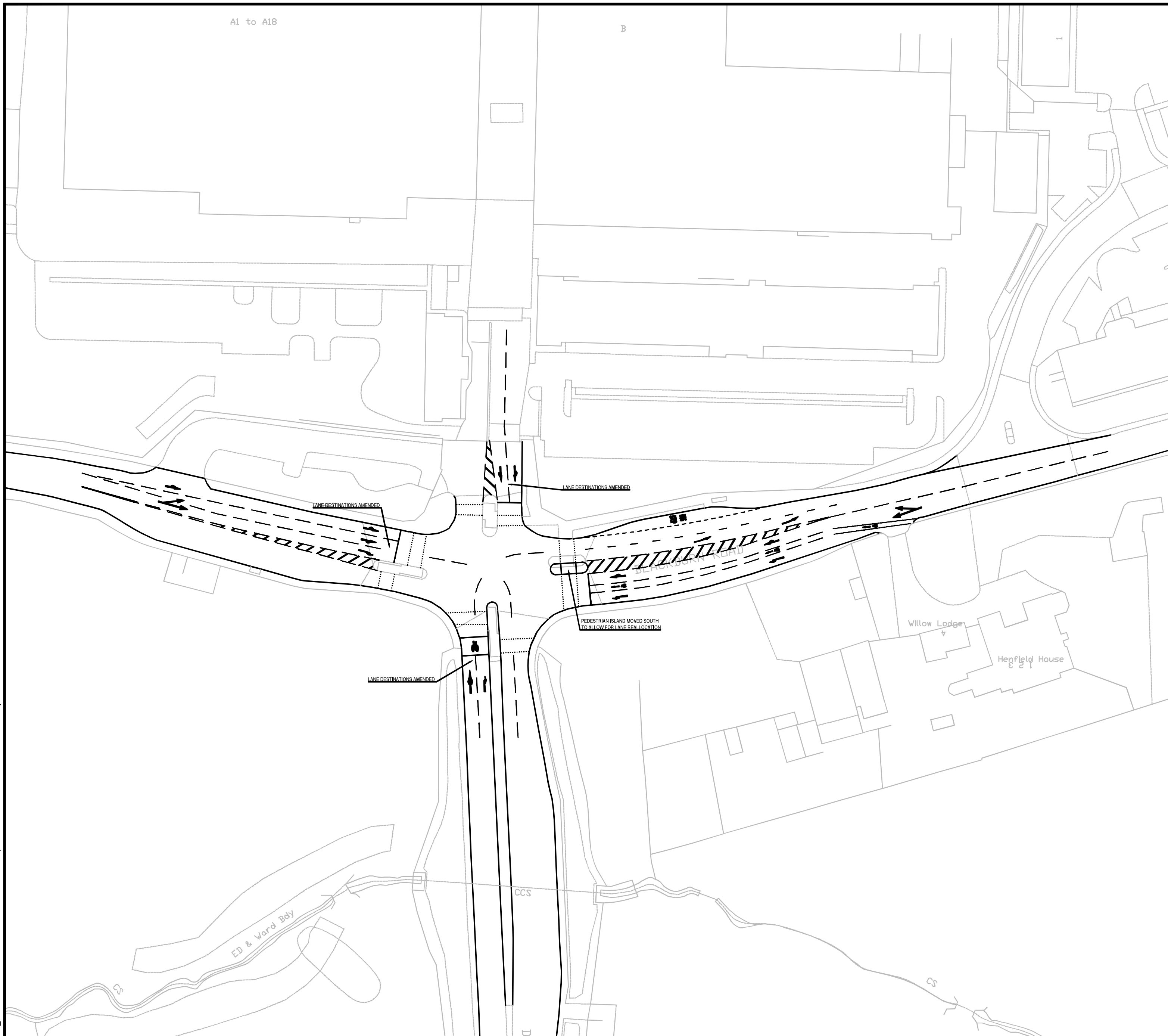
Arm	AM			PM		
	Queue	Delay	RFC	Queue	Delay	RFC
2036 Base + Com Dev + Local Plan						
Site R	0.0	8.91	0.03	0.1	7.35	0.05
Site L	0.0	18.67	0.04	0.1	16.48	0.08
A678 E	0.2	7.17	0.19	0.1	8.06	0.10
Sidebeet L	0.1	7.71	0.10	1.2	35.90	0.56
Sidebeet R	0.4	18.32	0.29	3.0	64.20	0.78
A678 W	0.1	8.98	0.06	0.0	6.81	0.02

A678 SIDEBEET LANE (MITIGATION OPTION TWO)

Arm	AM			PM		
	Queue	Delay	Deg Sat	Queue	Delay	Deg Sat
2036 Base + Com Dev + Local Plan						
A678 Blackburn Rd (E) (R + A)	17.8	14.6	74.3%	5.8	13.5	37.4%
Sidebeet Ln (L + R)	5.5	111.7	84.2%	8.7	81.3	85.1%

A678 Blackburn Rd (WB) (L + A)	26.1	21.4	86.0%	11.8	16.1	53.1%
A678 Blackburn Rd (EB) (A + L)	2.5	8.3	37.3%	22.1	20	83.5%
Site Access (R + L)	0.6	57.2	13.2%	1.1	44.9	15.6%
A678 Blackburn Rd (W) (A + R)	4.5	9.2	31.1%	15.6	16.8	67.0%

Appendix D: Highway Mitigation Concept Layouts



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DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: HYNDBURN COUNCIL

ARCHITECT: -

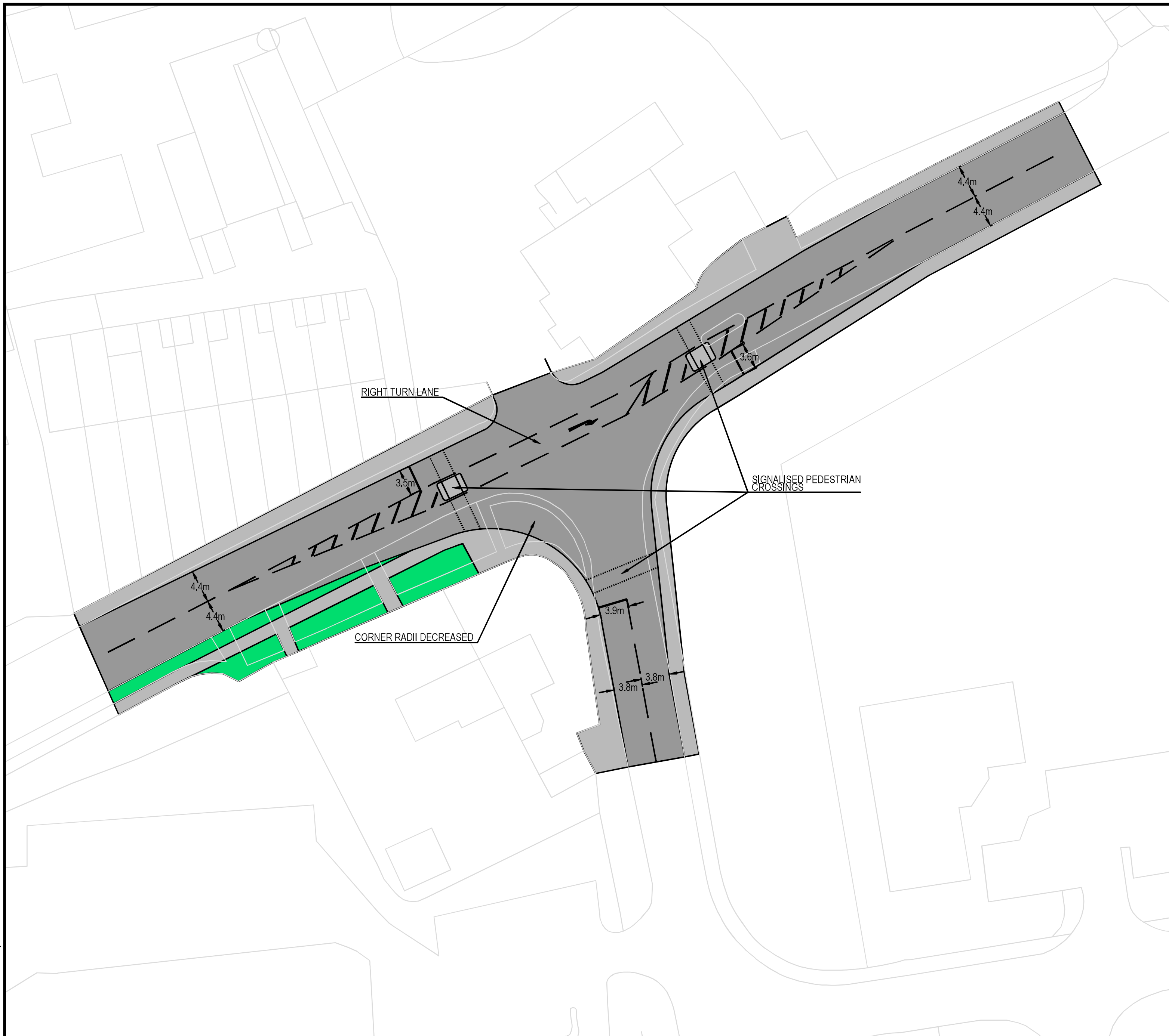
PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: M65 J7 / A678 / A6185
OPTION 2

SCALE @ A3: 1:1000	CHECKED: JR		APPROVED: JR
PROJECT No: 70077206	DESIGNED: DJS	DRAWN: DJS	DATE: December 21

DRAWING No: 7206-MJ7-001 | REV: P01

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70077XXX\70077206 - HYNDBURN COUNCIL HIGHWAYS CAPACITY STUDY\03 WIP\TP TRANSPORT PLANNING\01 ANALYSIS & CALCS\10 MODELLING CALCS\M65 J7 & A678_A6185\MEASUREMENTS\7206-MJ7-001.DWG, printed on 14 December 2021 14:26:19, by Skinner, Daniel



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CLIENT: HYNDBURN COUNCIL

ARCHITECT: -

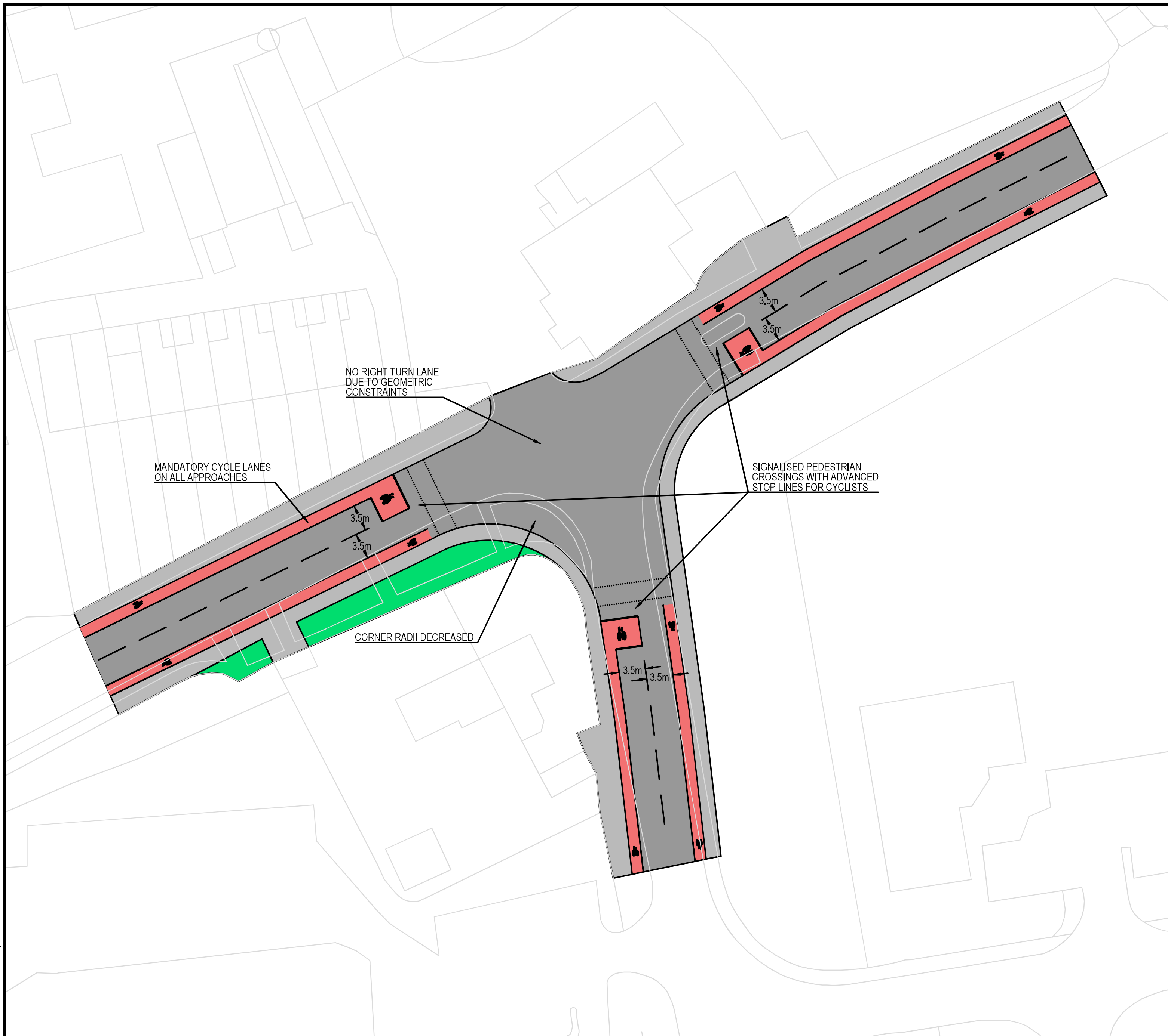
PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BURNLEY ROAD / ALTHAM LANE SIGNALISED OPTION 1

SCALE @ A3: 1:500	CHECKED: JR		APPROVED: JR
PROJECT No: 70077206	DESIGNED: DJS	DRAWN: DJS	DATE: October 21

DRAWING No: 7206-ALT-001 REV: P01

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70077XXX\70077206 - HYNDBURN COUNCIL HIGHWAYS CAPACITY STUDY\03 WIP\TP TRANSPORT PLANNING\01 ANALYSIS & CALCS\10 MODELLING CALCS\A678 ALTHAM LANE\7206-ALT-001.DWG, printed on 14 December 2021 13:33:52, by Skinner, Daniel



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PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BURNLEY ROAD / ALTHAM LANE SIGNALISED OPTION 2

SCALE @ A3:	CHECKED:		APPROVED:
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PROJECT No: 70077206	DESIGNED: DJS	DRAWN: DJS	DATE: October 21

DRAWING No: 7206-ALT-002 REV: P01

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CLIENT: HYNDBURN COUNCIL

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PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BURNLEY ROAD / ALTHAM LANE ROUNDABOUT OPTION

SCALE @ A3: 1:500	CHECKED: JR		APPROVED: JR
PROJECT No: 70077206	DESIGNED: DJS	DRAWN: DJS	DATE: October 21

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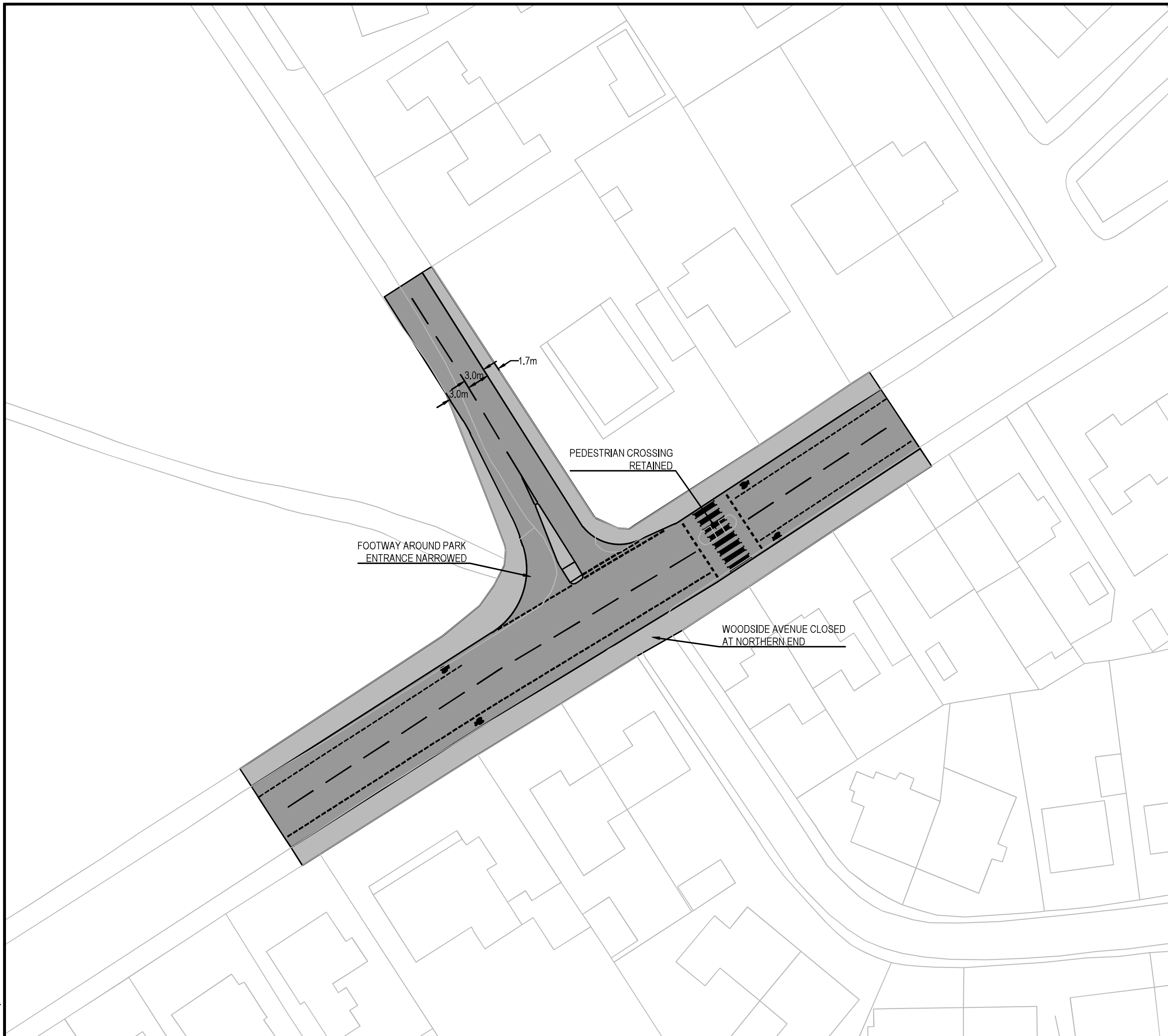

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CLIENT: HYNDBURN COUNCIL

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PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BLACKBURN ROAD / CUT LANE PROPOSED PRIORITY JUNCTION

SCALE @ A3:	CHECKED:	APPROVED:
1:500	JR	JR

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70077206	DJS	DJS	October 21

DRAWING No: 7206-CUT-001 REV: P01

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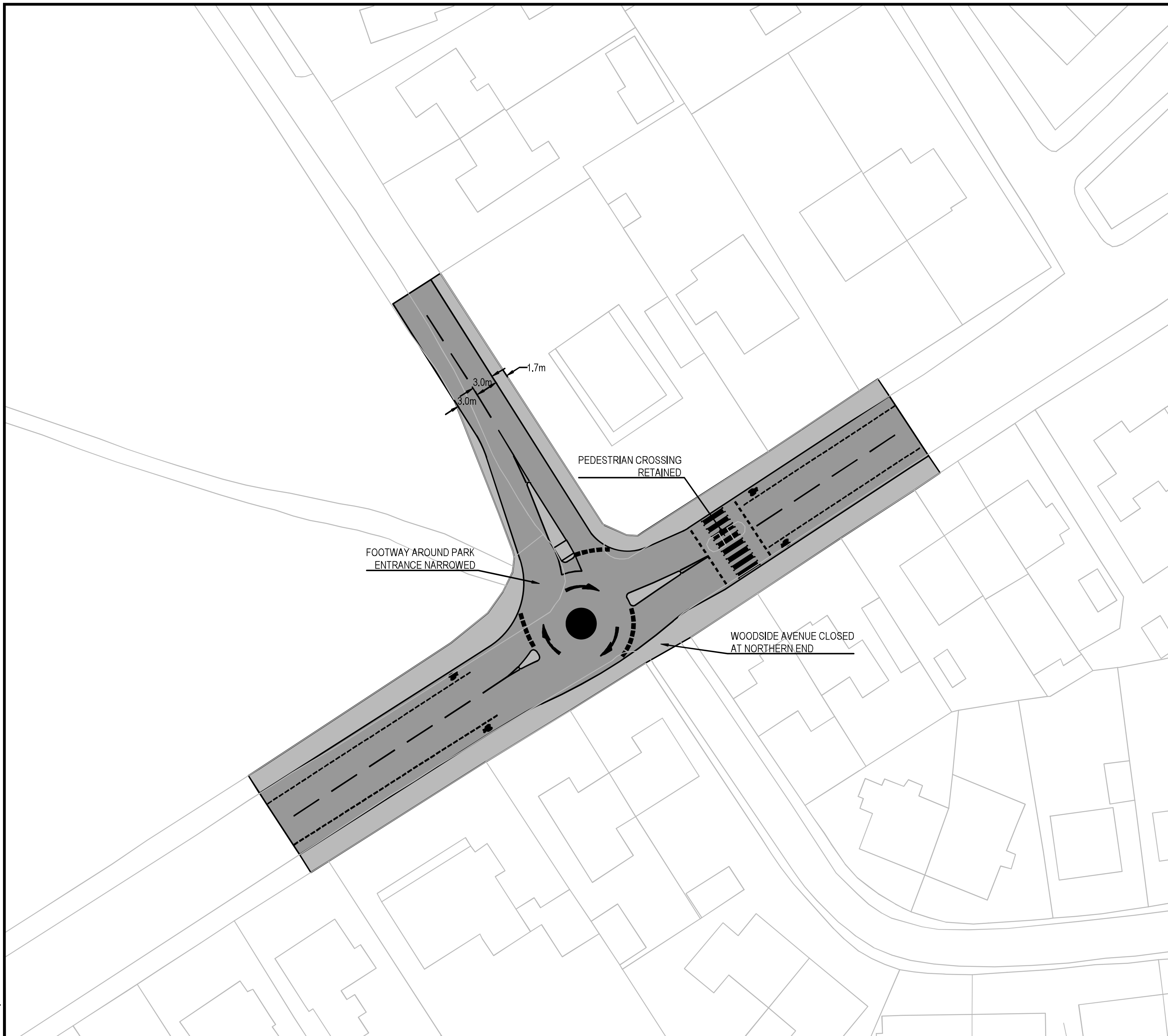

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PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BLACKBURN ROAD / CUT LANE PROPOSED MINI ROUNDABOUT

SCALE @ A3:	CHECKED:		APPROVED:
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PROJECT No:	DESIGNED:	DRAWN:	DATE:
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DRAWING No: 7206-CUT-002

REV: P01

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CLIENT: HYNDBURN COUNCIL

ARCHITECT: -

PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BLACKBURN ROAD / SIDEBEET LANE PROPOSED PRIORITY CROSSROAD

SCALE @ A3: 1:1000	CHECKED: JR		APPROVED: JR
PROJECT No: 70077206	DESIGNED: DJS	DRAWN: DJS	DATE: October 21

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CLIENT: HYNDBURN COUNCIL

ARCHITECT: -

PROJECT: HYNDBURN HIGHWAYS CAPACITY STUDY

TITLE: A678 BLACKBURN ROAD / SIDEBEET LANE PROPOSED SIGNALISED CROSSROADS

SCALE @ A3:	CHECKED:		APPROVED:
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PROJECT No: 70077206	DESIGNED: DJS	DRAWN: DJS	DATE: October 21

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Response to National Highways Comments

DATE:	31 October 2022	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Response to National Highways Comments on Local Plan Transport Study Report		
PROJECT:	Hyndburn Borough Council: Local Plan Transport Study	**AUTHOR:**	JR
CHECKED:	JR	**APPROVED:**	NM

Introduction

The purpose of this Technical Note is to provide a response to the comments received from National Highways in June 2022 on the Hyndburn Local Plan Transport Study Report.

The subheadings below correspond to the comments received from National Highways, where a response is required from WSP. Comments from National Highways are shown in blue text to differentiate from WSP's responses in black.

Proposed Site Allocations

National Highways has requested clarity over the Huncoat Garden Village (Huncoat GV) proposals: *"It is noted by National Highways that the proposed Huncoat GV is not included within the local plan"*

To clarify, Huncoat GV forms a key part of the new Local Plan. It will deliver around 1,500-1,600 new homes (some of which will be delivered beyond the Plan period), a village centre and associated infrastructure, As stated in the Transport Study Report, in terms of the overall transport and highway impacts, Huncoat GV is covered by the Huncoat Masterplan work. The supporting transport and highway assessment work has been undertaken by Arcadis.

National Highways has also requested clarification in relation to the status of the employment element of the Huncoat GV and whether this is sites 49, 60 and 218 of the proposed Local Plan allocations.

Hyndburn Borough Council (HBC) has confirmed that: large scale employment uses no longer form part of the Huncoat GV masterplan. There is a village centre that will comprise a mix of retail and local service provision. Although the adopted Core Strategy (2012) allocated the former power station site for strategic employment development, it was not possible to reconcile a high-quality housing development immediately adjacent to strategic employment site. The decision was therefore taken to develop housing at Huncoat GV and move the employment allocation north to Altham Business Park Extension (site allocations 49, 60 and 218). This allowed a strategic housing site (Huncoat GV) to be developed at Huncoat and the employment uses to be developed on land adjacent to Altham in a manner that shouldn't allow the employment development to prejudice the high-quality housing.

The Huncoat GV proposals include the integration of sustainable travel solutions across all modes of transport, including through: the delivery of a new link road, cycle and pedestrian infrastructure; mitigation of any road infrastructure impacts; delivery of a well-networked, safe streetscape environment that encourages by default, active modes of travel (walking and cycling) for short distances and everyday conveniences; smart infrastructure for clean vehicular travel options, across both private and shared/passenger transport modes.

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Previous Studies

National Highways states that it: *"has no plans to introduce such* (widening) *schemes on the M65; with widening of the M65 between junctions 2 and 6 being discounted* (in previous studies) *as not representing value for money. It should be further noted that it is not certain, moreover unlikely, that such improvements would come forward during the lifetime of the emerging Local Plan. Any improvements to the M65 through the RIS process are unlikely to delivered in the near to medium term."*

This point is accepted, and widening of the M65 is not necessary in order to deliver the planned level of growth. Notwithstanding, we recommend that HBC continues to work collaboratively with National Highways throughout the plan period, to share any data and intelligence which can help to inform the Route Strategy process and RIS pipeline.

National Highways states in relation to M65 Junction 8: *"Hyndburn Borough Council should note that an improvement scheme for M65 Junction 8 does not form part of National Highways' current funded programme of improvements during the RIS2 period."*

This point is noted. We recommend that HBC continues to work collaboratively with National Highways throughout the plan period, to develop an appropriate solution and secure funding from appropriate source(s). Further comments on M65 Junction 8 are provided later in this Note.

Baseline Analysis

National Highways confirm that it accepts the analysis of baseline data in the study, with the suggestion that, as part of the Local Plan review process, consideration is given to collecting new traffic data to review the operation of the network where appropriate.

We suggest that HBC will be open to this suggestion at appropriate points throughout the plan period.

Sustainable Transport Assessment

National Highways states that: *"WSP have also undertaken analysis of other core accessibility indicators and produced a comprehensive RAG matrix for all the proposed sites in the allocation – this is noted however there is no information related to how the overall site rating has been calculated i.e. some factors will have more weight in terms of the impact than others – as such this should be clarified."*

This is a high level analysis of overall sustainability which is intended to enable a comparison between the proposed site allocations and identify those which score lower. For simplicity, the categories were given equal weighting. The overall site rating is an average of the scores across all categories. This was calculated by assigning a numeric score of 1-5 for the five RAG colours, then summing all scores for a site and dividing by the number of categories to calculate the average score.

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In addition to sites 49, 60 and 218 highlighted by WSP as requiring sustainable transport improvements, National Highways have also noted the amber rating of sites 24, 228 and 229 which may also indicate that improvements are required.

This point is accepted, and site-specific sustainable transport mitigation measures for sites 24, 228 and 229 are presented in Table 7-3 of the Transport Study.

Sustainable Transport Measures

National Highways states that: *"WSP have identified measures on the local road network to improve accessibility on the network which if implemented could lead to a shift in mode of transport however further details such as cost, and year of construction should be set out."*

The measures presented in the Transport Study are suggested measures which are appropriate to identify at this stage in plan-making process but would need further work to sift, cost and appraise. As further work is undertaken during the plan period, HBC will work with National Highways to share details once these are available.

Traffic Forecasting and Survey Data

In the Transport Study, to provide a consistent base year dataset (up to 2021), the various traffic survey data has been growthed to a base year of 2021 (2015, 2017 and 2018) where required. For this, TEMPRO v7.2 was used to extract suitable growth factors for Hyndburn borough, for the weekday AM and PM peak period. National Highways has accepted the approach and agrees that the growth factors are acceptable. We therefore consider no further action is required on this.

In terms of committed development, National Highways considers the approach taken to be reasonable, but has requested confirmation that the level of applied alternative assumptions within TEMPRO does not include the discounted committed development sites.

To confirm, as per Table 8-3 of the Transport Study, only two committed developments – both employment sites - were subject to the manual trip generation and assignment exercise in the build-up of the traffic flow scenarios. All other committed developments were deemed to be small in scale and/or remote from the study area junctions, meaning any traffic impacts would be negligible. For the two committed developments selected, the number of jobs for each was calculated and manually deducted using the alternative assumptions in TEMPRO, to avoid double counting.

National Highways has also requested clarity as to whether the full proposed Huncoat GV is included within the assessment given that this is a substantial allocation within the emerging Local Plan.

As per paragraph 9.3.15 of the Transport Study, Arcadis were appointed by HBC to undertake a transport study focussed on Huncoat Garden Village, to support the development of the masterplan. Notwithstanding, WSP approached Arcadis to request information from that study to enable a more detailed

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assessment of M65 Junction 8 given the proximity of Huncoat GV to the junction. As such, the assessments of M65 Junction 8 include the Huncoat GV traffic which has been manually added in, totalling 178 trips in total at M65 J8 during the AM peak, and 127 trips in total during the PM peak. The TEMPRO alternative assumptions were not adjusted again at this point - the adjusted growth factors presented in Table 8-2 of the Transport Study were used as per the other assessed junctions. Therefore the assessments are considered to have a built-in level of robustness.

For the other study area junctions, the Huncoat GV trips were not manually accounted for, however it can be assumed that the underlying TEMPRO factors used in the build-up of traffic flow scenarios include a level of growth at Huncoat. Furthermore, there would be significant dissipation of Huncoat GV trips through the network which would reduce any impact.

Trip Generation Methodology

National Highways has accepted the trip generation methodology and stated that it would be useful to include an aggregate total to show the total of trips across all sites. This is provided below (excluding Huncoat Garden Village):

Table 1 Aggregate Trip Generation for Local Plan Site Allocations (excl. Huncoat GV)

TOTAL Trips 2021-2036					
Weekday AM Peak			Weekday PM Peak		
Arr	Dep	Total	Arr	Dep	Total
748	651	**1398**	595	786	**1379**

The latest information received from Arcadis on Huncoat GV sets out the following trip generation (this is based on an earlier proposal of 1,793 dwellings which exceeds the current proposal of around 1,500-1,600 dwellings):

Table 2 Arcadis Trip Generation for Huncoat GV

Weekday AM Peak			Weekday PM Peak		
Arr	Dep	Total	Arr	Dep	Total
259	791	**1050**	680	328	**1008**

National Highways has also requested that the associated traffic flow diagrams are provided so that these can be checked to assess the number of the trips on the SRN network.

Traffic flow diagrams showing the Local Plan trips at each of the M65 junctions in the 2026 and 2036 AM and PM peak periods are provided in Appendix A.

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Trip Distribution and Assignment

National Highways agrees with the methodology used to distribute trips across the highway network.

Junction Assessments

National Highways agrees with the methodology used in the junction assessments and states that it would welcome information related to validation of the base year models based on typical (non-COVID) conditions which can then be used to forecast future impacts.

As described in the Transport Study, due to the effects of the COVID-19 pandemic at the time of preparing the study, a desk-based approach was used in the junction modelling work, which was largely based on traffic data collected prior to the pandemic. As such, we have recommended that new traffic surveys are undertaken in the future, particularly for junctions where mitigation has been identified, to verify the assessments and confirm the appropriate level of mitigation needed.

M65 Junction 6

National Highways has requested a copy of the LinSig file so the modelling inputs can be checked and agreed.

This is provided alongside this Technical Note.

Based on the results of the modelling, the Transport Study states that no specific highway mitigation measures are required to support the proposed Local Plan growth. However, it is recommended that this junction undergoes continued monitoring in conjunction with colleagues at Blackburn with Darwen Council throughout the early stage of the Local Plan period, with further modelling work undertaken where required.

National Highways have confirmed that the results of their own study of the junction supports this conclusion. The National Highways study was informed by new traffic survey data and examined the impacts of cross-boundary Local Plan growth in the area in greater detail using microsimulation modelling.

National Highways has stated that it will support the proposal of monitoring the operation of the junction and this could then be linked to the Local Plan Review process.

M65 Junction 7

National Highways has requested a copy of the LinSig file so the modelling inputs can be checked and agreed.

This is provided alongside this Technical Note.

National Highways reiterates the recommendation made in the Transport Study that M65 Junction 7 undergo continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken where required.

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CHECKED:	JR	**APPROVED:**	NM

National Highways has requested that, given the proximity to the SRN, that the junction with the A678 Blackburn Road is also included within any modelling assessment. To confirm, this junction is included within the modelling, as shown in the results table in Appendix C of the Transport Study.

National Highways has undertaken its own study of M65 Junction 7 which uses microsimulation modelling and identified the following improvement scheme:

- Upgrade of the A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads to allow two lanes for the south to east and west to east movements. This change involves the reduction in lanes from three to two on the westbound approach, to accommodate the two lane eastbound exit.

National Highways has requested that the requirement for this upgrade should be set out more strongly within the Local Plan along with the approaches to delivery and funding at the appropriate time, so that so that any trigger levels can be identified and included within the Local Plan itself.

The improvement scheme identified in the National Highways study for the A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads is broadly the same as the Option 2 mitigation scheme presented in the Local Plan Transport Study. The only difference in the Option 2 scheme presented in the Local Plan Transport Study is minor and involves a change to the lane allocation on the northern arm (Business Park egress) and associated rearrangement of the signal staging. This is useful in that both studies have identified that a scheme is needed at the junction, and the use of two modelling software packages (LinSig and VISSIM) has reached similar conclusions and provides evidence that a scheme akin to that which is proposed in both studies would provide sufficient capacity to accommodate the full build out of the Local Plan allocations.

As per chapter 10 of the Local Plan Transport Study, the existing layout of the A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads is forecast to begin to exceed capacity in 2026 with the addition of the traffic generated by the Local Plan, so a scheme may be required in advance of this, though it is recommended that this is confirmed through the continued monitoring of the junction throughout the early stage of the plan period and further modelling work. The modelling of Option 2 in the Local Plan Transport Study shows that it would provide sufficient capacity for the Local Plan traffic up to 2036 during both weekday peak hours, and the scheme is costed at £35,000 as per Table 10-1.

Table 10-2 of the Local Plan Transport Study provides an overview of the proportional impacts of the Local Plan site allocations on the junction. This shows that Site 250 (Land west of J7 Business Park) contributes 27% of new trips at the junction, and Site 230 (Land north of railway line between Sidebeet Lane and L&L Canal) contributes 10% of new trips. 13 other sites have impacts lower than 10%. Overall, this demonstrates that the impacts at the junction are cumulative across a number of sites and are not linked to one single site.

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M65 Junction 8

This junction has been assessed as part of the Hyndburn Local Plan Transport Study using LinSig junction modelling software, and in the National Highways' M65 Junction 8 Study in March 2021, using VISSIM microsimulation modelling. The response from National Highways includes comments on the M65 Junction 8 study report. For clarity, that study was undertaken and report produced by a separate team in WSP on behalf of National Highways. As such, we have not responded to comments on that study here.

The specific comments from National Highways and our response are provided below. However, as per paragraph 9.3.16 of the Local Plan Transport Study, we suggested that the National Highways microsimulation model could be used in the future to undertake further modelling work of the Local Plan proposals including Huncoat GV, and the interaction with the Shuttleworth Mead junction. Having reviewed the comments from National Highways, we suggest that a piece of work is undertaken now to bring together the current growth proposals for the Local Plan, including Huncoat GV, along with any relevant committed developments (e.g. Burnley Bridge). Updated traffic forecasts would be produced and agreed with National Highways before being tested in the VISSIM model, and the results analysed. We suggest that this is the optimum way of bringing together the work undertaken in the Local Plan Transport Study, National Highways M65 Junction 8 study, and the Huncoat Masterplan work.

A response to the other comments from National Highways on the M65 Junction 8 work is provided below.

National Highways has requested clarity in relation to the inclusion/exclusion of the development trips related to the Huncoat GV.

WSP approached Arcadis to request information from the Huncoat Masterplan work to enable a more detailed assessment of M65 Junction 8, given the proximity of Huncoat GV to the junction. As such, the assessments of M65 Junction 8 presented in the Local Plan Transport Study include the Huncoat GV traffic which has been manually added in, totalling 178 trips in total at M65 J8 during the AM peak, and 127 trips in total during the PM peak. These additional trips were included in the junction assessments for both assessment years of 2026 and 2036. The TEMPRO alternative assumptions were not adjusted again to manually deduct the number of dwellings associated with Huncoat GV - the adjusted growth factors presented in Table 8-2 of the Transport Study were used as per the other assessed junctions. Therefore the assessments are considered to have a built-in level of robustness.

In terms of the comment relating to trip rates used in the studies, the differences in trip rates may arise from changes in the proposals at Huncoat GV over time and the studies being undertaken at different points in time. For the Local Plan Transport Study, the source of the Huncoat GV trips was the 'Huncoat Residential Flows Option 6' document received from Arcadis on 21st April 2021, which we were informed was the most up to date and appropriate information to use. It is based on a proposed development totalling 1,793 dwellings and the total trips are shown below:

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Key
PCU
HGV

Units: 1793

Distribution	Arrivals		Departures		Total	
Whinney Hill Rd	70	27%	213	27%	283	27%
Altham Lane	41	16%	127	16%	168	16%
Burnley Rd West	52	20%	158	20%	210	20%
Burnley Rd East	96	37%	293	37%	388	37%
Total	259	100%	791	100%	1050	100%

The information from Arcadis showed the distribution and assignment of these trips as far as the A679/A56 junction (but not at M65 J8). From this information, we were able to identify the number of trips on the A56 immediately south of M65 Junction 8. To calculate the turning movements at Junction 8 itself, in the absence of this information in the Arcadis work, we based this on existing turning proportions from the traffic survey data held for the junction. The calculated distribution of trips is shown below, and as explained above, these additional trips were included in the junction assessments for both assessment years of 2026 and 2036.

