

**Woodward Court, Mirfield  
Proposed Residential Development  
Transport Assessment**

**December 2025 (Initial Issue)**

Prepared on behalf of  
**Bellway Homes Limited (Yorkshire)**

# Quality Management

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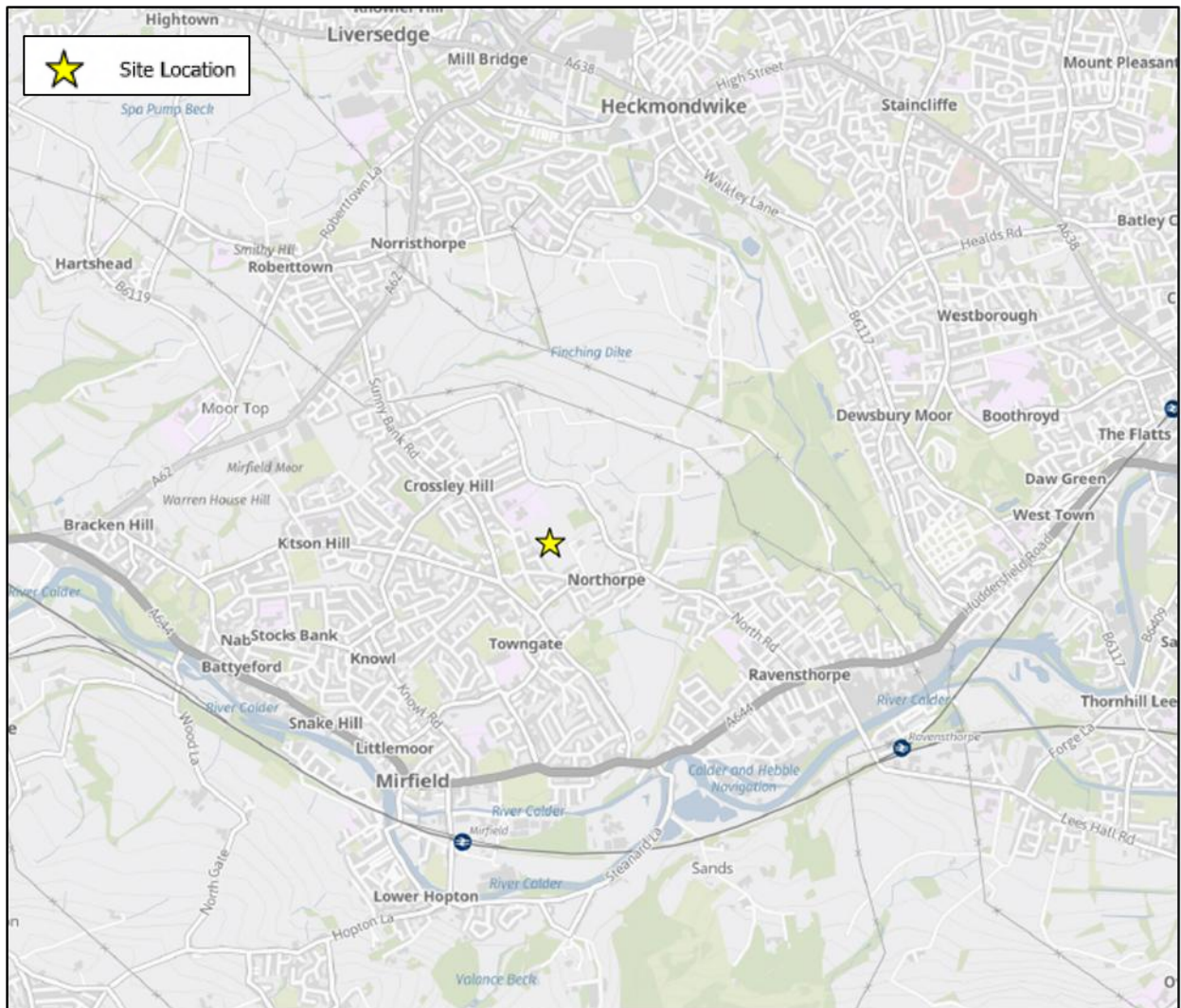
# 1. Introduction

## 1.1 INTRODUCTION

1.1.1 This Transport Assessment (TA) has been prepared by Optima Highways and Transportation Consultancy Limited (Optima) to consider the highways and transportation matters associated with a proposed residential development on land to the east of Woodward Court, Mirfield.

1.1.2 The Site in relation to the strategic transport network is shown on Figure 1 and an extract is shown in Image 1.1 below.

**Image 1.1 Site Location (Strategic)**



1.1.3 The town of Mirfield lies within the administrative boundary of the Metropolitan Borough of Kirklees and, as a unitary authority, Kirklees Council (KC) has responsibility for both planning and highway matters within it.

## 1.2 BACKGROUND

1.2.1 The Site is allocated as Safeguarded Land within the Kirklees Local Plan which was adopted in February 2019. As defined in Policy LP6 of the Local Plan the Site is therefore safeguarded for potential development at some point in the future.



1.2.2 Two previous planning applications have been submitted to the Council in relation to the construction of residential dwellings on the development Site, described as follows:

- Application Ref: 2014/912872/E – Erection of 135 residential properties with associated access, parking, landscaping and the creation of a car park to serve Crossley Fields Junior and Infant School. The application was submitted in April 2014 and subsequently withdrawn in July 2015; and
- Application ref: 2017/93935/E - Erection of 61 dwellings with associated access, drainage, open space and landscaping. The application was submitted to the Council in November 2017 (including a TA dated Nov 2017 & and Technical Note dated Feb 2018, both prepared by AMA Consultants) and subsequently refused in October 2018 for two reasons. The second reason for refusal relates to development traffic impact on the local highway network and reads as follows:

*“The proposed development would lead to additional traffic impacts on an already constrained local highway network which, by virtue of the existing network of narrow roads, the close proximity of the proposal to the existing school (Crossley Fields Junior and Infant School), and the substandard visibility at the junction of Woodward Court and Wellhouse Lane, would result in an unsafe development which would fail to acceptably mitigate the degree of conflict between all users. The proposed development would lead to an unacceptable highway safety impact, contrary to paragraph 109 of the National Planning Policy Framework, Policy T10 of the Kirklees Unitary Development Plan and Policy PLP21 of Kirklees Publication Draft Local Plan.”*

The Summary of Decision and Decision Notice associated with the 2017 application is attached at Appendix A along with the Highways Consultation Responses (last updated 9<sup>th</sup> October 2018).

1.2.3 Although the most recent 2017 planning application for 61 dwellings was refused permission by the members of the Council, the scheme was supported by the Local Highway Authority (LHA) i.e. KC Highways Development Management Team, with an officer recommendation for approval.

### 1.3 SCHEME PROPOSAL AND SCOPE OF REPORT

#### Scheme Proposals

1.3.1 This TA supports a full planning application made on behalf of Bellway Homes Limited (Yorkshire) for the development of land east of Woodward Court for residential purposes. The development proposals, which are illustrated on the Site Layout drawing contained in Appendix B, can be summarised as follows:

- Construction of up to 75 residential dwellings; and
- Associated access, parking, landscaping and infrastructure.

#### Consultation and Scope of Work

1.3.2 An online pre-application meeting took place with planning/highways officers from Kirklees Council on the 2<sup>nd</sup> September 2025 to discuss the above development proposals and the Council’s Highways Development Management team provided formal comments in a pre-app consultation response dated 25<sup>th</sup> September 2025 (copy in Appendix C). The comments advised that the planning application would need to be supported by a Transport Assessment (as well as a Travel Plan) and the



report would need to satisfactorily address the highways reason for refusal previously applied to the 2017 application 2017/93935/E.

1.3.3 The pre-app response also requested that, prior to the completion of the Transport Assessment, a Scoping Study was submitted to the Council for approval, setting out the key parameters/methodologies to be adopted in the TA. Such a document was prepared (dated 17<sup>th</sup> September 2025) and issued to KC for approval. At the time of writing this report, no response to the TA Scoping Study has been received.

1.3.4 A public consultation exercise to present/discuss the development proposals took place at St Andrew's Methodist Church in Mirfield on the afternoon/evening of Thursday 2<sup>nd</sup> October 2025. The comments raised at this event have been taken into consideration when preparing this TA, alongside the matters discussed with the Council at the pre-app meeting. This report has also been informed by traffic surveys, site visits and the documentation associated with the previous two planning applications.

1.3.5 At the time of the pre-application meeting with the Council, the issuing of the TA Scoping Study and at the public consultation event, a single point of vehicular access to the Site was proposed from Woodward Court. However, following these consultation events, further work has been undertaken and it is now proposed to provide a second vehicular egress from the Site (i.e. exit only) onto Hepworth Lane which forms part of the southern Site boundary.

1.3.6 Whilst a single point of access/egress from Woodward Court is still considered acceptable on highways/transport grounds (as was also previously agreed by KC Highway Officers for the 2017 application), in order to respond to the pre-app feedback and seek to reduce the volume of traffic on Wellhouse Lane, this TA assesses traffic impact on the local highway network assuming one point of access (Woodward Court) and two points of egress (Woodward Court and Hepworth Lane).

1.3.7 This report sets out the overall transport matters relating to the development proposals and identifies what measures will be provided to accommodate the anticipated transport impacts. It considers the sustainability of the Site, reviewing the provision for, and quality of, facilities and connections to and from the surrounding areas.

1.3.8 This TA should be read in conjunction with the separate Travel Plan (TP) document that also accompanies the proposed planning application and gives a detailed description of the measures that will be implemented to achieve modal shift away from single occupancy car use.

1.3.9 This TA has been prepared in accordance with the Ministry of Housing, Communities & Local Government 'Travel Plans, Transport Assessments and Statements' guidance published in 2014 which supersedes the DfT's March 2007 'Guidance on Transport Assessment' (GTA) document. Cognisance has also been taken of the prevailing National Planning Policy Framework (NPPF) Kirklees Highway Design Guide, adopted November 2019.

### Vision-Led Approach

1.3.10 The current NPPF, which was updated in December 2024, calls on new developments to adopt a 'vision-led approach' when considering the transport impacts and associated solutions of a development.

1.3.11 The vision of the proposed Woodward Court residential development is:

***“to utilise the Site's sustainable location to maximise trips by walking, cycling and public transport and to minimise trips by car”***



1.3.12 Whilst this TA encourages and embraces a 'vision-led' approach, the transport methodologies that have been utilised are robust and are likely to have assessed a greater development impact than would otherwise have been the case by applying a 'vision'-led' approach. For example, the trip rates applied in this TA adopt a traditional 'predict and provide' methodology based on historic trip rates/travel patterns, instead of considering the future changes to travel patterns that are likely to occur over the lifetime of the development.

## 1.4 REPORT STRUCTURE

1.4.1 This TA document covers a variety of topics which are set out in the following chapters:

- Chapter 2 – describes the overall Site and the existing transport conditions;
- Chapter 3 – defines the proposed development proposals including the proposed access strategies;
- Chapter 4 – describes the accessibility of the Site by non-car modes including accessibility to local facilities/services;
- Chapter 5 – sets out the trip generation and distribution methodologies applied in the assessment of the highway network;
- Chapter 6 – describes the build-up of traffic flow information for the base and design years and provides a materiality assessment of the highway network;
- Chapter 7 – describes the junction capacity assessments that have been undertaken to determine the impact of the development; and
- Chapter 8 – summarises and concludes the report.



## 2. Existing Site Conditions

### 2.1 INTRODUCTION

2.1.1 This chapter describes the Site and considers the existing conditions on the surrounding highway network for a range of transport modes. It also includes a review of personal injury collision data and summarises the traffic surveys undertaken.

### 2.2 EXISTING SITE

2.2.1 The Site is situated on land to the east of Woodward Court, Mirfield. The indicative Site boundary is shown on Figure 2 and an extract is provided in Image 2.1.

Image 2.1 Site Location Plan (Local)



2.2.2 The rectangular Site has an area of some 4.7 hectares and comprises undeveloped land, which falls relatively gently from north to south. It is bound by existing housing and Woodward Court to the west; a Public Right of Way (PRoW) footpath (Ref: MIR/19/10) and Crossley Fields Infant/Junior School beyond to the north; a PRoW footpath (Ref: MIR/15/10 & 15/50) and open fields beyond to the east; and a further PRoW (Ref: MIR 12/12/40) with existing residential



properties beyond and Hepworth Lane to the south. There is an existing field gate access to the Site from Woodward Court.

## 2.3 LOCAL HIGHWAY NETWORK

### Woodward Court

2.3.1 Woodward Court is a lit, cul-de-sac that currently serves 11 residential dwellings. The carriageway measures 6.0m in width with footways to both sides that measure circa 2.0m wide. The road extends north-east from its junction with Wellhouse Lane and forms a stub, adjacent the proposed Site's western boundary, from which access into the development would be taken - as shown within Image 2.2.

**Image 2.2 Woodward Court cul-de-sac adjacent Site**



2.3.2 The carriageway and footways along Woodward Court are within the adopted highway extents as shown on the Highway Adoption plan attached at Appendix D, provided by Kirklees Council - an extract of which is shown within Image 2.3.

**Image 2.3 Extract of KC Highway Adoption Plan – Woodward Court**



2.3.3 Woodward Court forms a simple priority T-junction with Wellhouse Lane, as shown within Image 2.4.

**Image 2.4 Woodward Court/Wellhouse Lane T-Junction**



2.3.4 At the mouth of the Woodward Court/Wellhouse Lane junction, single yellow lines are present around the radii and along Wellhouse Lane, with the following Traffic Regulation Order (TRO) operational during school drop-off/pick-up times:

- *No parking Monday to Friday between 8:00 to 9:30am and 3:00 to 4:00pm.*

#### **Wellhouse Lane between Woodward Court and Jenny Lane**

2.3.5 Wellhouse Lane, to the north of the junction with Woodward Court is lit and subject to a 30mph speed limit. It connects with Jenny Lane which links Woodward Court and Wellhouse Lane to Greenside Road.

2.3.6 The carriageway varies in width between 6.0m and 7.3m thereby comfortably permitting satisfactory two-way traffic movements. Footways are provided to both sides that vary in width but are typically 1.8m between Woodward Court and Jenny Lane.

2.3.7 The highway corridor, including carriageway and footways are adopted highway maintainable at public expense, as shown on the adoption plan attached at Appendix D and the extract within Image 2.5.



**Image 2.5 Extract of KC Highway Adoption Plan – Wellhouse Lane at Woodward Court Junction**

2.3.8 The typical two-way traffic flows along this section of Wellhouse Lane during the morning and evening peak hours as well as over a daily period were recorded as follows:

- AM Peak Hour – 184 vehicles;
- PM Peak Hour – 119 vehicles; and
- Annual Average Daily Traffic – 924 vehicles.

2.3.9 Traffic flows on this section of Wellhouse Lane are therefore relatively low with some 2 to 3 two-way vehicles per minute on average over the peak hour periods.

2.3.10 Table 2.1 sets out the northbound and southbound average and 85<sup>th</sup> percentile recorded speeds on Wellhouse Lane (north of Woodward Court). All speeds are well below the 30mph speed limit.

**Table 2.1 Wellhouse Lane (North of Woodward Court) – Recorded Speeds (mph)**

	Southbound	Northbound
Average	19.3mph	22.1mph
85 <sup>th</sup> Percentile	24.6mph	26.2mph

2.3.11 The TROs present at the junction with Woodward Court extend northwards to the southwestern corner of the Crossley Fields Junior and Infant School boundary. ‘School Keep Clear’ zig-zag markings are present along the school frontage, as shown within Image 2.6.



Image 2.6 School Keep Clear Marking – Wellhouse Lane



### Wellhouse Lane between Woodward Court and Hepworth Lane

2.3.12 Wellhouse Lane to the south of the junction with Woodward Court is lit and subject to a 30mph speed limit. The carriageway varies in width but is generally 5.3m to 6.2m wide, thereby permitting satisfactory two-way traffic movements. There are initially footways to both sides, but beyond the Wellhouse access to the west, only a single footway is provided on the eastern side of the road. The footway to the east varies in width between 1.6m and 2.0m.

2.3.13 The highway corridor, including carriageway and footways are adopted highway maintainable at public expense, as shown on the adoption plan attached at Appendix D and the extract within Image 2.7.

Image 2.7 Extract of KC Highway Adoption Plan – Wellhouse Lane (to Hepworth Lane)



2.3.14 The typical two-way traffic flows along this section of Wellhouse Lane during the morning and evening peak hours as well as over a daily period were recorded as follows:

- AM Peak Hour – 207 vehicles;
- PM Peak Hour – 127 vehicles; and
- Annual Average Daily Traffic – 928 vehicles.

2.3.15 Traffic flows on this section of Wellhouse Lane are relatively low with some 2 to 3½ two-way vehicles per minute on average during the peak hour periods.

2.3.16 Table 2.2 sets out the northbound and southbound average and 85<sup>th</sup> percentile recorded speeds on Wellhouse Lane to the south of the junction with Woodward Court. All speeds are either well below the 30mph speed limit or equal to it.

**Table 2.2 Wellhouse Lane (South of Woodward Court) – Recorded Speeds (mph)**

	Southbound	Northbound
Average	21.7mph	25.3mph
85 <sup>th</sup> Percentile	27.3mph	30.0mph

### Wellhouse Lane between Hepworth Lane and Mirfield Parish Church Cricket Club

2.3.17 Continuing south along Wellhouse Lane, between Hepworth Lane and the Mirfield Parish Church Cricket Club, the carriageway narrows to circa 3.7m to 4.0m. Therefore, one-way traffic working occurs over this relatively short length of some 45m (MfS advises that 4.1m is required to pass two cars in opposing directions). There is a single footway to the eastern side of the road which measures circa 1.0m in width. This length of Wellhouse Lane is shown within Image 2.8.

**Image 2.8 Wellhouse Lane between Hepworth Lane and Mirfield Parish Church Cricket Club**



2.3.18 The typical two-way traffic flows along this section of Wellhouse Lane (just south of the Hepworth Lane junction) during the morning and evening peak hours are as follows:

- AM Peak Hour – 167 vehicles; and
- PM Peak Hour – 52 vehicles.

2.3.19 Traffic flows on this section of Wellhouse Lane remain low with some 1 to 3 two-way vehicles per minute on average during the peak hour periods.

#### **Wellhouse Lane between Mirfield Parish Church Cricket Club and Grove Street**

2.3.20 Beyond the cricket club, Wellhouse Lane increases in width and varies between 4.3m and 5.8m wide. A footway is present along the eastern side of the road which measures circa 1.0m wide.

2.3.21 The road widens to circa 5.9m wide on approach to the junction with Grove Street adjacent to Wellhouse Court Mews.

2.3.22 Some on-street parking was observed during the Site visit along this section of the road, as shown on Image 2.9. The remaining width of the road adjacent where vehicles are parked is suitable to allow vehicles to pass.

**Image 2.9 Wellhouse Lane South of Cricket Club**



#### **Wellhouse Lane between Grove Street and Flash Lane**

2.3.23 From Grove Street to Flash Lane, Wellhouse Lane reduces in width to between 3.1m and 4.8m (on the immediate approach to the junction with Flash Lane). There is a footway along the eastern side of the road which measure between 0.8m and 1.0m wide, as shown within Image 2.10.

**Image 2.10 Wellhouse Lane on Approach to Junction with Flash Lane**



2.3.24 As shown on the highway adoption plan, attached at Appendix D, the full width of the highway corridor is adopted, including the footway to the east.

2.3.25 Wellhouse Lane forms the minor arm at the simple priority 'T' junction with Flash Lane. The typical two-way traffic flows along this section of Wellhouse Lane (i.e. just north of the Flash Lane junction) during the morning and evening peak hours are as follows:

- AM Peak Hour – 171 vehicles; and
- PM Peak Hour – 66 vehicles.

2.3.26 Traffic flows on this section of Wellhouse Lane remain low with some 1 to 3 two-way vehicles per minute on average during the peak hour periods.

### Flash Lane

2.3.27 Flash Lane is lit and subject to a 30mph speed limit. It has a generous 7.8m to 8.0m carriageway width adjacent to the Wellhouse Lane junction, with footways to both sides.

2.3.28 A bus stop is provided on the southern side of Flash Lane, just east of the junction with Wellhouse Lane, as shown within Image 2.11.

**Image 2.11 Flash Lane Southern Bus Stop**



2.3.29 The typical two-way traffic flows on Flash Lane (i.e. just east of the Wellhouse Lane junction) during the morning and evening peak hours are as follows:

- AM Peak Hour – 652 vehicles; and
- PM Peak Hour – 554 vehicles.

2.3.30 Traffic flows on Flash Lane are greater than those on Wellhouse Lane but are still not particularly high with some 10 to 11 two-way vehicles per minute on average during the peak hour periods.



## Hepworth Lane

2.3.31 Hepworth Lane connects with Wellhouse Lane to the west and Flash Lane/Shillbank Lane to the east.

2.3.32 At its western end, Hepworth Lane is one-way only (westbound) over a short 45m length i.e. vehicles can only exit Hepworth Lane onto Wellhouse Lane, as shown on Image 2.12. Over its remaining 235m length to the east i.e. up to its junction with Flash Lane, Hepworth Lane operates as a two-way street.

**Image 2.12 Hepworth Lane – One-Way Section**



2.3.33 Along the one-way section the Hepworth Lane carriageway measures between 3.1m and 3.5m wide and no footways are provided. Beyond this to the junction with Hepworth Close to the east, the road widens to between 5.5m and 6.5m wide with a single footway along the southern side that measures between 1.7m to 1.9m wide.

2.3.34 Beyond Hepworth Close, the Hepworth Lane carriageway reduces and varies in width between 4.1m and 5.0m wide.

2.3.35 The road is lit and subject to a 30mph speed limit (although surveyed speeds are much less – see chapter 3 for details). There is signage at the junction with Flash Lane stating that the road is 'Impassable for HGVs', as shown within Image 2.13.

**Image 2.13 Hepworth Lane/Flash Lane Junction**



2.3.36 The typical two-way traffic flows on Hepworth Lane to the east of the Site (taken from the ATC close to the Site boundary) during the morning and evening peak hours as well as over a daily period were recorded as follows:

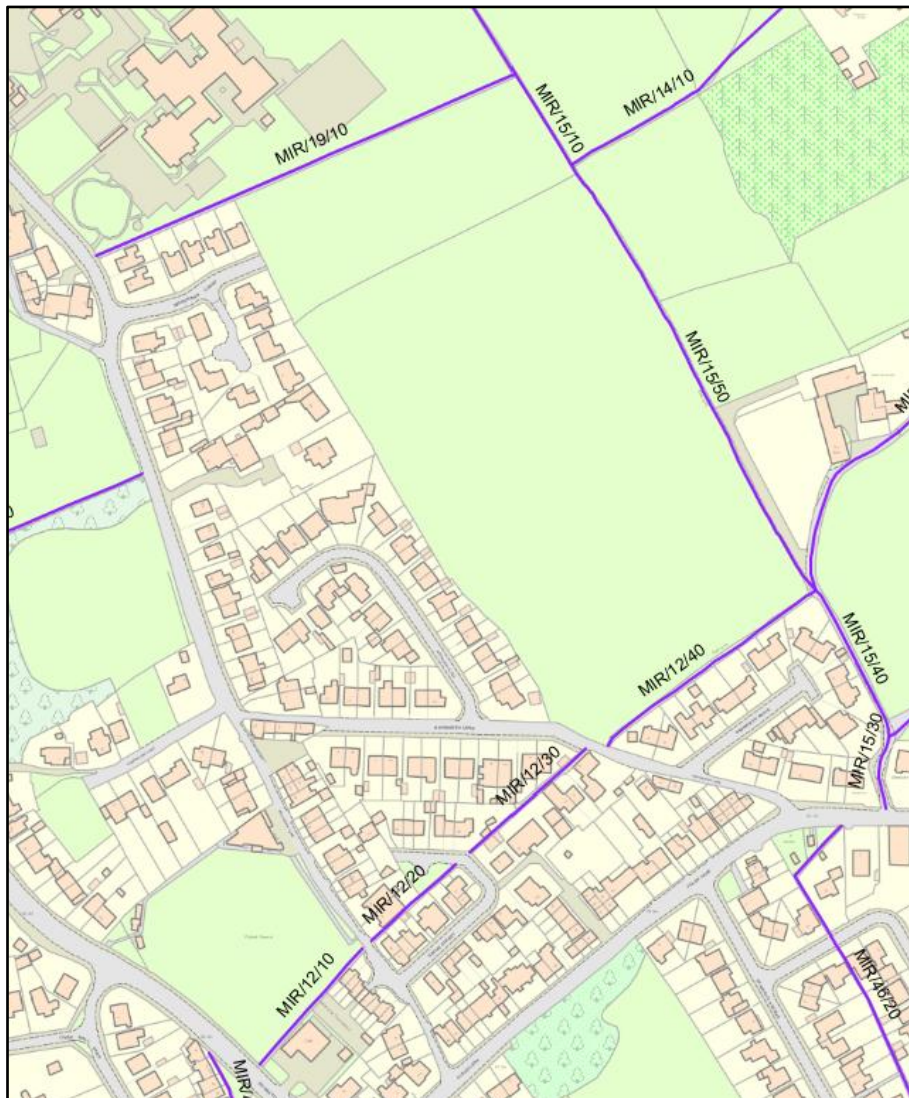
- AM Peak Hour – 33 vehicles;
- PM Peak Hour – 46 vehicles; and
- Annual Average Daily Traffic – 435 vehicles.

2.3.37 Traffic flows on Hepworth Lane are very low with less than 1 two-way vehicle per minute on average during the peak hour periods.

## 2.4 PUBLIC RIGHTS OF WAY

2.4.1 There are a series of existing Public Rights of Way (PRoW) surrounding the Site, as summarised within Table 2.3 and shown on Image 2.14. PRoW's run adjacent to all boundaries of the Site except for the western boundary.

**Image 2.14 Existing PRoW Network**



**Table 2.3 PRow Summary**

PRoW Ref	Status	Route	Approx. Length
MIR/15/10, MIR/15/50	Footpath	Abuts the Site to the east and connections will be made to it as part of the development proposals. Connects with MIR/15/20 to the north of the Site, and to MIR/15/40 along Balderstone Hall Lane which provides an additional pedestrian link to Shillbank Lane including the bus stops.	244m
MIR/12/10, MIR/12/20, MIR/12/30 and MIR/12/40	Footpath	Commences at Dunbottle Road to the southwest, through Grove Street to Hepworth Lane and to the south of the Site to Balderstone Hall Lane to the east of the Site.	293m

## 2.5 EXISTING PUBLIC TRANSPORT FACILITIES

### Bus Services

2.5.1 There is a frequent bus service operating in close proximity to the Site along Shillbank Lane. The stops to the south-east of the Site are shown within Image 2.15 and are summarised within Table 2.4.

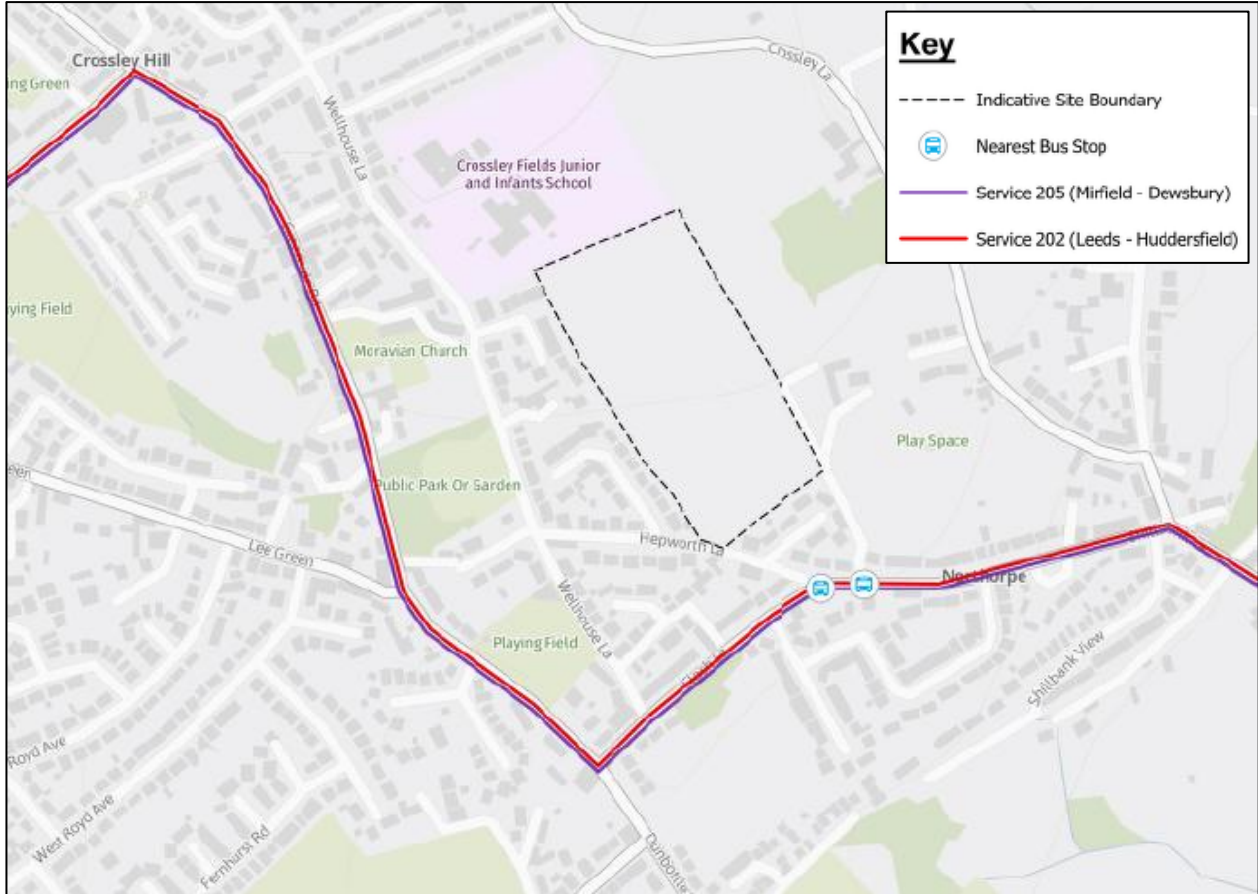
**Table 2.4 Bus Stop Provision**

Bus Stop Reference	Location	Direction	Distance from Site centre	Facilities	Buses towards	Services
45015602	Shillbank Lane	Eastbound	250m	Bus stop pole.	Leeds City Centre, Dewsbury and Huddersfield Bus Station	202/205
45015601	Shillbank Lane	Westbound	230m	Bus stop pole, timetable information and raised kerb.	Huddersfield Town Centre and Ings Grove Park Huddersfield Road	202/205

**Image 2.15 Shillbank Lane Bus Stops**

2.5.2 Figure 6 identifies the existing bus services that operate along these routes and within the general vicinity of the Site. An extract of Figure 6, which also shows the closest bus stops, is provided in Image 2.16 and a summary of the bus services on Shillbank Lane is given in Table 2.5.