Figure 1 Distribution and Assignment of Huncoat GV trips at M65 Junction 8 - AM Peak Hour

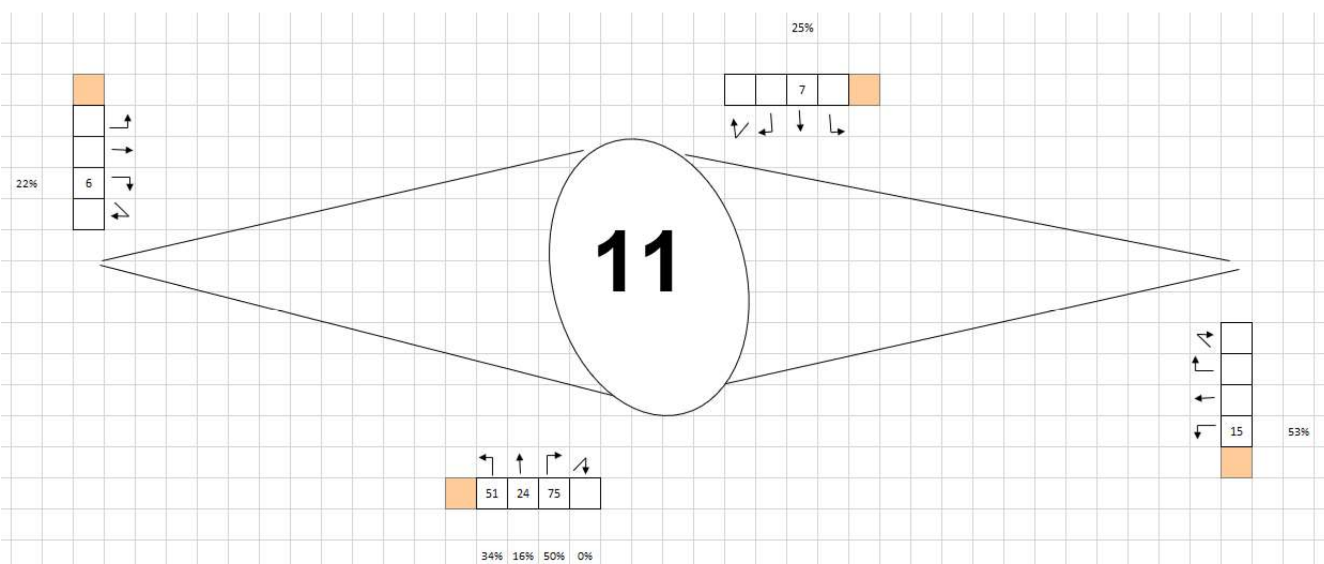

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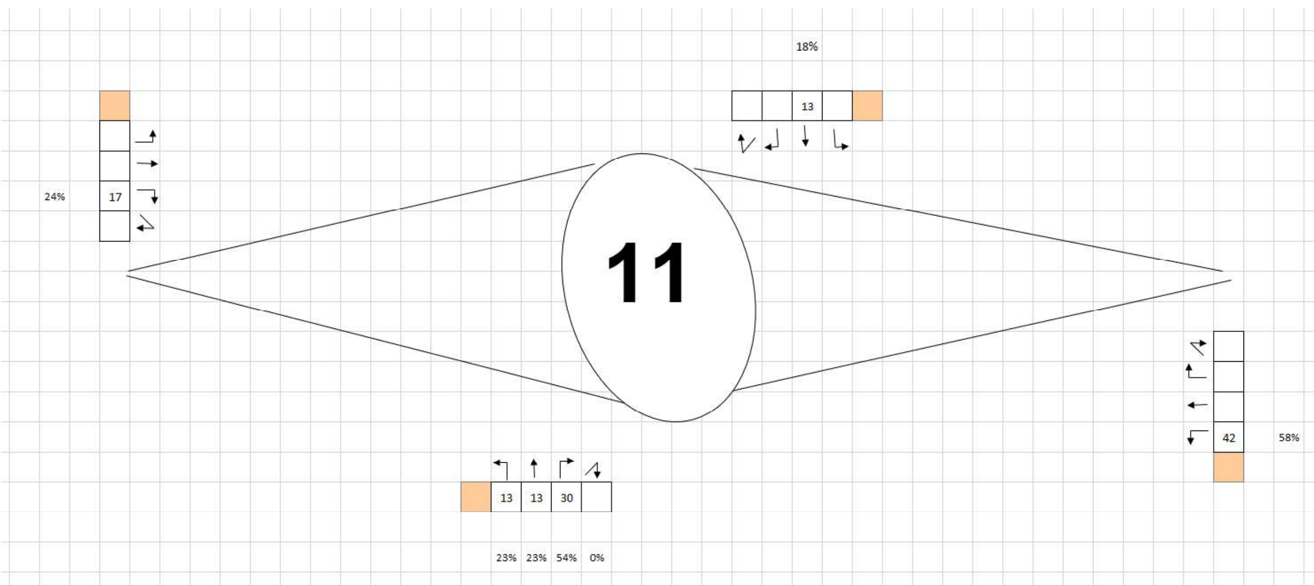
Figure 2 Distribution and Assignment of Huncoat GV trips at M65 Junction 8 - PM Peak Hour



National Highways has also requested details of the distribution and assignment to the network of the various local plan sites which are forecast to have a traffic impact on the junction. This information is presented in Table 3 below and in the traffic flow diagrams provided in Appendix B.

Table 3 M65 Junction 8 Forecast Trip Generation

			No. trips			
Site Ref.	**Site Name**	**Land Use**	**2026 AM**	**2026 PM**	**2036 AM**	**2036 PM**
49	Houghton Barn Farm	Employment	38	36	38	36
218	Land to west of Altham Lane	Employment	33	33	33	33
60	Land lying to the west of Altham Lane, south of Barnfield Way	Employment	33	33	33	33
250	Land west of J7 Business Park	Employment	0	0	5	5
Minor impacts from other LP site allocations/rounding of figures			6	6	14	14
Local Plan impact at M65 J8 (exc. Huncoat GV)			**110**	**108**	**123**	**121**
Huncoat GV impact at M65 J8			**178**	**127**	**178**	**127**
TOTAL trips			**288**	**235**	**301**	**248**

The percentage impact of the sites above in 2036 has been calculated and is set out in Table 4 overleaf.

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Table 4 M65 Junction 8 Percentage Impacts from Sites

		% Impact of trips	
Site Ref.	**Site Name**	**2036 AM**	**2036 PM**
49	Houghton Barn Farm	13%	15%
218	Land to west of Altham Lane	11%	13%
60	Land lying to the west of Altham Lane, south of Barnfield Way	11%	13%
	Huncoat GV	59%	51%
	Other Local Plan site allocations	6%	8%

Based on the above, it can be seen that by 2036, in terms of the respective trip impact at the junction, up to 59% of trips will be generated by Huncoat GV, up to 15% of trips will be generated by Local Plan Site 49, up to 13% of trips will be generated by Sites 218 and 60, and a nominal number of trips will be generated by the other Local Plan site allocations.

National Highways has requested that the same trip rates be used in both studies. The trip rates used in the Local Plan Transport Study are considered to be appropriate and we don't consider it necessary to re-run the junction assessments at this stage given that the trip rates are broadly similar to those used in the M65 Junction 8 study and the application of trip rates is not an exact science.

National Highways has also requested that the size of the employment sites should also be clarified, and whether the proposed employment site in Burnley was included as a committed development.

The differences in the two studies are due to the evolution of the Huncoat GV proposals, which evolved to being a residential only development (see 'proposed site allocations' response above).

In terms of the employment land in Burnley, this was not included in the assessments undertaken in Local Plan Transport Study, however as stated above, the assessments have a built-in level of robustness due to the manual addition of the Huncoat GV trips without undertaking a corresponding further adjustment (reduction in no. dwellings) to the TEMPRO growth factors.

National Highways have highlighted sites 49, 60 and 218 in Altham as needing more detail in the accessibility assessment, including details of destinations or frequency of bus and rail services, length of adequate footways, crossing point suitability, lighting and other factors. There is a suggestion from National Highways that additional physical mitigation measures for non-car modes may be required in addition to the proposed area-wide Travel Plan.

We agree that further work will be required to look at mitigation for non-car modes in more detail, for the sites at Altham and all of the other proposed allocations, and this would be undertaken in advance of development coming forward on the sites. It is considered that the work presented in the Transport Study is proportionate and appropriate for this stage of the Local Plan process.

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National Highways has noted significant differences in modelled queue lengths between the junction modelling undertaken in the Local Plan Transport Study and the microsimulation modelling undertaken in the National Highways Junction 8 study.

We would note that there is typically an inherent difficulty in comparing queues in that what constitutes a queue is difficult to define both between site observations and different software packages. For example microsimulation models typically allow adjustment of the criteria for when vehicles are considered to be in a queue state. As LinSig is not a simulation it cannot apply the same criteria therefore making comparison more difficult.

A LinSig model is typically based on a single model run and only reports maximum mean queue with no indication of the duration the queue may exist for. Due to the greater level of detail of microsimulation modelling queue profiles over time of maximum mean and maximum queue can be produced from multiple simulation runs. The queue extent on the network can also be shown graphically to sense check and understand the implications of the queue.

If queues extend through multiple junctions this can be modelled and recorded in the results of a microsimulation model, it is more difficult to do in LinSig with the need to apply negative bonus green as a proxy for this at signal junctions.

Queue lengths can therefore be compared but these limitations should be considered when doing so.

National Highways notes the link between Junction 8 and the Shuttleworth Mead junction to the north, and state that this highlights the importance of HBC taking steps to set out within the Local Plan the need for the delivery of capacity improvements to the Shuttleworth Mead junction at the appropriate time.

In the Local Plan Transport Study, an improvement option is presented and tested which improves the operation overall. It is recommended that the junction undergoes continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken if required.

Merge Diverge Assessments

National Highways notes the findings of the merge/diverge assessments and states that these echo the results of the 2014 AECOM VISSIM assessment.

Collision Data Analysis

National Highways have requested direct analysis of the SRN junctions to be included within this section.

The figures below show the collisions recorded at M65 Junctions 6, 7 and 8 respectively over the past five years. Details of the nature of these collisions are provided in Table 5.

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Figure 3 M65 Junction 6 CrashMap Collision Plan

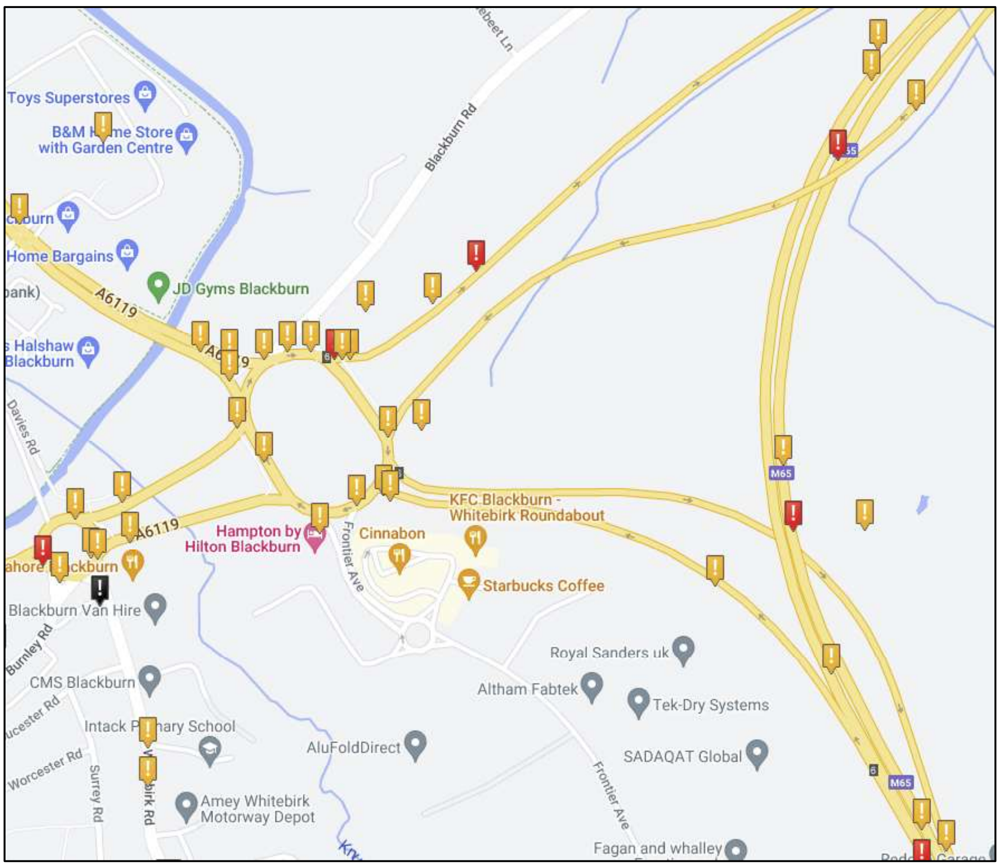

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Figure 4 M65 Junction 7 CrashMap Collision Plan

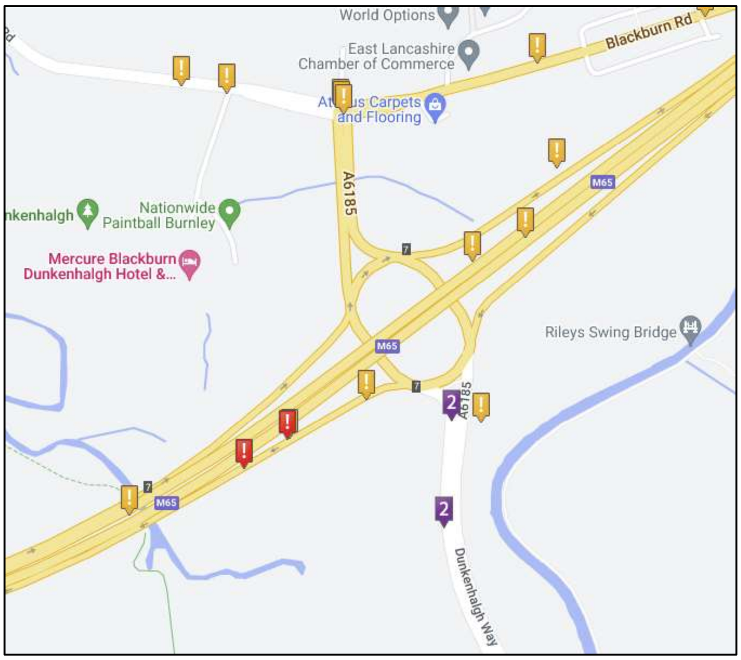

Figure 5 M65 Junction 8 CrashMap Collision Plan

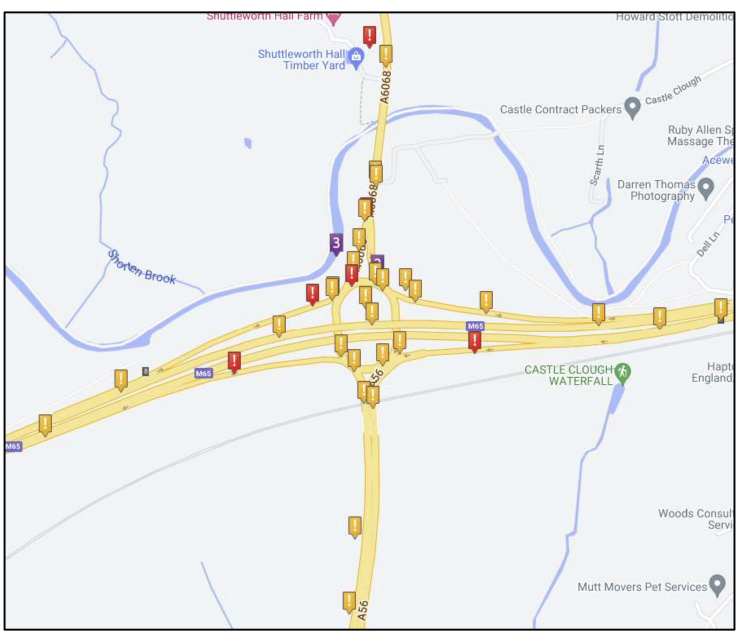

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Table 5 M65 Collision Analysis

Site	Identified Collision Clusters	KSI Collisions	NMU Collisions
M65 Junction 6	• 6 collisions on Whitebirk Roundabout circulatory • Cluster on M65 eastbound on-slip: 7 collisions	• 3 seriously injured on the M65 eastbound on-slip	• None identified
M65 Junction 7	• Cluster on M65 westbound on-slip: 4 collisions • 3 collisions at A6185/A678 junction to the north	• 2 seriously injured on the M65 westbound on-slip	• None identified
M65 Junction 8	• Cluster on Hapton interchange circulatory or entry to it: 11 collisions • 3 collisions on M65 eastbound off-slip	• 1 seriously injured on circulatory, 3 seriously injured on different slip roads, 1 seriously injured on A6068 arm to the north	• None identified

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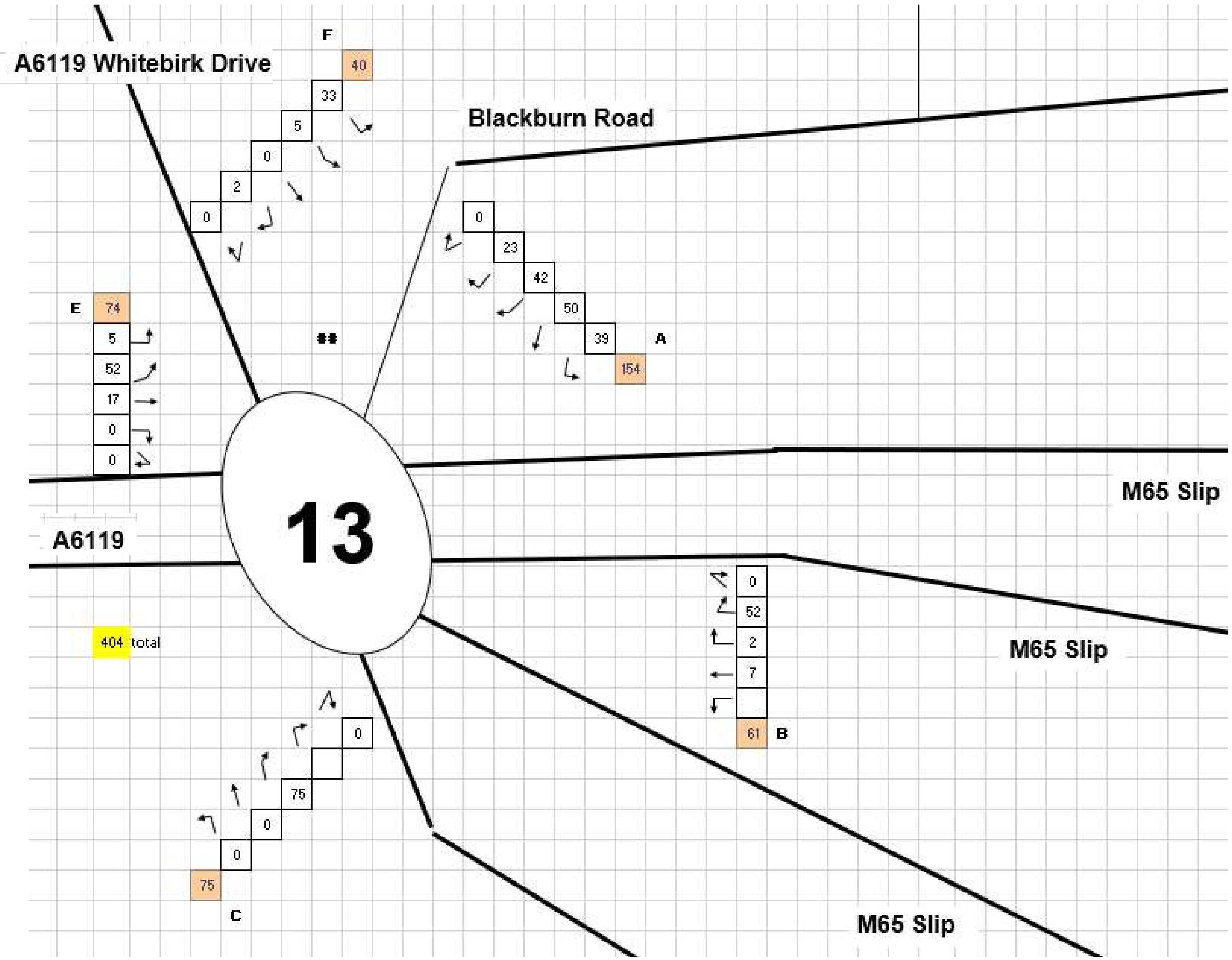
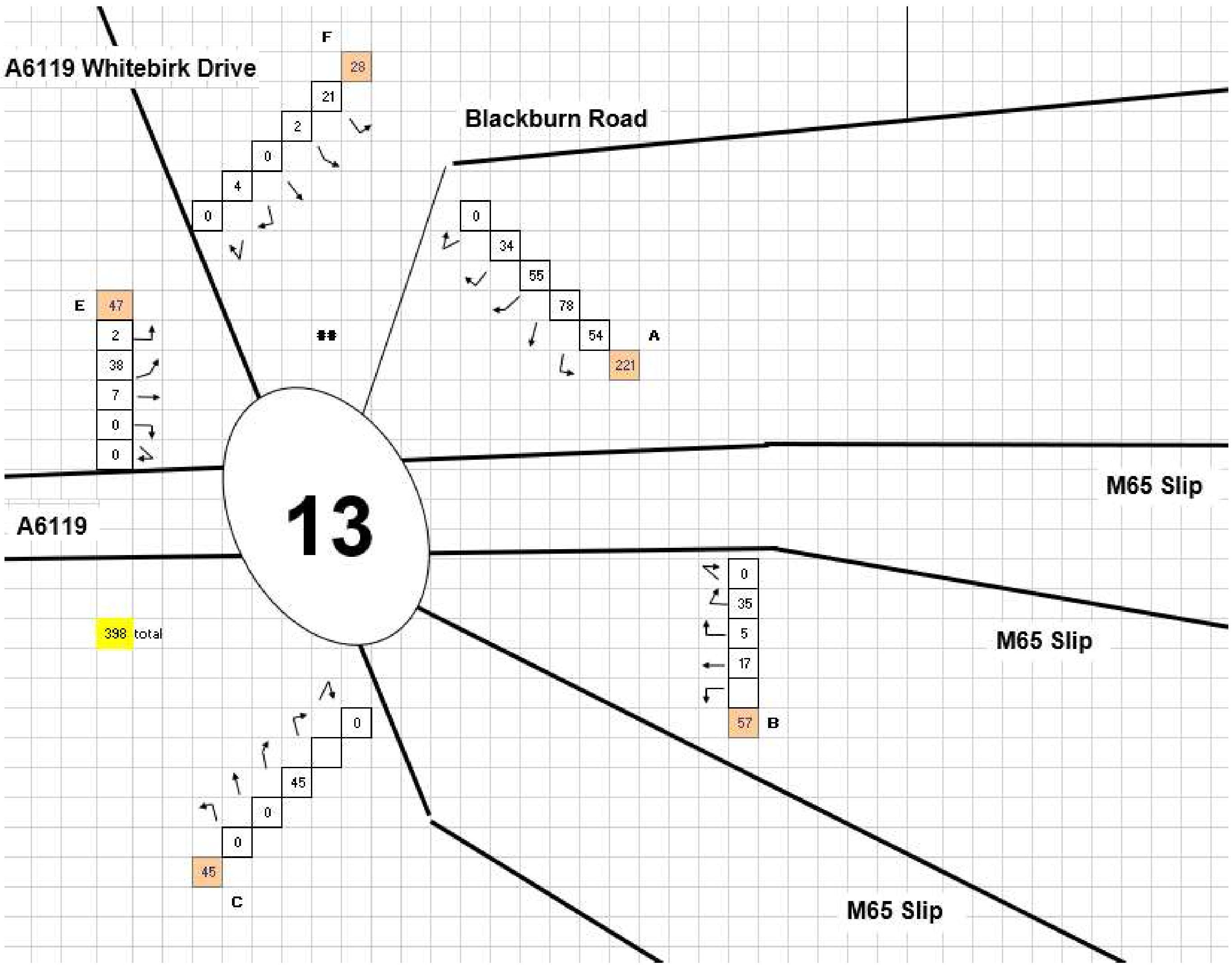
APPENDIX A – Traffic Flow Diagrams of Local Plan trips at M65 Junctions 6, 7 and 8

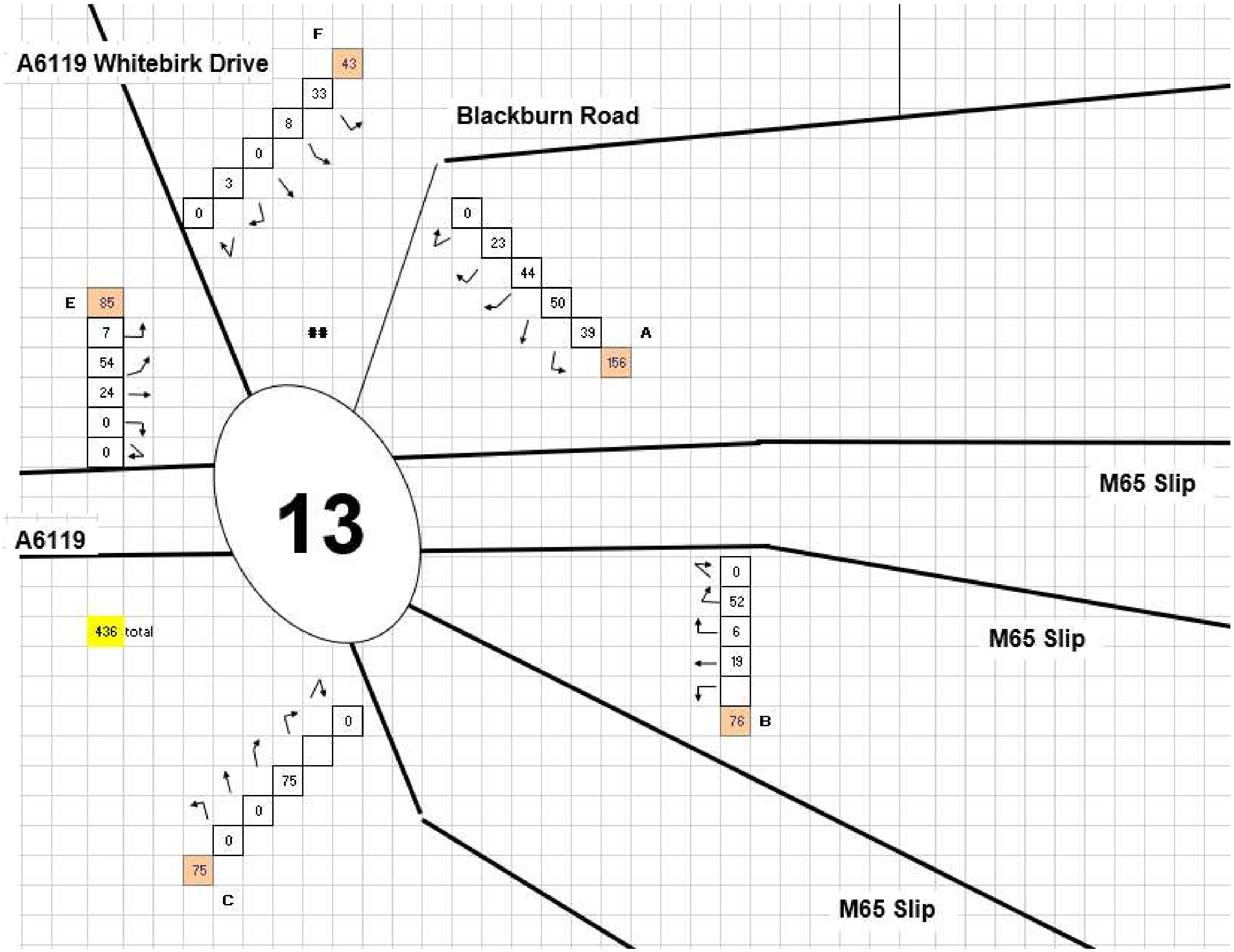
Local Plan trips: M65 Junction 6 - 2026 AM Peak



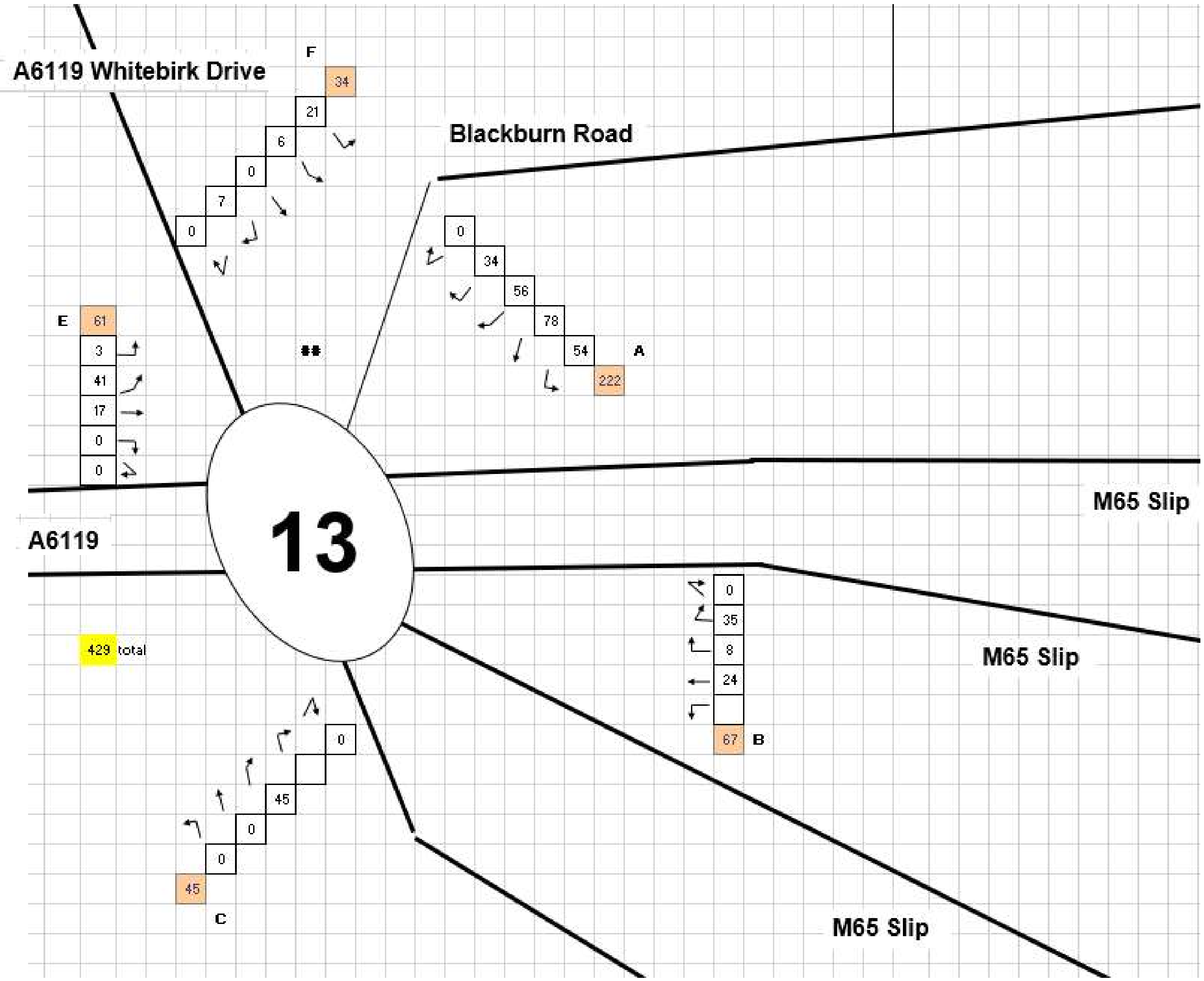
Local Plan trips: M65 Junction 6 - 2026 PM Peak



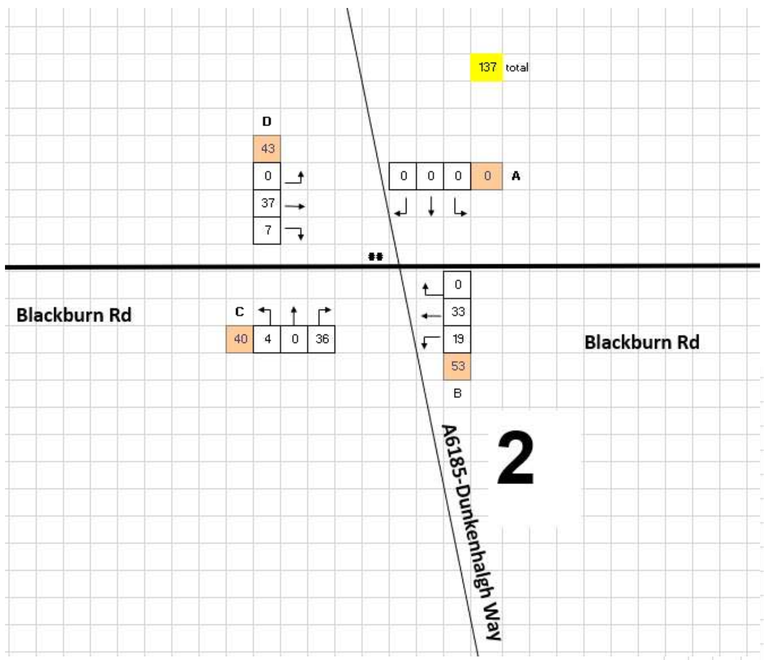
Local Plan trips: M65 Junction 6 - 2036 AM Peak

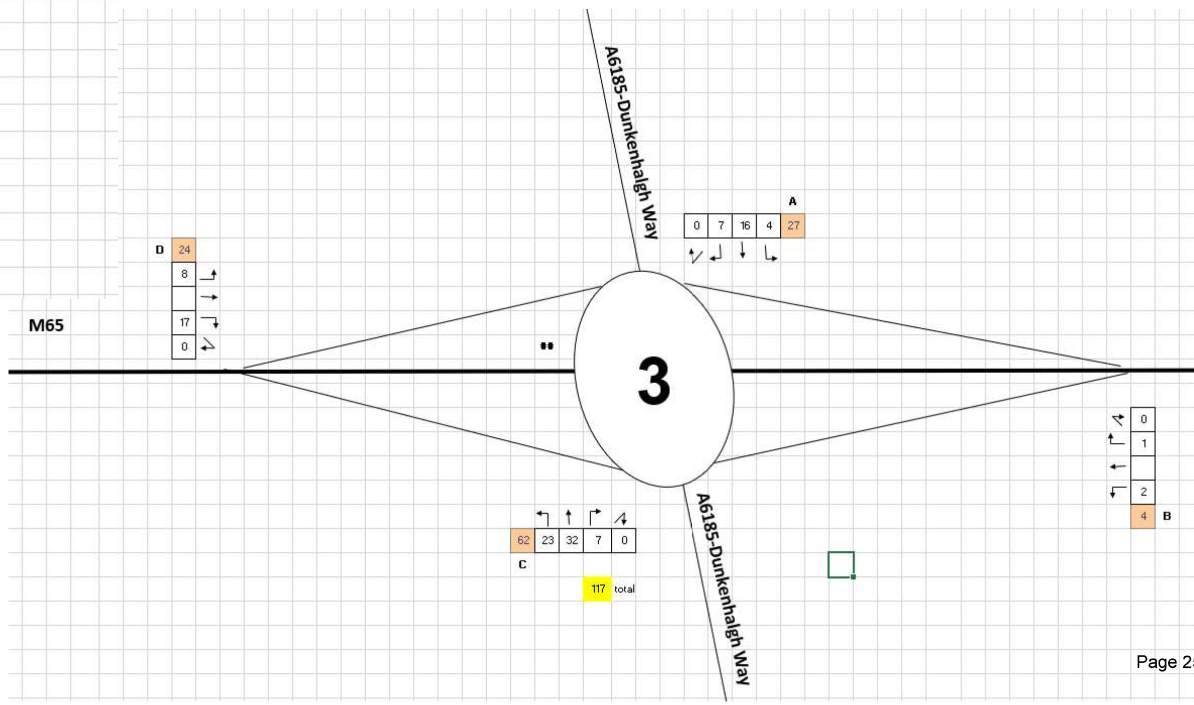


Local Plan trips: M65 Junction 6 - 2036 PM Peak

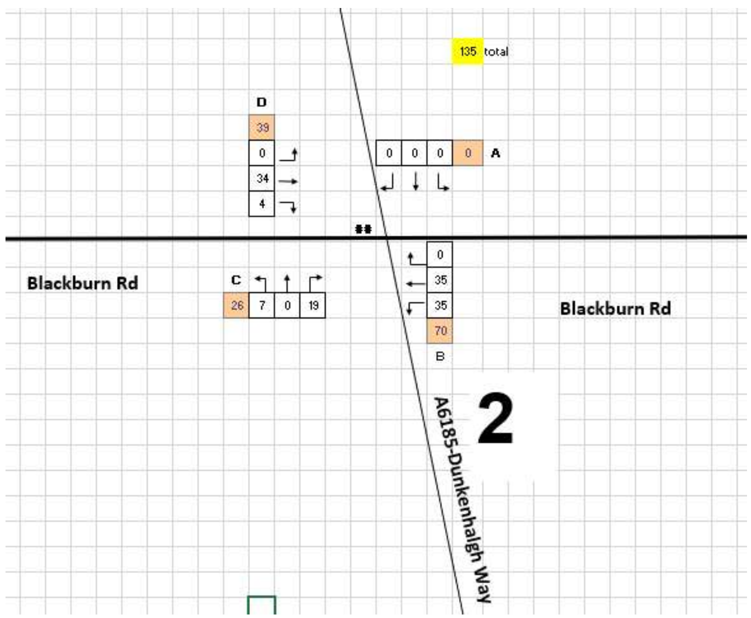


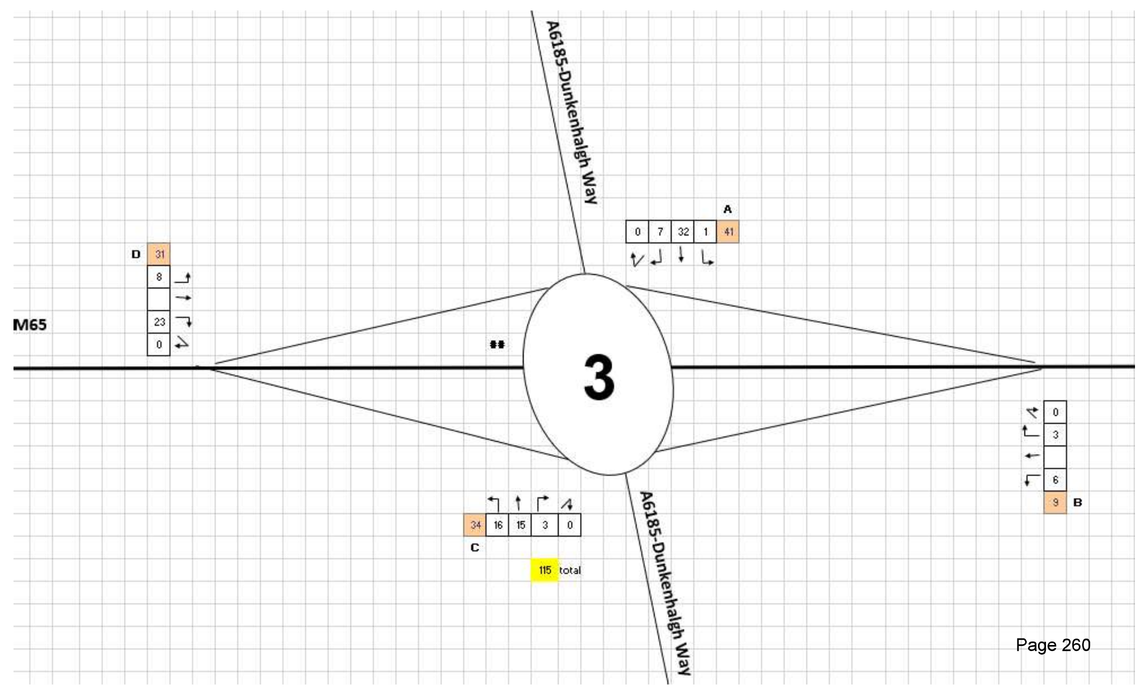
Local Plan trips: M65 Junction 7 - 2026 AM Peak



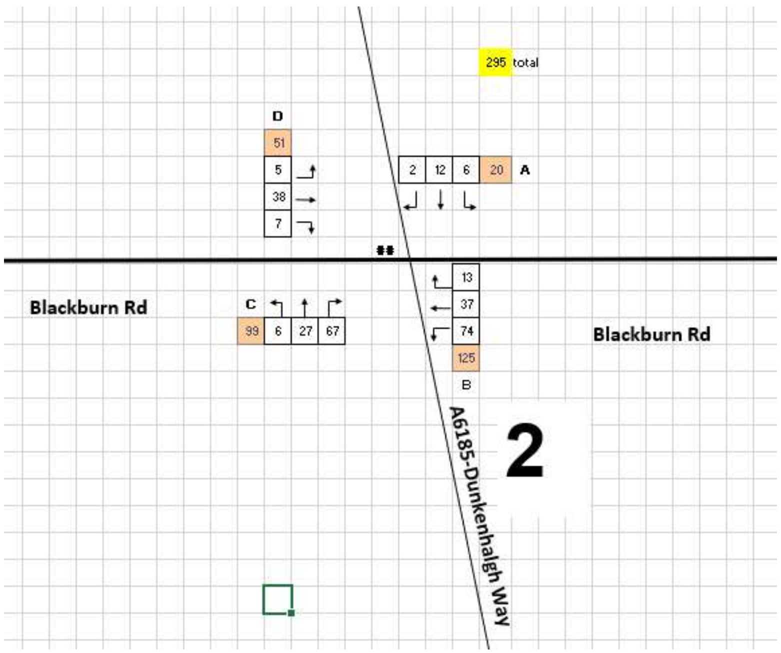


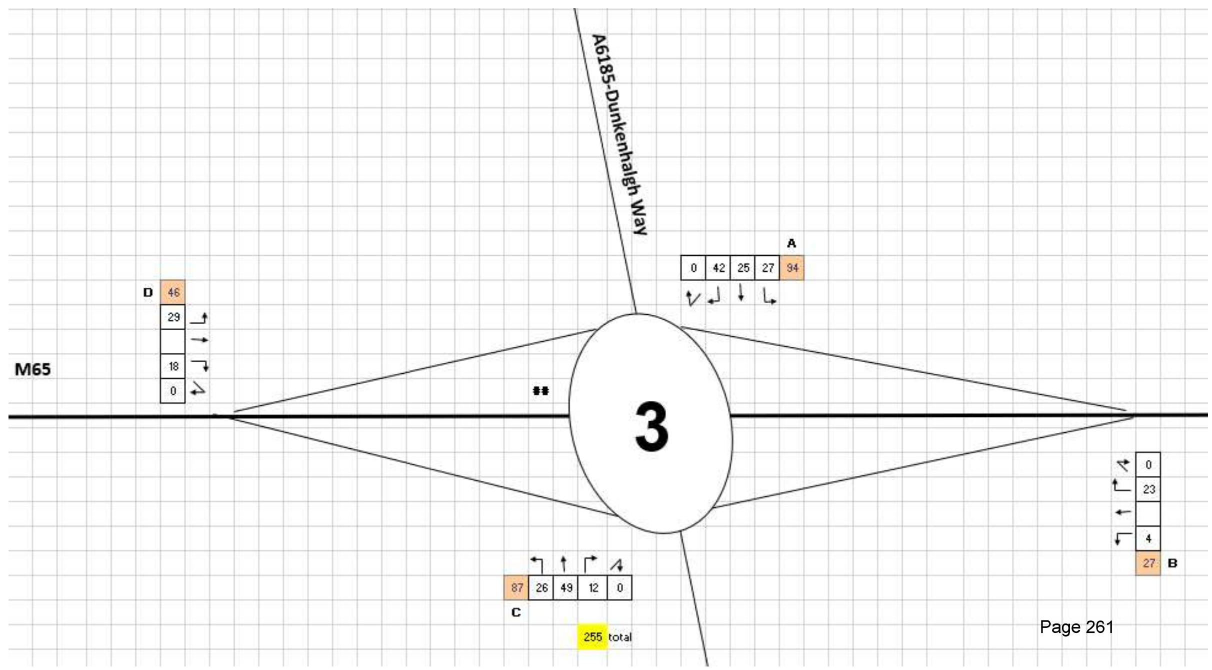
Local Plan trips: M65 Junction 7 - 2026 PM Peak



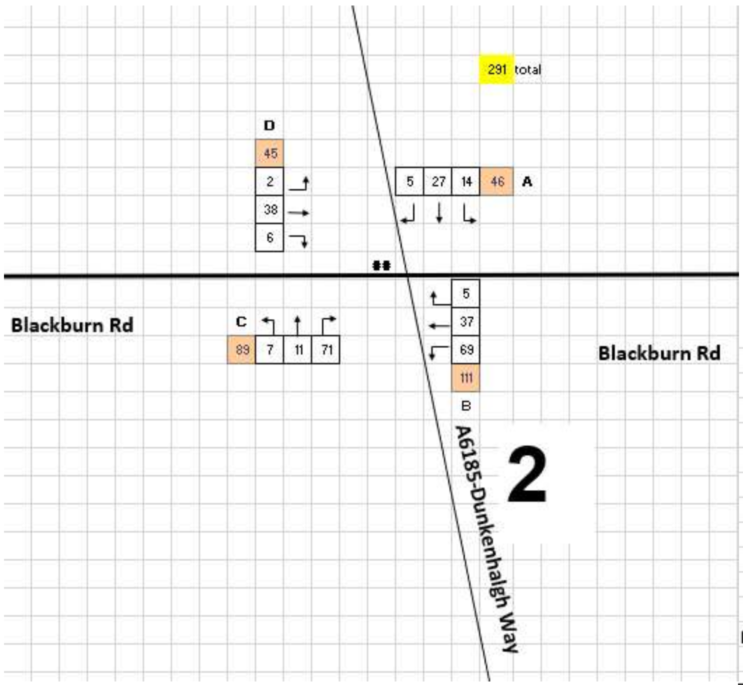


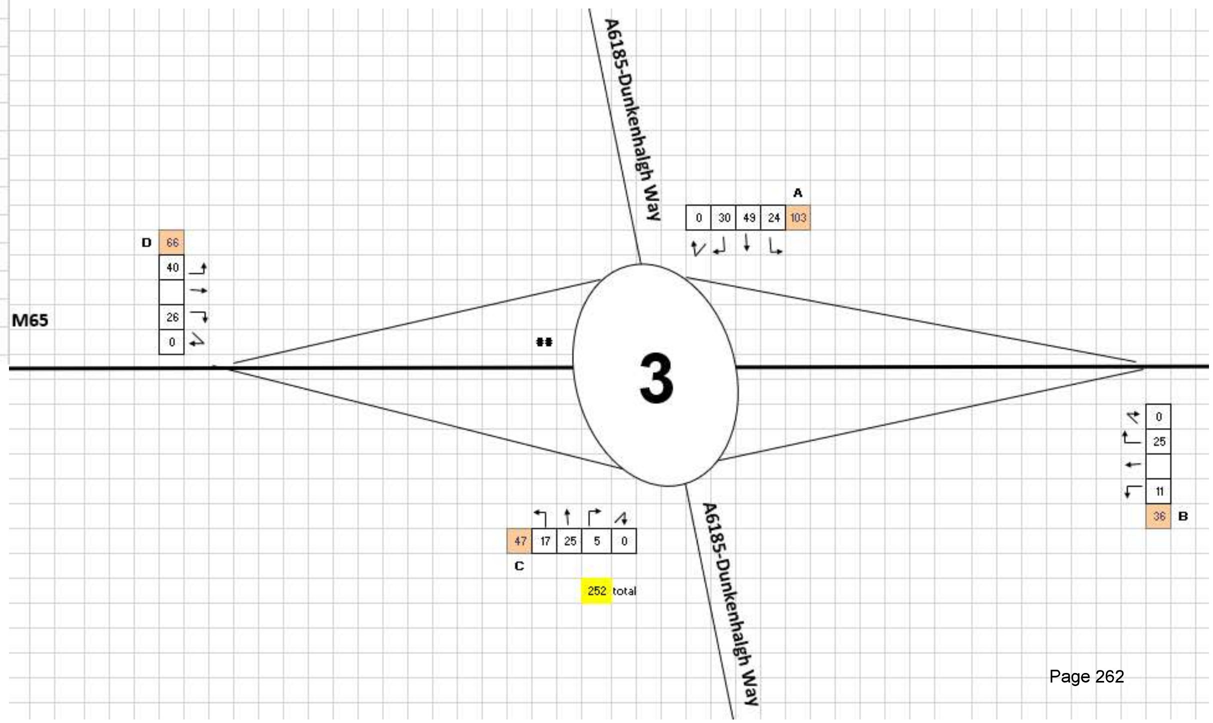
Local Plan trips: M65 Junction 7 - 2036 AM Peak



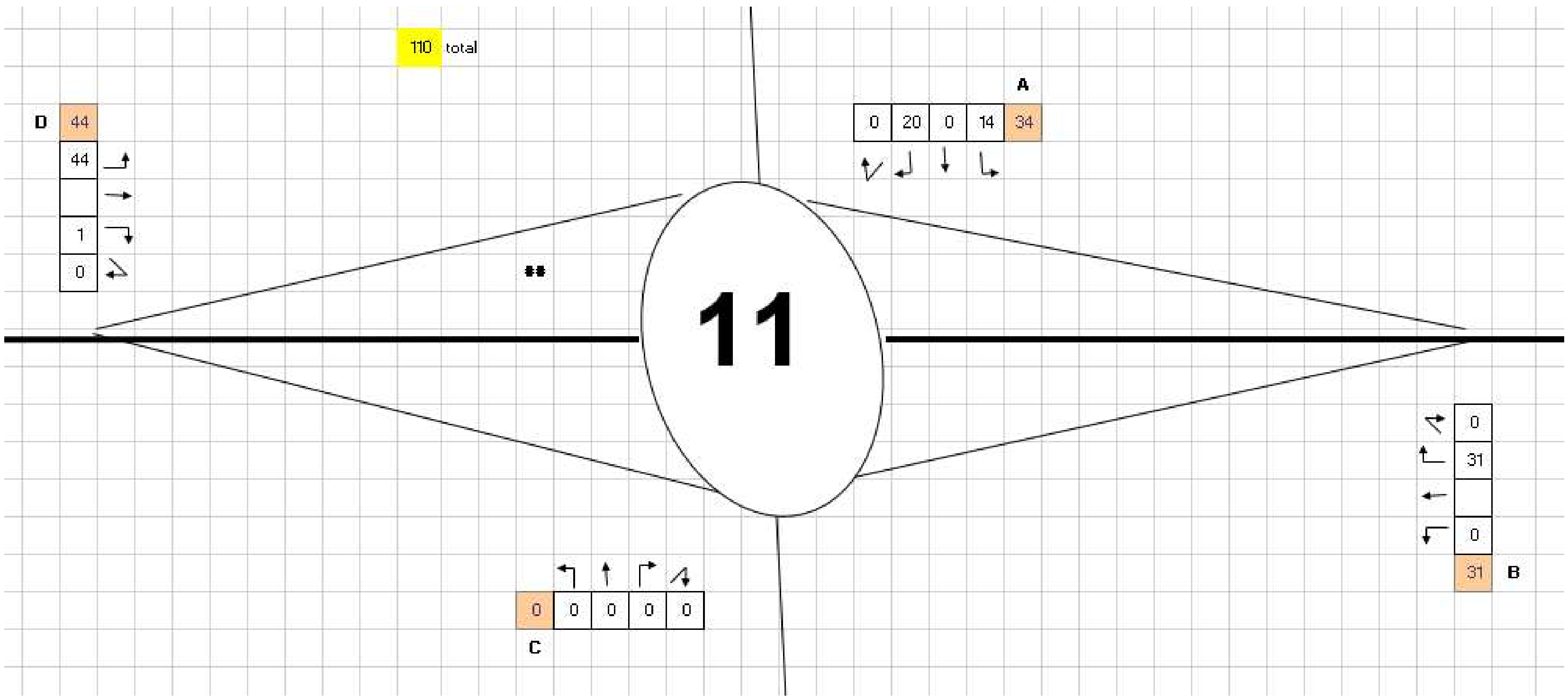


Local Plan trips: M65 Junction 7 - 2036 PM Peak

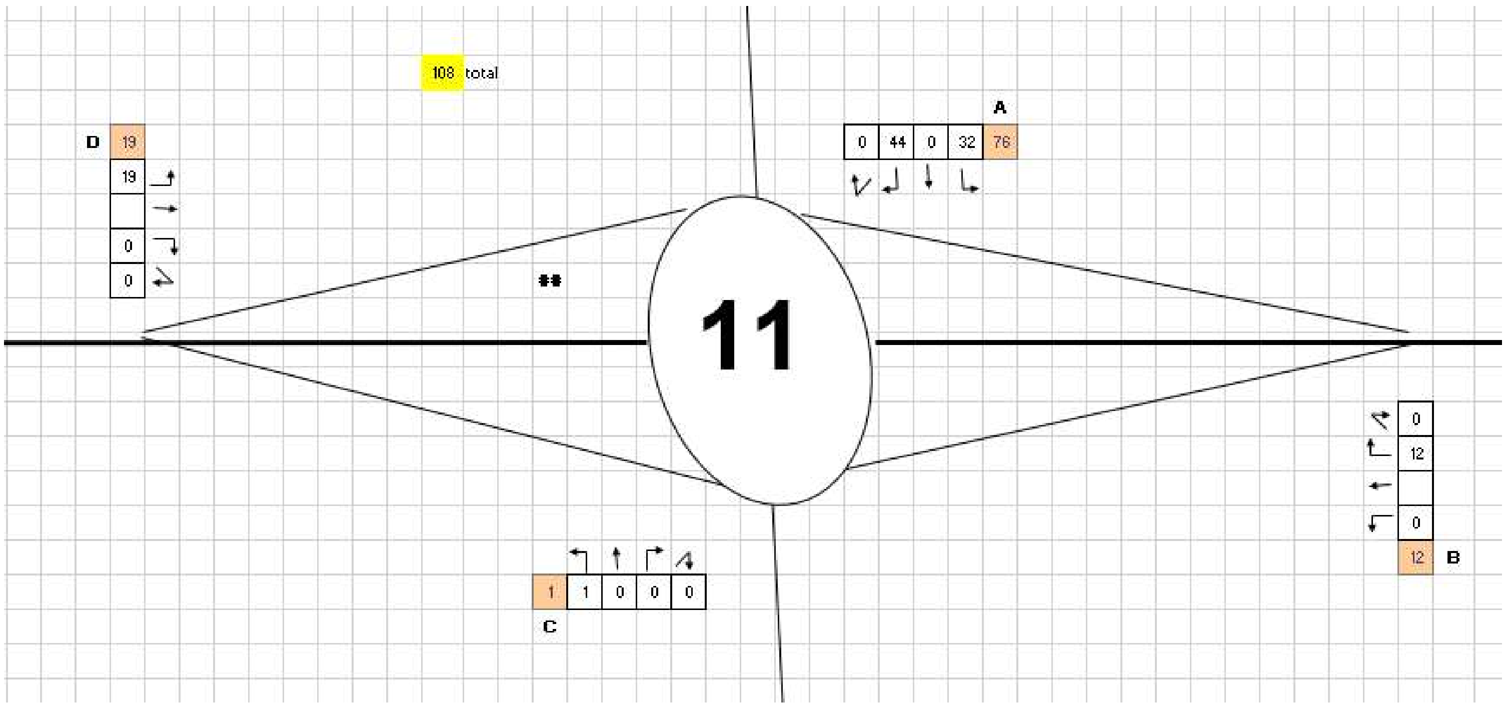




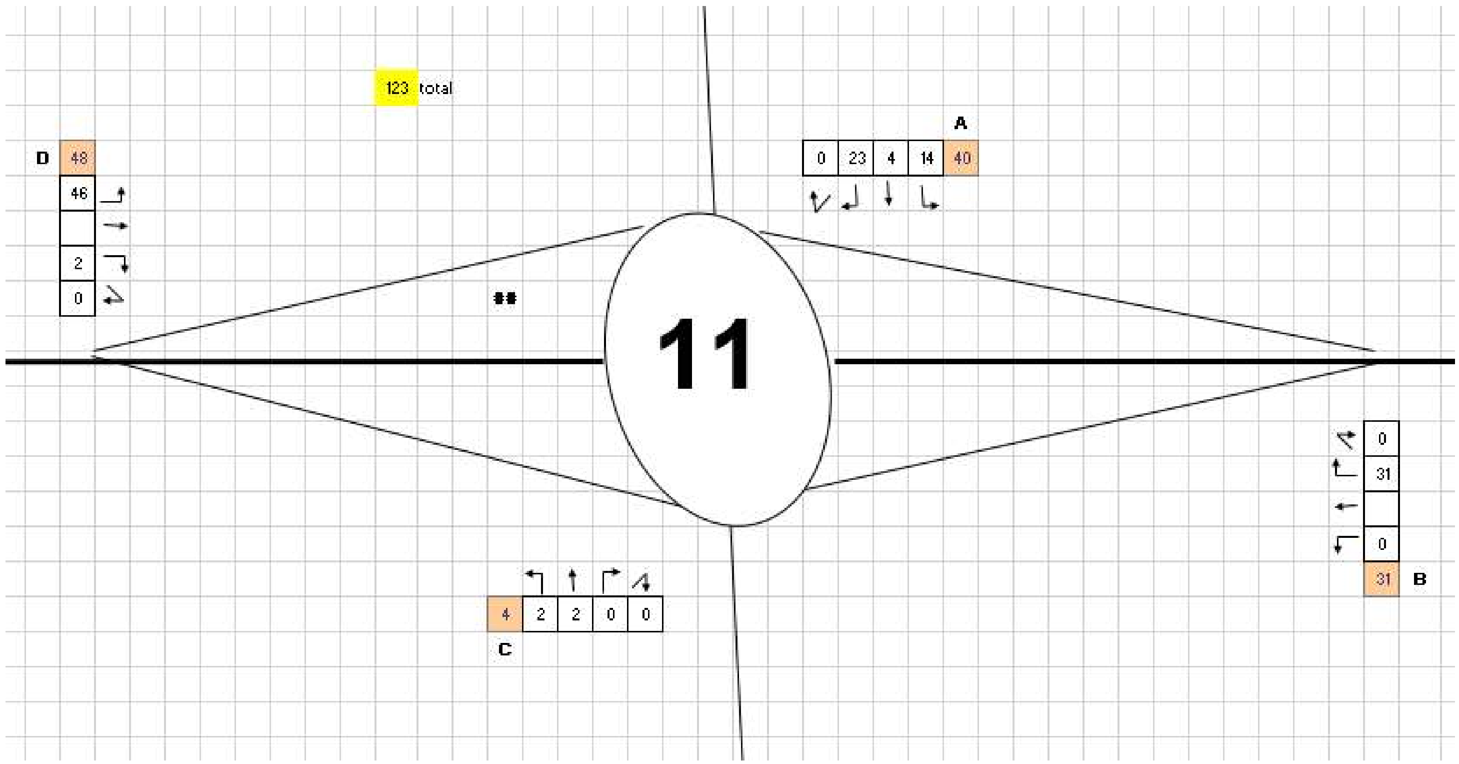
Local Plan trips: M65 Junction 8 - 2026 AM Peak



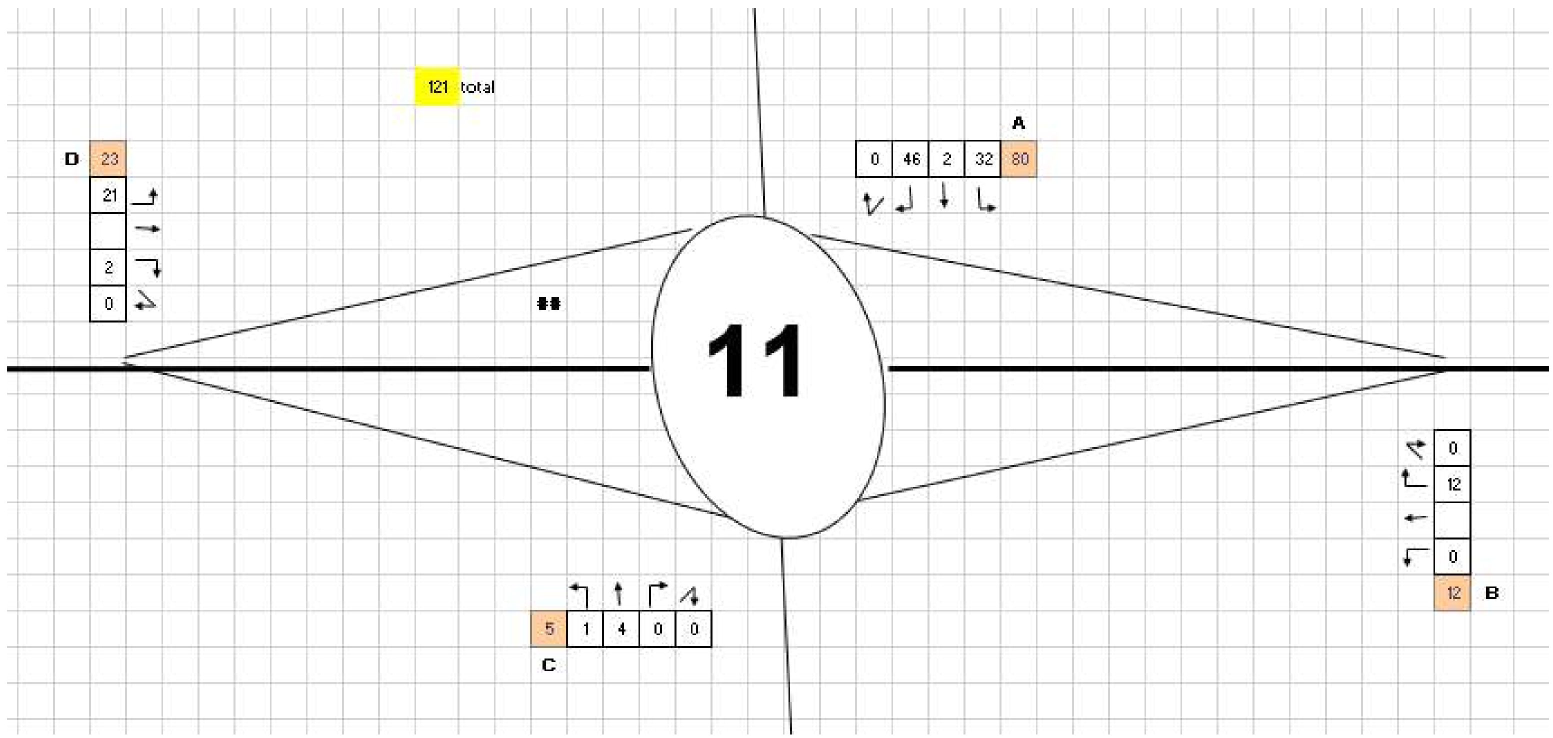
Local Plan trips: M65 Junction 8 - 2026 PM Peak



Local Plan trips: M65 Junction 8 - 2036 AM Peak



Local Plan trips: M65 Junction 8 - 2036 PM Peak



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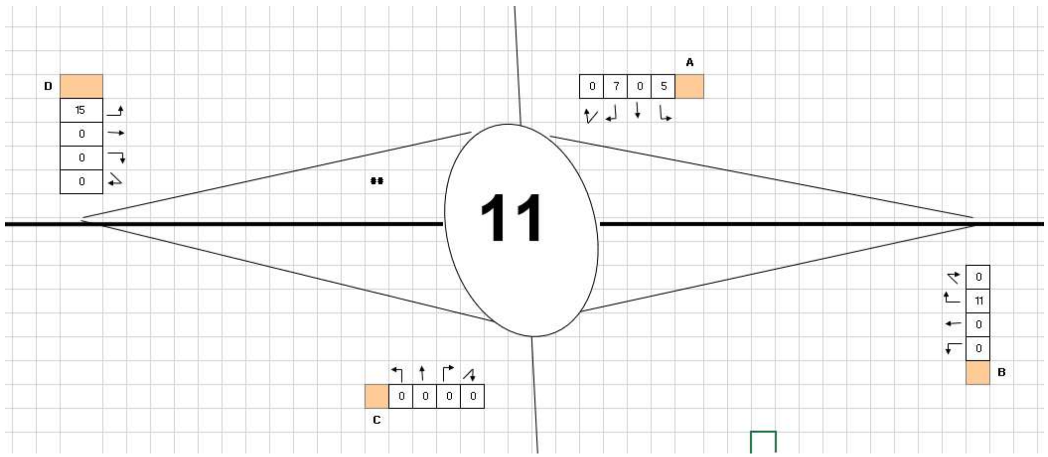
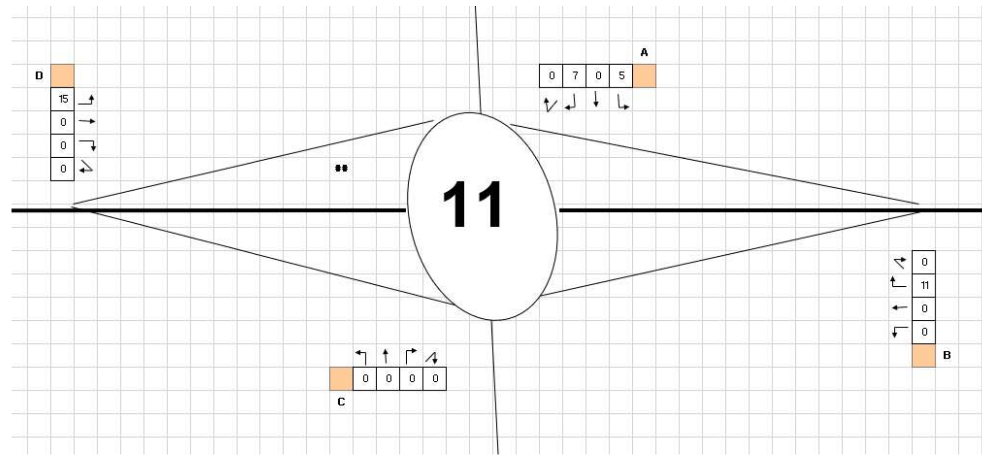
APPENDIX B – Traffic Flow Diagrams of Local Plan Site trips at M65 Junction 8

Site 49

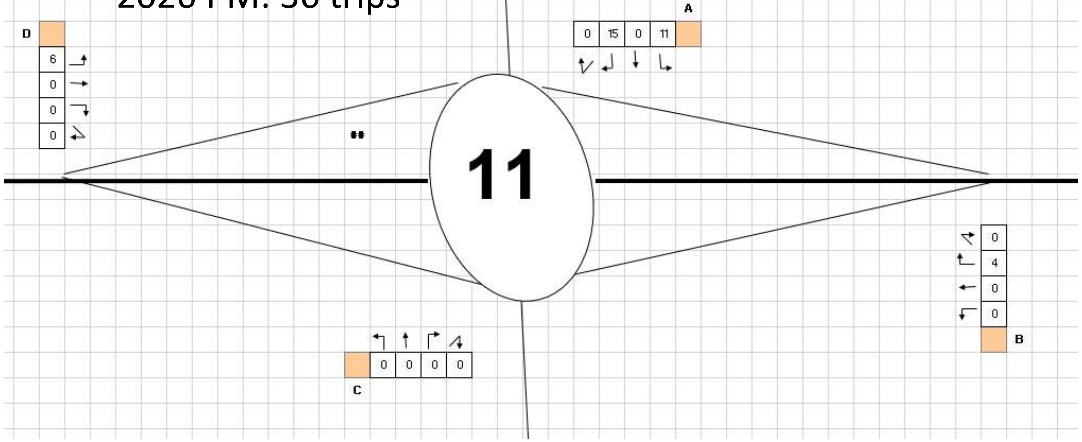
2026 AM: 38 trips



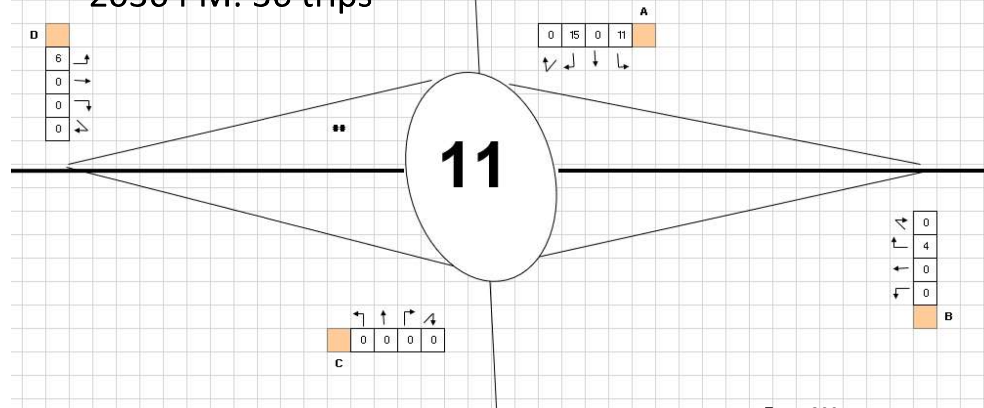
2036 AM: 38 trips



2026 PM: 36 trips

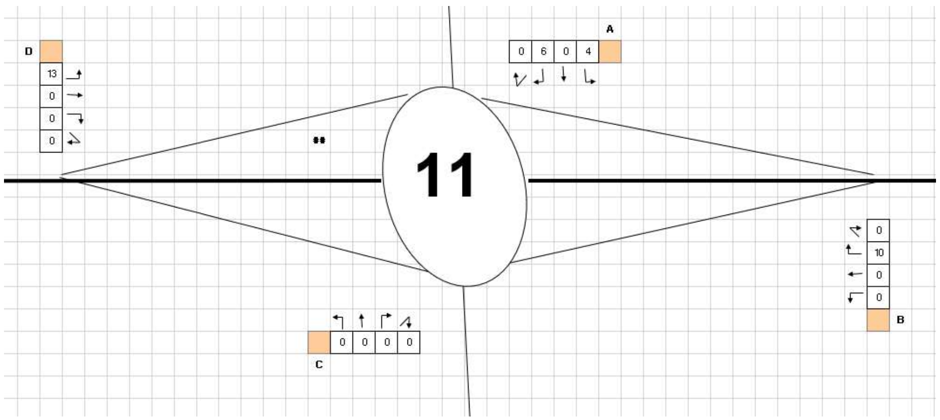


2036 PM: 36 trips

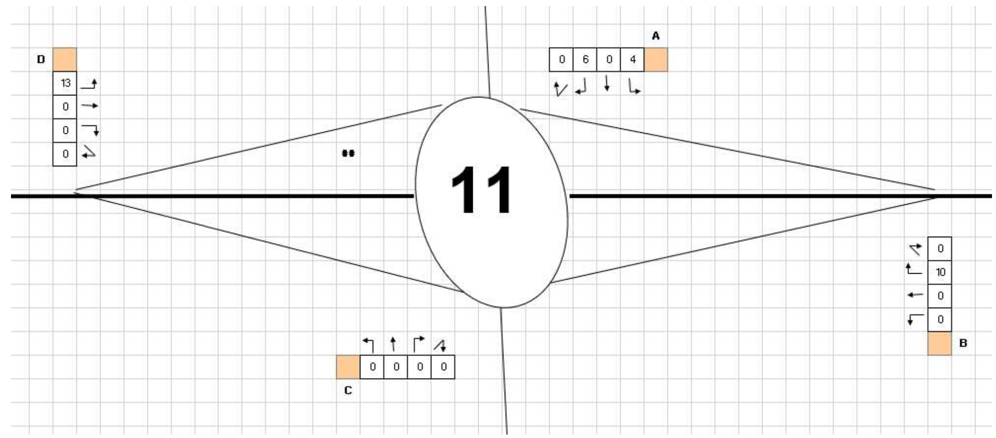


Site 218

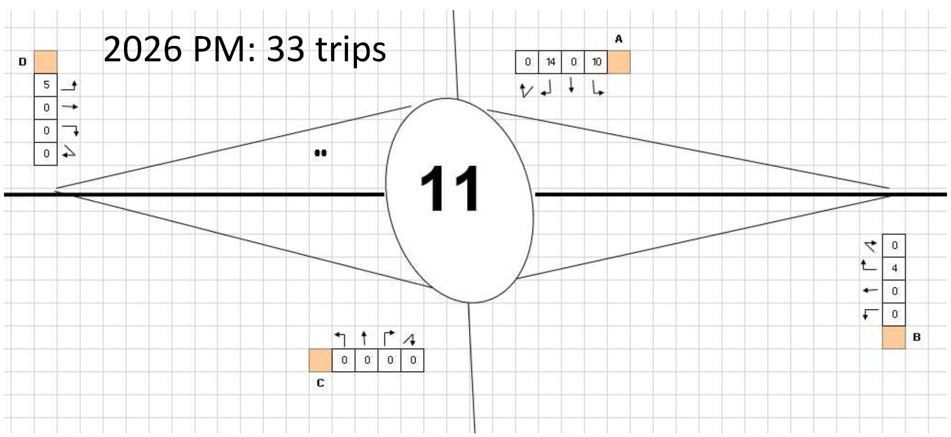
2026 AM: 33 trips



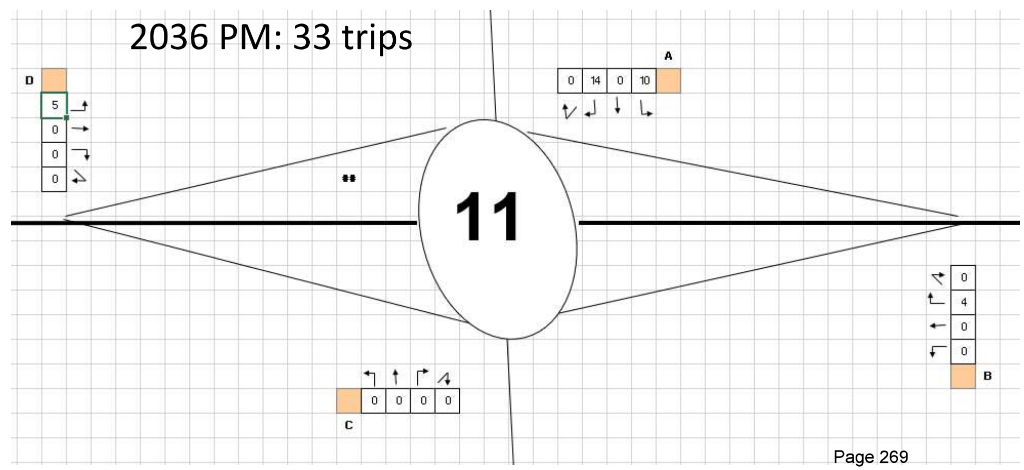
2036 AM: 33 trips



2026 PM: 33 trips

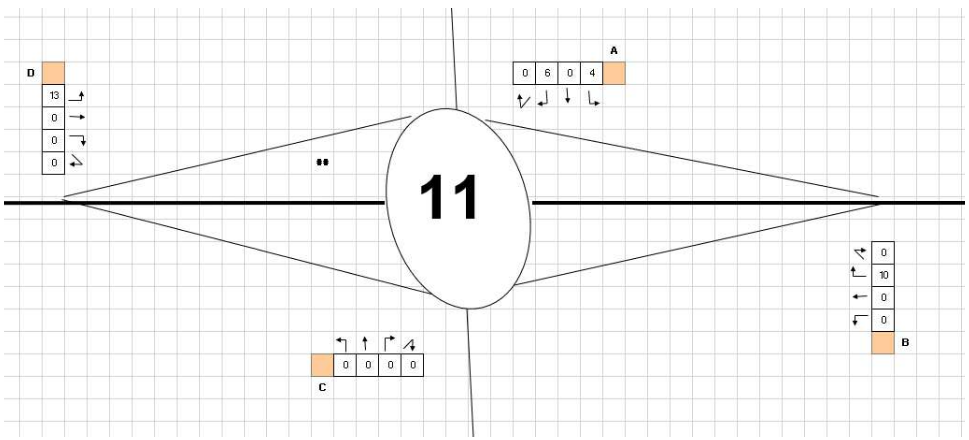


2036 PM: 33 trips

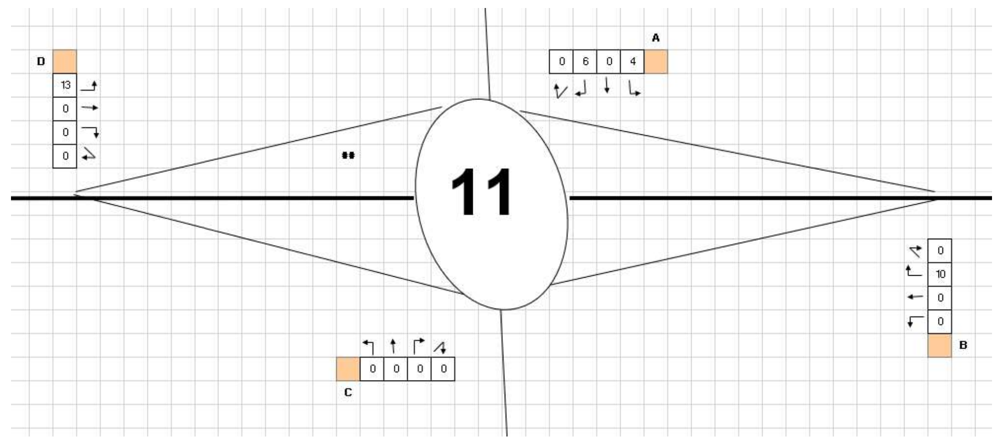


Site 60

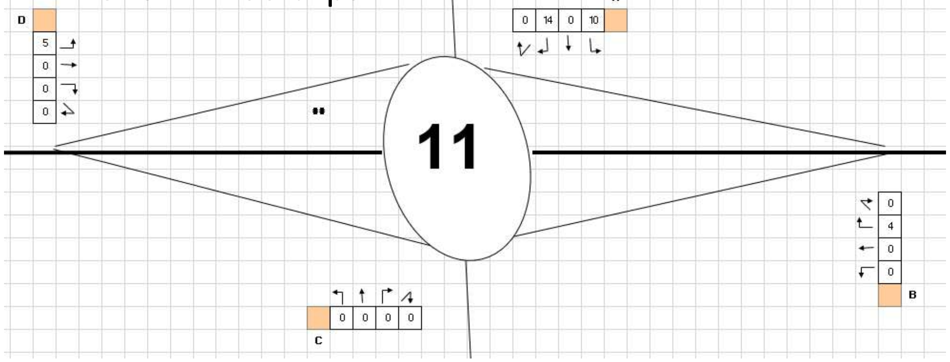
2026 AM: 33 trips



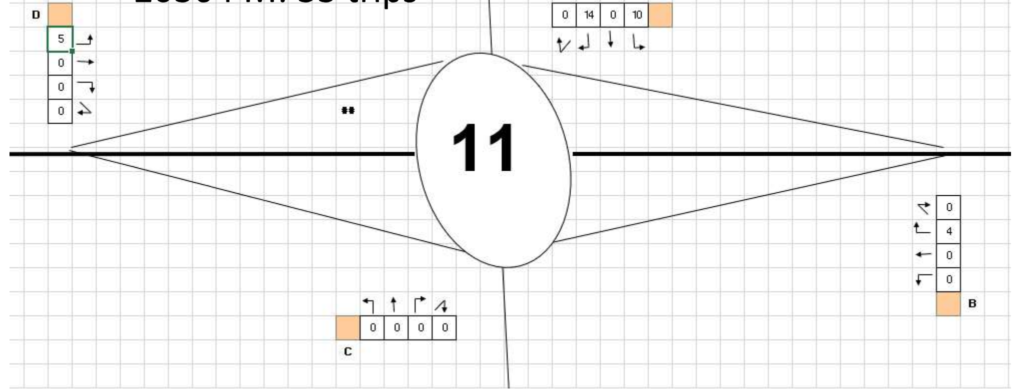
2036 AM: 33 trips



2026 PM: 33 trips



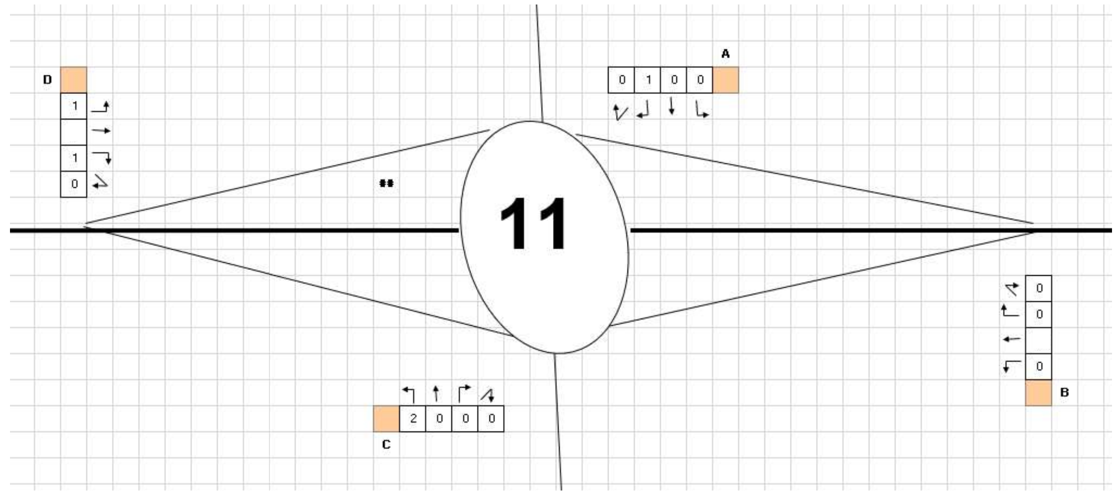
2036 PM: 33 trips



Site 250

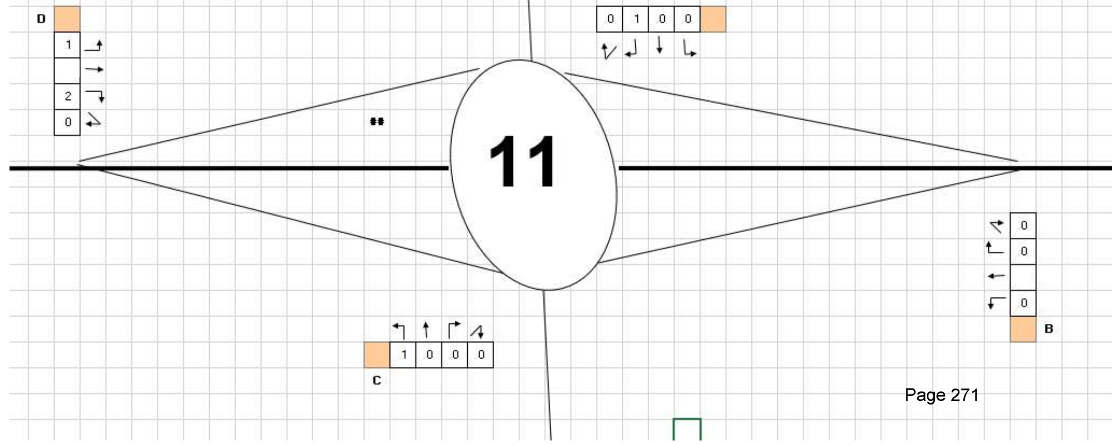
2026 AM: 0 trips

2036 AM: 5 trips



2026 PM: 0 trips

2036 PM: 5 trips



National Highways Comments on 'WSP emerging Hyndburn Local Plan 2021-40 Transport Study and response to National Highways Comments' dated 31/10/2022

1. Introduction

WSP, working on behalf of Hyndburn Borough Council (HBC), have prepared a Local Plan Transport Study in support of the emerging Hyndburn Local Plan 2021-40. National Highways originally provided comments on this work in June 2022. In response to this, WSP prepared an updated Local Plan Transport Study and separate 'Response to National Highways Comments' dated October 2022 and provided to us in October 2023.