**Image 2.16 Existing Local Bus Services**



**Table 2.5 Summary of Bus Services – Shillbank Lane**

Service	Route	Days of Operation	Approximate One-way Frequency	Time of Operation
202	Huddersfield Town Centre	Monday – Friday	2 per hour	05:08 – 21:59
		Saturday	2 per hour	06:08 – 21:58
		Sunday	1 per hour	09:14 – 21:59
	Leeds City Bus Station	Monday – Friday	2 per hour	05:26 – 23:19
		Saturday	2 per hour	06:24 – 23:17
		Sunday	1 per hour	09:32 – 23:17
205	Ings Grove Park Huddersfield Road	Monday – Friday	Hourly	07:03 – 18:53
		Saturday	Hourly	09:03 – 17:03
		Sunday	No Service	-
	Dewsbury	Monday – Friday	Hourly	07:26 – 19:13
		Saturday	Hourly	09:26 – 17:26
		Sunday	No Service	-



2.5.3 Services 202 and 205 operate along Shillbank Lane to the south of the Site. The 202 service provides a bus every 30 minutes in each direction Monday to Saturday, with hourly services on a Sunday. The 202 service operates from early in the morning through until late in the evening - thereby ensuring that all journey types are catered for including commuting/education in the morning and afternoon/early evening, retail/leisure during the day and leisure/socialising at night.

### Rail Services

2.5.4 Ravensthorpe Railway Station is located 2km to the south-east of the Site and provides regular connections to destinations such as Huddersfield, a 13 minute journey, and Leeds, a 23 minute journey.

2.5.5 At the time of writing, it is proposed that the station will close in September 2025 for Network Rail to undertake work as part of the TransPennine Route upgrade. The new station is planned to reopen in 2028, just 200m to the west of the existing station. There will be an integrated Rail Replacement bus stop and parking spaces for blue badge holders. The station will have step-free access with a footbridge and lifts provided.

## 2.6 EXISTING SURVEY DATA

### Traffic surveys

2.6.1 Manual junction turning counts were undertaken to obtain an understanding of the existing background traffic flows and network peaks as well as to complete junction capacity modelling. A summary of the surveys is provided within Table 2.6 and the results are referenced at Appendix E.

**Table 2.6 Summary of Manual Turning Counts**

Location	Data	Date	Time Period
Woodward Court / Wellhouse Lane	Manual Turning Count	Wednesday 18th June 2025	07:00 – 10:00 and 16:00 – 19:00
Hepworth Lane / Wellhouse Lane	Manual Turning Count	Wednesday 18 <sup>th</sup> June 2025	07:00 – 10:00 and 16:00 – 19:00
Wellhouse Lane / Flash Lane	Manual Turning Count	Wednesday 18 <sup>th</sup> June 2025	07:00 – 10:00 and 16:00 – 19:00
Hepworth Lane / Flash Lane / Shillbank Lane	Manual Turning Count	Wednesday 18 <sup>th</sup> June 2025	07:00 – 10:00 and 16:00 – 19:00
Jenny Lane / Greenside Road / Greenside Estate	Manual Turning Count	Wednesday 18 <sup>th</sup> June 2025	07:00 – 10:00 and 16:00 – 19:00

2.6.2 The traffic surveys identified the following existing weekday peak hour periods:

- Weekday AM Peak – 08:00 to 09:00; and
- Weekday PM Peak – 16:00 to 17:00.

2.6.3 The surveyed 2025 Weekday AM and PM peak hour traffic flows are shown on Figures 100 and 101, respectively.

### Automatic Traffic Counts

2.6.4 In addition to the manual junction turning counts, Automatic Traffic Counts (ATCs) have been undertaken on the local highway network by an independent survey company to record existing



traffic speeds and volumes. A summary of the surveys is provided within Table 2.7 and the results are referenced at Appendix E.

**Table 2.7 Summary of ATC Surveys**

Location	Survey	Data	Date	Time Period
Wellhouse Lane North of Woodward Court	ATC	Volumes and Speeds	Saturday 15 <sup>th</sup> March to Friday 21 <sup>st</sup> March 2025	24 hours/7 days
Wellhouse Lane South of Woodward Court	ATC	Volumes and Speeds	Saturday 15 <sup>th</sup> March to Friday 21 <sup>st</sup> March 2025	24 hours/7 days
Flash Lane East of Wellhouse Lane	ATC	Volumes and Speeds	Saturday 15 <sup>th</sup> March to Friday 21 <sup>st</sup> March 2025	24 hours/7 days
Flash Lane West of Wellhouse Lane	ATC	Volumes and Speeds	Saturday 15 <sup>th</sup> March to Friday 21 <sup>st</sup> March 2025	24 hours/7 days
Hepworth Lane East of Hepworth Close	ATC	Volumes and Speeds	Tuesday 23 <sup>rd</sup> Sep to Monday 29 <sup>th</sup> Sep 2025	24 hours/7 days
Hepworth Lane West of Hepworth Drive	ATC	Volumes and Speeds	Tuesday 23 <sup>rd</sup> Sep to Monday 29 <sup>th</sup> Sept 2025	24 hours/7 days

2.6.5 It is worth noting that the existing traffic flows along the Wellhouse Lane corridor have reduced since the previous 2017 planning application was submitted. This is based on a comparison between the average daily flows undertaken over a 7-day period in 2016 (a survey used to inform the 2017 AMA TA) and a 7-day period in 2025 (used to inform this Optima TA) - this shows that traffic flows on Wellhouse Lane (just south of the Woodward Court Junction) have reduced by some 12% to 14% during the intervening nine-year period.

## 2.7 PERSONAL INJURY ACCIDENT DATA

2.7.1 Personal injury accident data for the local highway network was requested from Leeds City Council (the Recording Authority) for the latest five-year period of data available covering the period between 1<sup>st</sup> August 2020 and 31<sup>st</sup> July 2025. The area for which the data was requested is shown within Image 2.17 and includes Woodward Court, Wellhouse Lane between Crossley Fields Junior and Infant School and Flash Lane, Hepworth Lane and Flash Lane.

2.7.2 The email attached at Appendix F confirms that no personal injury accidents have been recorded throughout the latest five-year period available for the area shown in Image 2.17.

2.7.3 There are therefore no existing personal injury accident concerns on the local highway network that the proposed development would exacerbate – including over the full length of the Wellhouse Lane and Hepworth Lane corridors.



Image 2.17 Personal Injury Accident Data Request Plot Area



## 3. Development Proposals and Access Strategy

### 3.1 INTRODUCTION

3.1.1 This chapter describes the development proposals as well as the access strategies for the primary transport modes. A section on access during the construction stage is also provided.

### 3.2 PROPOSED DEVELOPMENT

3.2.1 The development proposals, which are shown on the Site Layout drawing in Appendix B and the extract within Image 3.1, can be summarised as follows:

- Construction of up to 75 residential dwellings; and
- Associated works including landscaping, public open space and other infrastructure.

Image 3.1 Proposed Site Layout



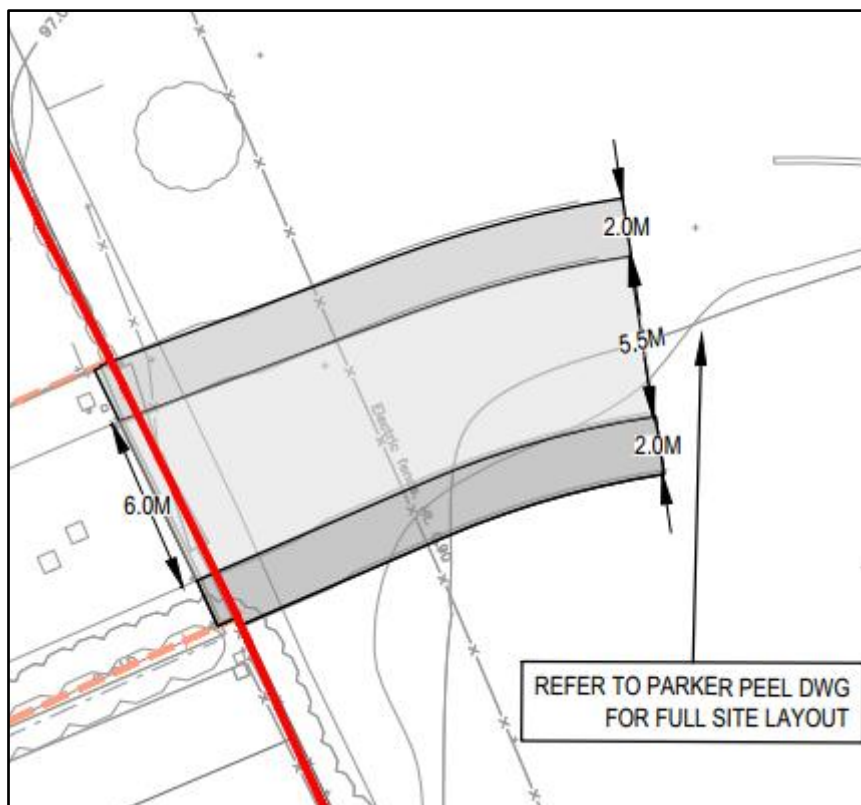
### 3.3 PROPOSED VEHICULAR ACCESS STRATEGY

3.3.1 Whilst a single point of access/egress from Woodward Court is still considered acceptable on highways/transport grounds (as was also previously agreed by KC Highway Officers for the 2017 application), in order to respond to the pre-app consultations/feedback which sought to reduce the volume of traffic on the southern section of Wellhouse Lane, this TA assesses the development traffic impact on the local highway network assuming an access/egress point from Woodward Court and an egress only from Hepworth Lane.

#### Proposed Woodward Court Site Access/Egress

3.3.2 Vehicular access and egress to the Site is proposed from an extension to the existing Woodward Court cul-de-sac as shown on the drawing contained at Appendix H and the extract within Image 3.2.

Image 3.2 Proposed Woodward Court Site Access



3.3.3 Woodward Court has a typical carriageway width of some 6m with 2m footways to both sides, thereby complying with a 'Local Residential Street Type B' which can accommodate up to 300 dwellings in accordance with the Kirklees Council Highways Design Guide. This threshold far exceeds the 86 dwellings being considered (11 existing and 75 proposed) and confirms that Woodward Court can comfortably accommodate the level of development sought.

3.3.4 The proposed development access road has a carriageway width of 5.5m and the existing Woodward Court 6.0m carriageway would therefore taper down as it enters the Site – as shown on the drawing in Image 3.2.



3.3.5 Some on-street parking occurs along Woodward Court, but this is typical of residential streets and particularly those in close proximity to a school when parking levels are at their greatest during the relatively short drop-off/pick-up times. The geometry of Woodward Court can satisfactorily accommodate on-street parking as well as maintaining access.

3.3.6 Furthermore, no personal injury accidents have occurred along Woodward Court throughout the latest five-year period available and therefore there are no recorded highway safety concerns.

### Woodward Court/Wellhouse Lane Junction

3.3.7 The existing carriageway geometry, junction radii and footway provision at the existing Woodward Court/Wellhouse Lane junction complies with the requirements of a Type B Local Residential Street within the KC Highways Design Guide.

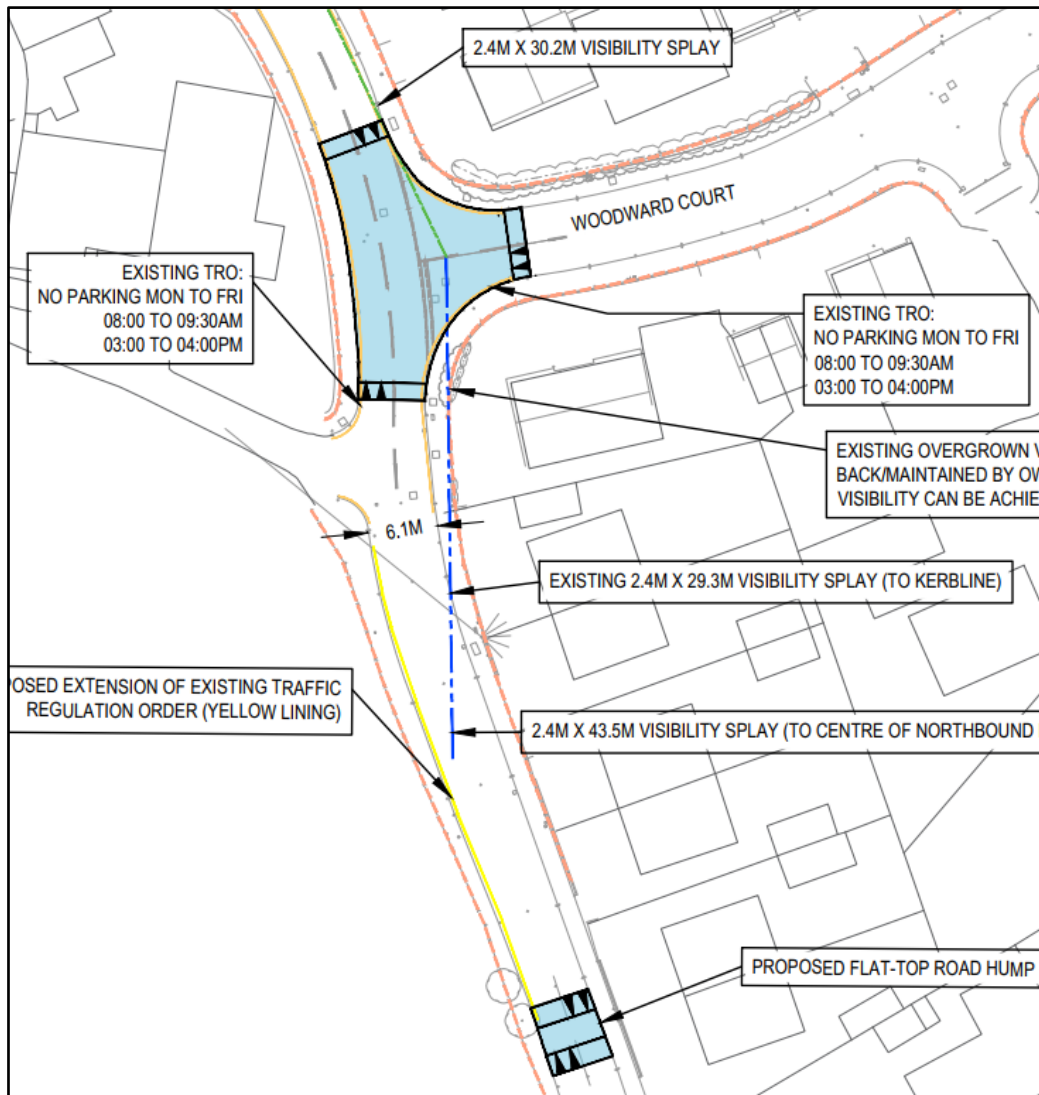
3.3.8 Sufficient junction visibility can be achieved to the north for drivers leaving Woodward Court, in accordance with MfS for the recorded 85<sup>th</sup> percentile speed of 24.6mph i.e. a 2.4m x 30.2m. Visibility along Wellhouse Lane to the south for vehicles departing Woodward Court is restricted when measured to the nearside kerbline with an achievable splay of 2.4m x 29.3m (assuming any vegetation overhanging the rear of the footway is cut back). A 29.3m visibility splay is less than the 40m required in accordance with MfS for the recorded 85<sup>th</sup> percentile northbound speed of 30.0mph (noting the Council's pre-app comment in Appendix C acknowledging that full visibility splays may not be achievable due to the road layout). However, this does not take into account the proposed mitigation measures which will reduce traffic speeds and further restrict parking close to the junction. These mitigation measures are shown on the drawing in Appendix H (and the extract in Image 3.3) and can be described as follows:

- A raised table at the Woodward Court/Wellhouse Lane junction;
- A flat-top road hump on Wellhouse Lane, some 55m south of the Woodward Court junction;
- A flat-top road hump on Wellhouse Lane, some 130m north of the Woodward Court junction (and approximately 35m north of the school access); and
- Extension of the '*no parking Monday to Friday between 8:00 to 9:30am and 3:00 to 4:00pm*' TRO (single yellow line) on the western side of Wellhouse Lane (south of the Woodward Court junction).