We now provide updated comments on the emerging Local Plan transport evidence base (i.e. Local Plan Transport Study) based upon our review of the following documents related to the Hyndburn Local Transport Study as prepared by WSP and ARCADIS, these are outlined below:

a. Baseline Evidence Report – ARCADIS – November 2019
b. Hyndburn Local Plan Study Report v4 – WSP – November 2022
c. Response to National Highways Comments – WSP – October 2022

The focus of the review is the Baseline Evidence Report produced by ARCADIS and the Response to National Highways Comments produced by WSP

Hyndburn Borough Council (HBC) is progressing with the preparation of a new Local Plan to cover the period to 2040, with adoption anticipated in 2024. To date, the Council has produced and commissioned evidence on a wide range of matters including housing and employment development. The Council has also commissioned consultants to develop a master plan for Huncoat Garden Village, an area where significant housing growth is proposed.

For ease our review will follow the sections as outlined in the WSP note and make comment where needed, with a section at the end which responds to the questions raised by National Highways within the Task brief.

The borough of Hyndburn is situated in north-west England. The borough has an estimated population of 80,734. Together with Burnley, Blackburn with Darwen, Pendle and Rossendale, it forms part of the Pennine Lancashire sub- region. The emerging Local Plan is supporting a growth strategy intended to boost the local economy and improve the range and type of homes being provided. This is to be achieved by identifying ambitious but achievable development requirements, including the identification of new allocations to deliver sustainable growth.

The M65 motorway runs through the centre of the borough in an approximate east-west alignment, connecting the borough directly to Blackburn and Burnley. Junction 8 provides the borough with direct access into Greater Manchester via the A56.

As stated by WSP, at the time of undertaking the baseline work for this Study, traffic was impacted by the COVID-19 pandemic and its resulting effects on employment and travel. Whilst overall traffic levels fluctuated as national and local restrictions tightened and eased, the general pattern was one of traffic being lower than typical conditions i.e. the corresponding period in the previous year. The extent to which the effects of the pandemic on travel patterns and increased homeworking will continue remains to be seen, but consideration has been given to this issue throughout the study.

This is noted by National Highways however given that the country has now fully “opened up” and started to revert to a mixture of old working habits / hybrid working, the influence of this may be measurable, however, it is noted that the long-term trends in this respect are unknown.

2. Response to National Highway Comments – October 2022

This section of the report relates to the “Response to National Highway Comments” produced by WSP in October 2022 in response to the comments received by WSP from the National Highways Hyndburn Local Plan Transport Study Report v3.0.

For ease of review, the comments presented in the document by WSP have been reproduced below in italics and then the response in bold below.

Proposed Site Allocations

National Highways has requested clarity over the Huncoat Garden Village (HGV) proposals: “It is noted by National Highways that the proposed HGV is not included within the local plan”.

As noted by WSP, HGV forms a key part of the new Local Plan. It will deliver around 1,500-1,600 new homes (some of which will be delivered beyond the Plan period), a village centre and associated infrastructure.

This is noted by National Highways, and is particularly relevant to our comments in relation to M65 Junction 8.

National Highways has also requested clarification in relation to the status of the employment element of the HGV and whether this is sites 49, 60 and 218 of the proposed Local Plan allocations.

In response, it is noted that HBC has confirmed that: large-scale employment uses no longer form part of the HGV masterplan. The decision was therefore taken to develop housing at HGV and move the employment allocation north to Altham Business Park Extension (site allocations 49, 60 and 218). This allowed a strategic housing site (HGV) to be developed at Huncoat and the employment uses to be developed on land adjacent to Altham in a manner that should not allow the employment development to prejudice the high-quality housing.

This clarification is noted by National Highways.

Previous Studies

National Highways states that it: "has no plans to introduce such (widening) schemes on the M65; with widening of the M65 between junctions 2 and 6 being discounted (in previous studies) as not representing value for money. It should be further noted that it is not certain, moreover unlikely, that such improvements would come forward during the lifetime of the emerging Local Plan. Any improvements to the M65 through the RIS process are unlikely to be delivered in the near to medium term."

As stated by WSP this is recognised and it is stated that they recommend that HBC continues to work collaboratively with National Highways throughout the plan period.

This is noted however the position has to be that National Highways has no current plans to progress such widening works within the next 5-year Roads Investment Strategy (RIS) period. There is no certainty that widening the M65 between these junctions will occur through funding in whole or in part through RIS over the lifetime of the Local Plan. It is therefore necessary for HBC to adopt and agree a position with National Highways in relation to such widening works to the M65 during the lifetime of the Local Plan before the Local Plan is accepted. National Highways suggests that both HBC and National Highways work together to reassess this requirement during the Plan period. However, in the absence of the likelihood of widening of the M65 being delivered through RIS during the Local Plan period, impacts on journey times along the M65 may deteriorate further in the future with the addition of traffic growth (both background growth and that associated with the Local Plan). Consequently, and against the fact that there is no certainty that this improvement would be delivered, HBC should consider whether the future performance levels on the M65 serving the borough would remain acceptable to HBC.

National Highways states in relation to M65 Junction 8: "Hyndburn Borough Council should note that an improvement scheme for M65 Junction 8 does not form part of National Highways' current funded programme of improvements during the RIS2 period."

Capacity and safety improvements to M65 Junction 8 are essential to the ability to deliver the Local Plan (and in particular, Huncoat Garden Village) without an unacceptable impact on the safety of the SRN in the form of regular and extended traffic queuing onto the mainline M65 carriageway, which is a safety issue. This is evidenced as part of the 2021 M65 Junction 8 Study by WSP (commissioned by National Highways), which forms part of the Local Plan transport evidence base. This study not only assessed the existing performance of this junction, but tested the traffic impact of growth in the emerging Local Plan using accurate microsimulation traffic modelling (including Huncoat Garden Village based upon the ARCADIS baseline report from November 2019) and identified outline scheme solutions to enable this junction to continue to function safely with the addition of traffic growth generated by the emerging Local Plan and Local Plan growth of the adjacent local planning authority areas.

Whilst it is National Highways' aspiration to deliver an improvement scheme to this junction, there is presently no certainty that a scheme could be funded for delivery through the RIS (whole or part funding). Consequently, at this time, HBC is reliant on RIS funding to ensure that the improvement to the junction necessary to support the Local Plan will be in place. This is contrary to paragraph 29 of DfT Circular 01/2022 which is clear in saying that where capacity enhancements are required to deliver strategic growth (for example, Huncoat Garden Village) "there cannot be any presumption that such infrastructure will be funded through a future RIS."

National Highways understands that HBC may be able to make a part-financial contribution to the cost of delivering the required improvements to M65 Junction 8 through funding that may be offered through Homes England. Whilst this is welcomed, it remains that delivery of the required scheme is reliant on funding in RIS3 with no viable alternative funding mechanism in place.

RIS3 is not scheduled to be formally announced until late 2024. National Highways remains committed to working with HBC over the coming months to keep this situation under review and explore possible solutions as we move further towards the formal announcement of RIS3 funding settlement for National Highways during the period 2025-30. However, ultimately a position will need to be agreed upon before the Local Plan can be accepted.

Baseline Analysis

National Highways confirm that it accepts the analysis of baseline data in the study, with the suggestion that, as part of the Local Plan review process, consideration is given to collecting new traffic data to review the operation of the network where appropriate.

In response, WSP stated that HBC would be open to this suggestion.

National Highways accepts this position and states that any future traffic counts should be agreed in principle in terms of location and timings to effectively monitor the operation of the network within this area.

Sustainable Transport Assessment

National Highways states that: "WSP has also undertaken analysis of other core accessibility indicators and produced a comprehensive RAG matrix for all the proposed sites in the allocation – this is noted however there is no information related to how the overall site rating has been calculated i.e. some factors will have more weight in terms of the impact than others – as such this should be clarified."

As stated by WSP, this is a high-level analysis of overall sustainability which is intended to enable a comparison between the proposed site allocations and identify those which score lower. For simplicity, the categories were given equal weighting. This was calculated by assigning a numeric score of 1-5 for the five RAG colours, then summing all scores for a site and dividing by the number of categories to calculate the average score.

This methodology is accepted.

In addition to sites 49, 60 and 218 highlighted by WSP as requiring sustainable transport improvements, National Highways have also noted the amber rating of sites 24, 228 and 229 which may also indicate that improvements are required.

This information has been accepted by WSP and future mitigation measures have been presented within this document (Table 7-3). This is noted.

Sustainable Transport Measures

National Highways states that: "WSP have identified measures on the local road network to improve accessibility on the network which if implemented could lead to a shift in mode of transport however further details such as cost, and year of construction should be set out.

In response, WSP notes that the measures presented in the Transport Study are suggested measures which are appropriate to identify at this stage in the plan-making process, but would need further work to sift, cost and appraise. As further work is undertaken during the plan period, HBC will work with National Highways to share details once these are available.

This is noted by National Highways but ideally, this information should ideally be presented before the Local Plan is accepted to understand how these may impact future operation of the network.

Traffic Forecasting and Survey Data

In terms of committed development, National Highways considers the approach taken to be reasonable, but has requested confirmation that the level of applied alternative assumptions within TEMPRO does not include the discounted committed development sites.

In response, WSP states that to confirm, as per Table 8-3 of the Transport Study, only two committed developments – both employment sites - were subject to the manual trip generation and assignment exercise in the build-up of the traffic flow scenarios. All other committed developments were deemed to be small in scale and/or remote from the study area junctions, meaning any traffic impacts would be negligible.

This is accepted by National Highways as these would likely be picked up by the growth factors included as part of the assessment.

Moreover, WSP states that for the two committed developments selected, the number of jobs for each was calculated and manually deducted using the alternative assumptions in TEMPRO, to avoid double counting. Similarly, to the point above this methodology is accepted and provides a reasonable assessment of the likely future traffic flows.

National Highways has also requested clarity as to whether the full proposed Huncoat Garden Village is included within the assessment given that this is a substantial allocation within the emerging Local Plan.

In response, WSP approached Arcadis to request information from that study to enable a more detailed assessment of M65 Junction 8 given the proximity of HGV to the junction. As such, the assessments of M65 Junction 8 included the HGV traffic which has been

manually added in, totalling 178 trips in total at M65 Junction 8 during the AM peak, and 127 trips in total during the PM peak. The TEMPRO alternative assumptions were not adjusted again at this point - the adjusted growth factors presented in Table 8-2 of the Transport Study were used as per the other assessed junctions.

Therefore, the assessments are considered to have a built-in level of robustness. This has been checked and is accepted by National Highways.

<u>Trip Generation Methodology</u>

National Highways has accepted the trip generation methodology and stated that it would be useful to include an aggregate total to show the total of trips across all sites.

In response, WSP has included this information within the report which outlines both the trip generation excluding HGV and the trip generation from the HGV from the ARCADIS document.

This is accepted by National Highways.

National Highways has also requested that the associated traffic flow diagrams are provided so that these can be checked to assess the number of trips on the SRN network.

As noted by WSP the traffic flow diagrams showing the Local Plan trips at each of the M65 junctions in the 2026 and 2036 AM and PM peak periods are provided in Appendix A.

These have been checked and are accurate and as such can be agreed upon.

<u>Trip Distribution and Assignment</u>

National Highways agrees with the methodology used to distribute trips across the highway network.

No further comment.

Junction Assessments

National Highways agrees with the methodology used in the junction assessments and states that it would welcome information related to the validation of the base year models based on typical (non-COVID) conditions which can then be used to forecast future impacts.

WSP has recommended that new traffic surveys be undertaken in the future, particularly for junctions where mitigation has been identified, to verify the assessments and confirm the appropriate level of mitigation needed.

This approach is recommended and as such is accepted by National Highways, further discussions should therefore be had before these are conducted to best model the base situation.

M65 Junction 6

National Highways has requested a copy of the LinSig file so the modelling inputs can be checked and agreed upon.

National Highways can confirm receipt of these models, and these have been checked and are accurate. In terms of the results, National Highways concur with the assessment as provided by WSP. As stated in the Local Plan Study Transport Report by WSP it is recommended that this junction undergoes continued monitoring (in collaboration with Blackburn with Darwen Council) throughout the early stage of the Local Plan period, with further modelling work undertaken where required. This position is supported by National Highways.

WSP are aware that National Highways commissioned a further study at M65 J6, informed by new traffic survey data, to look at the impacts of cross-boundary Local Plan growth in the area in greater detail, using microsimulation modelling. The results of which support the conclusions of the modelling conducted by WSP. Based on this National Highways have no further comment.

M65 Junction 7

National Highways has requested a copy of the LinSig file so the modelling inputs can be checked and agreed upon.

National Highways can confirm receipt of these models, and these have been checked and are accurate.

National Highways reiterates the recommendation made in the Transport Study that M65 Junction 7 undergo continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken where required.

National Highways has undertaken its own study of M65 Junction 7 which uses microsimulation modelling and identified the following improvement scheme:

- *Upgrade of the A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads to allow two lanes for the south to east and west to east movements. This change involves the reduction in lanes from three to two on the westbound approach, to accommodate the two-lane eastbound exit.*

National Highways has requested that the requirement for this upgrade should be set out more strongly within the Local Plan along with the approaches to delivery and funding at the appropriate time, so that so that any trigger levels can be identified and included within the Local Plan itself.

In response to this WSP states that the improvement scheme identified in the National Highways study for the A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads is broadly the same as the Option 2 mitigation scheme presented in the Local Plan Transport Study.

As noted by WSP this is useful in that both studies have identified that a scheme is needed at the junction, and the use of two modelling software packages (LinSig and VISSIM) has reached similar conclusions and provides evidence that a scheme akin to that which is proposed in both studies would provide sufficient capacity to accommodate the full build-out of the Local Plan allocations. This position is accepted by National Highways.

Furthermore, as noted by WSP A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads is forecast to begin to exceed capacity in 2026 with the addition of the traffic generated by the Local Plan, so a scheme may be required in advance of this, though it is recommended that this is confirmed through the continued monitoring of the junction throughout the early stage of the plan period and further modelling work.

This position is accepted by National Highways however it is recommended that an early engagement is sought with LCC Highways and National Highways so that preparations can be made to implement any such changes if they are deemed necessary. Consideration may also need to be given by HBC to whether there is a need for the inclusion of site-specific policies within this location that would require or highlight the need for sites to make a proportionate financial contribution to the delivery of the improvement scheme for

the A6185 Dunkenhalgh Way / A678 Blackburn Road crossroads should this not be able to be funded through conventional highway authority public funding.

WSP further states that the impacts at the junction are cumulative across several sites and are not linked to one single site i.e. Site 250 (Land west of Junction 7 Business Park) contributes 27% of new trips at the junction, and Site 230 (Land north of railway line between Sidebeet Lane and Leeds-Liverpool Canal) contributes 10% of new trips.

As such the funding mechanism as to how this scheme will be delivered will also need be considered so that the scheme can be properly implemented when required, if necessary linked to these site allocations within the Local Plan document.

M65 Junction 8

This junction has been assessed as part of the Hyndburn Local Plan Transport Study using LinSig junction modelling software, and in the National Highways' M65 Junction 8 Study in March 2021, using VISSIM microsimulation modelling. The response from National Highways includes comments on the M65 Junction 8 study report.

In response, WSP have suggested that the National Highways microsimulation model could be used in the future to undertake further modelling work of the Local Plan proposals including HGV, and the interaction with the Shuttleworth Mead local road junction to the north. Moreover, WSP suggests that a piece of work is undertaken now to bring together the current growth proposals for the Local Plan, including HGV, along with any relevant committed developments (e.g. Burnley Bridge). Updated traffic forecasts would be produced and agreed upon with National Highways before being tested in the National Highways VISSIM microsimulation traffic model, and the results analysed.

National Highways would agree with this position, as such details surrounding the relevant inputs and use of the model should be discussed at the earliest opportunity to effectively model both these junctions using current traffic survey data.

National Highways has also requested details of the distribution and assignment to the network of the various local plan sites which are forecast to have a traffic impact on the junction.

WSP has stated that they have been in contact with ARCADIS to request the relevant information about the trips generated by HGV and what has been included within the future year scenarios. Moreover, it is stated that the TEMPRO alternative assumptions were not adjusted manually deduct the number of dwellings associated with HGV, therefore the assessments are considered to have some level of robustness.

National Highways agrees with this methodology as it provides an assessment of the development and accounts for uncertainty that may arise in terms of the number of dwellings at the Site.

National Highways has also requested details of the distribution and assignment to the network of the various local plan sites which are forecast to have a traffic impact on the junction.

This information has been received and checked and can be agreed upon.

National Highways has requested that the same trip rates be used in both studies.

In response, WSP states we don't consider it necessary to re-run the junction assessments at this stage given that the trip rates are broadly similar to those used in the WSP (for National Highways) M65 Junction 8 study and the application of trip rates is not an exact science.

National Highways notes that these should then be presented within the assessment with a rationale as to why they are different, in any case, this exercise would likely have to be completed before assessing within VISSIM (if this is agreed).

National Highways has also requested that the size of the employment sites should also be clarified, and whether the proposed employment site in Burnley was included as a committed development.

WSP state the differences in the two studies are due to the evolution of the HGV proposals, which evolved to be a residential-only development. This is noted by National Highways. In terms of the employment land in Burnley, this was not included in the assessments undertaken in the Local Plan Transport Study, however as stated above, the assessments have a similar level of robustness due to the manual addition of the Huncoat Garden Village trips without undertaking a corresponding further adjustment (reduction in no. dwellings) to the TEMPRO growth factors.

This is noted however National Highways would confirm that the differences between this approach and the actual flows be established so that there is a certainty that the flows are as accurate as possible at this stage.

National Highways have highlighted sites 49, 60 and 218 in Altham as needing more detail in the accessibility assessment, including details of destinations or frequency of bus and rail services, length of adequate footways, crossing point suitability, lighting and other factors. There is a suggestion from National Highways that additional physical mitigation measures for non-car modes may be required in addition to the proposed area-wide Travel Plan.

This is agreed by WSP, and they state this will be undertaken in advance of any sites coming forward for development.

National Highways has noted significant differences in modelled queue lengths between the junction modelling undertaken in the Local Plan Transport Study and the microsimulation modelling undertaken in the National Highways Junction 8 study.

WSP states this is due to inadequacies of the LinSig software package and how queue lengths are modelled and that due to the greater level of detail of microsimulation modelling queue profiles over time of maximum mean and maximum queue can be produced from multiple simulation runs. The queue extent on the network can also be shown graphically to sense check and understand the implications of the queue. As such this gives more credence to the VISSIM model being used to model the junction so that the queue lengths and other base parameters can be assessed so the base model validates to the current position.

National Highways notes the link between Junction 8 and the Shuttleworth Mead junction to the north and states that this highlights the importance of HBC taking steps to set out within the Local Plan the need for the delivery of capacity improvements to the Shuttleworth Mead junction at the appropriate time.

WSP states that in the Local Plan Transport Study, an improvement option is presented and tested which improves the operation overall. It is recommended that the junction undergoes continued monitoring throughout the early stage of the Local Plan period, with further modelling work undertaken if required.

This is noted by National Highways however reiterates the point that HBC need to engage and have a scheme ready for delivery that will cater for all of the identified development growth. Currently, the only improvement options at Junction 8 and the Shuttleworth Mead junction that have been identified and assessed in the VISSIM microsimulation modelling

are those identified within the WSP (for National Highways) M65 Junction 8 Study from 2021. A strategy is therefore required to be agreed by HBC with both National Highways and LCC Highways as to how these improvements will be realised and delivered at the appropriate time so that there is no detrimental impact the network from Local Plan traffic.

Merge Diverge Assessments

National Highways notes the findings of the merge/diverge assessments and states that this echoes the results of the 2014 AECOM VISSIM assessment.

No comment is provided.

Collision Data Analysis

National Highways have requested a direct analysis of the SRN junctions to be included within this section.

This information has now been included by WSP which identifies collisions at each of the three junctions within the area. They have then provided a table which outlines potential collision cluster points at the junction, although this is welcomed it is considered that further investigation into the causality of these clusters be performed so that the reasoning behind these collisions is understood.

3. National Highways Comments on ARCADIS Baseline Evidence Report – Huncoat Garden Village Masterplan and Delivery Strategy

This document was produced by ARCADIS in November 2019 and provides information related to the baseline evidence report for the delivery strategy associated with the HGV.

Our review of the document focused solely on the impact of the development on the network and whether previous steps have been taken to identify the possibility of mitigation and the potential impact of the HGV on the operation of the network namely the M56 and A56.

As noted in the document on page 48 Lancashire County Council has planned a National Highways scheme at the M65 Junction 8, which aims to improve the capacity of the motorway for the future and improve overall safety. While the final design and scheme have yet to be established, engagement with Highways England (now National Highways) will be undertaken to ensure that any impact of the Masterplan Proposals upon the capacity of this junction is appropriately considered within its design. This statement (made in 2019) is factually incorrect **–**

there was at that time no scheme to improve Junction 8 within the forward programme of National Highways or Lancashire County Council.

This is not as great a concern now. This is because, in 2021, National Highways commissioned WSP to complete the M65 Junction 8 Study and VISSIM modelling. This study identified and tested in modelling options for possible improvements to the junction that could accommodate the Local Plan traffic growth. This study took into consideration taking into account flows from the HGV included within the ARCADIS Baseline Evidence Report.

As noted above, there is no certainty at this time that the scheme at M65 Junction 8 identified within the 2021 M65 Junction 8 Study by WSP (on behalf of National Highways) will be funded for delivery as part of RIS3. It is further understood that Hyndburn is relying on the scheme being funded as part of the next Road Improvement Scheme (RIS3), but funding allocations will not be confirmed until late 2024. Reliance on RIS is also non-compliant with paragraph 29 of Circular 01/2022 in which Hyndburn are reliant to deliver Huncoat Garden Village and employment sites at Altham Industrial Estate.

In terms of the relevant junction assessments that were performed at this time, this only relates to 2 of the 9 junctions identified namely the A56 / A679 Burnley Road (Western and Eastern Roundabout) which surveys were recorded in March 2018. The results (Page 52) indicate that, in 2018, there was minimal queuing at the junction and therefore limited queuing back which may impede the operation of the junction.

These junctions were then modelled in 2036 using TEMPro growth factors, these input parameters have been checked and are accurate. Moreover, they have included some committed development all of which are minor in terms of size. As such it recommended that if these junctions were to be remodeled, they do so in terms of the Local Plan traffic as well as TEMPro to account for any uncertainty in the base position.

However, the results do show that in 2036 both the eastern and western roundabouts of the A56 continue to operate within capacity during the network AM and PM peak hours in the 2036 future baseline conditions without the proposed development.

A further modelling exercise (page 61) was then carried out which included the redistribution of traffic associated with the Whinney Hill Link Road which consists of a 3.1km single carriageway link to the north of Huncoat between Whinney Hill Road/Bolton Avenue Junction and A679 Burnley Road/A56 T junction along with associated works land running west-east between Whinney Hill Road/ Bolton Avenue junction and Burnley Road A679/A56 T Junction passing via Altham Lane.

The results then indicate no detrimental impact on the SRN however it is noted that there is a potential error in terms of the presentation of the results - this should be confirmed.

ARCADIS then present the proposed trip generation for the site; this has been used by WSP to inform the potential trips at the site as part of their local plan work, that is ongoing. It appears there has been no assessment of those two junctions or the nearby M65 Junction 8 in a development scenario which given the number of trips generated and the proximity to the A56 and M65 should have been included.

Overall based on this document there appears to be limited regard for the operation of the M56 or the A56 in terms of the impact of the HGV on these links. The document does present the proposed trip rates at the site which have been used by WSP for their local plan assessment work for HBC for the emerging Local Plan overall. Moreover, given that the work was completed in 2018 this is now considered to be out of date and as such the conclusions sought then may not be appropriate now, except the HGV trip rates however these should still be checked to confirm if they are still appropriate.

Conclusion

In conclusion, National Highways is of the view that any improvements that may subsequently be required to the A56 / A679 junction to accommodate the HGV should be dealt with as part of the forthcoming planning application by HBC and Homes England for the ‘Huncoat Lane’ access road works for the HGV, which includes works in the vicinity of the A56 / A679 Huncoat junction.

The exclusion of an assessment of M65 Junction 8 within the 2019 ARCADIS Baseline report for the HGV is not considered by National Highways to be a significant issue in itself in 2024 given that the impacts and solution to accommodate the Local Plan generated traffic at M65 Junction 8 is set out and tested in outline within the 2021 M65 Junction 8 Study, which has been accepted by HBC as part of its Local Plan transport evidence base.

HBC is currently reliant on funding being secured within RIS3 by National Highways for the delivery of an improvement scheme to M65 Junction 8 to cater for the Local Plan growth. At this time, there is no certainty of funding being awarded for this scheme until the outcome of the RIS3 funding settlement is formally announced later in 2024.

National Highways therefore remains committed to working with HBC over the coming months to keep this situation under review and explore possible solutions as we move further towards the formal announcement of RIS3 funding settlement for National Highways during the period 2025-30. However, ultimately a position will need to be agreed upon before the Local Plan can be accepted.

National Highways

22nd March 2024

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22nd March 2024

Sent Via Email

Dear Sir / Madam,

Consultation on the Regulation 19 Publication Version Hyndburn Local Plan 2021 - 2040

National Highways welcomes the opportunity to provide comments on the Regulation 19 response to the Hyndburn Local Plan 2021- 2040. The Local Plan sets out the strategic policy framework to meet future development requirements in Hyndburn for the period 2021 to 2040 and allocates a wide range of specific sites to meet these requirements.

National Highways have been appointed by the Secretary of State for Transport as a strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Within the Hyndburn area our principal interest is safeguarding the operation of the M65 and A56, with Junctions 6 and 7 of the M65 lying within the Borough, and M65 Junction 8, (whilst being within the Borough of Burnley) is located very close to the Hyndburn boundary and therefore will be affected by the emerging Hyndburn Local Plan.

In responding to local plan consultations, we have regard to the newly published (December 2022) DfT Circular 01/2022 – The Strategic Road Network and the Delivery of Sustainable Development. This policy document which sets out how interactions with the SRN should be considered in the development of local plans. Although it is acknowledged that this Local Plan has been developed in part under the previous DfT circular, 02/2013.

This response has taken into account paragraph 26 of the new document which states:

"…..In relation to the preparation of local plans and spatial development strategies, the government expects that the relevant authorities will engage with the company from the outset of this process, to understand the interaction between land use designations and the impacts on

road safety and future performance of the SRN. The involvement of the company will ensure that the strategic transport evidence base will provide a robust assessment of any positive and negative impacts on the SRN and inform a transport strategy and the Strategic Environmental Assessment (SEA) for the study area that aligns with the safe operation and long-term integrity of the SRN…..".

Given our role and the context of our previous Local Plan consultation responses, this letter specifically considers the:

- Emerging Local Plan Transport Evidence Base – November 2022;
- Hyndburn 2037 Local Plan Strategic Policies and Site Allocations Regulation 19 Document – October 2022.

As part of the ongoing consultation, we provided previous comments in relation to the emerging Local Plan in July 2022 to Hyndburn Borough Council (HBC). We have since received a response to our previous comments from HBC dated October 2023, which we have reviewed and provide comments on enclosed with this letter. Those comments take account of ongoing dialogue between HBC and National Highways on matters concerning the traffic impacts of the emerging Local Plan upon the SRN and associated Local Plan highway infrastructure requirements.

The Local Plan replaces the 2012 Core Strategy with realigned strategic policies and new site allocations. The Local Plan forms part of the overall planning policy framework for Hyndburn which also includes the Development Management DPD adopted in 2018 and the Accrington Area Action Plan adopted in 2012.

Along with existing development commitments, land has been identified across the Borough to meet the requirements, of the overall development strategy set out in Policy SP1, with a need for at least 3,686 dwellings and 70 hectares of employment land across the plan period.

This sees the allocation of 23 specific housing site allocations, including land for up to 1500-1600 new homes at Huncoat (Huncoat Garden Village), and 6 employment site allocations. Together with Huncoat Garden Village, the two new strategic employment allocations at Altham and Whitebirk will be likely to have an impact upon the adjacent SRN. We note that the new employment land allocations are provided in conjunction with a policy approach which seeks to protect and develop existing employment locations.

SP1 also sets out the overarching policy framework for Hyndburn 2040 which sets out the development principles within which all future development would be expected to take place. Development proposals in the Borough would be assessed firstly against Policy SP1, then other relevant Local Plan policies and against national policy, including the National Planning Policy Framework. We would also advise that DfT Circular 01/2022 be considered within these policies, which reflects new government policies in relation to 'Net Zero' and sustainable transport, as well as a planned forthcoming revision to the NPPF.

As stated, there are specific strategic policies as part of the Spatial Development Strategy; these being 'SP1 – Spatial Development Strategy'; 'SP2 – Huncoat Garden Village', 'SP3 – Planning Obligations' amongst others to achieve the goals and ambitions of HBC for the Local Plan. Where possible, National Highways will work alongside the council in support of co-ordination between all relevant stakeholders in meeting these policy objectives.

An Infrastructure Delivery Plan will support identification of the key infrastructure required to support planned growth, and how this is expected to be funded and co-ordinated. We welcome this statement and recommend that we are included as part of any discussions related to the strategic road network and planned delivery of any associated infrastructure.

Policy SP1 further seeks to provide a balanced policy approach to ensure that the vision and objectives set out in Section 2 are met (in so far as planning can influence), whilst minimising any adverse impacts on the environment, economy and society. We welcome this approach and will work with all partners to ensure these objectives are met within the context of the SRN.

SP2 sets out the policy specifically related to the Huncoat Garden Village, an allocated site to the east of the area adjacent to the M65 Junction 8, with up to 1600 dwellings being identified, and it is stated that some of this may occur beyond the current plan period.

We note as part of the Huncoat Garden Village Masterplan that it does not refer to any M65 Junction 8 improvement as being 'strategic infrastructure' required to facilitate Huncoat Garden Village, this is despite the findings of National Highways' 2020 National M65 Junction 8 study that HBC have included as part of their Local Plan evidence base to date. This National Highways Study establishes not only an existing need for capacity improvements at this junction, but also the need for capacity enhancements to accommodate development growth (particularly that arising from Huncoat Garden Village). Consequently, there is already link between the emerging Local Plan and the need for infrastructure improvements at M65 Junction 8 to be able to accommodate the Local Plan growth that needs to be referred to within the Huncoat Masterplan and associated Local Plan site allocation policies.

Work was commissioned by HBC in July 2022 that provided a review of the local transport study to accompany the Local Plan. Included within our response to this document were several queries related to the Huncoat Garden Village and associated modelling, as such we will await until a response has been received and agreed with us before providing final comments.

The infrastructure required to support development planned at Huncoat will be set out in an Infrastructure Delivery Plan, it is requested that we be consulted on any development pertinent to the SRN and welcome the opportunity to work alongside the developers and local council to meet targeted objectives.

We would though welcome the approach as outlined in SP2, to achieve development that integrates sustainable travel across all modes of transport, as well as the need for Developers to contribute towards the cost of any strategic infrastructure identified through an Infrastructure Delivery Plan, and this should then include mitigating the impacts upon the SRN where necessary.

It should be noted that National Highways has no plans at this time to deliver capacity improvement schemes on the M65 during the current Roads Investment Strategy 2 (RIS) period (2020-25) and that we are unable to provide any certainty that such enhancements may feature within our programme during future RIS funding periods. Indeed, there is no certainty that any of the improvements required to the SRN or cited by HBC will be included within any of the Government's future five-year RIS periods during the lifetime of the Local Plan.

HBC will therefore need to consider all funding opportunities, including developer contributions for any infrastructure on the SRN required to accommodate Local Plan development growth. National Highways welcomes the opportunity to support growth in Hyndburn by supporting funding bids and business case development for improvements as appropriate, as well as providing technical advice and input as required.

SP3 sets out the planning obligations to be attached to developments through the provision and inclusion of planning conditions and/or Section 106 obligations or agreements, in line with the tests set out in paragraph 57 of NPPF. We welcome this approach as it helps secure sustainable development proposals and ensures that development proposals meet the reasonable costs of new infrastructure, facilities or services needed as a direct result of the development. Moreover, we note that HBC will identify specific obligations where infrastructure requirements are known and evidenced through an Infrastructure Delivery Plan. It is noted however HBC may consider the introduction of a separate delivery mechanism for the Huncoat Garden Village. As with our comments on SP2, we would request that we are included within any discussions to negate any potential impact on the SRN and to open dialogue between developers and relevant stakeholders.

SP4 outlines the employment provision and strategic sites, with a total of 59 hectares being identified over the plan period. Four sites have been identified with EMP3 located at Altham to the north of junction 8 of the M65, and EMP4, 5 and 6 located adjacent to junction 6 of the M65 at Whitebirk.

SP4 also sets out an area of safeguarded land (S2) for a Rail Freight Terminal to be located to the east of Altham Lane, within the Huncoat Garden Village boundary, although it is acknowledged that an appropriate access arrangement will need to be identified. For the avoidance of doubt, provision of a direct access to the SRN for such a Rail Freight Terminal would not be considered by National Highways.

Given the location of the above sites along the M65 corridor, it is stated that it is "*…essential that the strategic road network continues to be able to manage the traffic that the is generated by the industry along this corridor.*"

We would then wish to continue working with all parties to identify any impact upon the SRN and secure mitigation as required. Although it must be noted that any requirements for mitigation are likely to be required to be developer-funded and, as set out above, National Highways is unable to commit to the delivery of capacity enhancement schemes on the M65 in the near to medium term.

Policy SP10 sets out the Housing provision over the plan period with a total of 3,686 dwellings being identified, with Huncoat Garden Village making a significant contribution towards this overall total. This is the site that has the greatest potential to impact upon the operation of the SRN.

We would also wish to support the measures as set out in SP13 Climate Change and Sustainable Development and SP17 Renewable Energy as a means to support National Highways with our plan in working towards 'Net Zero' carbon emissions by 2050, which is a government policy aim.

Section 8 of the Local Plan outlines the policies associated with accessibility and transport. This includes working with neighbouring authorities, Lancashire County Council and National Highways to ensure that the M65 and A56 and their junctions have sufficient capacity to manage the growth planned across the sub-region and to allow businesses and people to connect effectively with neighbouring conurbations.

As well as ensuring new developments will not have an unacceptable impact on highway safety and will not have a severe cumulative impact on the road network, we welcome this emphasis on the road network and in particular on the M65 and will work alongside stakeholders to manage this.

We would also note that the plan identifies that whilst some works have been undertaken on the M65 to improve performance at junctions in recent years, M65 Junction 8 is a priority. In addition, HBC also state that, in the longer term the M65 will need to be widened to three lanes to accommodate potential growth in traffic and to allow it to effectively manage traffic generated from planned developments. Although, as stated above, we again comment that there are no current plans to improve the M65 and there is no certainty that any of the improvements required to the SRN or cited by HBC will be included within any of the Government's future five-year RIS periods during the lifetime of the Local Plan. Major improvements, such any changes to the mainline of the SRN or merge / diverge arrangements at junctions, is only potentially likely in the much longer term and would require additional studies to be undertaken. It would also be considered to be beyond the scope of highway works proposed in support of this Local Plan and would require a much more strategic intervention.

We do however, welcome the commitment to working with ourselves and Lancashire County Council in order to bring forward the extension to the Altham Business Park by ensuring that the capacity of the SRN does not act as a barrier to growth and development.

In respect to Policy SP23 Sustainable and Safe Transport we welcome the policy where developments that will generate a significant amount of movement should be accompanied by a Transport Assessment and Travel Plan. We also welcome the commitment by HMC that development with an unacceptable impact on highway safety, or that has a severe residual cumulative impact on the road network, will not be supported. In addition, we would also support the principle that where improvements are required that these are funded by the developer.

We will therefore continue work with both the local highway authority and developer to assist and advise on any applications likely to impact the SRN.

A number of allocations for both housing and employment are referenced within the Plan. Based on our review of the Plan, we consider that the following identified site allocations are likely to have a potentially significant impact on the SRN in terms of traffic related matters, therefore are considered key allocations;

- M65 Junction 6 – EMP4,EMP5, EMP6 and H20;
- M65 Junction 7 – EMP1, EMP2, H8,H9,H10 and H22; and
- M65 Junction 8 – EMP3, GT4, S1, S2, H11, H12, H13, H14 and H15.

The sites listed above are likely to result in an impact on the SRN in the area and any site anticipated to have an impact on the SRN in the area would be subject to consultation with National Highways and appropriately assessed in line with the DfT Circular 01/2022 to determine the extent of their potential impacts. Depending on the scale of likely impact on the SRN the developer / applicant may need to identify suitable mitigation measures.

Whilst we have identified the immediate SRN junctions in proximity to the site allocations identified in the Plan, it should be noted that assessments may need to cover a wider extent based upon the size of the development.

Where Plan proposals are anticipated to have an impact on the operation of the SRN in this area, we welcome the wording of the Regulation 19 document that states:

'Development which will generate a significant amount of movement should be accompanied by a Transport Assessment and Travel Plan' as outlined in SP23.

This will help to determine any adverse impacts to the reliability of the SRN. Transport Assessments will need to be agreed through site specific pre-application consultation with National Highways. At the planning application stage, the Transport Assessment will be reviewed in accordance with the current DfT Circular. Where appropriate, conditions may be agreed to mitigate any unacceptable impacts that may be identified through the assessment process as stated in SP3.

As noted earlier in the document National Highways and HBC continue to work together to seek an agreed way forward in respect of overcoming risks associated with the reliance of the Local Plan on RIS funding to deliver the necessary infrastructure enhancements needed to the SRN to accommodate traffic growth associated with the Local Plan, particularly in respect of M65 Junction 8 and Huncoat Garden Village (reliance on RIS funding is contrary to paragraph 2. Of Circular 01/2022).

In conclusion, the Localism Act 2011 placed the responsibility of 'Duty to Cooperate' on local authorities, to ensure that any local or cross-boundary impacts have been fully considered and addressed appropriately in preparing the Local Plan. The local authority must demonstrate that they have discussed such matters with the relevant bodies, including ourselves.

National Highways would like to work with HBC to develop a draft Statement of Common Ground to summarise the ongoing discussions and co-operation between HBC and National Highways in respect of the Local Plan. The document would include details of how the Council has responded to comments and representations made by National Highways as part of the Development Plan review process, the approach to collaborative joint working on the preparation of additional evidence and agreement on where future collaborative work will focus.

We hope that these comments are useful and would welcome continued dialogue with HBC to ensure that the transport impacts of this strategic area for growth is appropriately assessed and considered in respect of the continued safe operation of the SRN.

Yours faithfully,

Warren Hilton

Warren Hilton

North West Spatial Planning Team

BASELINE EVIDENCE REPORT

Huncoat Garden Village Masterplan and Delivery Strategy

TRANSPORT CHAPTER & APPENDICIES ONLY

NOVEMBER 2019

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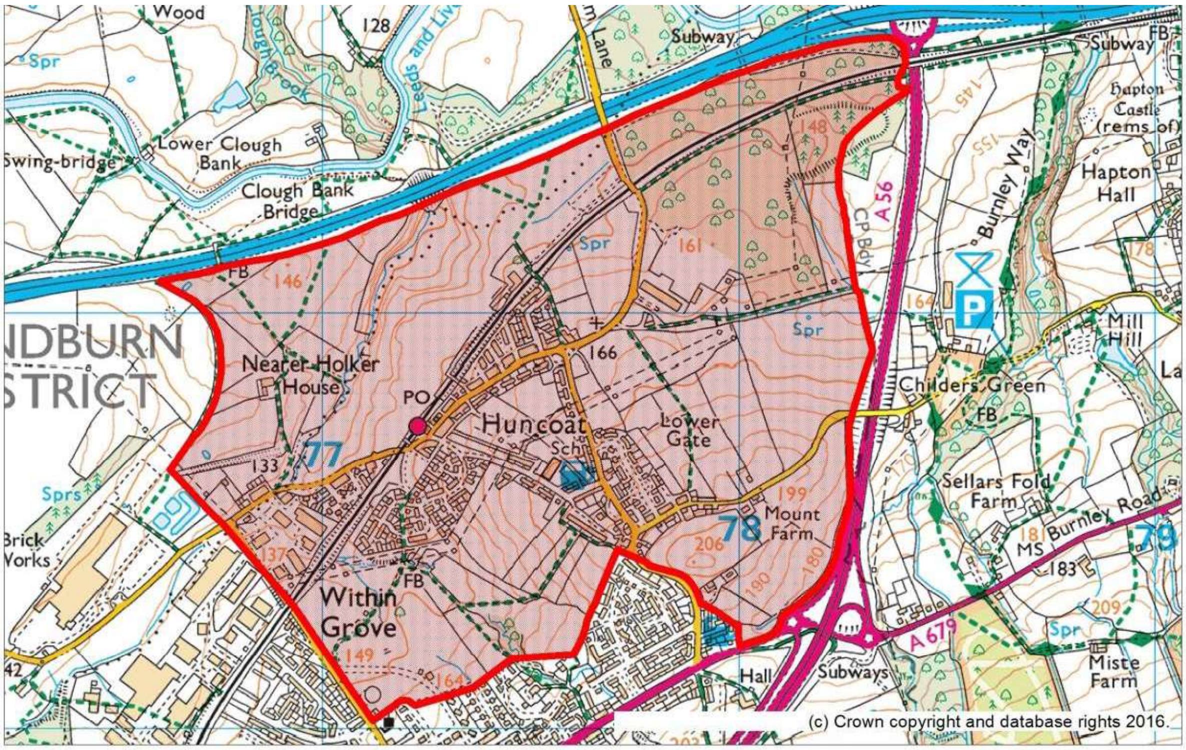
1 Transport and Highways

1.1 Transport Context

The study area is located immediately to the east of Accrington town centre, and immediately south of the M65, with the A56 bounding the Masterplan Area to the east (as shown on Insert 15-1). Huncoat is located within the administrative boundary of Hyndburn District Council the county of Lancashire, with Hyndburn District Council being the local authority.

Insert 15-1: Masterplan Area Location Plan



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Huncoat currently consists of primarily residential development, with several opportunities for employment in the immediate local area including Huncoat Business Park, together with established industrial uses such as the Landfilling site at Whinney Hill Quarry and the brickworks, all of which are located to the northwest of the Masterplan Area. Further afield, Accrington is located a short distance to the South West and the Altham Business Park is located to the north, together with a number of other smaller industrial estates towards Padiham.

The Masterplan Area is dissected by two local distributor roads, Station Road connecting to Altham Lane to the north and Whinney Hill Road to the west, and Higher and Lower Gate Road which provides connections to Station Road to the north from A679 Burnley Road to the south. The A679 in turn provides Access to the A56 Accrington Bypass and connections to the M65 junction 8. Lancashire County Council are the Highway Authority for all publicly accessible local roads within Huncoat, and Highways England are the Highways Authority with responsibility for the A56 and M65.

Huncoat has a railway station that is located towards the centre of the Masterplan Area. The station has limited connectivity with only hourly services from Huncoat to Burnley and Colne (eastbound) and Preston via Accrington and Blackburn (westbound). Some services pass through, but do not currently stop at the station.

1.1.1 Background Planning History

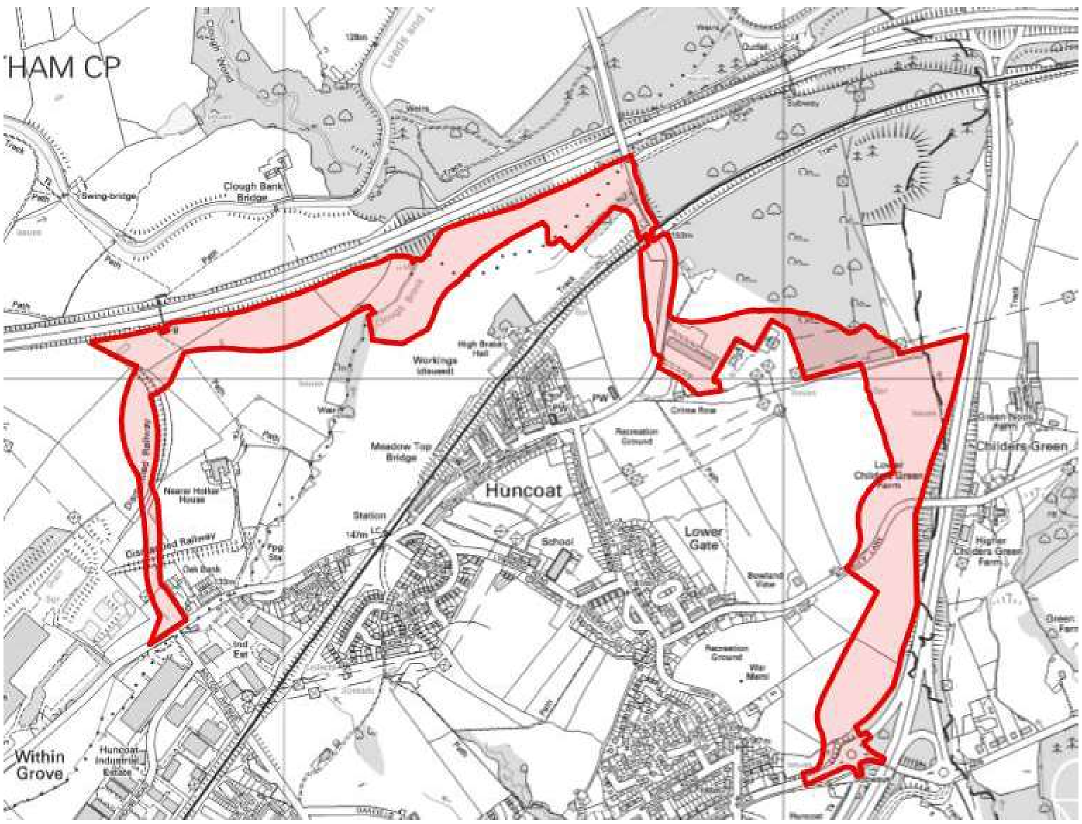
Huncoat itself has been the focus of a number of planning applications over the last 20 years since the decommissioning of the Huncoat Power Station, with a focus upon delivering improved transport infrastructure and releasing former brownfield sites for development. A brief history of the relevant applications is presented below and provides a useful context in terms of the scale of interventions previously considered and known highways considerations.

Whinney Hill Link Road

The application for the Whinney Hill Link Road (WHLR) (Ref 11/08/0482) consists of the construction of 3.1km length single carriageway to the north of Huncoat between Whinney Hill Road/Bolton Avenue Junction and A679 Burnley Road/A56 T junction along with associated works land running west-east between Whinney Hill Road/Bolton Avenue junction and Burnley Road A679/A56 T Junction passing via Altham Lane.

The proposed route corridor for the link road is shown on Insert 15-2.

Insert 15-2: Whiney Hill Link Road



The proposed link road will include the following features:

- Two new roundabouts at Altham Avenue;
- An overbridge to railway and adjacent access tract;
- 7.3m carriageway with 2m footway to one side and 2m verge to the other;
- A culture structure to Clough Brook;
- An at grade highway structure with highway embankments at railway overbridge and Clough Brook;
- A new signalised junction at Whinney Hill Road/ Bolton Avenue;
- A right turn facility for right turning traffic into the ELWTP; and

- Consideration may be given to traffic calming on Bolton Avenue and/ or Traffic Regulation Orders (TRO's on the surrounding local highway network including part of Bolton Avenue, Station Road, Higher Gate Road and Lower Gate Road.

Hyndburn's Local Transport Plan identified that the Whinney Hill Link Road would remove HGV traffic from Huncoat's unsuitable network, and it was committed by Lancashire County Council to be implemented servicing the purpose of providing a link between the landfilling site and the ELWTP site. Existing problems with HGV traffic within Huncoat have resulted in a conflict between the industrial and residential uses of the village, which the link road proposed to resolve by separating this traffic from the residential area of Huncoat.

It is also noted that a number of alternative potential routes for linking the two sites were examined, however proposals to insert a link to the M65 motorway network or the A56 directly were rejected by Highways England, therefore the link road was the only acceptable alternative for HGV traffic management.

A number of potential alignments for the link road were considered within a Route Options Appraisal Report written by Atkins. Within the Route Options Appraisal report it was concluded that the majority of the route options posed would have considerable environmental and social impacts, therefore an alignment which builds upon the suggested Green Route was put forward, which can be viewed in Appendix G of this report. It is this alignment which the Transport Assessment's findings have been based upon.

<u>Relevant Observations</u>

Condition 1 of the consented application (Ref: 11/08/0482) imposed an implementation period of five years from the date of granting planning consent, which expired on 29th April 2014, and has now lapsed.

Whilst, one of the primary objectives of the WHLR would be to remove HGV traffic associated with the Landfill site at Whinney Hill Quarry, Condition 1 of the planning consent for Landfilling and restoration of Whinney Hill Quarry (Ref:11/03/0017) stipulates that landfilling operations shall cease not later than 21st February 2045 and that the site should be restored in its entirety by 2050. The impacts associated with the current operation of the Landfill site is therefore unlikely to be a permanent condition.

It is also noted that the Transport Assessment for the Whinney Hill Link Road concluded that no existing capacity issues would be resolved by the implementation of the WHLR, and reiterated the primary objective being to reroute HGV's through Huncoat.

Notwithstanding the above the WHLR does provide opportunities to access isolated parcels of land located between Lower Gate Road and the A56 Accrington By-pass.

Land at former Huncoat Power Station Altham Lane

Planning permission for the development of land 0.5km north east of the village, previously accommodating Huncoat Power Station was granted in July 2006 (Ref: 11/05/0535). The application to which this relates was for the development of a waste technology park with proposed access from Burnley Road/A56 Junction and Altham Lane, linking to the first phase of the Whinney Hill Link Road (11/08/0482).

Following application number 11/05/0535 being granted, highway safety concerns relating to use of the existing roads to access the consented land use were raised by highway officers at Lancashire County Council. A further planning application (Ref: 11/09/0065) was submitted for Alternative B1, B2 and B8 uses of the Power Station site subject to access solely from Burnley Road/ A56 (T) Junction and Altham Lane. The Certificate of Appropriate Alternative development was granted in February 2009 but never implemented and has now lapsed in accordance with the conditions attached to the original application.

The land has been the subject of a further planning application for the demolition of the remaining power station buildings (Ref: 11/17/0158) in March 2017, which has been approved and actioned.

GN Properties Land

Land owned by GN Properties below the Huncoat Power Station site on Altham Lane was additionally subject to an approved outline planning permission (Ref:11/080355) for an employment site with B1, B2 and B8 Use. Outline permission was granted in June 2008 subject to written approval regarding reserved matters of the site with expiration date of 3 years for approval to be obtained from the local planning authority. This permission has since lapsed, and the development has not been actioned.

1.1.2 Policy Context

A review of national, regional and local planning policy from a transport perspective has been carried out to determine considerations within policy that should be applied to future development in Huncoat, and to ensure that the proposed transport strategy for the development accords with that policy.

National Planning Policy Framework (Revision July 2018)

The revised National Planning Policy Framework, (NPPF) was adopted in July 2018 and replaces the previous NPPF of March 2012. The revised NPPF does not contain any radical changes from the previous one, however more emphasis has been put on the importance of promotion of sustainable modes of transport and the need for transport issues to be considered early in the planning process (Chapter 9).

Paragraph 102 states that:

> '*Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*
>
> a. *the potential impacts of development on transport networks can be addressed;*
> b. *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
> c. *opportunities to promote walking, cycling and public transport use are identified and pursued;*
> d. *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
> e. *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places'.*

Paragraph 110 b of the Nation Planning Policy Framework states that developments should:

> *'address the needs of people with disabilities and reduced mobility in relation to all modes of transport'.*

Lancashire Cycling and Walking Strategy 2016-2026 Consultation Draft

This document details the county's plan to improve cycling and walking infrastructure and increase the use of these modes. The plan sets out a number of targets Lancashire desires to achieve which will be measures against current baseline conditions. These include:

- Doubling the number of cycling trips from the 2016 baseline by 2016
- Increase the number of walking trips by 10% from the baseline by 2026
- Create a culture within Lancashire which normalising the use of the cycling and walking modes as everyday modes of transport.
- Reduce number of cyclists and pedestrians killed on roads in Lancashire
- Double the trips of visitors and tourists traveling using active modes of transport

As part of this strategy developers funding is partly sought through development

The Hyndburn Borough Council Core Strategy 2012

The Core Strategy sets out the strategic policy framework of Hyndburn, which provides context for the more detailed DPD's ('Site Allocations and Proposals Map DPD Neighbourhood Plans', 'Development Management DPD Neighbourhood Plans' and 'Area Actions Plans Accrington AAP') and provides the necessary tools for sustainable development

<u>Policy T2- Improving Connectivity</u>

Development proposals which take into consideration the connectivity via sustainable modes of transport will be supported by the local planning authority, on the basis that the environmental and social impacts have been taken into consideration

Due to car ownership levels throughout the area being particularly low, the regeneration of the town could cause levels to rise, necessitating the need to ensure that sustainable modes of travel are developed within the area.

Policy T2- Cycle and Footpath Networks

The safeguarding of cycle and footway networks is essential, and where appropriate contributions to the improvement and maintenance of these networks should be made by developers
Existing footways and cycleways should also be extended and improved and must also compliment the Green Infrastructure Network, as detailed in Policy Env1 Green Infrastructure.

Future proposals have been established to widen the M65 to accommodate congestion within the local area, however at a more local level the following measures are expected to be taken to mitigate congestion:

- Developers will be expected to cover the potential costs associated with the external cost of the proposals
- The implementation of green travel plans at the Masterplan Area to alleviate traffic implication of potential development sites.

Core Strategies Policies Scoping Assessment Consultation Paper (February 2018)

This document reviews the existing policy set out within the Core Strategy, with the aim of assessing the policy for the development of the Local Plan, While the paper did not identify any transport related policy changes, some considerations were suggested.

The Development Management DPD 2018

The Development Management Plan is the principal forms part of the Hyndburn Borough Council Local Plan and sets out the policy framework that is used for assessing planning application, but also provides supporting detail to strategic policies set out in the Core Strategy. The Development Management DPD intends to further the aims and objectives of the NPPF and the local Core Strategy

Policy DM32 Sustainable Travel, Traffic and Highways Safety

Measures which reduce the need for travel and encourage more sustainable travel, by public and community transport, walking, and cycling are encouraged. Measures should prioritise sustainable modes of travel and recognise a hierarchy in the modes, with pedestrians being most important followed by cyclists, public transport users, and special vehicle service (taxis, deliveries and servicing needs). Other motorised transport should be considered last. Development should therefore aim to meet the following criteria:

- Take into consideration highways safety and mitigate any adverse impacts upon this.
- Ensure future development is accessible to all users including those with impaired mobility.
- Maintain and develop existing rights of way and established rights of way, while also facilitating the greening of access routes and contributing to the green infrastructure.
- Development proposals should be designed taking into consideration signage and street furniture, with a focus on decluttering the public realm within the vicinity of the Masterplan Area.
- Designing places in line with Manual for Streets and Manual for Streets 2 to create safe environments for pedestrians, cyclist and the wider community
- Encourage sustainable modes of transport by improving connectivity between places, particularly cycle and walking paths, with emphasise placed on the canal towpath.

<u>GN8 (Linked to DM32) Parking Standards</u>

Parking standards, which are expressed as maximum values for residential developments, are set out below.

Table 15-1: Hyndburn Parking Standards

Bedrooms per Unit	Vehicle parking Standard	Accessible standards	Cycle Parking Standards
1 Bedroom dwelling	1 space		Not Stated
2-3-bedroom dwelling	2 spaces	1 space per regular car parking space	2 spaces
4+ bedroom dwelling	3 spaces		4 spaces

Accrington Area Action Plan

The action plan aims to provide policy for which new developments can be assessed against and considers how the town centre should be regenerated, providing good context with which future development in Huncoat can be aligned with. Within the plan the transport framework the following has been taken into consideration:

- Local improvement plans such as rail station developments, the relocation of the bus station and the implementation of the East Lancashire Rapid Transit System.
- Maximising accessibility to key services via sustainable modes of travel and creating a townscape in which these modes have advantage over the private car
- Utilising land in a way in which will encourage walking trips, particularly in terms of commuting, retail and education trips.

East Lancashire Highways and Transport Masterplan

The East Lancashire highways and Transport Masterplan sets out the local transport strategies and priories within the East Lancashire area until 2021 and sets out how the masterplan will be implemented. In reviewing the Masterplan, it can be assessed how the Huncoat development can be implemented to fit in with its strategic objectives.

The Masterplan identifies key challenges within transport currently faced in East Lancashire
It identifies that for longer distance journeys, motorway is the predominantly utilised method of travel in an east or westerly direction from Hyndburn. It also identifies that a large portion of those commuting out of the district travel west, while those commuting into Hyndburn come from the neighbouring districts to the west and east
The Masterplan identifies that transport should aim to:

- reduce carbon emissions;
- improve personal health and well-being in Lancashire;
- support economic development;
- increase community cohesion; and
- provide affordable travel options in the future.

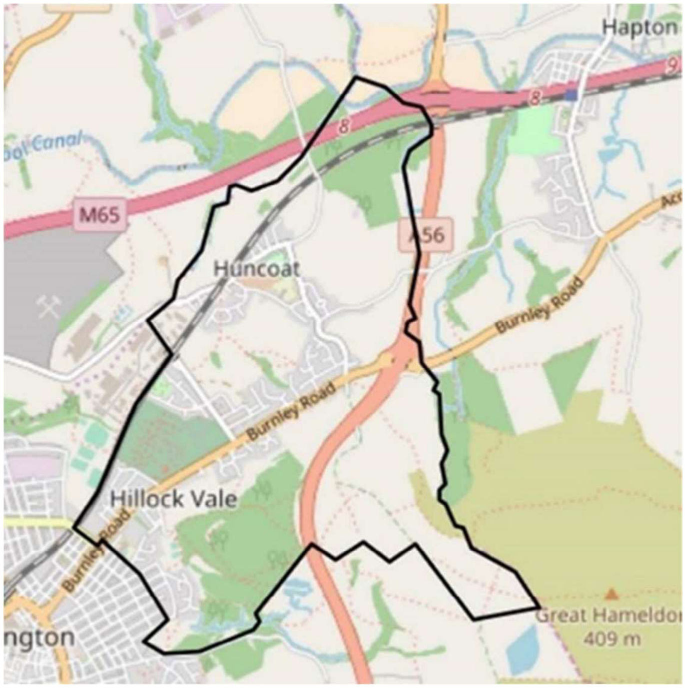
1.2 Baseline Information

This section sets out the baseline highways conditions within Huncoat, describing the demographic characteristics, journey patterns, accessibility to public transport, active travel infrastructure and physical road conditions within the area.

1.2.1 Demographics and Travel Patterns

The travel patterns observed within similar areas located in the Huncoat ward, Hyndburn district and Lancashire county, utilising data obtained from Lancashire County Council and the Office for National Statistics. The geographical area for the E36003825 Huncoat ward is shown in Insert 15-3.

Insert 15-3: Location of Huncoat Ward



While the Masterplan Area encompasses a slightly different area than that of the ward, the demographic and travel pattern statistics provide a general localised background which can be applied to the developmental area.

Population

The population density for the Huncoat ward is shown in comparison with the Hyndburn district and the rest of Lancashire. The average density for England and Wales is shown for comparison.

Table 15-2: Population density of districts in Lancashire.

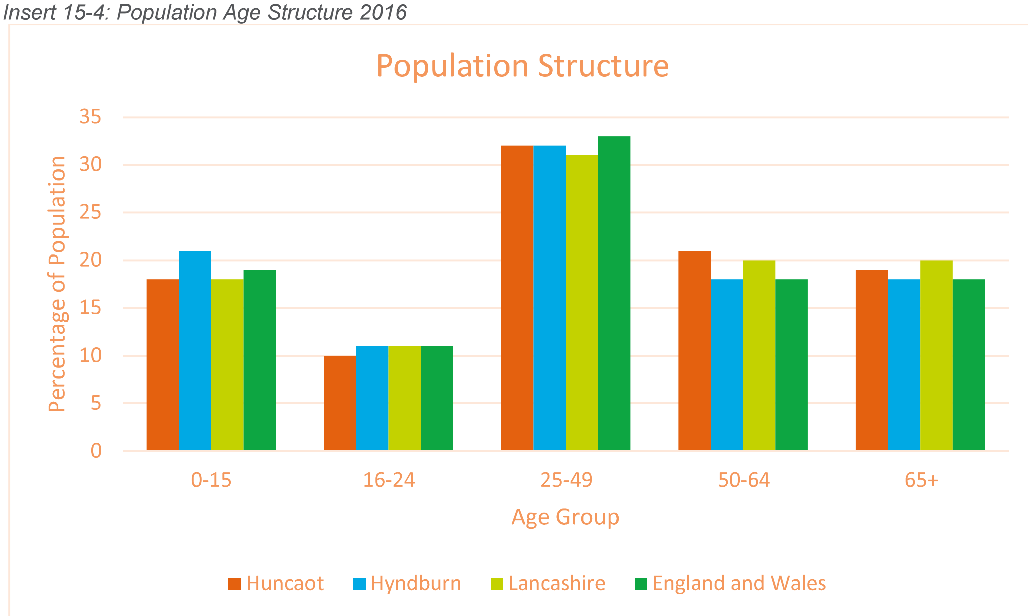
Area	Area Km^2	Population	Population Density per Hectare
Huncoat	4.13	4631	1,121
Hyndburn District	73	80,537	1,103
Lancashire 14	3,075	1,485,042	483

As shown above, the population density for Huncoat is slightly higher than the average density across the Hyndburn district, with the density for the district being significantly higher than the average for Lancashire. Comparably, Lancashire is also above average in population density in relation to the rest of England and Wales.

Population density generally corelates well with provision of services which are located within town centres and urban settlements leading to a relatively self-sufficient community which are able to meet the majority of their day-to-day within the areas in which they reside. It is however noted that the provision of general facilities and amenities within Huncoat itself is currently limited.

The age structure of populations for the Huncoat ward, Hyndburn district, Lancashire and England and Wales have been obtained from 2016 population estimates by the Office for National Statistics. Population groups are expressed in percentages and visualised within the chart overleaf.

Insert 15-4: Population Age Structure 2016

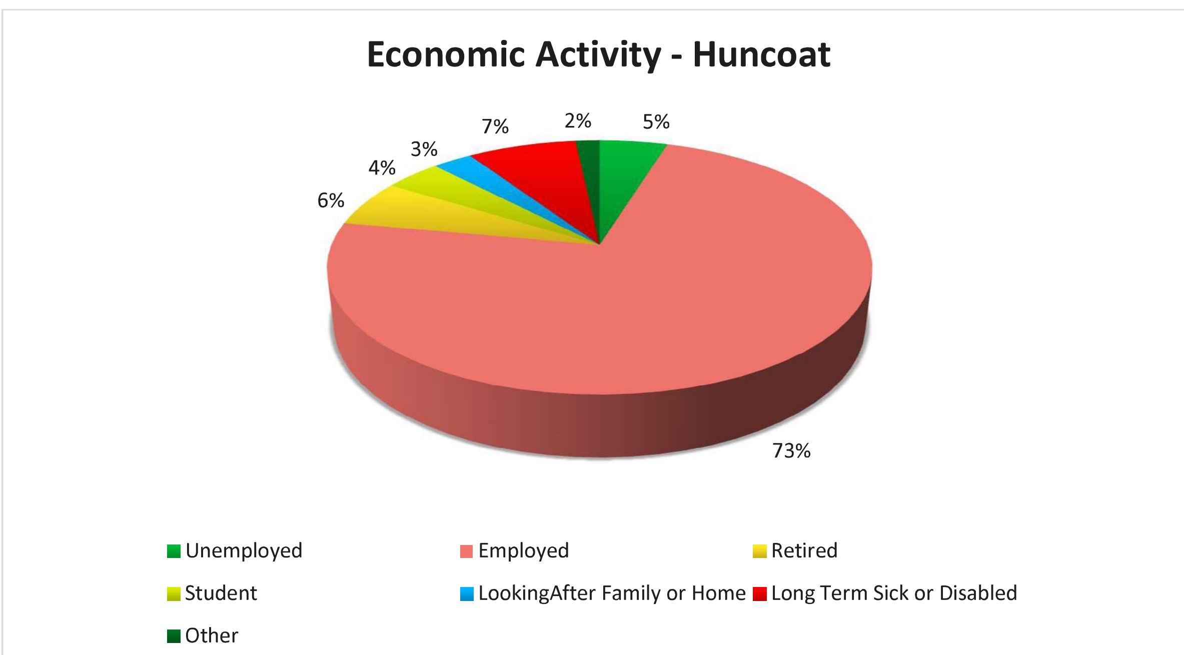


It is evident from Insert 15-4 that the age structure of the Huncoat ward reflects a population which is relatively consistent with that of Hyndburn District, Lancashire County and the majority of the UK. The only notable variation in structure can been seen between the Huncoat ward and Hyndburn district, wherein Huncoat has a slightly older population, with less 0-15 and 16-24 persons and higher levels of ages 50+. In terms of the working population, Huncoat has a marginally higher working population of persons ages 16-64 due primarily to the higher number of people aged between 50 and 64.

Economic Activity

Using data obtained from the 2011 National Census, the employment status percentages of the population for the Huncoat ward has been illustrated in Insert 15-5.

Insert 15- 5: Employment Status – Huncoat Residents

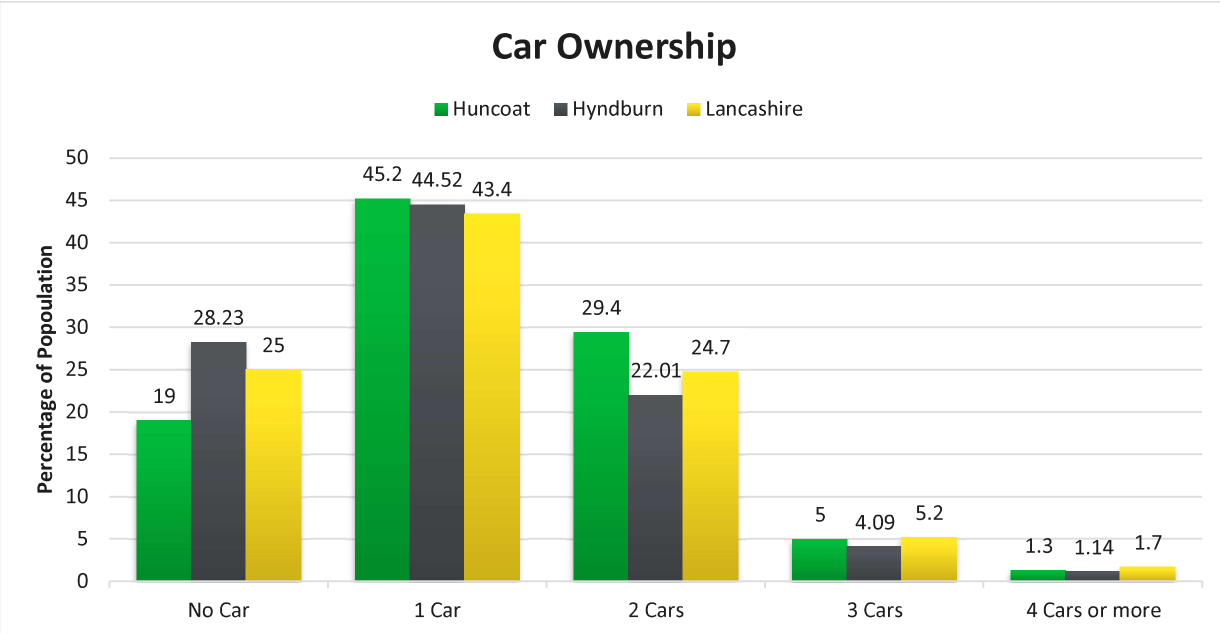


The majority (78%) of Huncoat's population are classified as economically active with 73% of the population being employed and a further 5% being unemployed, which is marginally higher than the national average which at the time of writing stands at 4%. The remaining 18% of the population is classified as economically inactive and whilst there is a very low proportion of students (4%) reflecting the lack of higher education establishments throughout the area, it is notable that a total of 7% is classified as Long-Term sick or Disabled and unable to work.

Car Ownership

Car Ownership for Huncoat has been calculated below using data from 2011 census data and is illustrated within Insert 15-6.

Insert 15-6: Average Cars Per Household



The chart above illustrates that residents of Huncoat generally displays a higher level of car dependency that that which is observed throughout the rest of the District and across the County, with only 19% of households not owning a car. The number of Households owning one or two cars are also significantly higher than those levels observed in the District and across the County, suggesting that that the availability of alternative modes of travel to employment, education, leisure and retail facilities is low and is likely to be a consequence of relative proximity to such facilities and the availability of public transport.

The average car ownership per household has also been investigated and is set out set out below in Table 15-3 for completeness.

Table 15-3: Car Ownership Levels

Area	Average level of Car ownership
Huncoat	1.3 cars per household
Hyndburn	1.1 cars per household

Notwithstanding the higher levels of car ownership identified above relative to the wider surrounding areas, it is clear that there remains a significant proportion of the population who rely on alternatives to the private car for travelling despite the comparative isolation of some parts of the Ward. This in turn points to opportunities to bring car dependency more into line with those observed in surrounding areas by enhancing connectivity, carefully locating complimentary facilities through the master planning process.

Journey Purposes

Journey purpose data recorded within the most recent National Travel Survey (2017) has been reproduced within Table 15-4 below. The data is taken from Tables NTS9906 and NTS9912 for the North West Region within which Lancashire is classified.

Table 15-4: Proportion trips by journey purpose (All day)

Purpose	England excluding London	North West	
	Percentage of Trips	Percentage of Trips	Average Distance Travelled (Miles)
Other Leisure	17.9%	17.1%	7.4
Commuting	14.1%	15.1%	8.1
Visiting Friends	14.6%	15%	7.9
Personal Business and Other Escort	18.8%	18.5%	4.6
Shopping	19.6%	19.8%	3.9
Business	3.1%	2.9%	19.1
Education (including escorting trips)	12%	11.4%	3.25

Journey purposes within the region are broadly similar to that of the rest of England excluding London across the day. Whilst shopping trips account for the highest single proportion of trips it is also associated with a relatively short distance travelled and provides an opportunity for the use of alternative modes of transport such as cycling and public transport providing. The highest average distance travelled is associated with business trips however trips account for a comparatively small proportion of trips throughout the day.

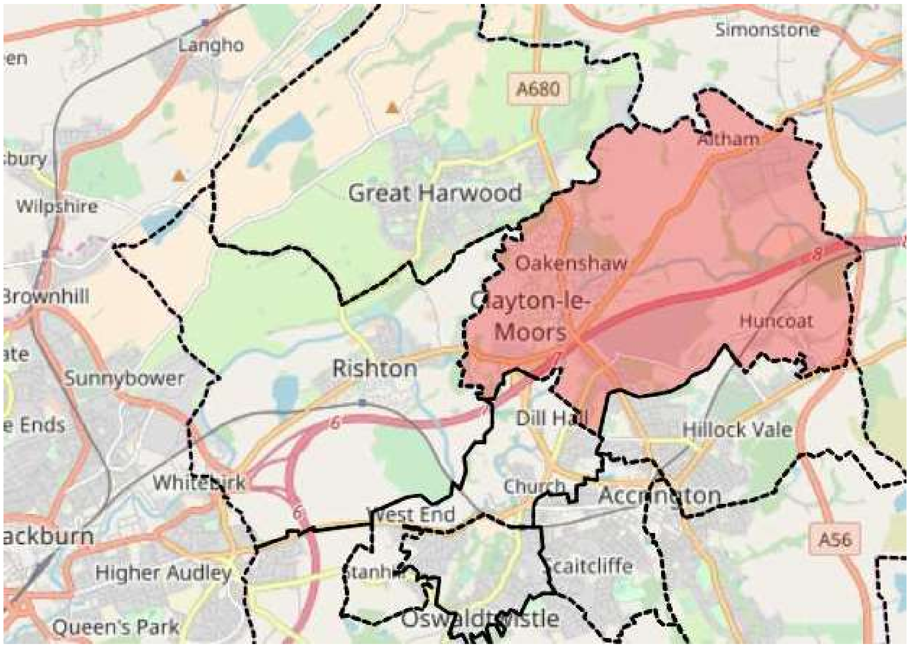
Other more significant journey purposes are those associated with commuting and leisure activities as these account for both a high proportion of trips and average journey distances of between 7 and 8 miles.

Whilst no further granularity of data is available for the North West region, Table NTS0502 provides visibility of journey purposes by time of day across the whole of England and identifies that some 72% of all journeys between the hours of 0800 and 0900 are associated with either commuting (21%) or education/ escort (51%) journey purposes. Between the hours of 1700 and 1800 commuting accounts for the largest single proportion of all journey purposes on the network at 33% with the majority of the remaining trips associated with Personal Business (20%) and Visiting Friends/ Leisure purposes (26%). Shopping trips account for 12% of trips during this period, its impact during the morning peak hour is relatively minor at 4%.

Travel to Work

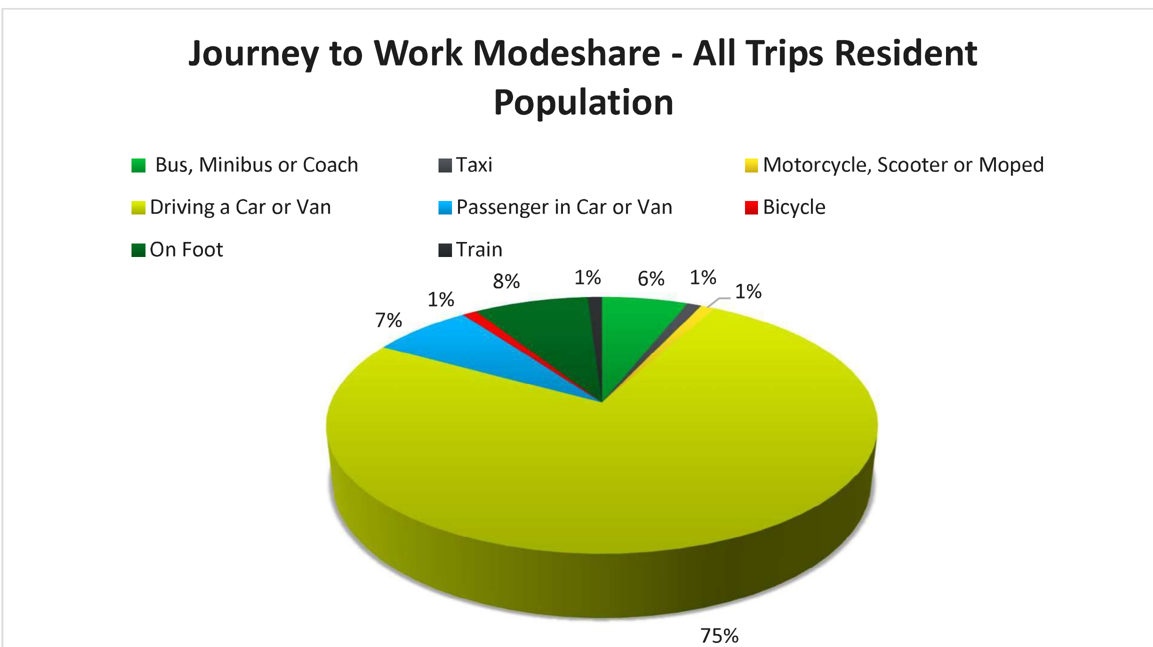
Given that commuting trips account for a significant proportion of trips during the AM and PM peak hours, data from the 2011 census for Travel to Work Mode Share has been interrogated to establish how the local population is travelling on the surrounding networks. This information is available for the Mid Super Output Area (MSOA) level within the Census. The selected MSOA, Clayton le Moors and Huncoat, is illustrated in Insert 15-7. It includes Huncoat and is considered to encompass an area which is generally similar in character to the Study Area.

Insert 15-7: Selected MSOA for Travel to Work Data



The journey to work mode share for this area is illustrated within Insert 15-8 and incorporates all journeys to work made by residents living within the MSOA.

Insert 15-8: Mode of Travel to Work



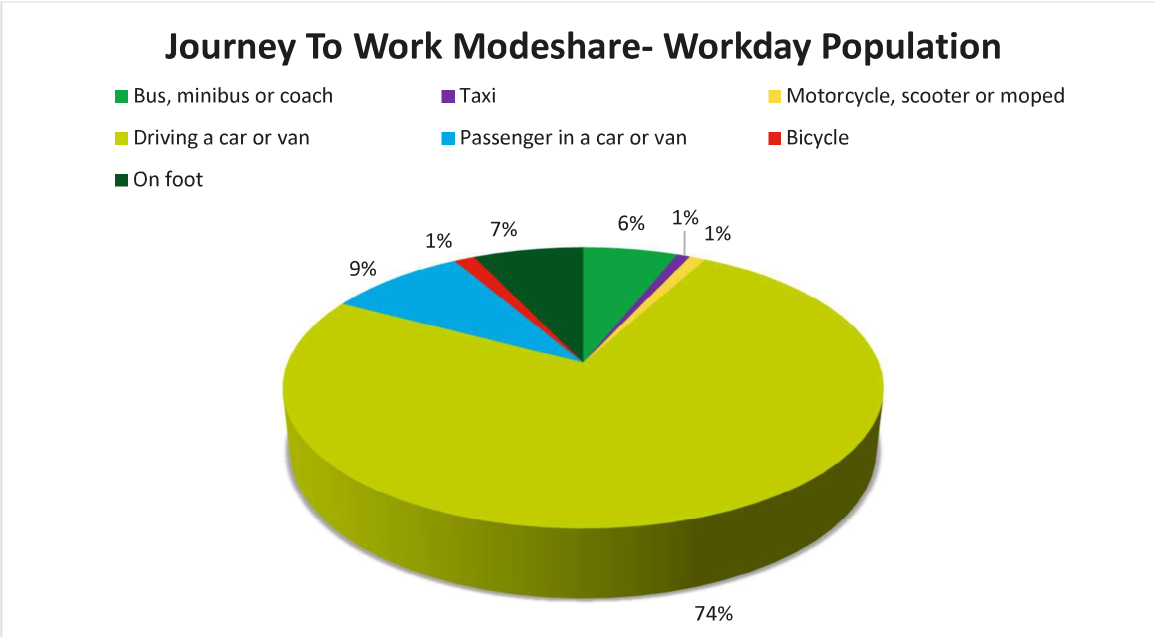
The Journey to Work Mode Share Analysis demonstrates that car borne trips dominate resident travel characteristics, with car driver trips accounting for 75% of all journeys and car passenger trips accounting for a further 7%, and taxi trips accounting for 1%.