3.3.9 The above proposed improvements are the same as those previously discussed and approved by Kirklees Council Highways during the determination of the 2017/93935 planning application (refer to AMA Drawing No.PL-20042-004 Rev C in Appendix D of the 5/4/18 AMA Technical Note and the Council's approval comments dated 18/4/18 contained in Appendix A of this report).



Image 3.3 Proposed Woodward Court/Wellhouse Lane Improvements



3.3.10 The proposed improvements shown on the drawing in Appendix H (and Image 3.3) will reduce the existing recorded vehicular speeds in both directions along Wellhouse Lane and will provide an overall highway safety benefit to the local highway network (including past the Junior School) as well as reducing the visibility levels required at the Woodward Court junction.

3.3.11 Furthermore, when measuring the Woodward Court visibility to the left, into the centre of the northbound traffic lane (i.e. to the oncoming traffic position) a splay of 2.4m x 43.5m can be achieved – this is 3.5m above what is required for the existing (pre-mitigation) 30mph design speed (excluding bonnet length which is not required for junction splays). This is acceptable given the nature and alignment of the road and the strong likelihood that northbound vehicles would not be overtaking on this section of Wellhouse Lane. Additionally, the proposed speed restraint measures will reduce the current visibility distances required from the junction.

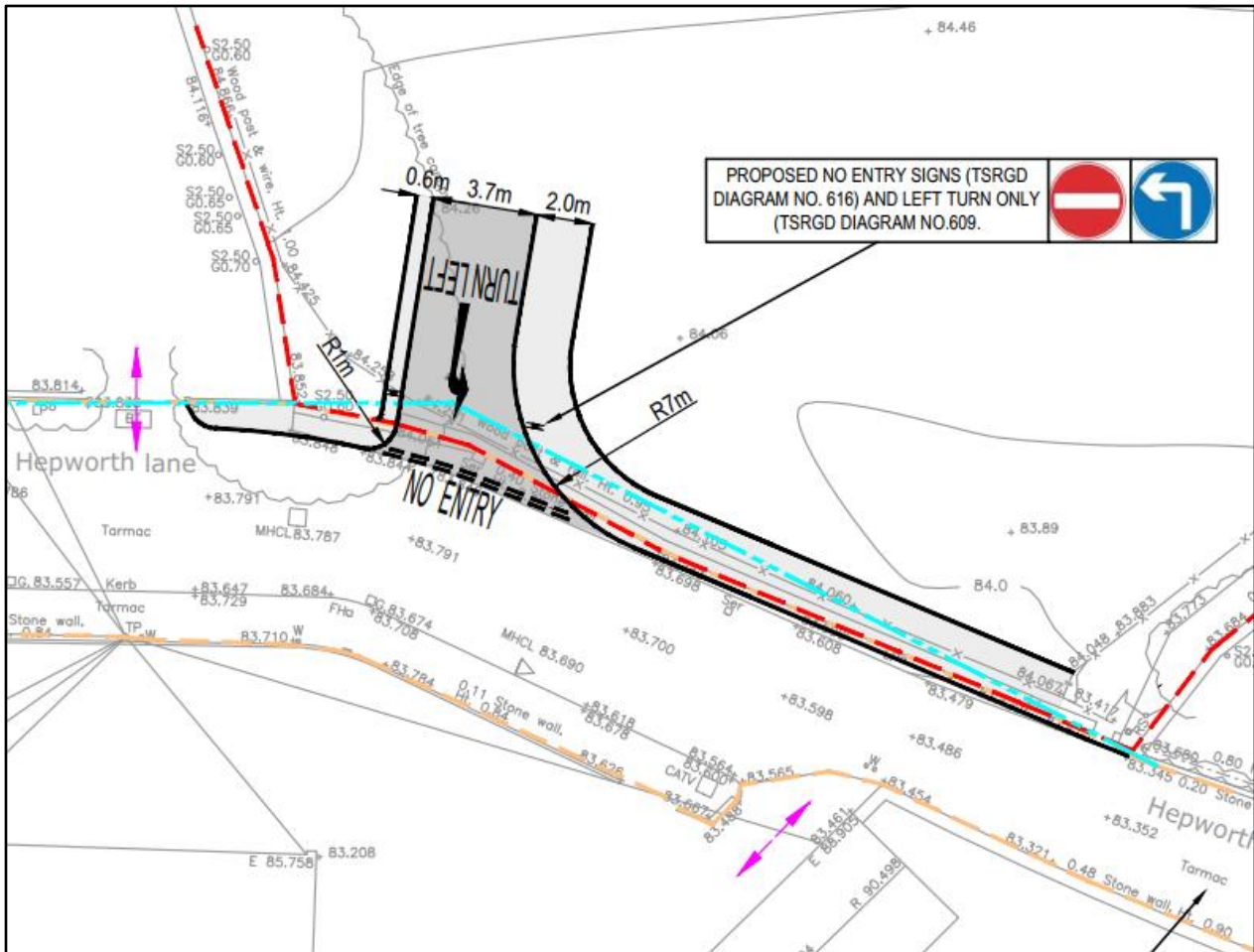
3.3.12 It is also worth noting that, due to the proposed additional Hepworth Lane Site egress, the volume of development trips using the improved Woodward Court/Wellhouse Lane junction will be less.



### Proposed Hepworth Lane Site Egress

3.3.13 A second vehicular egress is proposed from the southern boundary of the Site onto Hepworth Lane - as shown in the drawing at Appendix J and the extract in Image 3.4.

Image 3.4 Proposed Hepworth Lane Site Egress



3.3.14 The proposed site egress onto Hepworth Lane junction comprises:

- Left turn out only from the Site onto Hepworth Lane;
- 3.7m wide Site Access carriageway;
- Circa 1m and 7m kerb radii onto Hepworth Lane to enforce left turn out movements only; and
- 2m wide footway to the eastern side of the access road to provide access to the existing PRoW MIR/12/20.

3.3.15 The drawing attached at Appendix J demonstrates that the required visibility splays of 2.4m x 28m can be achieved along Hepworth Lane, as per the westbound 85<sup>th</sup> percentile speed of 21.8mph which equates to a required visibility splay of 28m, and eastbound 85<sup>th</sup> percentile speed of 21.7mph which also equates to a required visibility splay of 28m.



3.3.16 Refuse Vehicle Swept Path analysis has been undertaken which demonstrates that a vehicle can exit the Site safely and satisfactorily, as shown on the drawing attached at Appendix J.

3.3.17 The provision of the egress onto Hepworth Lane creates a Site 'through route' between Wellhouse Lane/Woodward Court and Hepworth Lane/Shillbank Lane i.e. the opportunity is provided for existing southbound traffic on Wellhouse Lane wishing to travel to Shillbank Lane to route through the development Site as opposed to continuing south on Wellhouse Lane and turning left onto Flash Lane.

### 3.4 PROPOSED PEDESTRIAN/CYCLE ACCESS

3.4.1 It is proposed that pedestrian and cycle access will be provided from the following points, as shown on the Site layout attached at Appendix B:

- Extension of Woodward Court which includes two 2.0m wide footways;
- The proposed Hepworth Lane Site egress which includes a 2.0m wide footway to the east of the carriageway;
- Connections to the existing PROW to the east of the Site (Ref: MIR/15/50 ); and
- Pedestrian routes will be provided throughout the Site including 2.0m footways on the spine road.

### 3.5 CONSTRUCTION ACCESS

3.5.1 During the construction of the development, a Construction Management Plan (CMP) will be implemented which will address any potential impacts arising from the development and ensure that site operations are efficient and safe. For example, the CMP will address construction hours of operation, treatment of delivery vehicles (wheel washing requirements, sheeting etc), access routes to/from the Site as well as measures that seek to minimise any effects on surrounding residential areas and local school. The impact of construction traffic on the local highway network will be minimised as much as possible.

3.5.2 With respect to the volume of traffic generated during the construction phase this would be substantially less than the development traffic generation of the Site once it is fully occupied, particularly during peak periods.



## 4. Site Accessibility and Measures to Influence Travel Behaviour

### 4.1 INTRODUCTION

4.1.1 This chapter describes the accessibility and sustainability of the Site by non-car modes.

### 4.2 ACCESSIBILITY BY FOOT

4.2.1 The measures proposed which will positively influence trips by foot, both for existing users and proposed residents alike, include:

- A pedestrian connection onto Woodward Court;
- A pedestrian connection onto Hepworth Lane;
- Pedestrian links to PROW MIR/15/50 and runs to the east of the Site, connecting to Balderstone Hall Lane; and
- Travel Plan initiatives (development residents only).

4.2.2 The residential design guide 'Manual for Streets' (MfS) advises that *"walkable neighbourhoods are typically characterised by having a range of facilities within ten minutes (up to about 800m) walking distance of residential areas..."* (ref para 4.4.1). However, this is not regarded as an upper limit in MfS and reference is also made to walking offering *"the greatest potential to replace short car trips, particularly those under 2km"*. The acceptability of walking trips up to 2km (an approximate 25-minute walk time) is also supported in the CIHT document 'Providing for Journeys on Foot'.

4.2.3 Using GIS Network Analyst software typical walk times (up to 25 mins) to specific local facilities situated in close proximity to the Site are shown on Figure 3 and an extract is provided in Image 4.1. The resulting GIS analysis demonstrates that:

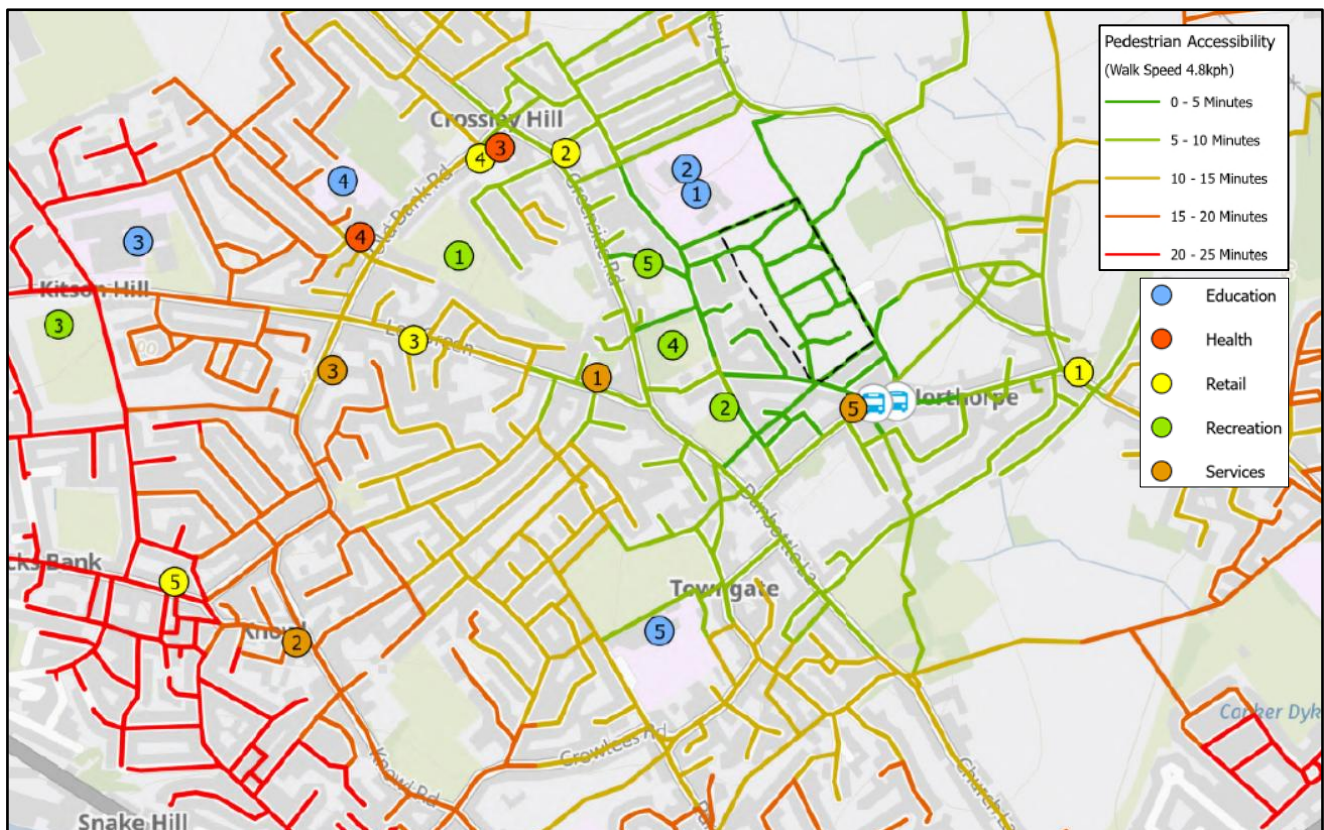
- The closest educational facilities to the site are Crossley Fields Junior & Infant School and Wellhouse Pre School which are located to the north of the development Site and can be accessed within a 5 minute walk. There are several other educational facilities located within 2km from the Site and so this site offers walkable educational facilities, which can reduce the number of short car trips taken from the Site.
- There are several food stores and local shops within walking distance of the Site including:
  - Shillbank Stores and One Stop are both located under 10 minutes on foot from the Site;
  - 7 Day Express and Co-Op Food, Mirfield are approximately a 10 to 15 minutes' walk from the Site with a further Co-op Food store some 25 minutes' walk; and
- Boots Pharmacy and a Dental Care Centre are located within a 15 minute walk to the northwest of the development Site. The closest Doctors is Mirfield Health Centre which can be accessed within a 20 to 25 minutes' walk from the centre of the development Site.
- There are recreational facilities located under 2km of the development Site, they are the following:



- Mirfield Parish Church Cricket Club, Gilder Hall Field and Katie Philpott School of Dance are the closest recreational facilities to the Site and can be accessed within a 5 to 10 minutes' walk.
- Green Side Estate Recreation Ground can be accessed within a 10 minute walk from the Site.
- The MFG Sports Centre can be accessed within a 25 minute walk from the Site.

4.2.4 It is therefore concluded that the Site will be provided with very good accessibility by foot to a range of services and facilities in accordance with national guidance.

Image 4.1 Extract of Pedestrian Accessibility Plan



### 4.3 ACCESSIBILITY BY CYCLE

4.3.1 The measures proposed which will positively influence trips by cycle, both for existing users and proposed residents alike, include:

- A cycle connection onto Woodward Court;
- A cycle connection onto Hepworth Lane; and
- Travel Plan initiatives (development residents only).