Whilst only 1% cycle and 8% use public transport (heavily weighted towards buses), some 8% travel on foot which is encouraging given the prevailing trend towards high levels of car dependency, as identified above. This propensity to engage in walking trips suggests that a fair proportion of housing stock within the MSOA is well located in terms of its proximity to employment throughout this area.

Journey to Work Mode Share for Workday Population

The journey to work mode share of the workday population, comprised of those living outside of the Huncoat MSOA who travel into the MSOA for work, is shown in Insert 15-9.

Insert 15-9: Journey to Work Mode Share for Workday Population



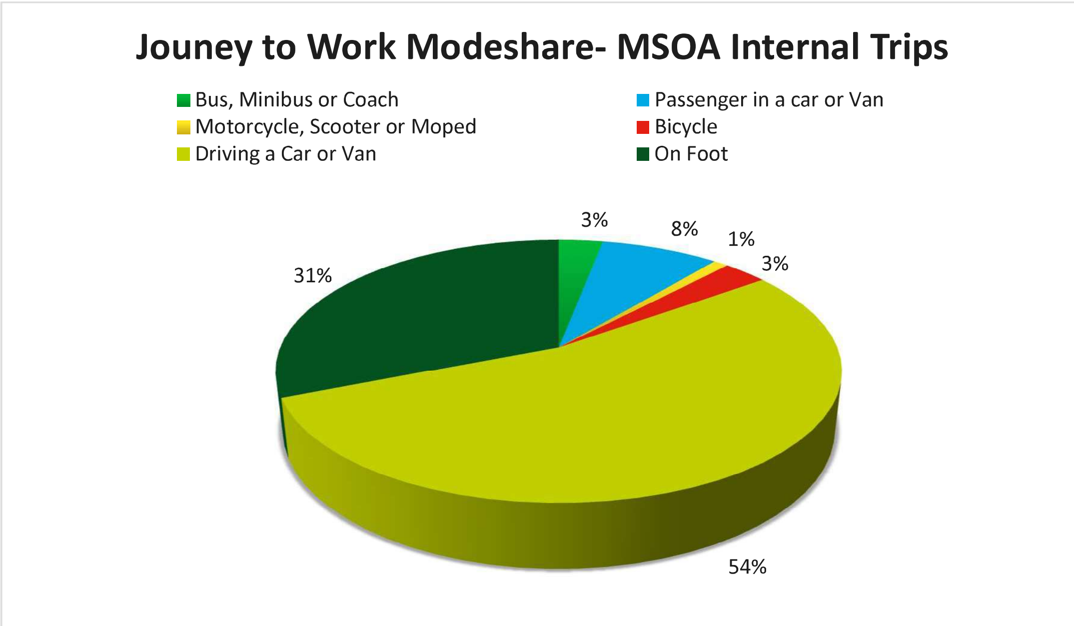
It is clear that car-based trips form the primary mode of transport for people commuting into the Huncoat MSOA for work, with 74% of all trips being undertaken by car drivers and a further 9% travelling by private car as passengers. It is also notable that despite the presence of Huncoat railway station, under 1% of those who work in within this MSOA travel by train. Whilst the station is well located in terms of its proximity to employment areas in Huncoat, the underutilisation of this mode may be related to a variety of factors such as, poor passenger waiting environment, limited service frequencies, low quality rolling stock and long journey times to key conurbations within the surrounding area.

Walking as a primary mode of travel to work is again noted as a reasonably high percentage relative to other modes and reflect the fact that a significant quantum of employment is located close to residential areas within the MSOA. The mode share for local trips to work are discussed in further detail below.

Journey to Work Mode Share for People Residing *and* Working within the MSOA

A total of 7,265 jobs are provided within this MSOA and further interrogation of the dataset identifies that some 14.3% (713 people) both live and work within this area. The mode share for journeys to work with both an origin and destination within the MSOA is displayed in Insert 15-10 below.

Insert 15-10 Mode of Travel to Work – Internal Trips within MSOA



The journey to work mode share for internal trips within the MSOA show a significant reduction in the proportion of car driver trips to work to 54%. Interestingly, the proportion of trips on foot increases exponentially to 31%, taking its increased mode share not only from Car Driver trips but also from public transport trips, which fall to just 3% suggesting a potential lack of local bus connections between residential and employment areas.

Cycle journeys also increase but remain at a comparatively low level when compared to the mode share by journeys on foot.

The strengthening of pedestrian connections between residential, employment areas and local facilities will serve to consolidate the strong trend towards walking trips for short journeys. Maximising opportunities for the use of other underused forms sustainable transport as an alternative to the private car will also be a key objective of the masterplan.

In particular, there is considered to be an opportunity to further encourage the use of cycling for short journeys and bring this into line with trends experienced throughout much of the UK. This will require the identification and removal of barriers which are currently restricting the uptake of cycling as a viable and convenient mode of travel. Delivering high quality and direct connections to public transport service access points and ensuring that services operating from this access points provide useful connections to surrounding employment, education and leisure may also increase patronage and viability of existing and new services.

Average distances travelled for journey to work purposes have also been obtained from the 2011 Census data for the Huncoat MSOA and are shown below.

Table 15-5: Distances travelled to Work Resident Population

Distance travelled to work	Residential Population	%
Less than 2km	861	15%
2km to less than 5km	1,364	23%
5km to less than 10km	1,340	23%
10km to less than 20km	633	11%
20km to less than 30km	365	6%
30km to less than 40km	191	3%
40km to less than 60km	118	2%
60km and over	121	2%

Of those who live in the Huncoat MSOA, 15% travel less than 2km to get to work, with a further 23% living 2km to 5km from their workplace. The average distance travelled to work indicates that of the population 61% travel less than 10km, with 11% of the population commuting an additional 10km beyond this. Of those who live in the Huncoat MSOA 75% travel by Car or Van. These statistics show that there are opportunities to change the ways in which people are traveling to work, specifically the large number of trips to work under 5km illustrate that there is an opportunity to facilitate mode shift towards active modes of travel such as cycling and walking.

Using the same MSOA census data sets, the origins and destinations of trips to work by car have been reviewed. The key origins and destinations for workday and residential populations within the MSOA being identified in the table below:

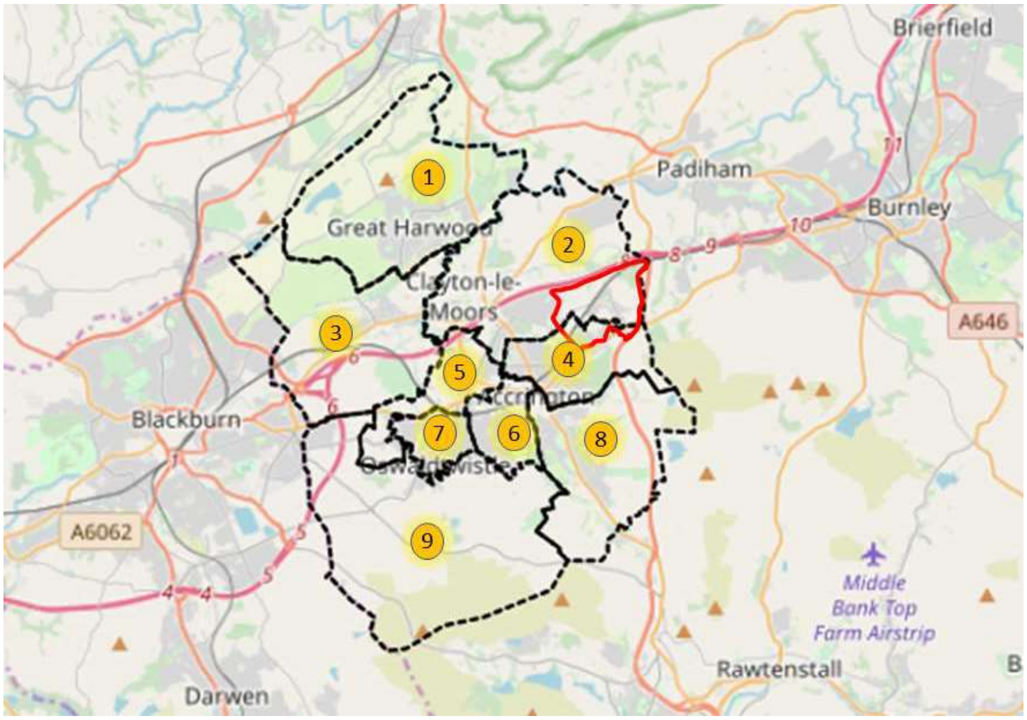
Table 15-6: Journey to work origins and destinations (for travel by car)

	Resident Population		Workday Population	
Area	Number of Vehicle Trips (Destinations)	%	Number of Vehicle Trips (Origins)	%
Blackburn with Darwen	647	17%	617	13%
Bolton	55	1%	53	1%
Bury	58	2%	66	1%
Manchester	53	1%	n/a	n/a
Burnley	423	11%	667	14%
Pendle	156	4%	378	8%
Hyndburn	**1,322**	**35%**	**1,610**	**34%**
Preston	70	2%	75	2%
Ribble Valley	317	8%	372	8%
South Ribble	43	1	86	2%
Rochdale	44	1%	42	1%
Other destinations	558	15%	708	15%

As identified above, trips within Hynburn account for the highest single proportion of journeys to work. Other significant locations include Blackburn with Darwen, Burnley and Ribble Valley.

Given that Hyndburn accounts for the single largest proportion of both origins (34%) and destinations (35%), further interrogation of the vehicle trips has been undertaken to establish where residents and employees within the Huncoat MSOA are travelling to and from at a local level within Hyndburn. The Masterplan Area outline is shown in red in relation to the numbered MSOA's within Hyndburn on the plan below.

Insert 15-11: Masterplan Area in Relation to Hyndburn MSOA's



The results of this analysis are illustrated within Table 15-7.

Table 15-7: Journey to work origins and destinations within Hyndburn (for travel by car)

Location on Plan	MSOA Area within Hyndburn	Resident Population		Workday Population	
		Number of Vehicle Trips (Destinations)	%	Number of Vehicle Trips (Origins)	%
1	Great Harwood	130	**10%**	201	**12%**
2	Clayton-le-Moors and Huncoat	386	**29%**	386	**24%**
3	Rishton	72	**5%**	132	**8%**
4	Huncoat (south) and Accrington	174	**13%**	280	**17%**
5	West Accrington and Oswaldwistle	56	**4%**	92	**6%**
6	Accrington 1	193	**15%**	123	**8%**
7	Accrington 2	68	**5%**	149	**9%**
8	Accrington 3	223	**17%**	149	**9%**
9	Oswaldtwistle	20	**2%**	98	**6%**

It is evident that local trips to work account for the single biggest proportion of all journeys to work within Hyndburn itself. Trips to and from Accrington and the surrounding areas to the south (Zones 4 to 9) account for 56% of resident trips to work, and 55% of all origins for people working within the Clayton Le Moors and Huncoat MSOA. The remaining trips travel north to/from Great Harwood (c. 10-12%) and west to/ from Rishton (5-8%).

In light of these observations, a review of existing conditions on the surrounding transport networks has been undertaken.

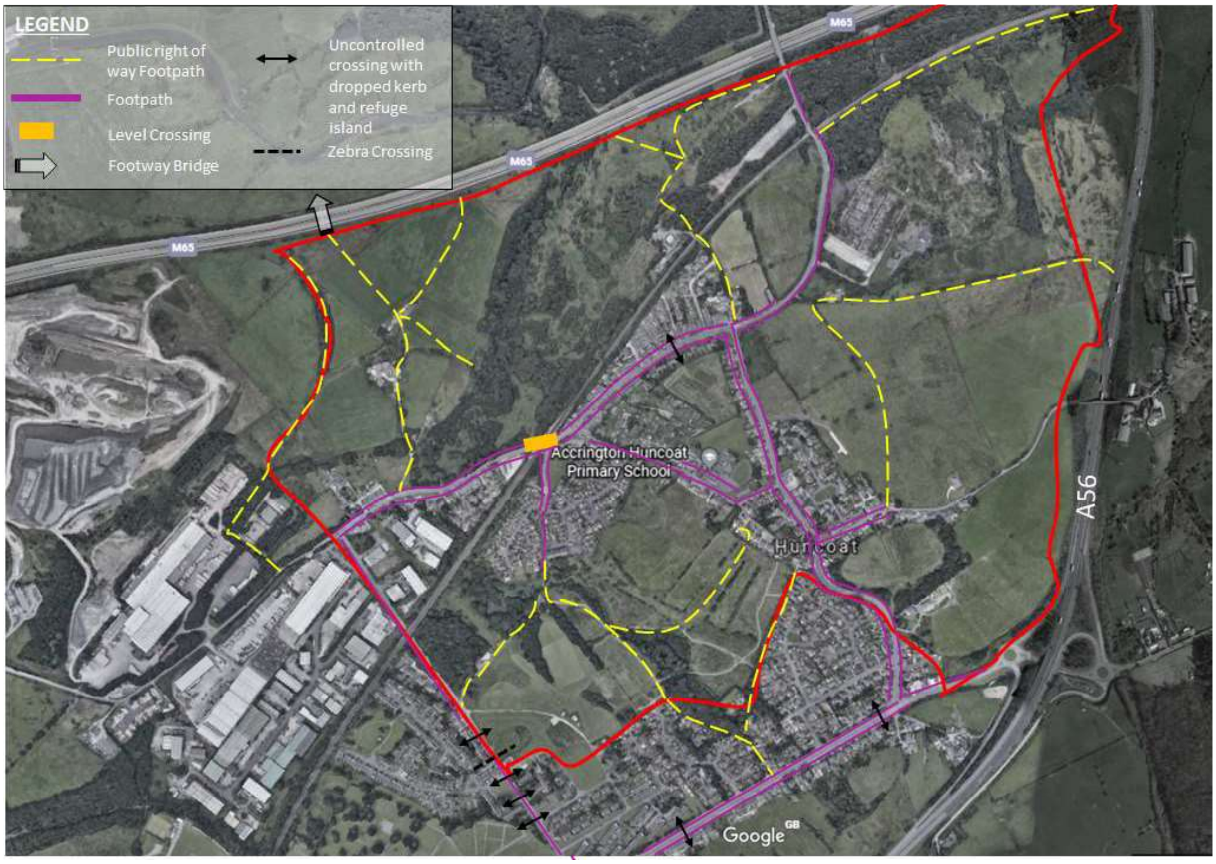
1.2.2 Baseline Accessibility

The purpose of this review is to identify the existing deficiencies across the network and opportunities for delivering material improvements and maximising wider benefit for the surrounding communities. This will in turn inform the development of the Masterplan for the area and the associated package of targeted interventions to be included within the Transport Strategy.

Walking Accessibility

Huncoat's existing pedestrian infrastructure is illustrated in Insert 15-12 below, showing the extent of footpaths provided, formal crossing points on main roads and public rights of way through land.

Insert 15-12: Existing pedestrian Infrastructure



It is evident that a well-defined and connected network of formal footways are present on the main roads which pass through Huncoat, including both sides of the road on A679 Burnley Road, Station Road, Enfield Road, Lower Gate Road, Higher Gate Road and half of Bolton Avenue. The layout of these roads address Huncoat Station well and provide direct walking routes for most residents. Pedestrian connections to the surrounding employment area of Huncoat Park is provided predominately by Bolton Avenue and Enfield Road, the latter of which provides a direct link from Huncoat Station. Whilst a new shared pedestrian and cycle route, which forms part of the Huncoat Greenway has recently also been added between Huncoat Park and Lynwood Road, there are currently no direct walking routes from existing dwellings and vacant land parcels located on the eastern side of Lower and Higher Gate Road. The routing of the Greenway is discussed in further detail in the next section.

It is also noted that footways are present only on one side of Altham Lane to the east of the junction with Lower Gate Road up until the railway bridge, at which point no footways are provided. On Bolton Avenue, the footway provision is reduced to a single footway on the west side of the carriageway on the section from Oakfield Avenue to Whinney Hill Road, with no formal footways on Whinney Hill Road to the west of Bolton Avenue and the remainder of Burnley Lane.

Lynwood Road has pedestrian infrastructure present on both sides of the road within the vicinity of the primary school and footways only on the southern side of the carriageway on the section between the Primary School and Station Road.

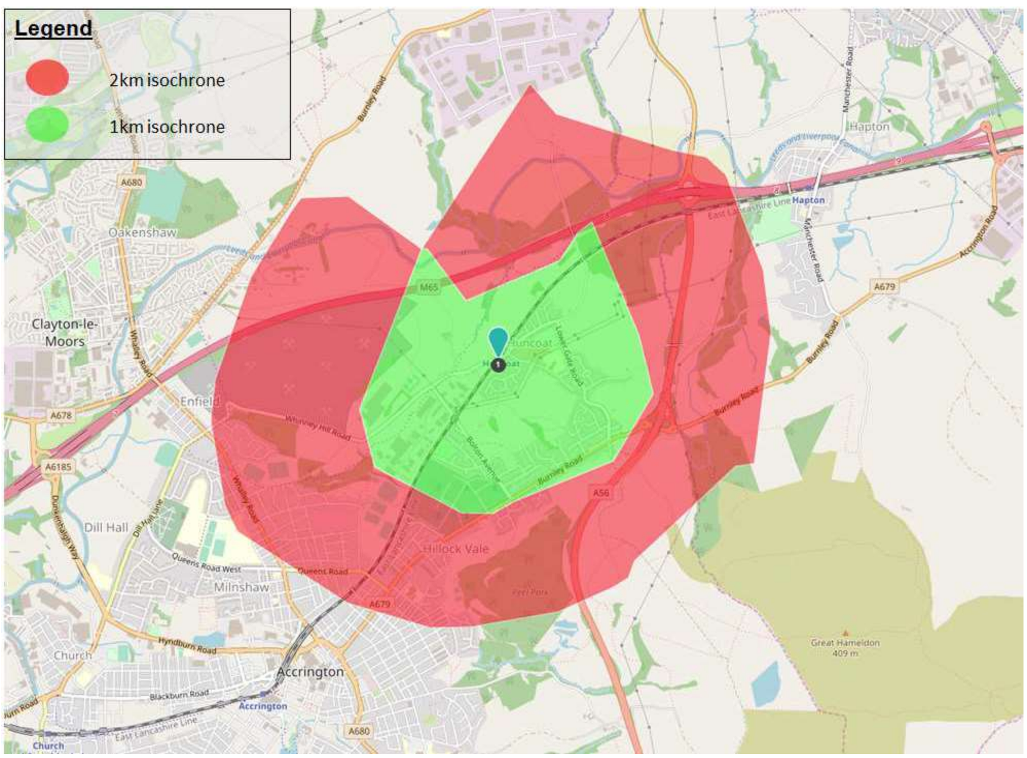
In general, there is a strong network of Public Rights of Way (PROW) which provide good connections through open spaces to provide direct pedestrian routes across open land, the railway and provide useful connections between parts of the public highway network.

While there are sufficient footways provided throughout the area within the public highway, pedestrian crossing provision is limited, with no formal crossing provisions (other than dropped kerbs) provided on the A679 Burnley Road, Enfield Road, Higher Gate Road and Lower Gate Road. The only exception to this is found on Bolton Avenue where a Zebra Crossing is located to the north of Oakhurst Avenue.

As noted previously, pedestrian infrastructure is absent on the Altham Lane bridge over the M65, requiring pedestrians to walk on the road when passing. Whilst pedestrian demand is currently limited in this location, pedestrian provision may need to be reviewed if significant quantum of development is to be provided nearby in the future as Altham Road serves as a primary link to the Altham Business Park.

The Chartered Institute for Highways and Transportation (CIHT) provides guidance on distances considered suitable for a journey on foot. A journey of up to 2km is considered acceptable by most people. Based on an average walking speed of 80m per minute, this equates to a 25 minutes journey. The walking isochrones are displayed graphically in Insert 15-13.

Insert 15-13: 2km Walking Isochrone



In addition to the employment areas of Huncoat Park and Altham Business Park, a number of local amenities and facilities are accessible on foot and by cycling within this area. A summary of these are provided in the Table 15-8.

Table 15-8: Existing Local Facilities

Amenity	Location	Operating Days
Huncoat Pharmacy	Station road	Monday- Friday
News n Booze- Convenience Store	Station Road	Monday-Sunday
The Railway Pub and Hotel	Station Road	Monday-Sunday
Proper Butties- Cafe	Station Road	Monday- Sunday
Accrington Huncoat Primary School	Lynwood Road	School Term Times
Griffins Head- Pub	Burnley Road	Monday-Friday
Apple Green Griffin Head- Petrol Station	Burnley Road	Monday- Sunday
Huncoat Business Park	Bolton Avenue	Varied
Mapleford Nursing Home	Bolton Avenue	Monday-Sunday

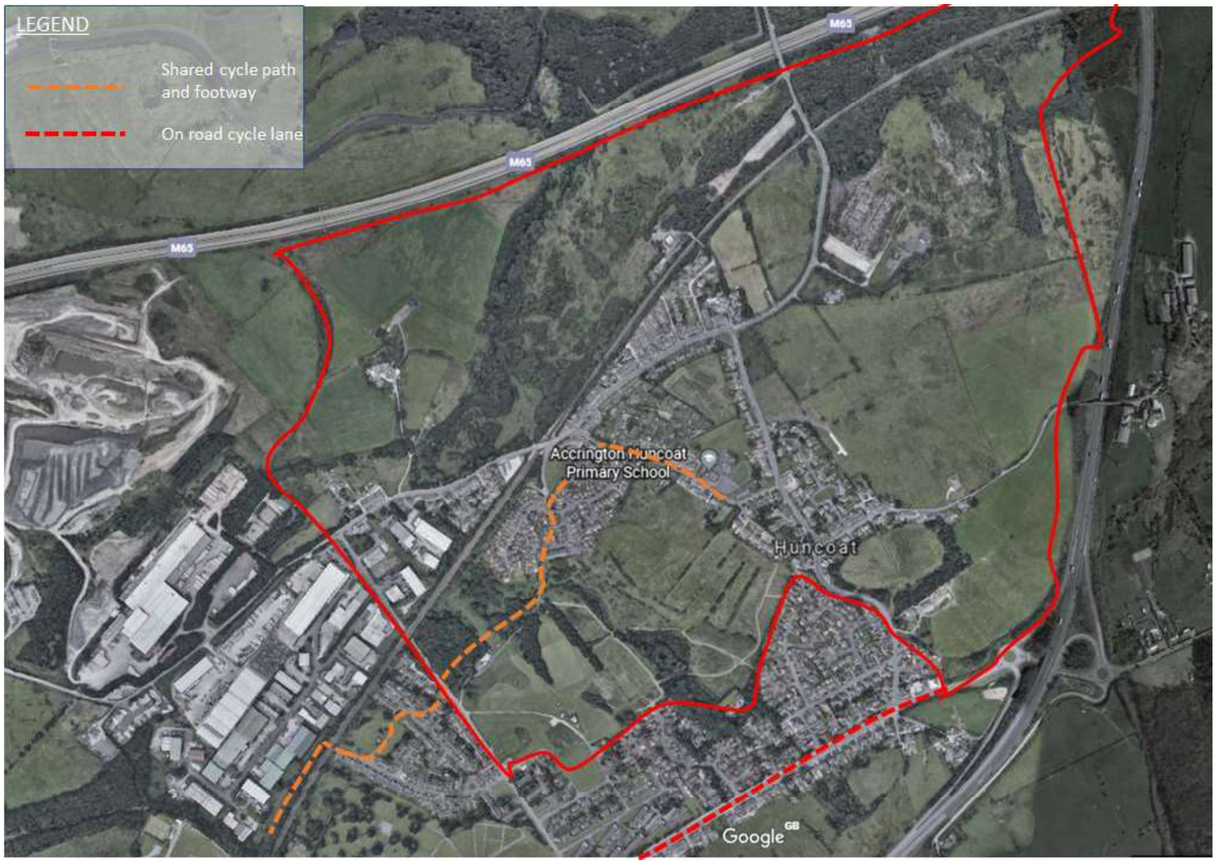
Cycling

In terms of cycle infrastructure, on-road cycle lanes are provided on both sides of the A679 Burnley Road, linking Huncoat to the south with Accrington. The Cycle lane terminates to the southwest on the edge of Accrington and to the northeast 100m before the Accrington Bypass Roundabout. Whilst this cycle lane provides good connectivity into Accrington, at present there are no recommended cycle routes that link into this provision from Huncoat itself. Whilst this is perhaps typical of rural areas, in this instance it is considered a deficiency given that many of the roads, such as Bolton Avenue and Higher Gate Road carry HGV traffic associated with the Whinney Hill Landfilling operations.

The lack of a connected cycle network within Huncoat itself is evident when looking at the cycle route map provided in Insert 15-14 below. Notwithstanding this fact, aspirations to improve provisions for cyclists in this area are noted and have led to the recent delivery of an off-street shared pedestrian and cycleway which runs between Lynwood Street and Newhouse Road (within the Huncoat Park employment area) via Bolton Avenue where a new uncontrolled crossing point is provided.

This link forms part of the Huncoat Greenway, which aims to provides a convenient and safe route for residents to access Accrington is in development. To date, three of the four sections having been completed. The route has an estimated completion date of 2019 and the full plan can be viewed in Appendix H of this report.

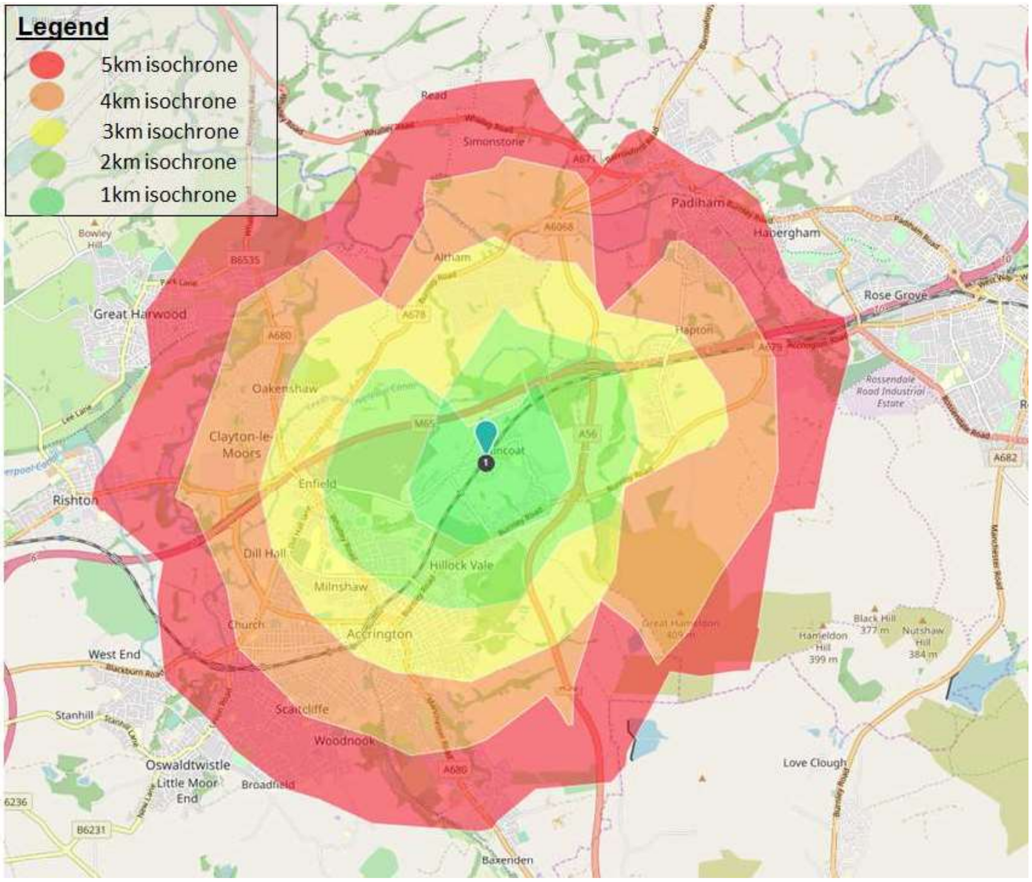
Insert 15-14: Local Cycle Infrastructure



The masterplan should seek to maximise the benefit of the existing cycle network provisions and ongoing investment through the provision of high-quality connections to the existing cycle routes and surrounding local facilities.

Surrounding areas within a 5km cycle of Huncoat are shown graphically in the isochrone in Insert 15-15.

Insert 15-15: 5km Cycling Isochrone



Local Bus Network

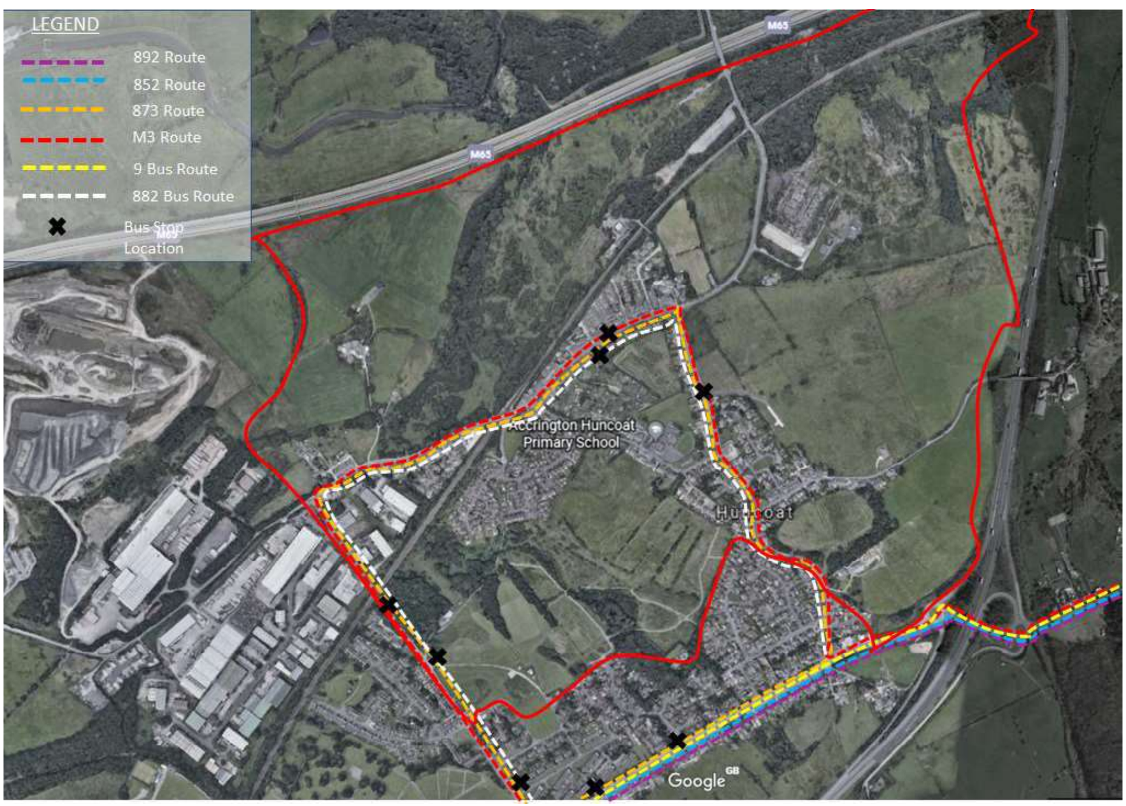
Huncoat is served by six bus routes, which can be accessed from a number of bus stops, located on Bolton Avenue, Station Road, Burnley Road, Road and Lower Gate Road. A number of hail-and-ride locations are also available along these bus routes. A map of bus stops and routes available within Huncoat is shown in Insert 15-16 and a summary of services available from these bus stops detailed in Table 15-9.

Table 15-9: Frequencies of local bus services

Bus Service	Route	Monday to Friday		Saturday		Sunday	
		Operating Hours	Peak Frequency*	Operating Hours	Peak Frequency*	Operating Hours	Peak Frequency*
M3	Accrington to Trawden	07:03 to 22:50	30 mins	07:33 to 22:50	30 mins	09:10 to 20:50	1 hr.
9	Accrington to Burnley	06:23 to 18:29	Hourly	09:13 to 16:13	Hourly	n/a	n/a
852	Queensgate to Myerscough College	07:35 to 18:30	Once Daily (School days only) .	n/a	n/a	n/a	n/a
892	Accrington Bus Station to Burnley, Croft Street Schools	07:22 to 16:30	Once Daily (School days only).	n/a	n/a	n/a	n/a
873	Milnshaw to Accrington St Annes	08:30 to15:40	Once Daily (School days only)	n/a	n/a	n/a	n/a
882	Huncoat to Hollins School, Baxenden	07:45 to 15:15	Once Daily (School days only)	n/a	n/a	n/a	n/a

*Peak Frequency Each Direction

Insert 15-16: Bus Stops and Routes in Huncoat



As shown in Insert 15-16 school bus services are provided by four of the six bus services available in Huncoat, which run once daily in each direction on school days only. Two of these four school services loop through Huncoat whilst the remaining two services operate solely on the A679 Burnley Road.

A daily and weekend service is available between Accrington and Trowden via the M3 service which runs every 30 minutes during peak hours Monday to Saturday and every hour on Sundays. This service operates on the A679 Burnley Road and loops through Huncoat via Bolton Avenue, Enfield Road, Station Road and Lower/Higher Gate Road.

Additionally, Service 9 also runs Monday to Saturday between Accrington and Burnley at hourly intervals but operates from bus stops located on the A679 Burnley Road only.

Whilst the routing of existing bus services relates well to the existing residential areas within Huncoat, it's the frequency of services is low.

The masterplan will need to carefully consider how access to bus services is provided, particularly for larger plots where walking distances to existing bus services is likely to be prohibitive. The feasibility of amendments to service frequencies will also need to be identified in consultation with Mainline and the Burnley Bus Company who are the operators of bus service M3 and 9 respectively.

National Rail

Whilst Huncoat itself has no formal centre, Huncoat Station does form a focal point within the town, being located at the confluence of Enfield Road, Station Road, and Lynwood Road. Huncoat Station is situated on the East Lancashire on which services run between Colne and Preston.

The service frequency of trains operating from Huncoat station are set out within Table 15-10 below.

Table 15-10: Huncoat Rail Services

Rail Service	Route	Monday to Friday		Saturday		Sunday	
		Operating Hours	Peak Frequency*	Operating Hours	Peak Frequency*	Operating Hours	Peak Frequency*
Huncoat to Colne	Huncoat-Hapton- Rose Grove – Burnley Barracks- Burnley Central- Brierfield- Nelson- Colne	05:03 to 22:40	Hourly	06:39 to 22:40	Hourly	09:39 to 22:44	Hourly
Huncoat to Preston (Lancs)	Huncoat- Accrington- Church & Oswaldtwistle – Rishton -Blackburn – Mill Hill (Lancs) Cherry Tree- Pleasington- Bamber Bridge- Lostock Hall- Preston (Lancs)	06:37 to 21:52	Hourly	05:46 to 21:52	Hourly	09:46 to 21:51	Hourly

There are hourly services from Huncoat to Colne via Burnley (eastbound) and Preston via Accrington and Blackburn (westbound). The journey time to Preston (the fastest connection to the West Coast mainline) is 44 minutes. Currently there are no other more frequent services to Preston. The Blackburn - Southport service via Manchester passes through the station hourly without stopping. There is potential for this service to additionally call at Huncoat, in order to provide a direct service to Manchester and an additional connection to the national rail network. A direct service to Manchester would be particularly important in unlocking Huncoat's growth potential.

The level of service at Huncoat Station is considered low given its proximity to the Huncoat Park employment area. The Station has no provision for the parking of cars or bicycles and the station platforms can be accessed by means of access bridge or via the level crossing. The station is also served by bus Service M3 with stops located on either side of Station Road to the east of the Station.

Huncoat Rail Station features a level crossing on Enfield Road, with manned barriers, traffic light signals, audible alarm and signage. The crossing allows crossing for vehicles, pedestrians and cyclists. According to data provided by National Rail, the crossing has seen one incident prior to the assessment (April 2015) and there have been no accidents post assessment. The level crossing sees 102 trains per a day passing through Huncoat, with a line speed of 70mph.

Further afield, Accrington mainline railway station is located approximately 2.6km southwest of Huncoat Railway Station with a public transport options from Huncoat available by bicycle or bus. The station has provision for cycle parking with 32 sheltered spaces. It is served by Northern rail services on the East Lancashire and Caldervale lines running from Colne to Preston and onwards connections between South Port and Blackburn respectively.

Whilst the use of the existing services will need to be established through consultation with Northern Rail, as the rail operator, existing patronage is expected to be low. The masterplanning process does however present an opportunity to enhance the role and viability of the Station within Huncoat and potentially deliver increases patronage through the delivery carefully planned residential development and complementary land-uses. Ensuring that future residents are well connected to the station by foot, cycle and public transport should be a key focus, and will facilitate further consultation with Northern Rail regarding the opportunities and feasibility of increasing service frequencies and connections with the national network. The potential for express services to stop at the station would be particularly important in improving Huncoat's connectivity to the West Coast main line. Improved service frequencies and reduced journey times potentially achieved through stopping one of the existing fast services.

1.2.3 Baseline Highways Conditions

Huncoat and its surrounding local highway network is situated between the M65 to the north and the A56 to the east, which intersect via a grade separated junction at Junction 8 to the north west of the Masterplan Area. The A679 Burnley Road is located to the South of the Masterplan Area providing the main arterial route between Huncoat, the A56 Accrington Bypass and the M65.

Huncoat's proximity to accesses on to the M65 and the A56 must be noted in terms of the strategic significance of these routes. The M65 provides a route from Colne west towards Preston enabling access to destinations such as Manchester, Blackburn, South Birmingham, Lancaster and Preston. The A56 is advantageous for onwards travel running between North Yorkshire and Chester, linking the town to important employment locations including Accrington, Bolton and Bury.

Access into Huncoat itself is facilitated four primary routes, namely Burnley Road, Bolton Avenue, Higher/Lower Gate Road, Whinney Hill Road, and Altham Lane. An overview of the highway network and the location of the roads in relation to each other are illustrated within Insert 15-17.

Insert 15-17: Overview of Highway Network

Altham Lane to the northeast provides a route north of Huncoat to employment opportunities in the heavily industrialised area of Altham. Whinney Hill Road, further west of this, links Huncoat to Altham West and Clayton-le Moors, providing access to Huncoat Business Park and quarry site. These two roads are connected by Enfield Road and Station Road which run on an east-west axis.

Both Station Road and Enfield Road provide access to Huncoat Railway Station, and the Accrington Huncoat Primary School. Enfield Road generally provides access to commercial properties located on the southern side of the carriageway, whilst Station Road is more residential in nature with residential properties fronting onto the road with on-street parking, and connections to local access roads serving residential dwellings.

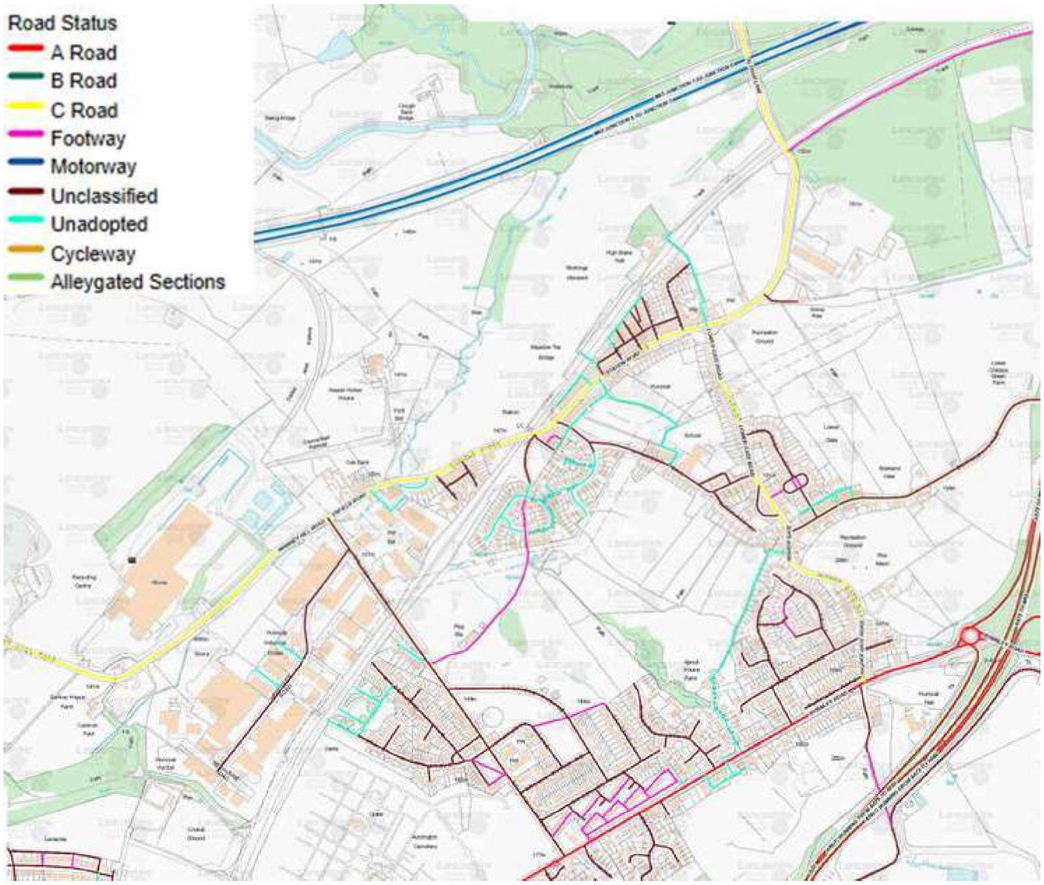
Bolton Avenue and Lower Gate Road/Higher Gate Road run on a north-south access and link the A679 Burnley Road to Whinney Hill Road and Station Road/Altham Lane respectively.

Bolton Avenue provides connections to number of local access roads serving residential dwellings together, however residential properties fronting onto this road are limited, being restricted to a short section of circa 17 homes located opposite The Hollow play area. Bolton Avenue also serves as a key route for commercial traffic and HGV's accessing Huncoat Business Park and the Whinney Hill Landfilling site.

Conversely, Lower and Higher Gate Road is more residential in nature with properties fronting onto the road and frequent connections to local access roads along its length. This road also provides access to the Accrington Huncoat Primary School via connections onto Lynwood Road which serves as an important link between the surrounding residential areas, the Primary School and Huncoat Station. On-street parking is also generally unrestricted.

The composition of Huncoat's Highway Network in terms of the road hierarchy and their adoption status is illustrated within Insert 15-18 below.

Insert 15-18: Road Hierarchy within Huncoat



As shown in the above, much of Huncoat key roads such as Enfield Road, Station Road, Altham Lane and Higher and Lower Gate roads are classified as C roads, labelled as such for administrative purposes for the Local Authority, however, have no unique definition in term of characteristics or purpose.

The A679 Burnley Road serves as the only Arterial Road within the local highway network and provides for large scale movement of people and goods between surrounding areas, primary destinations and the trunk road network, including the Accrington By-Pass.

Whilst there are no designated B Roads within the local highway network, Whinney Hill Road, Enfield Road, Station Road, Altham Road and Lower/Higher Gate Roads serve as Classified un-numbered roads providing connections to and from the Arterial Road network.

Whilst Bolton Avenue's official designation is an Unclassified Road, it essentially serves the same purpose as those classified roads listed above, particularly given that it provides a key route to primary destinations such as the Huncoat Business Park and carries a number of HGV movements. The designation of this road may therefore need to be reassessed.

The remaining roads within Huncoat, such as Burnley Lane and Lynwood Road are unclassified roads which have no defined designation and serve as local access roads.

It is also notable that there are a number of unadopted roads within Huncoat. These consists primarily of small access roads within residential areas. These roads must be given careful consideration within the emerging Masterplan given that they cannot be relied upon for access due to the likelihood of third-party ownership issues and standard of construction. Any rights of access which is currently granted over these roads should also be treated with caution as they often do not permit intensification of use.

Lancashire County Council is the highways authority responsible for the majority of classified and unclassified roads within the local highway network illustrated within Insert 15-18. The only exceptions being the unadopted roads within the network which fall under private ownership. These adoptions are further shown in maps provided by Lancashire County Council included within Appendix I.

Highways that fall outside of Lancashire County Council's adopted network include the M65 to the north of Huncoat and the A56 to the west, both of which (including the grade separated intersection at Junction 8) fall under the responsibility of Highways England. The extent of the highway for which Highways England is response is shown in Insert 15-19 below.

Insert 15-19: Highway England Ownership

It is notable that the A56 Accrington Bypass together with the slip roads and the eastern and western roundabouts on the A679 Burnley Road are all is adopted by Highways England. Similarly, it appears that both land adjacent the landings of the overbridge on Burnley Lane and Altham Lane are also managed by Highways England. Land registry records should be checked in these areas.

Local Highway Network

Further details of the character, traffic profile and HGV composition on the local highway network are described for each road below.

A679 Burnley Road

Burnley Road is a two-way road with marked central reservation interspersed with ghost right turning islands as shown in Insert 15-20. A footway is present along the northern side of Burnley Road with approximately 2m in width and regularly spaced street lighting within the vicinity of Huncoat. The footway becomes narrower towards the Accrington Bypass, with footways only provided on the north side of the road for distance of c.140m opposite the Griffins Head and provides opportunities to cross the bypass. Car parking is provided in marked bays in areas where residential properties have their frontages along the road and some bus stops are marked. Throughout the course of Burnley Lane, cycle lanes are provided on both sides of the road on the outside of traffic lanes.

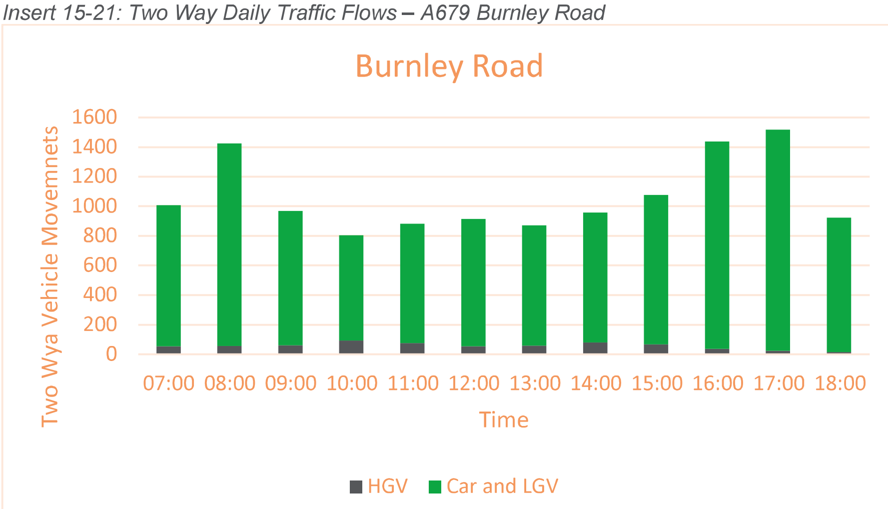
Insert 15-20: Image Source: Google Streetview

Whilst there are dropped kerbs and some tactile pavement on both sides of Burnley Road at crossing points, with pelican crossings located at several points within proximity of Huncoat, no formal controlled crossings are provided.

The two-way traffic flow profile and vehicle composition for Burnley Road, including HGV's traffic is illustrated in Insert 15-21, and demonstrates that peak traffic volumes occur between 08:00-09:00 during the morning and between 17:00-18:00 during the evening during which time the road carries between 1400 and 1500 two-way vehicle movements per hour.

The peak HGV volumes on this road occur between 10:00 and 11:00, with 93 HGV's observed using this road accounting for 12% of total traffic, which is typical for Arterial Roads.

Insert 15-21: Two Way Daily Traffic Flows – A679 Burnley Road



Bolton Avenue

Bolton Avenue is a two-lane road with a marked central reservation; however, it is noted that the carriageway width on Bolton Avenue narrows towards its northern end on the approach to the cycle crossing from which point the marked central reservation is discontinued.

A footway of circa 2m in width is provided on both sides of the road to the south of the junction Haweswater Road. To the north of this point footways are provided on the western side of the carriageway only, and becomes grade separated as the carriageway grade drops as it passes under the railway bridge, where a height restriction of 4.3m is in place. Whilst it is noted that the approach to the bridge is ramped, a clearance of 4.3m is sufficient to accommodate most types of service vehicles, including Articulated HGV's, 10m rigid vehicles and tipper trucks. The presence of this advertised restriction may however influence route choice for HGV's and prevent its use by the largest of road legal vehicles.

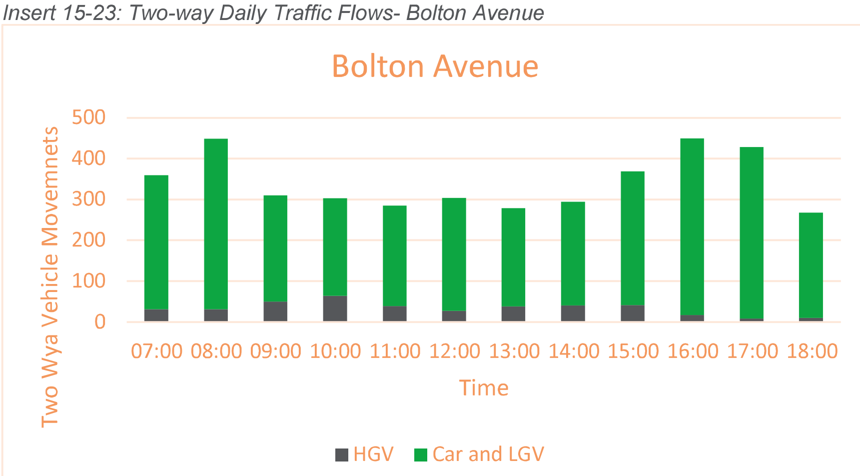
No footways are provided on the short section to the north of Newhouse Road, however significant on-street parking activities have also been observed on both sides of the carriageway in this location (as shown in Insert 15-22) and can potentially impact upon the operation of the public highway.

Insert 15-22: Image Source: Google Streetview

Several informal crossing points with dropped kerbs and tactile paving are provided along the length of Bolton Avenue. Two mini roundabouts are also located at the junction of Woodside Road and Oakhurst Avenue/Within Grove which act as traffic calming features. A zebra crossing is also located immediately to the north of Oakhurst Avenue providing formalised crossing facilities between The Hollow and the residential areas to the west of Bolton Avenue.

Two-way traffic flows for Bolton Avenue are illustrated in Insert 15-23 and demonstrates that peak traffic volumes occur between the hours of 08:00 to 09:00 during the morning and 16:00 to 17:00 during the afternoon when two-way traffic volumes of approximately 500 vehicles were observed.

Insert 15-23: Two-way Daily Traffic Flows- Bolton Avenue



Similarly, to the trend observed on the A679 Burnley Road, peak two-way HGV movements on the network occur mid-morning between the hours of 10:00 and 11:00, with 65 HGVs being observed, equating to 21% of the overall traffic on the road at this time. This is considered high for an unclassified road.

The high proportion of HGV's reflect the use of this route by the HGV's associated with the Whinney Hill Landfilling Site and the Huncoat Business Park.

Higher Gate Road/ Lower Gate Road

Higher Gate Road and Lower Gate Road are both subject to a 30mph speed limit but also provide footways on both sides of the carriageway. Generous carriageway widths also potentially encourage higher vehicle speeds illustrated by the introduction of road markings prompting speed reductions at the beginning and end of the northbound carriageway. Higher Gate Road is typified by changes in vertical and horizontal alignment which restrict forward visibility in places and whilst Lower Gate Road provides a straighter alignment this also suggests that higher vehicle speeds and on-street parking activities would be encouraged.

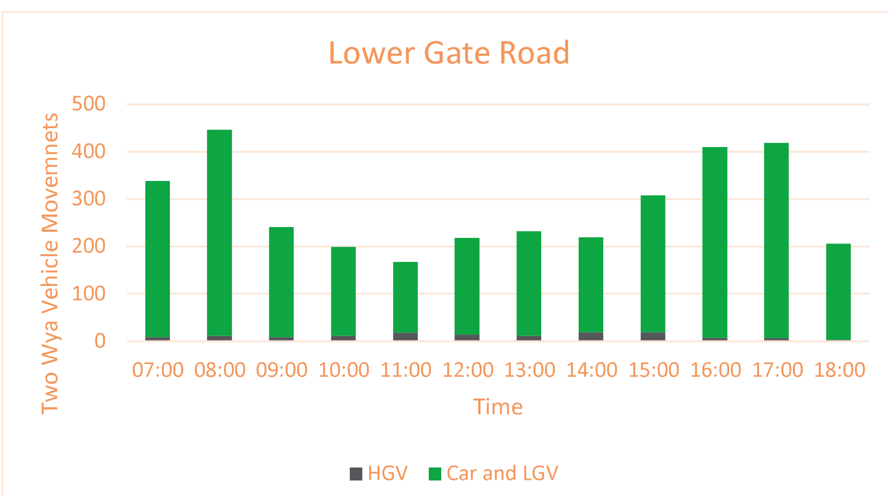
The typical cross section of this road can be viewed in Insert 15-24 below, which also illustrates the presents of an informal dropped kerb crossing to the north of Lynwoood Road and connects into the pedestrian route to the Accrington Huncoat Primary School.

Insert 15-24: Image Source: Google Streetview

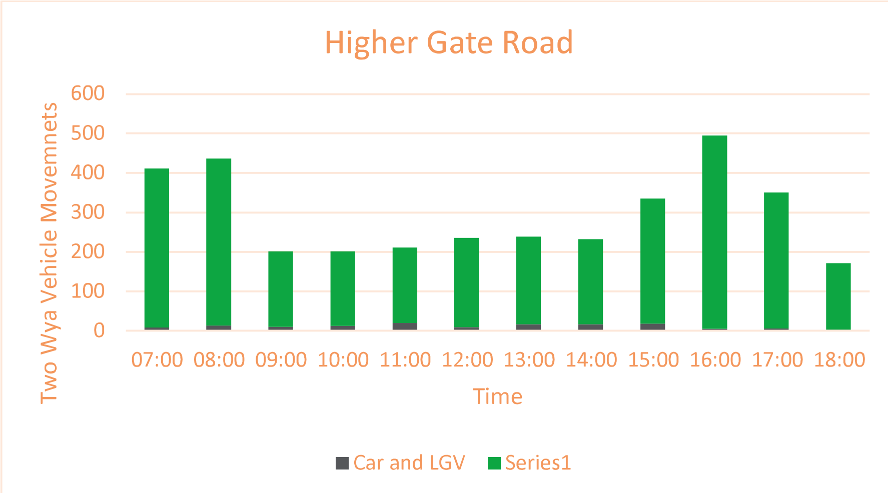
It is also noted that the grade of the footway on the eastern side of the carriageway between Burnley Lane and Griffin Close raises above the level of the carriageway and is safeguarded by railings.

Daily Traffic Profiles for the both Higher Gate Road and Lower Gate Road are shown in Inserts 15-25 and 15-26 below:

Insert 15-25: Two Way Daily Traffic Flows Lower Gate Road



Insert 15-26: Two Way Daily Traffic Flows Higher Gate Road



It is clear from the above graphs that Lower Gate Road and Higher Gate Road traffic flow profiles are influenced by traffic associated with the Accrington Huncoat Primary School. The peak traffic volumes are more pronounced Higher Gate Road occurring between 08:00 to 09:00 during the morning and 16:00 to 17:00 during the evening. Whilst the evening peak hour shifts to 17:00 to 18:00 on Lower Gate Road, traffic volumes remain broadly constant with that of the preceding hour.

Peak traffic flow volumes are broadly similar during the AM peak hour at circa 430 vehicles. During the PM peak hours Higher Gate Road carries notably more vehicles, circa 500 vehicles per hour relative to just over 400 vehicles per hour on Lower Gate Road, indicating that the predominant demand is for journeys to and from Burnley Road. It is also notable from the traffic surveys that traffic flows on Higher and Lower Gate Road are also very tidal in nature with the majority of trips heading northbound during the AM peak hour and Southbound in the PM peak hour. Further interrogation of the flows has identified that these roads are used as an alternative route for accessing the Altham Business Park, via Altham Lane.

Peak HGV movements occur mid-morning and mid-afternoon but do not exceed 20 two-way HGV movements in any single hour, accounting for less than 10% of the total traffic flows. HGV movements during the network peak hours identified above are significantly lower. It is likely that the HGV's routed along this road are a consequence of the height restrictions in place on Bolton Avenue.

Lynwood Road

Lynwood Road provides access to a number of residential properties and within the centre of Huncoat as well as the Accrington Huncoat Primary School. The road runs from Lower Gate Road at its eastern point, joining at a priority junction and terminates at a roundabout to the west with Station Road and Enfield Road. The road operates as one-way in a westerly direction towards Huncoat Station for a short section between the Primary School and Bluebell Way, with enforcement managed by signage and narrowed carriageway widths which has facilitated the delivery of a shared pedestrian and cycle path along its southern edge, as illustrated below in Insert 15-27.

Insert 15-27: Image Source: Google Streetview

The road features parking restrictions directly within the vicinity of the school, with no stopping Monday to Friday between 08:00 and 18:00 and single line markings to the front of the driveways parallel to the school in indicated no parking permitted.

Whilst traffic conditions on this road have not been surveyed, on-site observations during a site visit has identified that the road is generally lightly trafficked with the exception of school drop off and pick up periods when activity increases, and the road becomes heavily parked making passing and pedestrian crossing activities difficult on the northern two-way section of the road.

Station Road

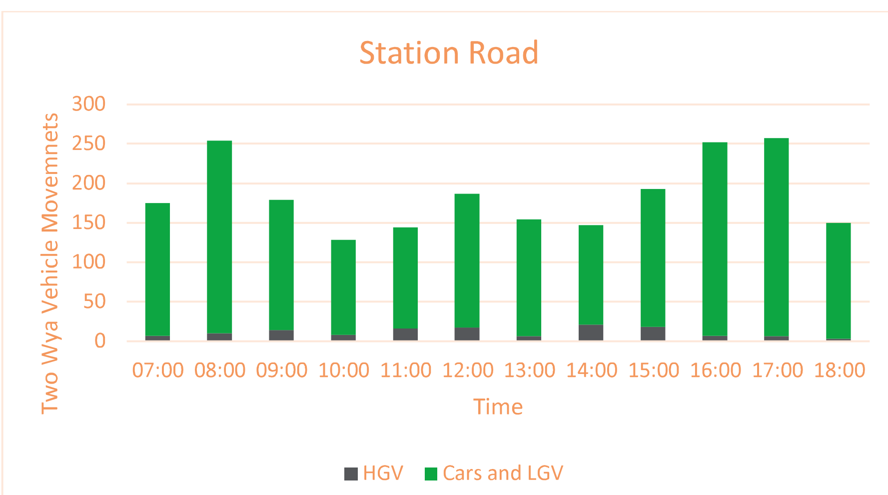
Station Road runs in an east-west alignment between a priority junction with Altham Lane and the mini-roundabout junction of Enfield Road/ Bluebell Way. Traffic calming measures are in place along the length of this road to enforce a 20mph speed limit. These features include signage and kerb buildouts at the eastern end of the road, speed humps, and localised carriageway narrowing enforced by kerb buildouts with priority given to eastbound traffic approximately 100m to the east of the mini roundabout. This feature also provides a separate route for cyclists either side, allowing them to bypass the width restrictions, yet this is unconnected to the wider cycle network provision. This feature is illustrated in Insert 15-28.

Insert 15-28: Image Source: Google Streetview

The carriageway is typified by narrow footways on both sides of the road, with marked parking spaces to the frontage of residential properties on the eastern end of the road, including marked disabled bays. No parking restrictions are in place official parking is provided at the western end of the road where ad-hoc on-street parking occurs, including on the westbound approach to the kerb buildouts which block access to the give way line on the westbound lane, as illustrated above. Double yellow lines exist to the entrance of The Railway pub's services access, and double and single yellow lines are present at the approach to the roundabout on the southern side of the road. This road also serves the local bus routes with a number of marked bus cages present towards its eastern end.

A daily traffic profile for Station Road with relative HGV movements and Car and LGV movements is shown in Insert 15-29.

Insert 15-29: Two Way Daily Flows- Station Road



Station road experiences the typical network peak hours of 08:00 to 09:00 and 17:00 to 18:00, but it is notable that traffic volumes remain relatively low at approximately 250 vehicles per hour. Peak HGV movements occur late morning and early afternoon with a maximum of 21 two-way HGV movements per hour being observed accounting for 14% of total traffic. HGV movements will include the bus services operating on this road, with the M3 service accounting for four of these HGV movements per hour. The height restriction in place on Bolton Avenue may result in some traffic being re-routed onto Higher Gate Road even though this restriction is not theoretically prohibitive for use by most service vehicles with standard loads. Whilst Bolton Avenue should be utilised by all traffic associated with the Land Filling Site, this route may also be perceived by some commercial operators to provide a more direct route to the A56 as it by-passes the junction of Bolton Avenue/ Burnley Road.

Enfield Road

Enfield Road runs in a east to west allignment between a rounabout at its eastern end with Station Road and Lynwood Road and changes names prior to the junction with Bolton Avenue. Within the vicinity of the railway station a level crossing with signals and alarm is provided for both pedestrians and vehicles. This is illustrated in Insert 15-30.

Insert 15-30: Image Source: Google Streetview

The speed limit of the section of this road to the west of the level crossing is 30mph, at which point it reduces to 20mph as it passes through Huncoat and joins Station Road. Footways are provided on both sides of the road with regularly spaced lighting. No formal pedestrian crossings are provided, however dropped kerbs are featured at breaks along the footways. Traffic flow volumes observe similar characteristics to that of Station Road.

Altham Lane

Altham Lane joins Lower Gate Road/ Station Road via a priority junction before routing north into Altham. The road is subject to a 30mph speed limit at its southern end on the approach to Huncoat, with a 40mph speed limit in place on the remainder of the road.

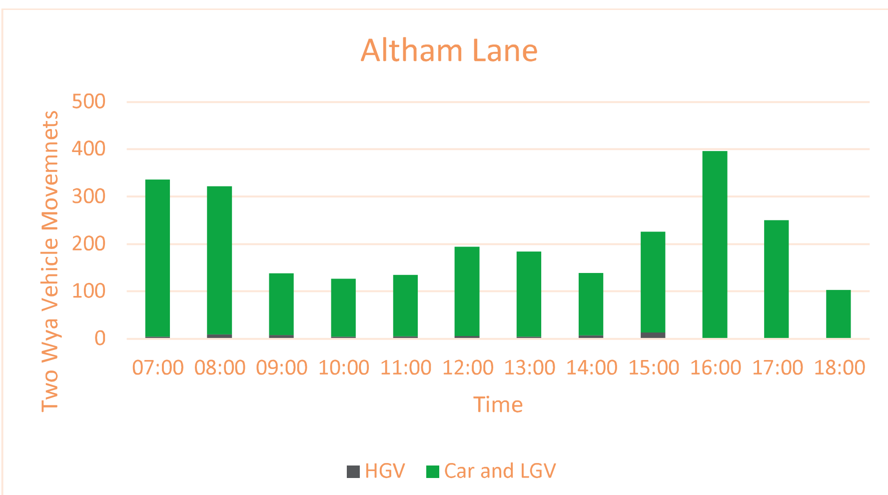
A signed weight limit of 7.5 tonnes is in place on along Altham Lane. Whilst we understand that there is no structure weakness on either bridge over the railway line or the canal, the width of these bridges are currently constrained and not considered appropriate for larger HGVs. Plates have therefore been introduced to restrict the use of this road by HGV traffic. A footpath is provided to the eastern side of the road for the full duration, with evenly space street lighting along the full length of the road. The only exception to this is at the railway bridge where restricted carriageway widths are not sufficient to accommodate a footway.

No parking restrictions are present, however informal on-street parking is currently only generated within the vicinity of the residential dwellings at the junction with Lower Gate Road. This feature is illustrated in Insert 15:31.

Insert 15-31: Image Source: Google Streetview

The following graph in Insert 15-32 shows daily traffic flows profiles for this road.

Insert 15-32: Daily Traffic Flows- Altham Lane



In terms of overall traffic trends the road experices a slightly earlier morning peak of 07:00 to 08:00 and a clearly defined evening peak of 16:00 to 17:00. Interrogation of vehicle movements have identified that traffic flows on this road are very tidal in nature with the majority of traffic during the morning peak hour travelling northbound, whith the pattern being reversed during the evening peak hour. As noted previously, the tidal nature of traffic volumes on this road identifies that it is used by through traffic as an alternative route to access the Altham Business Park, whilst also serving as an access route for local residents for journeys to and from the north.

It is also notable that Altham Lane expereinces a minmal level of HGV movments throughout the day, this is primarily due the wieght restrictions in place on the bidge over the railway line. No bus routes currently operate on Altham Lane, and indeed, the weight restrications mean that it would not be possible to operate routes across the bridge.

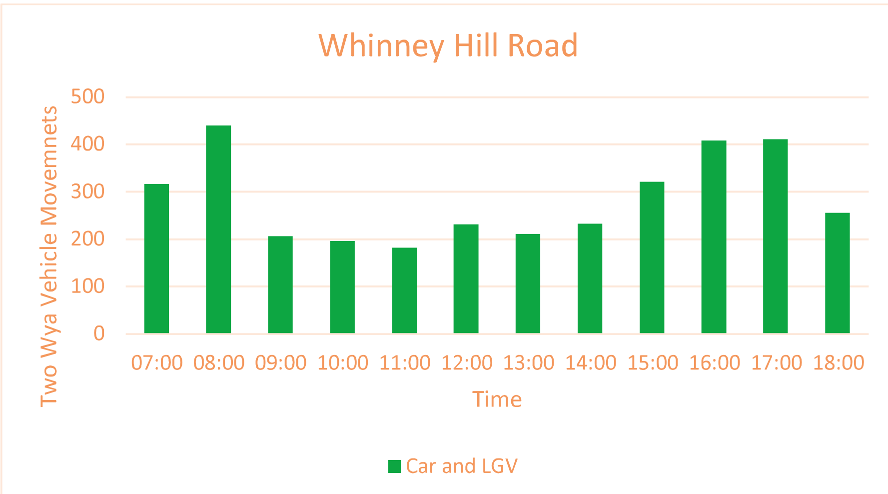
Whinney Hill Road

Whinney Hill Road runs in a northeast to southwest alignment, changing names from Enfield Road at its junction with Bolton Avenue to the east and terminating to the west at a signalised junction with A680 Whalley Road and B6231 in Accrington. This road provides access to part of the Huncoat Business Park, The Nori Brick Yard, Huncoat Waste and Recycling Centre, and the Whinney Hill Quarry Landfilling Site.

Footways are only present at the western most end of Whinney Hill Road between Whalley Road and the Park Royal Whinney Hill Quarry Entrance. The road is dominated by industrial uses, with steep gradients prominent at its western end where signage is in place advertising a 1:8 gradient on a winding road for drivers travelling in an easterly direction towards Huncoat. There are no parking restrictions along the length of Whinney Hill Road.

A daily traffic profile for Whinney Hill Road with two-way flows is shown in Insert 15-33 below:

Insert 15-33: Two Way Daily Traffic Flows for Whinney Hill Road



Whinney Hill Road carries a maximum of 465 vehicles per hour between 08:00 and 09:00 during the morning peak hour and approximately 425 vehicles between 16:00 and 17:00.

Unsurprisingly, Whinney Hill Road experiences higher levels of HGV movements, with HGV traffic peaking at 60 two-way HGV movements per hour mid-morning which equates to 23% of the total traffic. HGV movements operate within a range of 24 to 45 vehicles per hour throughout the majority of the day, between the hours of 08:00 and 16:00.

Road Traffic Accidents

A high-level review of road traffic accidents on the road network within the vicinity of the Masterplan Area has been undertaken for the five-year period between 2013 and 2017. The data is presented within Insert 15-34 and identifies that a total of 30 accidents have occurred across the entire study area during the last five years with no fatalities and only five accidents resulting in serious injury.

Significantly, only three of these accidents have involved pedestrians of which only one resulted in a serious injury. The three pedestrian accidents occurred during the last two years (since May 2016), and were located as follows:

- Wedgewood Road/ A679 Burnley Road, Serious Injury – Date: 22nd May 2016;
- A679 Burnley Road, 80 metres to the east of Bolton Avenue, Slight Injury – Date: 25th October 2016;
- Lynwood Road/ Lower Gate Road, Slight Injury – Date: 1st February 2017.

The four other serious accidents involved motor vehicles only.

The occurrence of accidents involving vehicles is predominately clustered around the access to the Accrington Bypass and along the length of the A679 Burnley Road. On the Accrington Bypass northbound on-slip from the Western Roundabout, 10 accidents were recorded, with 9 slight incidents and one serious. The potential cause of this cluster could be due to the merging of the lanes from two lane to one lane on this on-slip, however further investigation into the details of these collisions would need to be undertaken.

Insert 15-34: Road traffic accident data for the period 2013-2017 (Source: CrashMap)

Along Burnley Road itself, there have been a total of 8 accidents involving vehicles only, of which two resulted in serious injury to vehicle occupants. The majority of these incidents involved one or two vehicles in slight accidents occurring at priority junctions onto Burnley Road, with three accidents occurring at each of the junctions of Bolton Avenue/ Burnley Road and Higher Gate Road/ Burnley Road. This is visualised in Insert 15-34.

Other incidences on Bolton Avenue, Lower Gate Road, Bluebell Way and Station Road are isolated accidents, with no clusters or patterns present.

Further analysis of the causes the accidents on the on-slip to the Accrington Bypass would be required to ensure that the masterplan proposals do not exacerbate existing safety issues related to the geometric deficiencies on the public highway.

Planned Highways Improvements

<u>Junction 8 M65:</u>

Lancashire County Council have planned a Highways England scheme at the M65 Junction 8, which aims to improve the capacity of the motorway for the future and improve overall safety. While the design and scheme have yet to be established, engagement with Highways England will be undertaken to ensure that any impact of the Masterplan Proposals upon the capacity of this junction are appropriately considered within its design.

1.3 Baseline Highway Capacity Assessments

1.3.1 Overview and Data Collection

The scope of the baseline highway conditions surveys was discussed with Lancashire County Council to establish the extent of the network to be surveyed, resulting in the following nine junctions being identified:

Signalised Junctions (LINSIG)

1. A680 Whalley Road / A678 Blackburn Road / A678 Burnley Road (Signalised Junction)
2. Whinney Hill Road / A680 Whalley Road / B6231 Dill Hall Lane (Signalised Junction)

Priority Junctions (PICADY)

3. Bolton Avenue / Whinney Hill Road / Enfield Road
4. Bolton Avenue / A679 Burnley Road
5. Lower Gate Road / Altham Lane / Station Road
6. Higher Gate Road / Burnley Lane / Lower Gate Road
7. A679 Burnley Road / Higher Gate Road

Roundabouts (ARCADY)

8. A56 / A679 Burnley Road (Western Roundabout)
9. A56 /A678 Burnley Road (Eastern Roundabout)

The locations of the junctions surveyed are illustrated in Insert 15-35, whilst the full traffic survey data has been provided in Appendix J of this report.

Insert 15-35: Studied Junctions

The surveys were undertaken on Thursday 15th March 2018 with both counts and video footage provided. Traffic counts were undertaken from 07:00 to 19:00 with data split into 15-minute periods and included the following classifications - Cars; PC; MC; LGV (light goods vehicles); OGV1; OGV2;PSV (public service vehicles, buses and coaches); MCI (two-wheel motor cycles); and PCL (pedal cycles).

The AM and PM traffic flow diagrams from the survey are also provided in Appendix K.

An independent review of the traffic flow diagrams has been undertaken by Lancashire County Council (LCC). This review noted that whilst new traffic data was collected inform this Evidence Base, which is the correct approach, the traffic flows recorded as part of the March 2018 surveys were lower than similar historic data held by LCC. Across Lancashire falls in traffic levels have been observed in other areas, confirming this trend is not uncommon.

It has therefore been recommended by LCC that annual traffic monitoring is undertaken to ensure an accurate baseline on which to base future developments and future year traffic growth as part of the HGV masterplan. In parallel any new planning applications should be requested to collect new traffic data as part of preparing materials and technical reports for their associated submissions. The onus should, therefore, be on future applicants.

1.3.2 Base Year Assessment

The following assessments scenarios for both signalised and non-signalised junction have been modelled for a 2018 Baseline.

In addition, the impact of traffic redistribution as a result of the implementation of the Whinney Hill Link Road has also been considered.

1.3.3 Base Year Modelling Methodology

Common Principles

In assessing the signalised and non-signalised junctions, the geometries of the existing junctions and roundabouts were measured in CAD using an OS mapping base. Satellite imagery was used in conjunction with the OS map to ensure that that geometry was a true reflection of the existing conditions in the absence of some road markings. These geometric measurements were inputted into the junction models alongside count data and traffic distribution in relation to the specific junction type.

Non-Signalised Junctions

The priority-controlled junctions and roundabouts were modelled using TRL's PICADY v5 and ARCADY v6.

Data inputted into the ARCADY (for priority-controlled roundabouts) and PICADY (priority-controlled junctions) models were derived from the manual classified counts, which was analysed and sorted into origin and destination matrices in 15-minute intervals from the survey data, including a separate HGV percentage matrix. Distribution within the network was determined by the junction turning counts at each arm of the junction converted into PCUs (Passenger Car Units). Flow diagrams showing the base year flows for the AM and PM peak hours at each junction are included in Appendix K.

Survey video footage was reviewed to ensure that there were no blockages or unusual behaviour occurring on the network that might affect the calibration of the models.

<u>Assumptions</u>

Altham Lane/ Station Road/ Lower Gate Road: Due to the minimal flows produced by the access road north off of Altham Lane, Stone Hey, these flows were attributed to Altham Lane. This junction was therefore modelled a T-junction with Altham Lane being the minor arm.

Lower Gate Road/Burnley Lane/Higher Gate Road: The access road to the east of Higher and Lower Gate roads produced insufficient flows and due to the shape of the access road the flows were distributed across Higher and Lower Gate Roads. This junction was then modelled as a T-junction, with Burnley Lane treated as the minor arm.

The results refer to the Ratio of Flow to Capacity (RFC) of the junctions which is taken as the ratio of the flow to capacity on the worst performing arm of the junction. RFC values are an indication of the amount of available capacity which is being used on the worst performing arm of the junction. An RFC value of 0.85 or higher would indicate that the junction is overcapacity on at least the worst performing arm, which could lead to unacceptable queue lengths or delays at the junction. An RFC of 0.85 or above and may require some changes in its design/layout to reduce the RFC value and provide suitable levels of operation

In the modelling software and calculations of RFC, only arms with traffic approaching a junction which is opposed would generate a positive value. For example, if the layout of a junction includes a left turn lane which is able to flow freely, or where this arm operated as an exit only, these would report RFCs of zero.

Signalised Junctions

Signalised modelling assessments were undertaken using LinSig v3.2.27. LinSig is an industry standard junction software package for assessing the design of traffic signal junctions, incorporating the impact of junction geometries, traffic flows and the balance of demands and priorities across the junction.

Surveyed junction turning counts for the A678 Burnley Road/A680 Whalley Road/A678 Blackburn Road and the Whinney Hill Road/A680 Whalley Road and B6231 Church Lane signalised junctions were converted into passenger car units (PCU's) for use in the modelling of the 2018 base year scenario. Flow diagrams showing the base year flows for the AM and PM peak hours at both junctions are included in Appendix K.

Signal controller information, including phasing, staging and inter-green data was obtained from Lancashire County Council. Average cycle times and stage green lengths were calculated based on observations of the video footage obtained during the junction surveys.

Further observations of the survey video footage were used to calculate under-utilised green times, and the models were validated against degree of saturation (DoS) observations, which were calculated using TfL's Underutilised Green Time Calculator tool.

The Degree of Saturation (DoS) is a measure of how much demand each arm of a signalised junction is experiencing when compared to available capacity. Values of DoS over 90% would indicate an arm of a junction is approaching capacity, with queuing and delay therefore expected, which may reach unacceptable levels. Some changes to the operation of the signalised junction may therefore be required to reduce the DoS value, this could include changes to the traffic signal timings, the order in which the signals operate on each arm, the introduction of dedicated turn signals, or possibly physical changes to the junction itself.

1.3.4 2018 Base Year Modelling Results

Non-Signalised Junctions

The results of the base year modelling for each junction are summarised in Tables 15-13 to 15-17. The results are reported in terms of:

- End Queue- The average vehicle queue length at the end of each 15-minute interval
- Ratio of Flow (volume) to Capacity (RFC)

All values shown are reported in maximum values for the peak period and full ARCADY and PICADY reports can be viewed at Appendix L.

For the purposes of validation of existing conditions, an observed queue length has been provided for each junction, by taking the maximum queue lengths per minute during each peak 15-minute period and calculating an average queue length.

In accordance with best practice guidance outlined within the PICADY user manual *'It must be stressed that the calculated queues and queueing delays are average values of broad distributions, and considerable variation about these values will be encountered in practice. In fact, day-to-day variations in the queue lengths and delays can occur at any given time during the peak period'*. Following this advice, there may be some small degree of variance between the maximum observed queue lengths shown in the tables below and the modelled result.

Following this, after reviewing the footage of the junction it was evidential there was an underestimation in the queue length at Bolton Road in the modelled results. Implicit in the capacity formulae is an error due to particular site-to-site variation, and this can be removed for existing 3-arm junctions by making on-site observations of the entry capacity of the minor arm. In order to correct this issue, observations of the capacity of the Bolton Road stream were undertaken based on the footage from the traffic surveys. This procedure produced a correction (of intercept) to the capacity relationship of the traffic stream in question of -0.6 pcu/min prompting the queue calculations to be consequently more accurate.

Roundabouts

Table 15-11: A679/A56 Eastern Roundabout 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Arm A- A679 W	0.296	0.4	0.402	0.7	0.2
Arm B- A56 N	0.19	0.3	0.253	0.3	0.4
Arm C- A679 E	0.386	0.6	0.323	0.5	Not Available
Arm D- Unnamed Road	0.011	0	0.005	0	0

The results above demonstrate that the Eastern Roundabout operates with significant spare capacity, experiencing very low instances of queueing during the 2018 peak hours.

Table 15-12: A679/A56 Western Roundabout 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Arm A- A56 N (Exit Only)	n/a	n/a	n/a	n/a	n/a
Arm B- A679 W	0.454	0.8	0.398	0.7	0
Arm C- A56 N Off-slip	0.218	0.3	0.184	0.2	1.1
Arm D- A679 E	0.506	1	0.646	1.8	0.7

The results above demonstrate that the Western Roundabout operates with significant spare capacity, experiencing very low instances of queueing during the 2018 peak hours.

The results show that both roundabout junctions operate with significant reserve capacity in both peak hours using the 2018 baseline traffic flows, with no issues identified on the network. These conclusions have also been validated based on observations from site visits and video footage recorded during the traffic survey.

Priority Junctions

Table 15-13: Burnley Road/Bolton Avenue 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Burnley Road West	0	0	0	0	0.7
Bolton Avenue	0.671	1.85	0.961	7.65	6.6
Burnley Road East	0.353	0.54	0.232	0.3	0.2

The results for the Burnley Road/Bolton Avenue junction show that during the AM peak hour it operates within capacity, however during the PM the junction is over capacity on the Bolton Avenue arm.

Table 15-14: Burnley Road/Kingsway/Higher Gate Road 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Higher Gate Road	0.397	1	0.334	0.72	1.8
Burnley Road East	0.071	0.08	0.014	0.01	0.7
Kingsway	0	0	0.007	0.01	0
Burnley Road West	0.338	0.5	0.587	1.35	0

The modelling results for the Burnley Road/Bolton Avenue Junction indicate that the junction is operating within capacity during both the AM and PM peak hours.

Table 15-15: Station Road/Altham Lane/Lower Gate 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Station Road	0	0	0	0	0
Altham Lane	0.135	0.15	0.443	0.78	0.3
Lower Gate Road	0.583	1.43	0.145	0.17	0.5

The modelling results for the Station Road/Altham Lane/Lower Gate Road junction indicate that the junction is operating below its capacity in both the AM and PM peak hours.

Table 15-16: Whinney Hill Road/Bolton Avenue 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Whinney Hill Road East	0.264	0.36	0	0	0
Bolton Avenue	0.33	0.49	0.379	0.6	0.2
Whinney Hill Road West	0.367	0.61	0.253	0.35	0.7

The modelling results for the Whiney Hill Road/Bolton Avenue Junction indicate that the junction is operating within capacity in both the AM and PM peak hours.