4.3.2 An acceptable and comfortable distance for general cycling trips is considered to be up to 5 kilometres as referred to in Local Transport Note (LTN) 2/08 (published by the DfT). However, the same guidance also refers to commuting cycle trips of up to 8km. Whilst this guidance has now been withdrawn and replaced with LTN 1/20, Cycle Infrastructure Design', this later guidance does



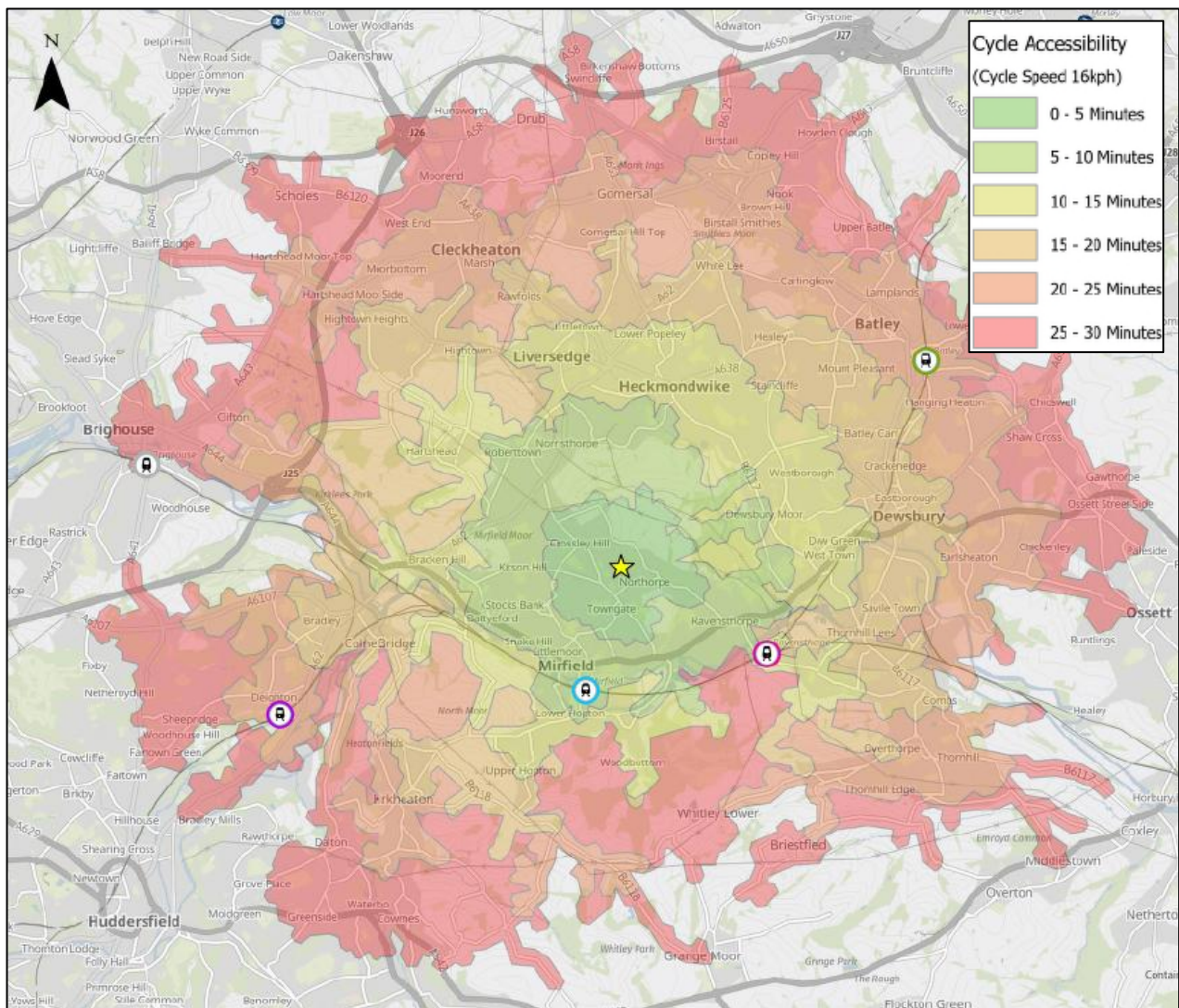
not contain specific distances. However, there is no reason to suggest that the guidance contained within LTN 2/08 is no longer appropriate and applicable.

4.3.3 Using GIS Network Analyst software typical cycle times from the proposed development (with 19 minutes approximating to around a 5km distance) are shown on Figure 4 (and an extract is provided in Image 4.2). Figure 4 demonstrates that:

- Mirfield is located to the south of the development site and can be reached within a 5 to 10 minutes' cycle ride from the Site;
- There are five railway stations within 8km of the development site, they are the following: Mirfield, Ravensthorpe, Batley, Deighton and Brighouse. The closest railway stations to the Site are Ravensthorpe and Mirfield Railway Station, a circa 10 minute cycle away;
- Employment opportunities are available in Brighouse which is located within 25-30 minute cycle ride; and
- Areas such as Cleckheaton, Batley, Brighouse, Heckmondwike and Liversedge can all be reached within a 30 minute cycle from the development Site.



Image 4.2 Extract of Cycle Accessibility Plan



4.3.4 It is therefore concluded that the Site will have good accessibility by cycle to a range of local services, facilities and employment opportunities within a relatively short journey time.

#### 4.4 ACCESSIBILITY BY BUS

4.4.1 The measures proposed which will positively influence trips by bus, both for existing users and proposed residents alike, include:

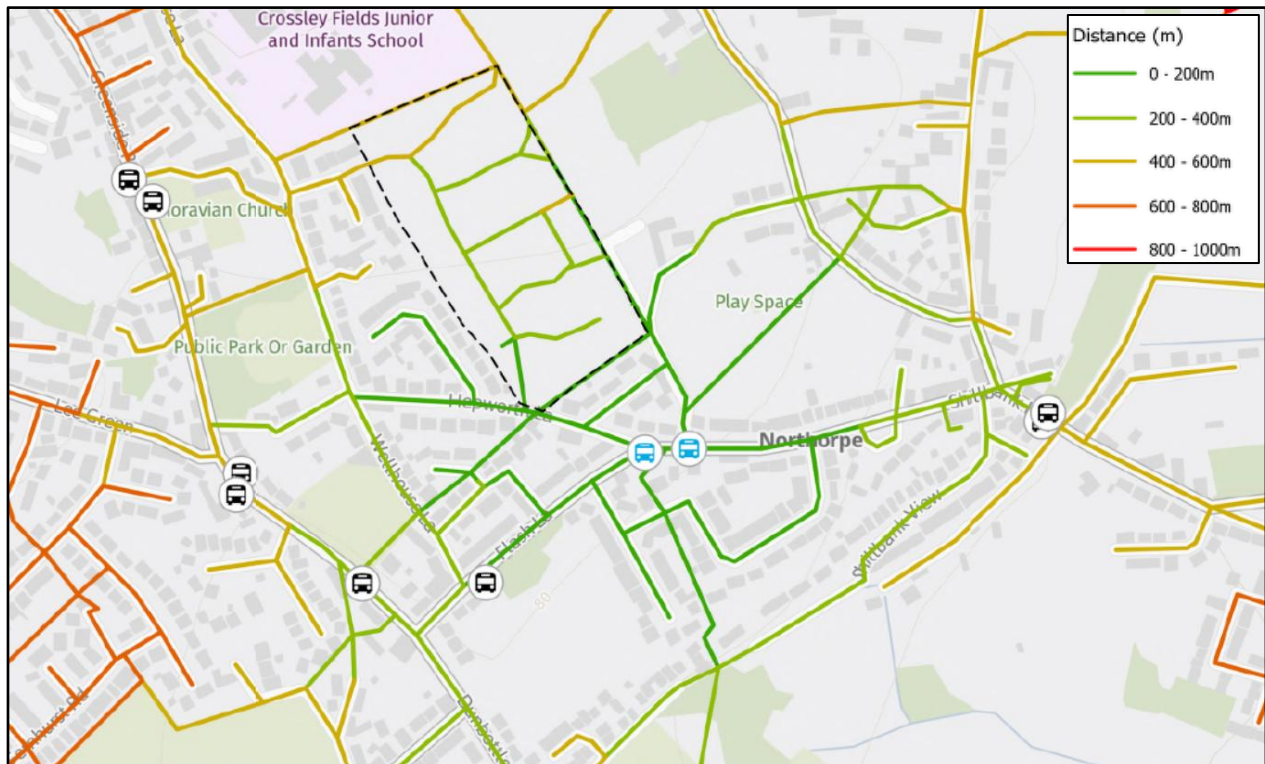
- A pedestrian connection onto Hepworth Lane;
- A pedestrian connection onto Woodward Court; and
- Travel Plan initiatives (development residents only).

4.4.2 Using GIS Network Analyst software typical walk times between the existing bus stops and the Site are shown on Figure 5 (and an extract is provided in Image 4.3). Figure 5 demonstrates that:

- The bus stops on Shillbank Lane can be reached within a 400m (5 minute) walk from the centre of the development Site;



Image 4.3 Extract of Bus Stop Accessibility Plan



4.4.3 In summary, the two nearest bus stops to the Site offer a cumulative frequency of 3 buses per hour in both directions on Monday – Saturday, with an hourly 202 service on a Sunday.

4.4.4 It is therefore concluded that the Site is provided with very good accessibility by bus to a large range of local services, facilities and employment opportunities – including those within Mirfield (10 minutes journey time), Dewsbury (15 minute journey time), Huddersfield (40 minute journey) and Leeds (77 minute journey time).

#### 4.5 ACCESSIBILITY BY RAIL

4.5.1 Ravensthorpe Railway Station is located 2km to the southeast of the Site and provides regular connections to destinations such as Huddersfield and Leeds.

4.5.2 The station can be accessed by:

- Foot – approximately 30 to 35-minute journey time;
- By bike – approximate 10-minute journey time;
- Bus Service 202 or 205 – approximate 18 minute journey time; and
- By car – typical 6 to 8 minute journey time during peak and off-peak hours.

4.5.3 Alternatively, Mirfield Railway Station is located 2.2km to the southwest of the development Site and can be accessed within similar journey times to Ravensthorpe.

4.5.4 Dewsbury Railway Station is located 4.2km east of the development Site and can be accessed within a 20 cycle ride.

4.5.5 Dewsbury Railway Station offers services to a variety of local and regional destinations such as Leeds, Halifax and Huddersfield. This station provides parking and a ticket office within the



station. There are also 70 bike spaces provided at the station, a secure storage facility is situated on Platform 2 and the cycle racks are available on platform 1.

4.5.6 It is therefore concluded that the proposed development will have acceptable accessibility by rail to principal local and regional destinations such as Leeds and Huddersfield – all of which offer a vast range of services, facilities and employment opportunities over and above those on offer in the local area and within Dewsbury.

#### 4.6 SITE ACCESSIBILITY SUMMARY

4.6.1 It is concluded that the Site will have very good accessibility to travel by foot, cycle and public transport to a vast range of local services, facilities and employment opportunities. This will be reinforced by the implementation, management and monitoring of a Residential Travel Plan at the development.

4.6.2 As such the Site is in a sustainable location and is compliant with the NPPF which requires at paragraph 110 that people are offered “*a genuine choice of transport modes*” and that “*significant development should be focused on locations which are or can be made sustainable*”.

4.6.3 Furthermore, the development proposals comply with Kirklees Local Plan (adopted on the 27<sup>th</sup> February 2019), which requires that developments “*provide access to a range of transport choices and access to local services*”.



## 5. Development Trip Generation and Distribution

### 5.1 INTRODUCTION

5.1.1 This chapter sets out the trip generation and distribution methodologies applied in the assessments of the highway network.

### 5.2 RESIDENTIAL DEVELOPMENT TRIP GENERATION

#### Development Vehicular Trip Rates

5.2.1 As set out in the September 2025 TA Scoping Study report, the vehicular trip rates to be utilised for the proposed residential development have been determined using TRICS 7.11.4. The TRICS outputs, which are contained in Appendix K, were determined based on the following parameters:

- Land use: Residential/Houses Privately Owned;
- Calculation Options: Vehicular trip rates selected;
- Regions: Greater London and Ireland sites excluded;
- Trip Rate Parameters: Number of units (5 to 150);
- Date Range: 1<sup>st</sup> January 2016 to 18<sup>th</sup> September 2024 (excluding Covid Sites);
- Days included: Monday to Friday – no weekends; and
- Location Type: Suburban/Edge of Town.

5.2.2 The resulting proposed residential vehicular trip rates, which reflect those included within the September 2025 TA Scoping Report, are summarised in Table 5.1.

**Table 5.1 Proposed Residential Vehicular Trip Rates**

Time Period	Vehicular Trip Rates (per dwelling)		
	Arrivals	Departures	Total
AM Peak Hour	0.153	0.373	<b>0.526</b>
PM Peak Hour	0.344	0.160	<b>0.504</b>

5.2.3 The trip rates set out within Table 5.1 have been determined using historic TRICS travel surveys and take no account of future travel behaviours/working practices which are likely to see a continued reduction in future peak hour trips. Furthermore, they take no account of the trip targets set out within the accompanying Travel Plan report. As such they are considered to be robust and not reflective of the recently published NPPF 'vision-led' approach.

#### Development Vehicular Trip Generation

5.2.4 Applying the trip rates in Tables 5.1 to 75 dwellings produces the peak hour vehicular flows shown in Table 5.2.



**Table 5.2 Proposed Overall Development Vehicular Trip Generation**

Time Period	Vehicular Trip Generation (75 units)		
	Arrivals	Departures	Total
AM Peak 08:00-09:00	11	28	<b>39</b>
PM Peak 16:00-17:00	26	12	<b>38</b>

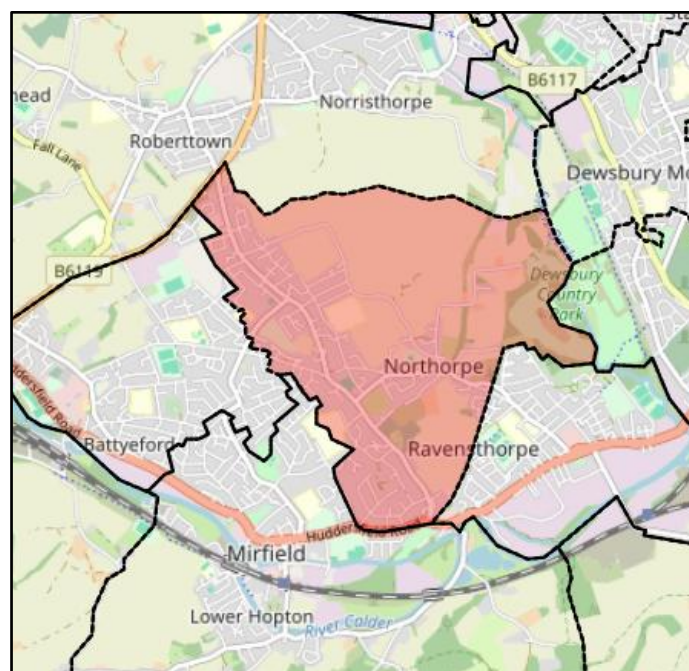
5.2.5 As shown in Table 5.2, the development Site is predicted to generate **39 and 38 two-way vehicle movements** during the morning and evening peak hours, respectively.

### 5.3 RESIDENTIAL DEVELOPMENT DISTRIBUTION

5.3.1 Having established the residential development traffic generations (shown in Table 5.2), a distribution exercise has been completed to predict the assignment of these trips onto the highway network.

5.3.2 Census data (2011) has been interrogated for the Kirklees 020 super output area (middle layer) to predict the destination of residents travelling to work (majority of trips). The census data has been used to establish the journey to work destinations for all car driver trips travelling from the Kirklees 020 SOA.

5.3.3 The proposed development is located in the super output area (mid layer) Kirklees 020 as illustrated in Image 5.1.

**Image 5.1 Kirklees 020 Super Output Area**

5.3.4 The development traffic has been distributed onto the local highway network using the following routes to/from the Site:

- Shillbank Lane;
- Dunbottle Lane (via Flash Lane);
- West Royd Avenue (via Lee Green);
- Camm Lane;
- Old Bank Road; and
- Sunny Bank Lane north/Jenny Lane.