Table 15-17: Burnley Lane/Higher Gate/Lower Gate 2018 Base Year Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)		Maximum Observed Queue Length
	RFC	Queue (veh)	RFC	Queue (veh)	
Lower Gate Road	0	0	0	0	0
Burnley Lane	0.031	0.03	0.027	0.03	0.3

Higher Gate Road	0.02	0.02	0.065	0.1	0

Summary

The results show that all but one of the priority junctions operate with significant reserve capacity in both peak hours in the 2018 Baseline, with no issues identified on the network. The junction of Bolton Avenue and Burnley Road already needs an improvement scheme to provide a suitable level of operation.

The observed queueing validates well again the modelled results, showing the modelling to be reflective of current conditions on the network. It is noted that he observed and queue lengths for the Bolton Avenue showed queues of up to 11 cars forming at this junction, which are reflected in both the modelled and observed results. The queues form as a result of the gradient of Bolton Avenue which in combination with the high levels of traffic mean that minimum gap acceptance for entry into the mainline flow is increased, therefore reducing the capacity of the minor arm.

Signalised Junctions

The results of the base year modelling for the signalised junctions are summarised in Tables 15-20 and 15-21. The results are reported on in terms of the following:

- Degree of Saturation (DoS %) – A measure of the peak hour demand against the saturation flow of each arm/movement
- Delay (PCUhr) – The total delay encountered by traffic on each arm/movement
- MMQ (PCUs) – The Mean Max Queue length, in PCUs, for each arm/movement
- Junction Practical Reserve Capacity (PRC%) – The difference between the capacity of the junction and the current demand, expressed as a percentage.

Table 15-18 Burnley Road/Whalley Road/Blackburn Road 2018 Base Year Results

Arm/Movement	AM Peak Hour (0745-0845)			PM Peak Hour (1630-1730)		
	DoS %	Delay (PCUhr)	MMQ (PCUs)	DoS %	Delay (PCUhr)	MMQ (PCUs)
A - Burnley Rd Lane 1 (Ahead/Left)	89%	8.8	17.6	96%	12.0	21.7
A - Burnley Rd Lane 2 (RT)	52%	2.3	4.8	41%	1.8	4.3
B - Whalley Rd SE	87%	10.5	24.6	91%	11.2	25.8
C - Blackburn Rd (Right/Ahead)	87%	9.4	20.0	97%	12.6	19.3
C - Blackburn Rd (Left Turn Slip)	44%	2.1	7.4	75%	5.1	18.0
D - Whalley Rd NW	78%	8.5	22.9	79%	18.0	18.0
Junction PRC	**0.9%**			**-7.6%**		

Table 15-19: Whinney Hill Road/Whalley Road/Church Lane 2018 Base Year Results

Arm/Movement	AM Peak Hour (0745-0845)			PM Peak Hour (1630-1730)		
	DoS %	Delay (PCUhr)	MMQ (PCUs)	DoS %	Delay (PCUhr)	MMQ (PCUs)
A - Whinney Hill Rd	60%	2.4	5.5	68%	2.9	6.4
B - Whalley Rd SE	69%	3.2	6.9	77%	4.0	8.2
C - Church Ln	42%	1.4	3.4	38%	1.2	2.9
D - Whalley Rd NW	77%	4.3	10.2	73%	3.6	8.5
Junction PRC	**16.30%**			**16.80%**		

The results show that the Burnley Road/Whalley Road/Blackburn Road junction is already operating at capacity in the AM peak, and is approaching its maximum theoretical capacity in the PM peak hour. This junction would need an improvement scheme to provide additional capacity to ensure future traffic growth and development traffic can be accommodated.

The Whinney Hill Road/Whalley Road/Church Lane junction is currently operating with sufficient reserve capacity.

2018 Base Year Modelling Summary

The 2018 base year modelling suggests seven of the nine modelled junctions are reported to operate satisfactory with minimal levels of queues and delay predicted.

However, the priority junction of Bolton Avenue and Burnley Road and the signalised junction of Burnley Road/Whalley Road/Blackburn Road would both operate at unacceptable levels, with extensive queues and delays predicted.

1.3.5 2036 Future Baseline Forecasting

For the purposes of a robust assessment, the future conditions on the highway network have been forecast for a future year of 2036, to include future traffic growth upto 2036, together with committed housing developments.

Traffic Growth

Traffic growth factors were determined using the Trip End Modelling Program (TEMPro v7) database using the following criteria:

- Base Year - 2018
- Future Year - 2036
- Result Type - Trip end by time period
- Trip End Selections - Car driver
- Area Level – Authority
- Area Name - Hyndburn
- Time Periods - Weekday AM and PM peak periods

The growth factor of 1.1225 was applied to the 2018 base year demands in order to create the 2036 future year base traffic.

Committed Developments

Within the timeframe between the baseline survey conducted and the construction of the Huncoat development, changes to the baseline flows are expected to occur on the surrounding highway network due to the construction of committed developments within the area. All committed developments within the Huncoat ward are shown in Insert 15-36 with the corresponding details in Table 15-20.

Insert 15-36 Committed Development Locations

Table 15-20: Committed Developments Overview

Site	Location	Total Units
1	Land off Lower Gate Road	5
2	Land off Foxwood Drive, Deer Park	27
3	Land at Lower Gate Road	6
4	209 Burnley Road	1
5	12 Lower Gate Road	1
6 (Construction not yet started)	17 Old Hall Drive	1
7 (Construction not yet started)	Land at Yorkshire Street	15
8	Manchester Road, Hapton	202
9	Ribblesdale Avenue	108
10	Hillside Farm	31

Of these committed developments, Sites 1 through 5 have commenced construction, with sites 6 and 7 having been granted planning permission but in the pre-construction stage. Due to the limited quantity of units, and therefore resultant traffic being produced by each development, only flows from developments with 10 or more dwellings have been applied to the network.

The future baseline conditions have however been assessed with the TEMPro growth factor applied to 2018 flows in addition to committed development flows, which have been routed internally towards the Accrington Bypass to provide a worst-case scenario. The impact of the additional flows on the network is shown within the future baseline traffic flow diagrams and can be viewed in Appendix M.

1.3.6 2036 Future Baseline Modelling Results

Non-Signalised Junctions

The results of the PICADY and ARCADY modelling for the future baseline traffic conditions are shown in Table 15-21 to Table 15-27. Full ARCADY and PICADY reports can be viewed at Appendix N.

Roundabouts

Table 15-21: A679/A56 Eastern Roundabout 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Arm A- A679 W	0.341	0.5	0.529	1.1
Arm B- A56 N	0.23	0.4	0.3	0.4
Arm C- A679 E	0.6	1.5	0.362	0.6
Arm D- Unnamed Road	0.015	0	0.021	0

Table 15-22: A679/A56 Western Roundabout 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Arm A- A56 N (Exit Only)	n/a	n/a	n/a	n/a
Arm B- A679 W	0.511	1	0.456	0.8
Arm C- A56 N Off-slip	0.284	0.4	0.247	0.3
Arm D- A679 E	0.646	2.3	0.781	3.4

The results identify that the both the eastern and western roundabouts continue to operate within capacity during the network AM and PM peak hours in the 2036 future baseline conditions without the proposed development.

It should however be noted that the increased future baseline flows do reduce the reserve capacity particularly at the western roundabout. The introduction of an additional arm at the western roundabout would further remove capacity from the junction, and subject to assumptions made with regard to development quantum and wider traffic redistribution on the network is likely to generate a requirement for highway improvement works.

Priority Junctions

Table 15-23: Burnley Road/Bolton Avenue 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Burnley Road West	0	0	0	0
Bolton Avenue	0.856	4.3	1.217	30.18
Burnley Road East	0.468	0.85	0.258	0.34

During the 2036 future baseline scenario the Burnley Road/Bolton Avenue junction is operating in excess of the operational capacity in both the AM and PM peak periods, but particularly during the PM peak.

Table 15-24: Higher Gate Road/Burnley Road/Kingsway 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Higher Gate Road	0.502	1.85	0.421	1.24
Burnley Road East	0.075	0.08	0.014	0.01
Kingsway	0	0	0.007	0.01
Burnley Road West	0.422	0.71	0.779	3.05

During the future baseline scenario Higher Gate Road/Burnley Road/Kingsway junction is operating within the operational capacity in both the AM and PM peak periods.

Table 15-25: Station Road/Altham Lane/Lower Gate 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Station Road	0	0	0	0
Altham Lane	0.157	0.18	0.508	1.01
Lower Gate Road	0.661	2	0.153	0.18

Future Baseline modelling results for the Station Road/Altham Lane/Lower Gate junction show spare capacity on all arms during the AM and PM peak periods.

Table 15-26: Whinney Hill Road/Bolton Avenue 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Whinney Hill Road East	0	0	0	0
Bolton Avenue	0.303	0.43	0.43	0.74
Whinney Hill Road West	0.373	0.63	0.299	0.45

Future Base modelling results for the Whinney Hill Road/Bolton junction also show spare capacity on all arms during the AM and PM peak periods.

Table 15-27: Lower Gate/Higher Gate/Burnley Lane 2036 Future Baseline Results

Arm	AM Peak Hour (0745-0845)		PM Peak Hour (1630-1730)	
	RFC	Queue (veh)	RFC	Queue (veh)
Lower Gate Road	0	0	0	0
Burnley Lane	0.268	0.36	0.05	0.05
Higher Gate Road	0.024	0.03	0.075	0.12

The above results show that the Lower Gate/Higher Gate/Burnley Lane junction continue to operate with significant spare capacity when tested with 2036 future baseline flows.

<u>Summary</u>

All priority junctions continue to operate with significant reserve capacity in both peak hours, with the exception of the Bolton Avenue/Burnley Road junction

It should however be noted that the ratio between flow and capacity (RFC) at the Bolton Avenue/ Burnley Road priority junction is 1.217 and has a modelled queue of 30 vehicles on the Bolton Avenue arm. Improvement works on this junction will be necessary and an additional lane on this approach will need to be considered in further detail. Modelling results for the 2018 baseline at this junction already indicated some improvement was already required.

Signalised Junctions

The results of the LinSig modelling for the Burnley Road/Whalley Road/Blackburn Road and Whinney Hill Road/Whalley Road/Church Road signalised junctions for the future baseline are summarised in Table 15-28 to Table 15-29. Signal timings have been optimised for practical reserve capacity at both junction in both peak hours.

Table 15-28 Burnley Road/Whalley Road/Blackburn Road 2036 Future Baseline Results

Arm/Movement	AM Peak Hour (0745-0845)			PM Peak Hour (1630-1730)		
	DoS %	Delay (PCUhr)	MMQ (PCUs)	DoS %	Delay (PCUhr)	MMQ (PCUs)
A - Burnley Rd Lane 1 (Ahead/Left)	93%	104.6	21.5	106%	255.0	43.7
A - Burnley Rd Lane 2 (RT)	65%	84.6	5.5	56%	64.5	5.5
B - Whalley Rd SE	101%	125.7	41.3	105%	203.2	60.0
C - Blackburn Rd (Right/Ahead)	101%	145.5	37.0	106%	210.6	43.6
C - Blackburn Rd (Left Turn Slip)	49%	23.8	9.2	84%	36.6	23.8
D - Whalley Rd NW	102%	115.1	47.8	106%	184.5	67.4
Junction PRC	-12.8%			-17.8%		

Table 15-29 Whinney Hill Road/Whalley Road/Church Lane 2036 Future Baseline Results

Arm/Movement	AM Peak Hour (0745-0845)			PM Peak Hour (1630-1730)		
	DoS %	Delay (PCUhr)	MMQ (PCUs)	DoS %	Delay (PCUhr)	MMQ (PCUs)
A - Whinney Hill Rd	80%	38.9	8.0	81%	36.7	8.6
B - Whalley Rd SE	73%	27.7	8.1	84%	35.0	10.1
C - Church Ln	51%	24.8	4.3	45%	23.3	3.5
D - Whalley Rd NW	83%	23.7	12.4	81%	22.7	11.2
Junction PRC	9.00%			7.00%		

The results show that the Burnley Road/Whalley Road/Blackburn Road junction is predicted to be significantly over capacity in both peak hours in the future baseline scenario with optimisation of signal timings. Further improvement works at this junction would therefore need to be considered should significant volumes of development traffic be routed through this junction in the future.

The Whinney Hill Road/Whalley Road/Church Lane junction continues to operate within capacity in the future baseline scenario, although the Whalley Road South East arm is beginning to approach unacceptable levels of operation

2036 Future Baseline Modelling Summary

The 2036 future baseline scenario includes traffic growth and committed developments across the Huncoat Garden Village masterplan area. Seven of the nine modelled junctions are suggested to operate satisfactory with minimal levels of queues and delays predicted.

However, the priority junction of Bolton Avenue and Burnley Road and the signalised junction of Burnley Road/Whalley Road/Blackburn Road would both operate at unacceptable levels, with extensive queues and delays predicted. The issues at these two junctions are exacerbated from the same situation reported in the 2018 base year.

1.3.7 Whinney Hill Link Road Traffic Redistribution

Whilst the implementation of the Whinney Hill Link Road was not required to alleviate any existing capacity issues on the network, which remains the case within the 2031 Future Baseline traffic flow scenario, it is useful to understand the impacts that the introduction of this route was forecast to have upon traffic redistribution and residual capacity on the local highway network at that time. This is because the assumptions associated with traffic redistribution are likely to be replicated if the Link Road, or part thereof, is introduced as part of the emerging Masterplan proposals.

Scheme Overview and Predicted Impacts

The application for the Whinney Hill Link Road (Ref 11/08/0482) consists of the construction of 3.1km length single carriageway to the north of Huncoat between Whinney Hill Road/Bolton Avenue Junction and A679

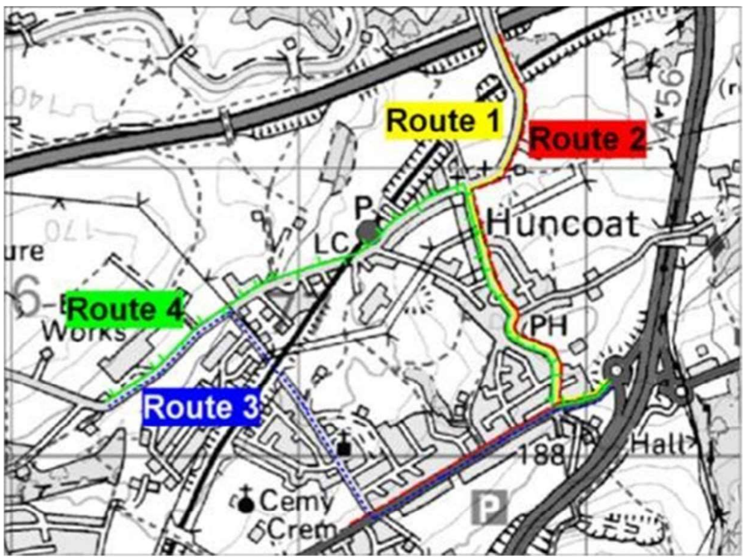
Burnley Road/A56 T junction along with associated works land running west-east between Whinney Hill Road/ Bolton Avenue junction and Burnley Road A679/A56 T Junction passing via Altham Lane.

The implementation of the Whinney Hill Link road would result in a redistribution of traffic from the eastern arm of the Accrington Bypass roundabout, routing traffic north of the Huncoat own Centre

The predicted re-distribution of traffic as a result the link road, as detailed in the 2007 Atkins Transport Assessment, is separated into two elements, namely:

- Local Through Traffic – Traffic would be signed on to the Link Road where the opportunity exists in order to remove unnecessary through traffic on Huncoat's local roads. The traffic routes that would be redistributed onto the Link Road are those associated with Routes 1, 2, 3 and 4 within Insert 15-37;
- Whinney Hill Landfilling Site – All traffic entering and exiting the Masterplan Area to/from the west along Whinney Hill Road would transfer to the Link Road, meaning all arrivals and departures would be to/from the east of the Masterplan Area. Existing arriving and leaving the Masterplan Area from/to the east would re-distributed within the local through traffic, as above. The landfilling site traffic predominately use Route 3 within Insert 15-37;

Insert 15-37 – Redistributed Through-Route Traffic (Source – Atkins TA 2007)



As depicted in Insert 15-37, traffic was removed from the following routes for redistribution on to the WHLR:

- Route 1 (Yellow route)- Traffic accessing the A56 along Altham Lane from the norther using Lower Gate/Higher Gate Road.
- Route 2 (Red Route)- Traffic accessing Burnley Road along Altham Lane using Lower Gate/Higher Gate Road.
- Route 3 (Blue Route)- Traffic accessing the A56 from Whinney Hill Road using Lower Gate/Higher Gate Road, together with HGV traffic accessing the Whinney Hill Landfilling Site from Burnley Road.
- Route 4 (Green Route)- Traffic accessing the A56 from Whinney Hill Road using Bolton Avenue.

Assessments of the impact of the introduction of the Link Road upon the operation of the Western Access Roundabout were undertaken for a future year of 2021 which represented 10 years after the anticipated opening of the road and considered two scenarios with and without additional Traffic Regulations Orders to maximise the redistribution of traffic onto this road. The results of these assessments are set out in Tables 15-30 and 15-31.

Table 15-30 Western Roundabout with introduction of WHLR – 2021 Future Year Assessment

Arm	AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)	
	RFC	Queue (veh)	RFC	Queue (veh)

Arm B (Dumb-bell Link)	0.428	0.7	0.390	0.6
Arm C (A56 Nbnd Off-slip)	0.271	0.4	0.280	0.4
Arm D (A679)	0.613	1.6	0.664	2
Arm E (new site link)	0.291	0.4	0.629	1.7

Source: Atkins TA, 2007

Table 15-31 Western Roundabout with introduction of WHLR plus TRO's – 2021 Future Year Assessment

Arm	AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)	
	RFC	Queue (veh)	RFC	Queue (veh)
Arm B (Dumb-bell Link)	0.521	1.1	0.413	0.7
Arm C (A56 Nbnd Off-slip)	0.319	0.5	0.293	0.4
Arm D (A679)	0.719	2.5	0.688	2.2
Arm E (new site link)	0.389	0.6	0.950	11

Source: Atkins TA, 2007

Atkins concluded that the A56/ Burnley Road Western Roundabout experiences no detrimental impact to its operation in 2021 with the introduction of the additional arm. It should however be noted that the Atkins modelling suggests the new access arm is sensitive to increases in traffic flows, reaching an RFC of 0.95 during the PM peak hour with maximum traffic redistribution. Whilst the queues are contained within the approach arm, further optimisation of the geometry of this approach is likely to be required.

This assessment took no account of additional traffic growth to 2031 nor the impact of the emerging masterplan for development in Huncoat which is now being proposed, and underlines that a requirement for highway improvements in this location is required. The form of improvements will of course be subject to the nature of the Link Road and its connections to the north, the supporting Traffic Regulation Orders implemented, and the quantum of development proposed.

Whilst the delivery of the WHLR would result in reductions in traffic along the routes identified within Insert 15-37, it will also attract increased traffic volumes through the masterplan. The form of the road, provisions for cyclists, and pedestrian crossing facilities therefore need to be given careful consideration within the emerging masterplan.

1.4 Masterplan Consideration

Forecast Development Trip Generation

Residential Element

In order to understand the scale of impact of the emerging masterplan quantum, it is important to establish the future trip generation rates at an early stage. These have been obtained utilising the TRICs database, which provides an average trip rate for the peak hours that will be generated per dwelling. Inputs into TRICs for the residential elements were as follows:

- Multimodal trips
- Within England
- Suburban and Edge of Town locations
- Houses privately owned
- 212-805 units

Once a selection of sites that matched these criteria had been generated, each site was scrutinised for compatibility to the Huncoat area. Sites that were not based in similar locations, or with different facilities and local amenities were discounted from the Trip rate, in order to produce AM and PM peak hourly trip rate that would be typical of dwelling in Huncoat Details of this selection criteria are provided in Appendix O alongside the full TRICs output reports.

The resultant trip generation rates for arrivals and departures during the AM peak period (08:00-09:00) and PM peak period (17:00-18:00), when traffic levels on the local network will be at its highest, is tabulated below:

Table 15-32: Vehicular Trip Generation Rates

Mode	AM			PM		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Vehicles	0.1444	0.441	**0.585**	0.379	0.183	**0.562**

These trip generation rates have been applied to the three potential development scenarios in terms of quantity of units. Table 15-33 below shows the trip generation for these potential scenarios in terms of arrivals and departures during the morning and evening peak hours.

Table 15-33: Vehicular Trip Generation Projections

Development Quantum	AM			PM		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
1100 units	158	485	**644**	417	201	**618**
1550 units	223	684	**907**	587	284	**871**
2220 units	320	979	**1299**	841	406	**1248**

It should be noted that the above trip rates relate to residential uses only. The trip generation associated with ancillary uses and associated linked, pass-by and internalised trips will require further consideration within detailed planning applications brought forward for each site.

The distribution of these trips onto the surrounding local highway network and their capacity implications will be subject to the outcome of Site capacity assessments and the form of any new access road which is taken from the A673 Western Roundabout. Further clarity on these issues will be provided within the next stage of works.

Employment Element

Trip generation for the employment element for the development scheme has additionally been assessed utilising the TRICs database. Sites were interrogated for their similar uses and settings to that of the proposed employment sites, full inputs and outputs can be viewed in Appendix O. As the exact Use Class split of the employment element has not been determined employment has been assessed for B8 Use, B2 Use and B1 Use. Additionally, trip rates for an Industrial site in close proximity to Huncoat has been provided. All trip rates shown below are trips per 100 square metres of floor area.

Table 15- 34: Employment Trip Rates (Per 100sqm)

Use	AM			PM		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Industrial Unit (B1+B2)	0.276	0.034	**0.292**	0.016	0.184	**0.2**
B2	0.261	0.034	**0.295**	0.000	0.034	**0.034**
B8	0.246	0.561	**0.807**	0.491	0.491	**0.982**
Industrial Estate (B1, B2 & B8)	0.447	0.184	**0.631**	0.227	0.396	**0.623**
Blackburn Site (B1)	0.128	0.071	**0.199**	0.199	0.185	**0.384**

Internalisation

No internalisation factors have been applied to the residential and employment trip rates identified above.

The applicable internalisation factors will be derived subject to the mix of land-uses proposed within each of the masterplan options.

Distribution

Traffic will be distributed onto the surrounding highway network for residential and employment land-use based upon both the distribution embedded within the surveyed traffic movements on the existing road network and analysis origin/ destination data for travel to work.

1.4.1 Key Constraints and Mitigation

Pedestrian Network

In terms of pedestrian connectivity, whilst there is a good network of footways and Public Rights of Way serving the existing residents with a confluence at Huncoat Station, it is noted that there is a general lack of pedestrian crossing facilities throughout the study area.

Improved crossing facilities should be provided on key desire lines generated by future land parcels. Routes to Schools, Huncoat Station, Huncoat Business Park, local Bus Stops and new or existing community facilities should be considered within the masterplan proposals. Likewise, any routes crossing roads carrying high numbers of HGV's such as Bolton Avenue and Burnley Road will also require careful consideration.

Existing deficiencies in footway provision are noted at the following locations:

- the northern end of Bolton Avenue – no footways provided; and
- across the railway bridge on Altham Lane – no footways provided; and
- new pedestrian connections to Huncoat Railway Station and Bus Stops will need to be considered, particularly from larger land parcels located to the north of the railway line and the south easternmost part of the Huncoat Study Area.

Cycle Network

Whilst the cycle network provision in Huncoat is limited and cycling is under-used as a mode of transport, recent and ongoing investment in the Huncoat Greenway has delivered an improvement in cycle network provision.

Notable constraints in terms of the delivery of cycleway provision are the existing carriageway widths and presence of on-street car parking activities on Station Road and Enfield Road.

Public Transport Network

The masterplan will need to carefully consider how access to bus services is provided, particularly for larger plots where walking distances to existing bus services is likely to be prohibitive. Ideally all homes should be within a short walking distance of a bus stop.

Any increases in the frequency of bus and rail services serving Huncoat will be subject to negotiation with the relevant operators, Network Rail and Lancashire County Council and is likely to require significant investment, particularly if services are not currently viable;

Intensification of the use of the level crossing at Huncoat Station may also be considered contentious for Network Rail and Northern Rail, given their general aspiration to reduce reliance upon level crossing across their network. Early consultation with both parties is recommend minimising this risk.

Highway Network

Whilst highway capacity constraints are only evident at the signalised junction of A680 Whalley Road / A678 Blackburn Road / A678 Burnley Road in the future baseline 2036 assessment scenario, given the quantum of development traffic forecast highway capacity improvements would be expected at the following junctions:

- A680 Whalley Road / A678 Blackburn Road / A678 Burnley Road (Signalised Junction) – *Already operating at capacity and requires improvements if a significant volume of vehicles is expected to route through this junction;*
- Bolton Avenue / A679 Burnley Road (Priority Junction) – *capacity improvements may only be required if a Link Road is not delivered. Improvements in pedestrian crossing facilities would however be desirable.*
- A56 / A679 Burnley Road (Western Roundabout) – *including the introduction of a new access to unlock the development sites to the north*.

The existing volume and speeds of HGV traffic travelling through Huncoat and specifically on Bolton Avenue are a key concern for residents. The masterplan should seek to ensure that the existing issues associated with highways safety and residential amenity are not exasperated by the masterplan proposals.

Improved pedestrian crossing facilities would also be expected to be delivered as part of any highway improvement scheme in these locations.

Additional highway works would also be required if a new access road is connected from the A56/ A679 Western Roundabout through to Altham Lane given the redistribution of traffic flows that would be expected in that development scenario.

It is also expected that Highways England would seek S106 contributions towards the delivery of a future highway improvement scheme which is being developed at Junction 8 of the M65.

Whilst the junction of Lynwood Road/ Lower Gate Road is also known to be busy during school drop off and pick up times, this junction has not been modelled as is not expected to required improvement. Existing operational issues could however be alleviated by the implementation of parking management measures during these periods.

Relevant Restrictions on the Highway Network

The following restrictions are in place on the highway network:

- A signed weight limit of 7.5 tonnes is in place on the bridge over the railway tracks on Altham Lane restricting its use by HGV's and Buses;
- A signed height restriction of 4.3m underneath the railway bridge on Bolton Avenue. *Whilst this is prohibitive to use by double decker buses, articulated vehicles and larger rigid vehicles (10m rigid). The overall body height of Hyndburn's refuse vehicle is* 3.85 metres and is not therefore affected by the height restriction;
- One-way northbound section of road on Lynwood Road due to single carriageway width restrictions.
- The current traffic conditions on Bolton Avenue during the peak period have been both observed and modelled and have been found to be operating close to capacity during peak hours and is therefore likely to require mitigation through the implementation of an additional flare or approach lane on the minor arm. Signalisation of this junction should also be considered.

1.4.2 Opportunities

The proposed masterplan should seek to create sustainable communities which are thoughtfully integrated into the existing community, with a focus upon delivering strong pedestrian and cycle links to surrounding employment areas, schools, local facilities and public transport service access points. Notable opportunities are set out below:

1. The citing of local facilities and complementary land uses within the development area will have the opportunity to considerably improve accessibility to local facilities for both existing and future residents and deliver wider community benefit.
2. The masterplan should seek to maximise the benefit of the existing cycle network provisions and ongoing investment through the provision of high-quality connections to the existing cycle routes and surrounding local facilities. Cycle route provision should seek to tie into or extend the Huncoat Greenway or the existing cycle lanes on Burnley Road where possible.
3. There is an opportunity to improve cycle and car parking provisions at Huncoat Railway Station. There is considered an opportunity for Huncoat Station to be serve as park and ride facility to nearby destinations such as Preston and Burnley.
4. There is an opportunity to deliver a step change in public transport service provision in this area. The feasibility of amendments to service frequencies will also need to be identified in consultation with Mainline and the Burnley Bus Company who are the operators of bus service M3 and 9 respectively.
5. The masterplanning process also presents an opportunity to enhance the role and viability of the Station within Huncoat and potentially deliver increases patronage through the delivery carefully planned residential development and complementary land-uses. Ensuring that future residents are

well connected to the station by foot, cycle and public transport should be a key focus, and will facilitate further consultation with Northern Rail regarding the opportunities and feasibility of increasing service frequencies.

6. The delivery of targeted infrastructure interventions, such as signalisation of priority junction on Burnley Road provides the opportunity to unlock additional capacity on the existing network and improve pedestrian crossing facilities.
7. There is an opportunity to deliver a new access off of the western roundabout to access land parcels to the east and to serve employment land uses. The provision of secondary connections to Lower Gate Road and Altham Lane would deliver wider capacity improvements by providing alternative route choices and reduce demand for additional use of the existing access junctions on Burnley Road. Whilst this access road is not strictly required in terms of capacity for the residential scheme, it is politically desirable for the reasons noted above. An access road is however considered to be required if additional B2/B8 employment uses are proposed in the masterplan to avoid exacerbating existing issues with HGV traffic on the existing network.
8. The implementation of a new link between Altham Lane and Enfield Road to the north of the railway would provide residents with additional route choice and would take pressure off of the level crossing on Station Road

Whilst there is an opportunity to strengthen the link between Huncoat Station and the new local centre by the removal of HGV traffic on Station Road, some fairly significant measure would be required to achieve this such as works to increase the height restriction to accommodate larger vehicles. It should however be recognised that is likely to be a contentious issue for existing residents

1.5 Conclusions

To maximise the use of currently underused public transport services and to reduce car dependency, highest residential densities should be located in areas where highest levels of accessibility to public transport is (or can be) achieved, and in those areas that offer good pedestrian and cycle connections to local schools, services, facilities and employment areas. The provision of pedestrian crossing facilities on these routes will be important, especially where these routes carry high volumes of HGV's.

The transport strategy developed for the Masterplan will need to build upon existing travel characteristics focusing upon delivering a connected, safe and convenient network of walking and cycle routes, tying into existing provisions where possible.

Ideally all homes should be located within a short walk of a bus stop, a recommended distance would be 400m as a guide. Rerouting of bus services or the additional of new services is likely to be required to provide public transport accessibility to some of the larger land parcels.

Modelling software has been used to test the operation of nine junctions across the masterplan area. Results from this modelling suggest seven of the nine modelled junctions would operate satisfactory with minimal levels of queues and delay predicted.

However, the priority junction of Bolton Avenue and Burnley Road and the signalised junction of Burnley Road/Whalley Road/Blackburn Road would operate at unacceptable levels, with extensive queues and delays predicted. The issues at these two junctions are exacerbated from the same situation reported in the 2018 base year.

The introduction of a new access from the A679 Burnley Road western roundabout is also recommended and will unlock access to the land parcels located within the eastern part of the Study Area. At this stage we would not however propose to design this route as a by-pass, instead preferring a series of secondary connections to the existing public highway to the north.

The fully connected Link Road will be provided on a needs basis with its design being related to the quantum of traffic associated with masterplan options and required access routes to employment land-uses. The link road will provide an alternative route for both existing and development generated traffic, reducing pressure on the junctions on Burnley Road. Traffic regulation orders on both Higher Gate Road and Lower Gate road should be considered to address vehicle speeds on this road, as at present there are no restrictions in place.

1.6 Limitations

This initial assessment has been undertaken based upon a site visit and traffic data collected in March 2018. The following tasks would be recommended for the next stage of works:

- Consultation with Highways England regarding the proposed impact of the Masterplan and the current status of the improvement plans being considered for Junction 8 of the M65;
- Consultation with Network Rail/ Northern Rail regarding the feasibility for delivering greater service frequency at Huncoat Station;
- Consultation with Bus Operators to identify the patronage of existing services and opportunities for increasing service frequencies or adding new routes in the future;
- Investigation of highway safety issues at the on-slip from the Western Roundabout to the A56 Accrington By-pass;
- The access constraints review has been based upon a high-level review of existing conditions and the extent of highway adoptions only. A full review of land registry data for the land parcels identified within the masterplan should be undertaken to ensure that no ransom strips are present.

Appendix G – Proposed Route from route appraisal report

Appendix H – Huncoat-cycle way

Appendix I – Huncoat Adoptions

Appendix J – Survey Data

Appendix K – AM and PM Baseline Flows

Appendix L – PICADY Outputs

Appendix M – AM and PM Future Baseline Flow Diagram

Appendix N – PICADY Outputs Future

Appendix O – Trip Rates and TR

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Hyndburn Local Plan – Regulation 19 consultation

Statement of representations procedure

How representations will be considered and where documents are available

Local Plan (Strategic Policies and Site Allocations) Publication (Pre Submission) Plan |February 2024

Representations period: 12th February 2024 to 5pm 25th March 2024
https://www.hyndburnbc.gov.uk/localplan/

The Council is inviting comments, known as representations, on the Hyndburn Local Plan (Strategic Policies and Site Allocations) Publication (Pre-Submission) Plan (Regulation 19). This statement sets out how and by when to make such representations, how to express interest in appearing at the Examination into the Plan, as well as where to find the proposed submission documents and supporting evidence.

Document title

Hyndburn Local Plan 2040 (Strategic Policies and Site Allocations): Publication Plan — February 2024

Subject matter and area covered

The document covers the whole of the administrative area of Hyndburn Borough. It covers the period to 2040, sets out the level of growth to be planned for, where that growth should be located and how it should be delivered. It includes a vision for communities of Hyndburn and objectives to make the vision a reality. It also contains planning policies which will be used to determine planning applications.

Period of Publication for Representations

The representation period runs from Monday 12th February to 5pm on Monday 25th March 2024. Representations at this stage should only be made on the legal compliance and soundness of the Pre Submission Local Plan.

How to make a Representation

In order that the Council and the Planning Inspector have all of the necessary information to consider representations, respondents are asked to complete a representation form. The representation form can be completed and submitted via:

- www.hyndburnbc.gov.uk/localplan The Council's online representation form (this is the Council's preferred way of receiving representations).

- Downloading a representation form from the website www.hyndburnbc/localplan and returning via email to planningpolicy@hyndburnbc.gov.uk or by post to Hyndburn Borough Council, Planning Policy Team, Scaitcliffe House, Ormerod Street, Accrington BB5 0PF.

- Requesting a representation form from the Planning Policy Team by emailing planningpolicy@hyndburnbc.gov.uk or by phoning 01254 388111, and returning via email or post.

What happens to the Representations

Representations will be submitted with the Publication Local Plan to the Government's Department for Levelling Up, Housing and Communities to be considered as part of examination of the plan by an independent planning inspector.

Any representations received after the representation period may not be considered. Only representations received within the representation period have a statutory right to be considered by the Inspector at the Examination.

How to participate in the Examination, and request notification on the future progress of the Local Plan

By using the representation form you can request to participate in the Examination and to be notified of the following:

- Submission of the Hyndburn Local Plan for independent examination;
- Publication of the Inspector's Report on the examination of the Hyndburn Local Plan;
- The Adoption of the Hyndburn Local Plan.

If you choose not to submit representations using the representation form, you must specifically request if you wish to participate in the Examination and be kept informed of the progress of the Local Plan.

How to view the documents

To view the Publication Local Plan, supporting documents, evidence base and to submit a representation visit: www.hyndburnbc.gov.uk/localplan.

Copies of the Publication Local Plan are available to view at the Council's offices (Scaitcliffe House, Ormerod Street, Accrington BB5 0PF).

Further information about the Hyndburn Local Plan 2040 and requests for representation forms should be directed to the Planning Policy Team by calling (01254) 388111 or emailing planningpolicy@hyndburnbc.gov.uk

March 2024

REF 506

Hyndburn Local Plan Business Development / Strategic Planning Input

Introduction and Purpose

This document provides a high-level strategic response to the Hyndburn 2040: Local Plan (Strategic Policies and Site Allocations) outlining opportunities to strengthen the plan and enhance rail services.

Response

Network Rail welcome the response to comment on the Hyndburn 2040 Local Plan (Strategic Policies and Site Allocations). We recognise the focus on sustainable development, including development sites focussed on areas of Hyndburn with rail stations and enhanced density permissible around rail stations. We note the plan highlights that a higher % of household (28%) in Hyndburn than the national average have no access to cars. This makes effective rail services even more important for Hyndburn residents.

The document notes that 'rail connectivity across Pennine Lancashire is generally poor with long journey times to significant destinations, resulting in comparative isolation' (Point 8.10, p86). Network Rail would welcome the opportunity to work together with Hyndburn Council to consider what opportunities there are to improve the capability of the rail network and increase rail's attractiveness. Rail offers direct connectivity within Hyndburn and directly connects Hyndburn to other economically important areas including Blackburn, Manchester, Preston, Blackpool and West Yorkshire. Improved transport provision can act to close the wealth gap between Hyndburn /& Pennine Lancashire and other areas. Specific rail opportunities include:

- **Huncoat Garden Village**: The development of 1500 homes at Huncoat Garden village presents an opportunity to work together to develop improvements in services at Huncoat station. We would welcome consideration of service improvement that may help support sustainable development and relieve congestion on the road network, particularly the M65 and A56. This development will also substantially increase the level of road traffic and therefore risk level of the level crossing at Huncoat station on Enfield Close which may necessitate consideration of level crossing closure and segregation of road and rail.
- **Huncoat Railfreight terminal**: We welcome the safeguarding of land to the east of Altham Lane, between the railway and the M65 for the development of a rail freight terminal. Rather than this being dependent on the extension of the railway from Colne to Skipton, we would note that there would be a need for infrastructure works on the existing network, with gauge clearance works needed to link the site to the West Coast Mainline for intermodal traffic and would welcome exploration of the ability to do this without the extension of the Colne route to Skipton.
- **M65 corridor**: We note the focus on the importance of the M65 corridor for Hyndburn and the sub-region and that development may put further pressure on the M65, with multiple references to increasing capacity and managing traffic on this route. We note that the East Lancashire line parallels the M65

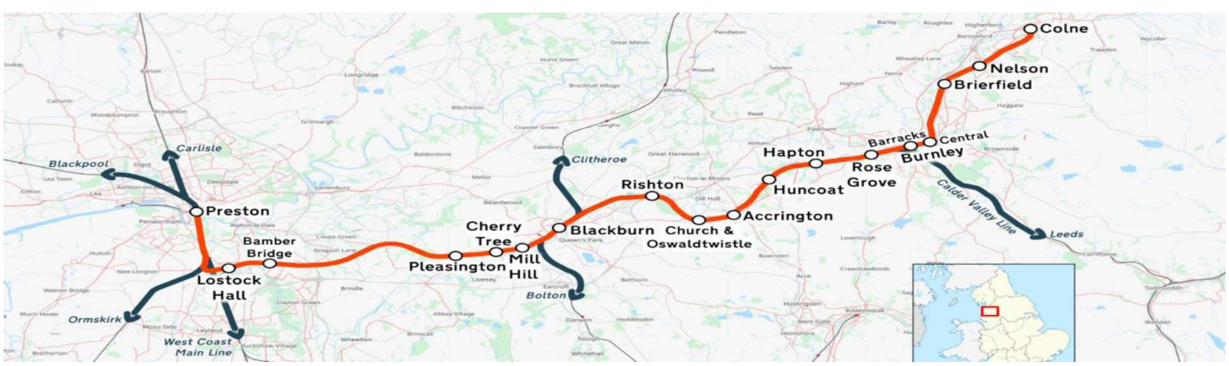

Figure 1: East Lancashire Line. By OpenStreetMap contributors - openstreetmap.org, CC BY 3.0, https://commons.wikimedia.org/w/index.php?curid=116551801

corridor and would welcome exploration of the ability to accommodate growth on this corridor through an enhanced rail service, noting the slow speeds of current rail services. Network Rail remains open to involvement in any cross-modal analysis which may identify options for investment which ensure that the M65 and the A56 and their junctions have sufficient capacity to manage growth planned across the sub-region.

- **Connectivity to Manchester**: The plan comments on the importance of links to Greater Manchester and highlights the importance of the Todmorden curve rail services that now link Accrington directly with Greater Manchester. However in point 8.9 the plan claims there is no alternative to the A56 to link Hyndburn with Greater Manchester. The availability of direct train services between Accrington and Greater Manchester should be considered as an alternative to this road link, and Network Rail would welcome any cross-modal assessment which could increase connectivity via improved rail links.
- **Connectivity to West Yorkshire**: The plan notes how 'transport connections between Pennine Lancashire and West Yorkshire are also severely constrained' (2.38, p11) and notes how extending the M65 could provide greater connectivity to West Yorkshire. We would welcome an examination of how improving this existing service could improve connectivity to West Yorkshire.