5.3.5 The proposed traffic distribution is summarised within Table 5.3.

**Table 5.3 Proposed Vehicular Distribution - Route Assignment Summary**

	Shillbank Lane	Dunbottle Lane (via Flash Lane)	West Royd Avenue/Lee Green	Camm Lane	Old Bank Road	Sunny Bank Lane N/Jenny Lane	Total
<b>Percentage Distribution</b>	24.4%	10.6%	3.4%	3.5%	8.0%	50.1%	100%

5.3.6 The distribution is based on journey to work data which generally encompasses the longest and most popular journey during peak periods. Leisure, school and retail journeys are also accounted for within the trip rates and these tend to be more localised journeys and would therefore not impact on the junctions further away from the Site. However, for robustness all trips have been assumed to be journey to work trips.

5.3.7 The distributions set out within Table 5.3 are shown diagrammatically on Figure 150 and it is therefore predicted that the following traffic proportions will turn into and out of Woodward Court as well as out of Hepworth Lane:

- **58.1% turning right-out/left-in between Woodward Court and Wellhouse Lane (north)** i.e. 8.0% (Old Bank Road) + 50.1% (Sunny Bank Lane N/Jenny Lane);
- **4.4% turning left-out between Woodward Court and Wellhouse Lane (south) and 41.9% turning right-in between Wellhouse Lane and Woodward Court** i.e. 17.5% from Dunbottle Road and 24.4% from Hepworth Lane;
- **37.5% turning left-out at Hepworth Lane** i.e. 24.4% (Shillbank Lane) + 13.1% (Dunbottle Lane via Flash Lane).

5.3.8 Development traffic travelling to Jenny Lane, Old Bank Road and Sunny Bank Lane has been distributed via the Woodward Court/Wellhouse Lane junction.

5.3.9 For development traffic travelling to the south (to Shillbank Lane and Dunbottle Lane) it is assumed that residents would use the proposed Hepworth Lane Site egress. However, in order to be robust, 25% of this traffic has been distributed along Wellhouse Lane to the junction with Flash Lane and the remaining 75% has been distributed along Hepworth Lane to the junction with Shillbank Lane and Flash Lane.

5.3.10 Applying the development trips set out within Table 5.2 to the distributions shown within Table 5.3 (and shown on Figure 150) produces the trip generations shown diagrammatically on the following traffic flow diagrams:

- Figure 151 – AM Peak Hour Development Trip Generations; and
- Figure 152 – PM Peak Hour Development Trip Generations.

## 5.4 MULTIMODAL DEVELOPMENT TRIP GENERATIONS

5.4.1 To establish the trip generations by mode, the 2021 Census Data has been interrogated for the residential areas surrounding the Site, thereby reflecting the proposed developments characteristics.

5.4.2 The census mode splits for the Kirklees 020 Super Output Area are shown in Table 5.4.



**Table 5.4 Residential Census Mode Split (for Kirklees 020 Super Output Area)**

Method of Travel to Work	Total Residents	Percentage
Work Mainly at or From Home	0	0%
Train	78	3%
Bus, Minibus or Coach	152	6%
Taxi	17	1%
Motorcycle, Scooter or Moped	20	1%
Driving a Car or Van	1,934	76%
Passenger in a Car or Van	153	6%
Bicycle	29	1%
On Foot	167	7%
Other	4	0%
<b>Total</b>	<b>2,554</b>	<b>100%</b>

5.4.3 Having established the total vehicular trip generations and the census modal split for existing residents, it is possible to calculate the number of trips by mode. This is done by multiplying the vehicle trips by the appropriate modal split factor determined from Table 5.4 to obtain the number of trips for each travel mode. The resulting multi-modal trips are given in Table 5.5.

**Table 5.5 Proposed Multi Modal Trip Generations (75 Dwellings)**

Trip Type	AM Peak Hour Trip Generation by Mode			PM Peak Hour Trip Generation by Mode		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Work mainly at or from home	0	0	<b>0</b>	0	0	<b>0</b>
Train	0	1	<b>2</b>	1	0	<b>1</b>
Bus, minibus or coach	1	2	<b>3</b>	2	1	<b>3</b>
Taxi	0	0	<b>0</b>	0	0	<b>0</b>
Motorcycle, scooter or moped	0	0	<b>0</b>	0	0	<b>0</b>
Driving a car or van	11	28	<b>39</b>	26	12	<b>38</b>
Passenger in a car or van	1	2	<b>3</b>	2	1	<b>3</b>
Bicycle	0	0	<b>1</b>	0	0	<b>1</b>
On foot	1	2	<b>3</b>	2	1	<b>3</b>
Other method of travel to work	0	0	<b>0</b>	0	0	<b>0</b>
<b>Total</b>	<b>13</b>	<b>34</b>	<b>51</b>	<b>33</b>	<b>15</b>	<b>49</b>



## 6. Traffic Flows and Materiality Assessment

6.1.1 introduction This chapter describes how the traffic flows have been produced and includes a materiality assessment of the impact of development trips on the highway network.

### 6.2 PEAK HOUR TRAFFIC FLOWS

6.2.1 As set out within Chapter 2, the 2025 traffic counts identified the following existing weekday peak hour periods:

- Weekday AM Peak – 08:00 to 09:00; and
- Weekday PM Peak – 16:00 to 17:00.

6.2.2 The weekday AM and PM peak hour traffic flows are shown on the Traffic Flow Figures 100 and 101, respectively.

### 6.3 FUTURE ASSESSMENT YEAR

6.3.1 Assuming a build out rate of 35 dwellings per year, the proposed development would be completed and occupied within 2 to 3 years and based on a 2027 start on site date this gives a latest completion year of 2030.

### 6.1 2030 BASE TRAFFIC FLOWS

6.1.1 In order to determine the 2030 Base Traffic Flows, background traffic growth has been applied to the 2025 surveyed traffic counts.

6.1.2 Traffic growth is based on a combination of proposed future developments, car ownership and changing attitudes in the way people use and have access to their vehicles. Traffic growth has been calculated utilising the latest TEMPro v8.1 software (Trip End Model Presentation Program).

6.1.3 Traffic growth rates, between 2025 and 2030 have been calculated using TEMPro v8.1 and are set out as follows:

- 2025-2030 AM growth rate of 1.056 (5.6%); and
- 2025-2030 PM growth rate of 1.057 (5.7%).

6.1.4 Applying the identified growth rates to the 2025 surveyed count flows shown on Figures 100 and 101 produces the morning and evening peak hour base traffic flows shown on the following traffic flow figures:

- Figure 120 - 2030 AM Peak Hour Base Traffic Flows; and
- Figure 121 - 2030 PM Peak Hour Base Traffic Flows.

### 6.2 EXISTING TRAFFIC REASSIGNMENT

6.2.1 The development proposals will benefit the local highway network by providing an alternative southbound route through the Site between Wellhouse Lane/Woodward Court and Hepworth Lane/Flash Lane/Shillbank Lane i.e. avoiding continuing south on Wellhouse Lane and turning left turn out at the Flash Lane junction.

6.2.2 A comparison of the journey distances between the Wellhouse Lane/Woodward Court junction and the Hepworth Lane/Flash Lane/Shillbank Lane junction is as follows:

- Via Wellhouse Lane (south) and along Flash Lane – 635m; and
- Via Woodward Court/The Development Site/Hepworth Lane – 525m.



6.2.3 The journey distance through the Site will therefore be some 110m shorter than travelling along the southern section of Wellhouse Lane and turning left at the Flash Lane junction.

6.2.4 An assessment has therefore been undertaken to redistribute a conservative 20% of existing southbound traffic from north of Woodward Court (on Wellhouse Lane), along Woodward Court and through the Site to the left-out access onto Hepworth Lane, then left out onto Flash Lane/Shillbank Lane. A conservative 20% has also been applied for the southbound traffic departing Woodward Court.

6.2.5 The reassigned traffic for the morning and evening peak hours is shown diagrammatically on the following Traffic Flow figures:

- Figure 130 – 2030 AM Peak Hour Reassigned Base Traffic Flows; and
- Figure 131 – 2030 PM Peak Hour Reassigned Base Traffic Flows.

6.2.6 As shown on Figures 130 and 131:

- Throughout the morning peak hour, of the 79 trips that are predicted to turn left out of the Wellhouse Lane onto Flash Lane in the 2030 Base scenario, 27 trips will re-route through the Site as a result of the 20% reassignment. This equates to a reduction of circa 34% of trips undertaking this movement during this peak hour.
- Similarly, throughout the morning peak hour, of the 14 trips that are predicted to turn left out of the Wellhouse Lane onto Flash Lane in the 2030 Base scenario, 5 trips will re-route through the Site as a result of the 20% reassignment. This equates to a reduction of circa 36% of trips undertaking this movement during this peak hour.

6.2.7 The reassigned traffic has then been applied to the 2030 Base Traffic Flows (including traffic growth) to produce the 2030 AM Peak Hour Base Traffic Flows with traffic reassignment shown on the following figures:

- Figure 140 – 2030 AM Peak Hour Base Traffic Flows (with Reassignment); and
- Figure 141 – 2030 PM Peak Hour Base Traffic Flows (with Reassignment).

### 6.3 2030 DESIGN TRAFFIC FLOWS

6.3.1 Adding the proposed development trips (shown on Figures 151 and 152, set out within Chapter 5) to the 2030 Base Traffic Flows with reassignment (shown on Figures 140 and 141) produces the AM and PM peak hour 2030 Design Traffic Flows, shown on the following figures:

- Figure 160 - 2030 AM Peak Hour Design Traffic Flows; and
- Figure 161 - 2030 PM Peak Hour Design Traffic Flows.

### 6.4 MATERIALITY ASSESSMENT

6.4.1 The previous national GTA document (now withdrawn) suggested that a development traffic generation of 30 trips represented a reasonable threshold figure above which further assessment may be required but below which the impact could be considered non-material. Whilst the Government's current PPG does not specifically refer to 30 trips this remains a starting threshold which is generally applied within the industry including by Local Highway Authorities.



## Junctions

6.4.2 Consideration has therefore been given to those junctions where development trips at the junction exceed 30 two-way as well as taking into account the existing traffic concerns along Wellhouse Lane by the cricket club.

6.4.3 A materiality assessment of the following junctions has been undertaken in order to determine if any require further capacity modelling:

- Woodward Court/Wellhouse Lane;
- Jenny Lane/Greenside Road/Greenside Estate;
- Hepworth Lane/Flash Lane/Shillbank Lane; and
- Wellhouse Lane/Flash Lane.

6.4.4 None of the junctions exceed the 30 two-way trip threshold, other than the Woodward Court/Wellhouse Lane priority junction in the evening peak hour, as shown in Table 6.1. However, for robustness capacity assessments have been undertaken for all of the above junctions, in addition to the proposed Hepworth Lane Site Egress, the results of which are set out within Chapter 7.

**Table 6.1 Two-Way AM and PM Peak Hour Development Trips**

Junction	AM Two-Way Development Trips	PM Two-way Development Trips
Woodward Court/Wellhouse Lane	29	33
Jenny Lane/Greenside Road/Greenside Estate	23	22
Hepworth Lane/Flash Lane/Shillbank Lane	13	11
Wellhouse Lane/Flash Lane	7	7

## Wellhouse Lane

6.4.5 The provision of the egress onto Hepworth Lane creates a route through the Site between Wellhouse Lane/Woodward Court and Hepworth Lane/Shillbank Lane i.e. the opportunity is provided for existing southbound traffic on Wellhouse Lane wishing to travel to Shillbank Lane to route through the development Site as opposed to continuing south on Wellhouse Lane and turning left onto Flash Lane.

6.4.6 This has the effect of removing some existing traffic from the southern section of the Wellhouse Lane corridor such that there is either a beneficial reduction in overall traffic flows or the development proposals have a 'nil detriment' effect. This is demonstrated by comparing the 2030 Baseline 'without development' flows (Figures 120 & 121) and the 2030 Design 'with development flows' (Figures 160 & 161) on Wellhouse Lane just north of the Flash Lane junction – the results are as follows:

- AM Peak Hour
  - Baseline flow of 181 vehicles two-way
  - Design flow of 156 vehicles two-way
  - **Net reduction of 25 vehicles two-way**



- PM Peak Hour
  - Baseline flow of 71 vehicles two-way
  - Design flow of 70 vehicles two-way
  - **Net reduction of 1 vehicle two-way**

6.4.7 As shown above the development proposals result in an overall reduction in traffic flows on the southern section of Wellhouse Lane during the morning peak hour (circa 25 vehicles) and no change (one less vehicle) during the evening peak hour.



## 7. Operational Highway Assessment

### 7.1 INTRODUCTION

7.1.1 This chapter describes the individual capacity assessments that have been undertaken at the following junctions (set out within Chapter 6) on the local highway network:

- Woodward Court/Wellhouse Lane;
- Jenny Lane/Greenside Road/Greenside Estate;
- Hepworth Lane/Flash Lane/Shillbank Lane; and
- Wellhouse Lane/Flash Lane.

### 7.2 WOODWARD COURT/WELLHOUSE LANE PRIORITY JUNCTION

7.2.1 The Woodward Court Site Access junction is shown on the drawing attached at Appendix H and within the extract at Image 3.2.

#### 2025 Surveyed Count

7.2.2 The Woodward Court/Wellhouse Lane Junction has initially been modelled using the PICADY function of Junctions 9 for the 2025 Count AM and PM peak hours. The full modelling outputs are attached at Appendix L and summarised within Table 7.1.

**Table 7.1 Woodward Court/Wellhouse Lane (2025 Count)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2025 Count</b>						
Woodward Court	0.06	7	1	0.02	7	0
Wellhouse Lane	0.03	6	0	0.01	6	0

7.2.3 A Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction or arm operates within its desirable practical capacity. An RFC value between 0.85 and 1.00 indicates that there may be occasions during the period modelled when queues will develop and delays will occur. An RFC value greater than 1.00 indicates that the junction or arm operates beyond its theoretical capacity and increased queuing and delay will be experienced.

7.2.4 The results within Table 7.1 show that the Woodward Court/Wellhouse Lane junction operates with significant spare capacity during both the AM and PM peaks hours with a maximum RFC of 0.06 along Woodward Court in the morning peak hour.

7.2.5 Little to no queuing occurs across all arms of the junction in both peak hours and the model validates well against recorded queues during the morning and evening peak hours.

#### 2030 Base Scenario

7.2.6 The junction has then been modelled for the 2030 Base scenario including background traffic growth during the morning and evening peak hours and the results are summarised within Table 7.2.



**Table 7.2 Woodward Court/Wellhouse Lane (2030 Base)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Base</b>						
Woodward Court	0.06	7	1	0.02	7	0
Wellhouse Lane	0.03	6	0	0.01	6	0

7.2.7 The results in Table 7.2 demonstrate that with the addition of background traffic growth is predicted to continue to operate well within practical desirable capacity with a maximum RFC of 0.06 along Woodward Court in the morning peak hour. Queues and delays are expected to continue to be 1 or 0 across the junction.

### 2030 Design Scenario

7.2.8 Finally, the junction has been modelled for the 2030 Design scenario including trips associated with the proposed development and reassigned existing traffic, during the morning and evening peak hours. The results are summarised within Table 7.3.

**Table 7.3 Woodward Court/Wellhouse Lane (2030 Design)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Design</b>						
Woodward Court	0.09	8	1	0.04	7	0
Wellhouse Lane	0.05	6	0	0.03	6	0

7.2.9 The results in Table 7.3 demonstrate that with the addition of traffic associated with the proposed development and reassigned existing traffic, the junction is predicted to continue to operate with significant spare capacity throughout both the morning and evening peak hours. A maximum RFC of 0.09 is anticipated along Woodward Court during the morning peak hour. Minimal queues of 1 or 0 are also predicted across all arms of the junction throughout both peak hours.

### Conclusion – Woodward Court/Wellhouse Lane Priority Junction

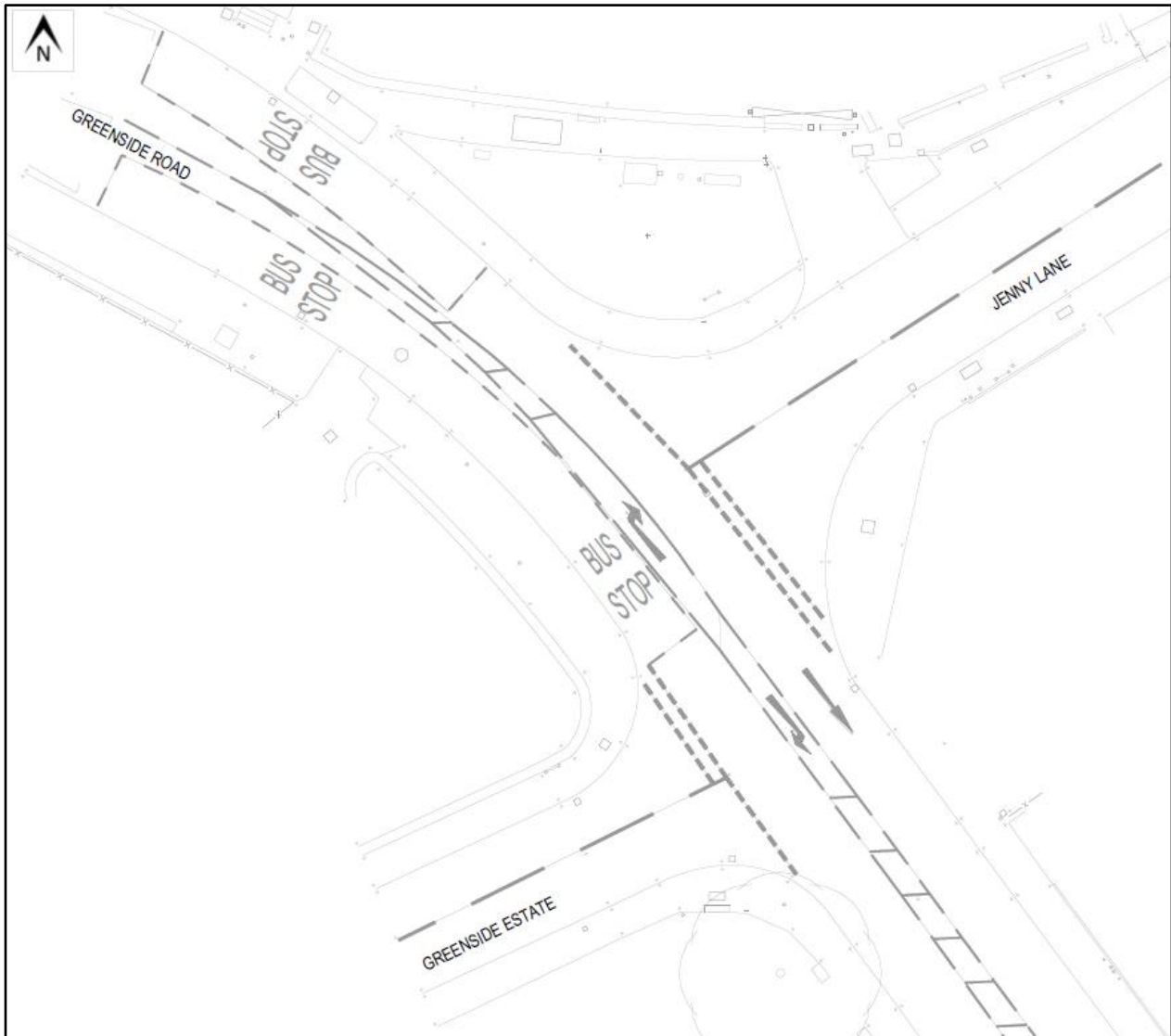
7.2.10 The impact of the proposed development and reassigned existing traffic, in terms of highway capacity, can be satisfactorily accommodated at the existing Woodward Court/Wellhouse Lane priority junction and no mitigation is therefore required with respect to junction capacity.

## 7.3 JENNY LANE/GREENSIDE ROAD/GREENSIDE ESTATE JUNCTION

7.3.1 The Jenny Lane/Greenside Road/Greenside estate junction is shown on Figure 10 and the extract within Image 7.1.



Image 7.1 Jenny Lane/Greenside Road/Greenside Estate Priority Junction



### 2025 Surveyed Count

7.3.2 The junction has initially been modelled using the PICADY function of Junctions 9 for the 2025 Count AM and PM peak hours. The full modelling outputs are attached at Appendix M and summarised within Table 7.4.

**Table 7.4 Jenny Lane/Greenside Road/Greenside Estate (2025 Count)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2025 Count</b>						
Jenny Lane – Greenside Road (S), Greenside Estate	0.05	13	1	0.02	7	0
Jenny Lane – Greenside Road (N), Greenside Estate	0.34	15	1	0.21	13	1
Greenside Road (N)	0.02	7	0	0.14	7	1
Greenside Estate	0.05	8	0	0.06	10	1
Greenside (S)	0.15	8	1	0.03	8	0



7.3.3 The results within Table 7.4 show that the Jenny Lane/Greenside Road junction operates with significant spare capacity during both the AM and PM peaks hours, with a maximum RFC of 0.34 along Jenny Lane in the morning peak hour. Minimal queues of 1 or 0 occur across all arms of the junction throughout both peak hours and the model validates well against on-site recorded queues.

### 2030 Base Scenario

7.3.4 The junction has then been modelled for the 2030 Base scenario including background traffic growth during the morning and evening peak hours and the results are summarised within Table 7.5.

**Table 7.5 Jenny Lane/Greenside Road/Greenside Estate (2030 Base)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Base</b>						
Jenny Lane – Greenside Road (S), Greenside Estate	0.05	8	1	0.02	7	0
Jenny Lane – Greenside Road (N), Greenside Estate	0.34	16	1	0.23	14	1
Greenside Road (N)	0.02	7	0	0.15	7	1
Greenside Estate	0.05	8	1	0.06	10	1
Greenside (S)	0.16	9	1	0.03	8	0

7.3.5 The results in Table 7.5 demonstrate that with the addition of background traffic growth, the junction is predicted to continue to operate well within practical desirable capacity with a maximum RFC OF 0.34 along Jenny Lane. Queues and delays are expected to continue to be minimal across the junction.

### 2030 Design Scenario

7.3.6 The junction has then been modelled for the 2030 Design scenario including trips associated with the proposed development during the morning and evening peak hours and the results are summarised within Table 7.6.

**Table 7.6 Jenny Lane/Greenside Road/Greenside Estate (2030 Design)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Design</b>						
Jenny Lane – Greenside Road (S), Greenside Estate	0.05	8	1	0.02	8	0
Jenny Lane – Greenside Road (N), Greenside Estate	0.39	17	1	0.23	14	1
Greenside Road (N)	0.02	7	0	0.15	7	1
Greenside Estate	0.05	8	1	0.06	10	1
Greenside (S)	0.16	9	1	0.03	8	0

7.3.7 The results in Table 7.6 demonstrate that with the addition of traffic associated with the proposed development, the junction is predicted to continue to operate well within practical desirable capacity throughout both the morning and evening peak hours, with a maximum RDC of 0.39 along Jenny Lane throughout the morning peak hour. Minimal queues and delays are predicted across all arms of the junction in both peak hours.



## Conclusion – Jenny Lane/Greenside Road/Greenside Estate

7.3.8 The impact of the proposed development, in terms of highway capacity, can be satisfactorily accommodated at the existing Jenny Lane/Greenside Road/Greenside Estate junction. Therefore, no mitigation is required.

## 7.4 HEPWORTH LANE EGRESS

7.4.1 The Site egress/Hepworth Lane junction is shown with Appendix J and the extract within Image 3.4.

### 2030 Design Scenario

7.4.2 The junction has been modelled using the PICADY function of Junctions 9 for the 2030 Design scenario including trips associated with the proposed development and reassigned existing traffic, during the morning and evening peak hours. The full modelling outputs are attached at Appendix N and summarised within Table 7.7.

**Table 7.7 Site Egress/Hepworth Lane (2030 Design)**

Arm	AM Peak (08:00 to 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Design</b>						
Site Egress	0.06	5	1	0.01	5	0
Hepworth Lane	0.00	0	0	0.00	0	0

7.4.3 The results in Table 7.7 demonstrate that the junction is predicted to operate with significant spare capacity throughout the 2030 Design scenario including proposed development trips as well as reassigned existing traffic. Minimal queues of 1 or 0 are predicted across all arms of the junction throughout both peak hours.

## Conclusion – Site Egress/Hepworth Lane

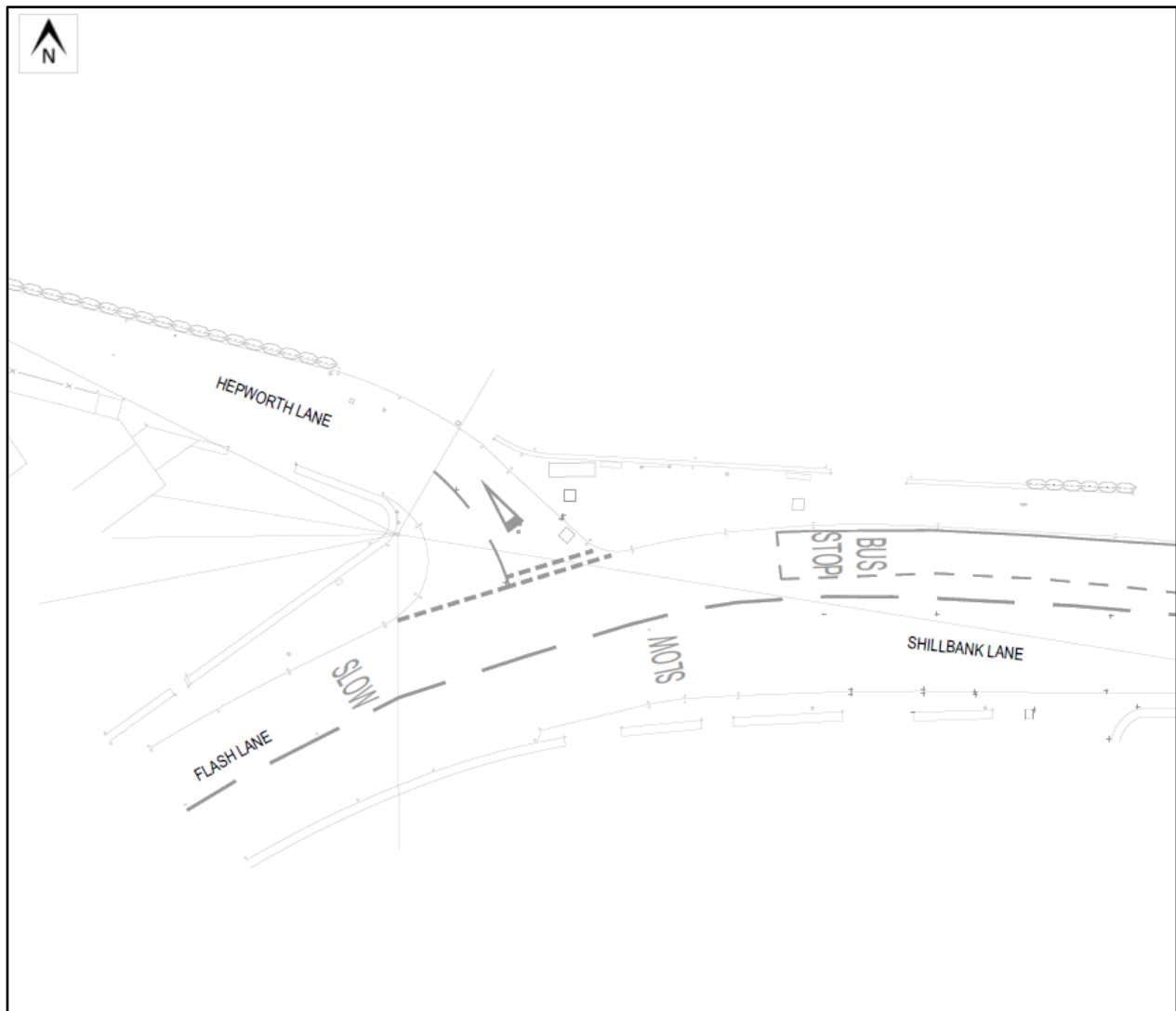
7.4.4 The impact of the proposed development, in terms of highway capacity, and reassigned existing traffic can be satisfactorily accommodated at the proposed Site egress/Hepworth Lane priority junction.

## 7.5 HEPWORTH LANE/FLASH LANE/SHILLBANK LANE PRIORITY JUNCTION

7.5.1 The Hepworth Lane/Flash Lane/Shillbank Lane Priority Junction is shown on Figure 11 and the extract within Image 7.2.



Image 7.2 Hepworth Lane/Flash Lane/Shillbank Lane Priority Junction



### 2025 Surveyed Count

7.5.2 The junction has initially been modelled using the PICADY function of Junctions 9 for the 2025 Count AM and PM peak hours. The full modelling outputs are attached at Appendix O and summarised within Table 7.8.

**Table 7.8 Hepworth Lane/Flash Lane/Shillbank Lane (2025 Count)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2025 Count</b>						
Hepworth Lane	0.03	8	0	0.01	7	0
Shillbank Lane	0.09	6	1	0.03	6	0

7.5.3 The results within Table 7.8 show that the Hepworth Lane/Flash Lane/Shillbank Lane junction operates with significant spare capacity during both the AM and PM peaks hours and no queuing occurs across all arms of the junction in both peak hours with a maximum RFC of 0.09 along Shillbank Lane during the AM peak hour. The model validates well against recorded queues.



## 2030 Base Scenario

7.5.4 The junction has then been modelled for the 2030 Base scenario including background traffic growth during the morning and evening peak hours and the results are summarised within Table 7.9.

**Table 7.9 Hepworth Lane/Flash Lane/Shillbank Lane (2030 Base)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Base</b>						
Hepworth Lane	0.04	8	0	0.01	7	0
Shillbank Lane	0.10	6	1	0.04	6	1

7.5.5 The results in Table 7.9 demonstrate that with the addition of background traffic growth the junction is predicted to continue to operate well within practical desirable capacity with a maximum RFC of 0.10 along Shillbank Lane throughout the morning peak hour. Queues and delays are expected to continue to be minimal across the whole junction.

## 2030 Design Scenario

7.5.6 Finally, the junction has been modelled for the 2030 Design scenario including trips associated with the proposed development and reassigned existing traffic, during the morning and evening peak hours. The results are summarised within Table 7.10.

**Table 7.10 Hepworth Lane/Flash Lane/Shillbank Lane (2030 Design)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Design</b>						
Hepworth Lane	0.11	8	1	0.03	7	0
Shillbank Lane	0.11	6	1	0.05	6	1

7.5.7 The results in Table 7.10 demonstrate that with the addition of traffic associated with the proposed development and the reassigned traffic, the junction is predicted to operate with significant spare capacity throughout both the morning and evening peak hours. Maximum RFCs of 0.11 are predicted along both Hepworth Lane and Shillbank Lane and minimal or no queueing is predicted across all arms of the junction in both peak hours.

## Conclusion – Hepworth Lane/Flash Lane/Shillbank Lane

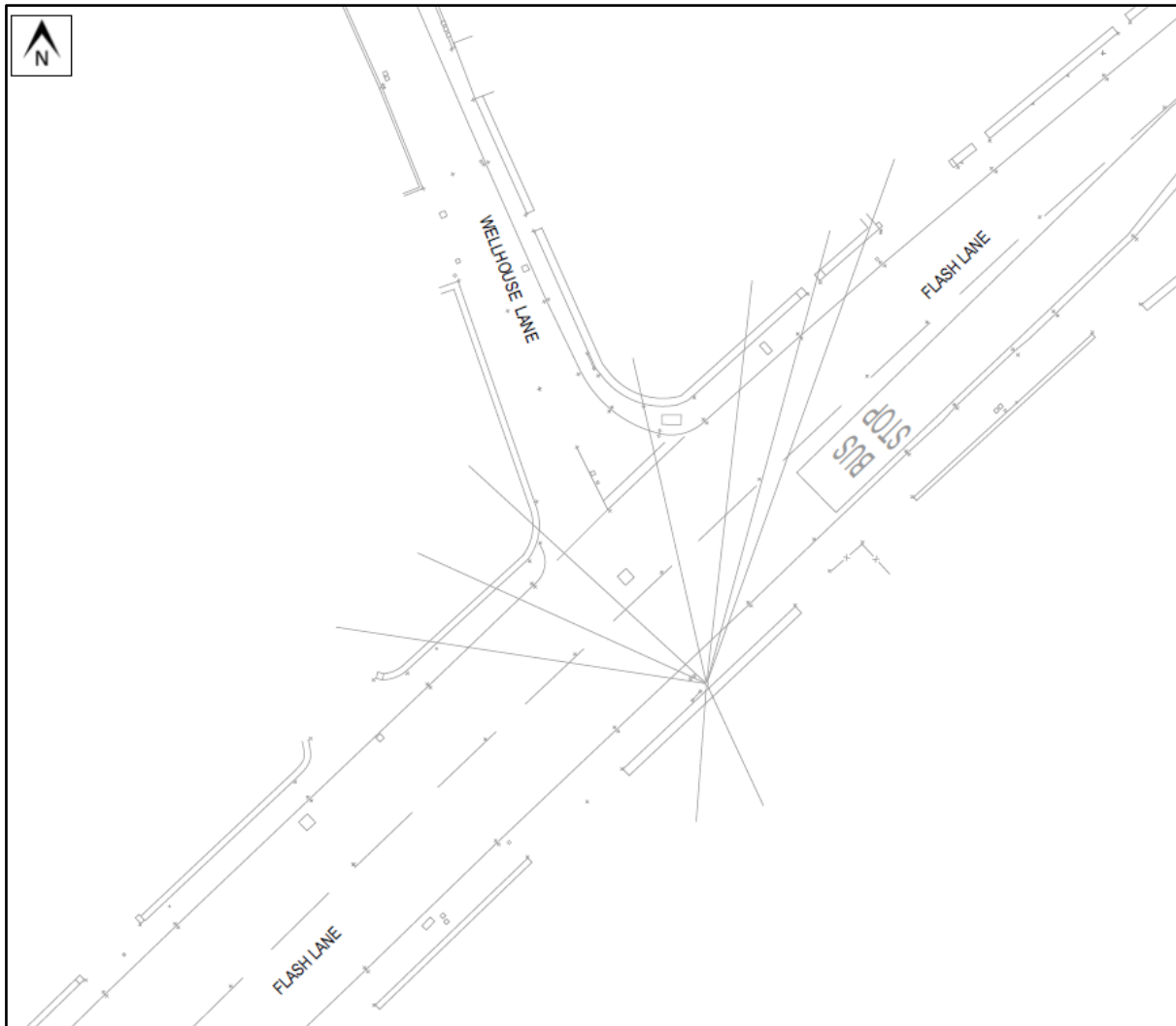
7.5.8 The impact of the proposed development combined with some reassigned existing traffic, in terms of highway capacity, can be satisfactorily accommodated at the existing Hepworth Lane/Flash Lane/Shillbank Lane priority junction.

## 7.6 WELLHOUSE LANE/FLASH LANE PRIORITY T-JUNCTION

7.6.1 The Wellhouse Lane/Flash Lane Priority Junction is shown on Figure 12 and the extract within Image 7.3.



Image 7.3 Wellhouse Lane/Flash Lane Priority Junction



### 2025 Surveyed Count

7.6.2 The junction has initially been modelled using the PICADY function of Junctions 9 for the 2025 Count AM and PM peak hours. The full modelling outputs are attached at Appendix P and summarised within Table 7.11.

**Table 7.11 Wellhouse Lane/Flash Lane (2025 Count)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2025 Count</b>						
Wellhouse Lane	0.35	13	1	0.06	9	1
Flash Lane	0.07	5	1	0.08	5	1

7.6.3 The results within Table 7.11 show that the Wellhouse Lane/Flash Lane junction operates with significant spare capacity during both the AM and PM peaks hours and no queuing occurs across all arms of the junction in both peak hours.



## 2030 Base Scenario

7.6.4 The junction has then been modelled for the 2030 Base scenario including background traffic growth during the morning and evening peak hours and the results are summarised within Table 7.12.

**Table 7.12 Wellhouse Lane/Flash Lane (2030 Base)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Base</b>						
Wellhouse Lane	0.37	13	1	0.07	9	1
Flash Lane	0.08	5	1	0.09	5	1

7.6.5 The results in Table 7.12 demonstrate that with the addition of background traffic growth is predicted to continue to operate well within practical desirable capacity with a maximum RFC of 0.37 along Wellhouse Lane during the morning peak hour. Queues and delays are expected to continue to be minimal across the whole junction with no more than 1 on each approach.

## 2030 Design Scenario

7.6.6 The junction has been modelled for the 2030 Design scenario during the morning and evening peak hours and the results are summarised within Table 7.13.

**Table 7.13 Wellhouse Lane/Flash Lane (2030 Design)**

Arm	AM Peak (08:00 – 09:00)			PM Peak (16:00 to 17:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
<b>2030 Design</b>						
Wellhouse Lane	0.30	11	1	0.05	8	1
Flash Lane	0.08	5	1	0.10	5	1

7.6.7 The results in Table 7.13 demonstrate that with the addition of traffic associated with the proposed development and benefits from the reassigned traffic, the junction is predicted to operate with significant spare capacity throughout both the morning and evening peak hours, and minimal queuing is predicted across all arms of the junction in both peak hours.

7.6.8 Throughout the morning peak hour, Wellhouse Lane is expected to operate better than the 2030 Base scenario, with a reduction in RFC from 0.37 in the Base scenario to 0.30 in the Design scenario. This is as a result of 27 vehicles routing through the Site rather than turning left out of Wellhouse Lane onto Flash Lane.

7.6.9 Similarly, throughout the evening peak hour Wellhouse Lane operates slightly better than the 2030 Base scenario due to 5 less vehicles turning left out of Wellhouse Lane onto Flash Lane and travelling through the Site instead.

## Conclusion – Wellhouse Lane/Flash Lane

7.6.10 The impact of the proposed development, in terms of highway capacity, can be satisfactorily accommodated at the existing Wellhouse Lane/Flash Lane priority junction. In fact, there will be a



slight improvement in operation at the junction as a result of the proposed connection through the Site between Woodward Court and Hepworth Lane.

## **7.7 SUMMARY**

7.7.1 In summary, from the assessments undertaken within this chapter it is considered that taking into account all reasonable future scenarios the development proposals, in terms of highway capacity, can more than comfortably be accommodated on the existing highway network. The impact of the development is certainly not considered severe which is the test applied in paragraph 116 of the NPPF.

7.7.2 In addition, the operation of the Wellhouse Lane corridor will improve due to the development proposals because existing southbound traffic will be able to use the Site to bypass Wellhouse Lane and instead use Hepworth Lane to access Shillbank Lane.



## 8. Summary and Conclusions

8.1.1 This Transport Assessment (TA) has been prepared by Optima Highways and Transportation Consultancy Limited (Optima) to consider the highways and transportation matters associated with a proposed residential development on land to the east of Woodward Court, Mirfield.

8.1.2 The development proposals, which are shown on the Site Layout drawing in Appendix B, can be summarised as follows:

- Construction of up to 75 residential dwellings; and
- Associated works including landscaping, public open space and other infrastructure.

8.1.3 Whilst a single point of access/egress from Woodward Court is still considered acceptable on highways/transport grounds (as was also previously agreed by KC Highway Officers for the refused 2017 application), in order to respond to the pre-app consultations/feedback which sought to reduce the volume of traffic on the southern section of Wellhouse Lane, this TA assesses the development traffic impact on the local highway network assuming an access/egress point from Woodward Court and an egress only from Hepworth Lane.

8.1.4 Highway improvements are proposed at the existing Woodward Court/Wellhouse Lane junction and along Wellhouse Lane including provision of a junction raised table, two flat-top road humps and an extension of the existing 'no parking' restrictions. These improvements are the same as those previously discussed and approved by Kirklees Council Highways during the determination of the 2017 planning application and they will reduce the existing recorded vehicular speeds in both directions along Wellhouse Lane, provide an overall highway safety benefit to the local highway network (including past the Junior School) as well as reducing the visibility levels required at the Woodward Court junction. Furthermore, due to the proposed additional Hepworth Lane Site egress, the volume of development trips using the improved Woodward Court/Wellhouse Lane junction will be less.

8.1.5 It is proposed that pedestrian and cycle access will be provided from Woodward Court, Hepworth Lane Site and additional connections to the existing PROW to the east of the Site.

8.1.6 The Site provides very good accessibility by foot, cycle and public transport to local services and facilities and this will be promoted and encouraged by the implementation, management and monitoring of a Residential Travel Plan at the development. As such it is in a sustainable location and is compliant with the NPPF which requires at paragraph 110 that people are given "*a genuine choice of transport modes*" and that "*significant development should be focused on locations which are or can be made sustainable*".

8.1.7 A review of the personal injury accident data has been undertaken for the study area, which has shown that no personal injury accidents recorded. There are therefore no existing injury accident concerns on the local highway network that the proposed development would exacerbate – including over the full length of the Wellhouse Lane and Hepworth Lane corridors.

8.1.8 It has been demonstrated that all of the modelled junctions would operate comfortably within capacity during the future 2030 design year and can therefore satisfactorily accommodate the development proposals. Beyond these junctions the development impact dilutes even further, becoming negligible and immaterial compared with daily fluctuations in traffic flows. The impact of the development is certainly not severe which is the test applied in paragraph 116 of the NPPF.

8.1.9 On the contrary, the development proposals result in an overall reduction in traffic flows on the southern section of Wellhouse Lane during the morning peak hour and no change during the



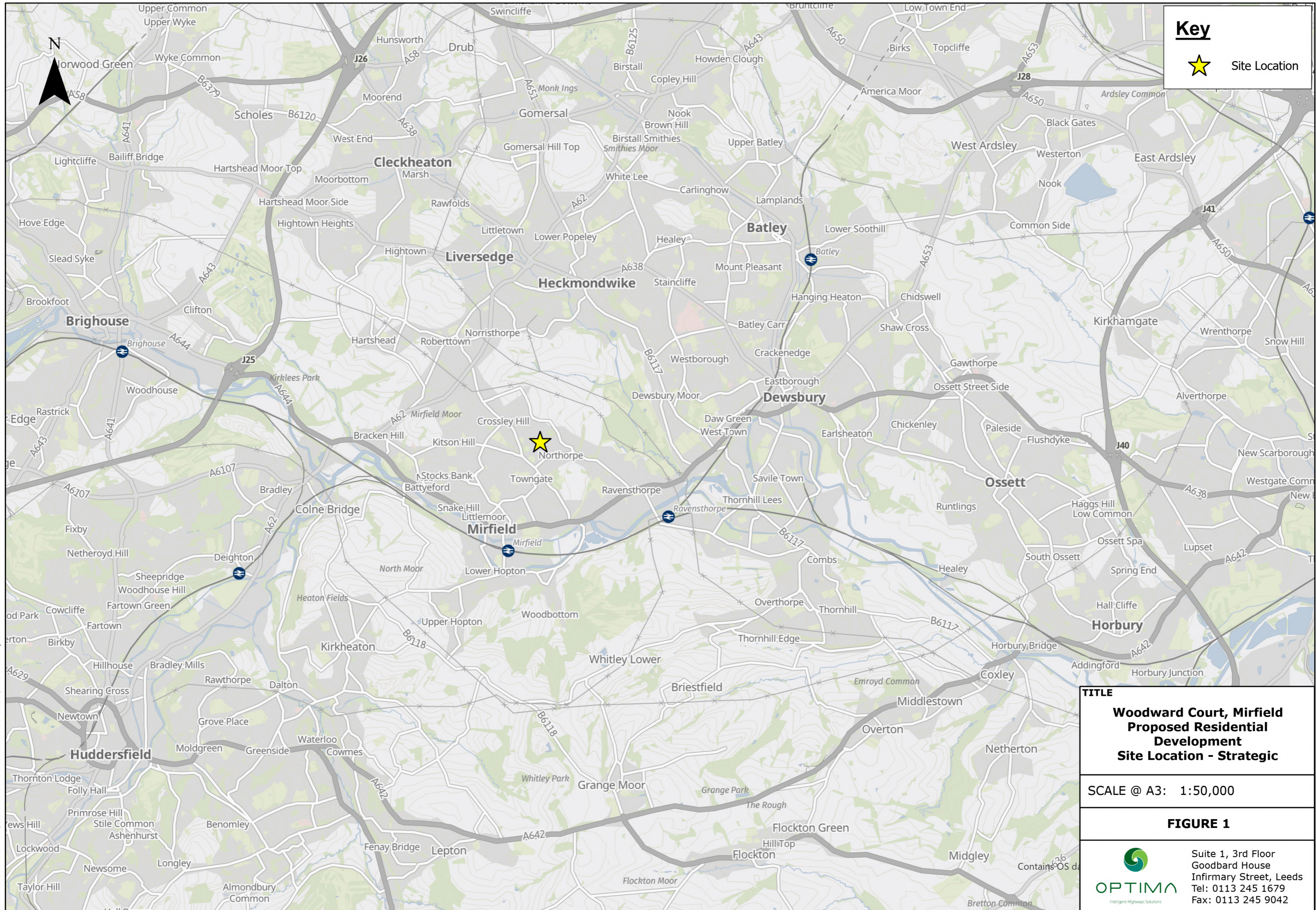
evening peak hour i.e. providing either a betterment or at least a 'nil detriment' impact on this part of the network.

8.1.10 From the work undertaken it is concluded that there are no reasons on highways or transport grounds why the development Site should not be granted planning permission for residential purposes.



# Figures





**Key**

★ Site Location

**TITLE**

**Woodward Court, Mirfield  
Proposed Residential  
Development  
Site Location - Strategic**

SCALE @ A3: 1:50,000

**FIGURE 1**



Suite 1, 3rd Floor  
Goodbard House  
Infirmary Street, Leeds  
Tel: 0113 245 1679  
Fax: 0113 245 9042

Path: O:\Woodward Court, Mirfield\DRAWINGS\GIS\Woodward Court, Mirfield GIS.aprx



**Key**

— Indicative Site Boundary

**TITLE**

**Woodward Court, Mirfield  
Proposed Residential  
Development  
Site Location - Local**

SCALE @ A3: 1:5,000

**FIGURE 2**



Suite 1, 3rd Floor  
Goodbard House  
Infirmary Street, Leeds  
Tel: 0113 245 1679  
Fax: 0113 245 9042

Path: O:\Woodward Court, Mirfield\DRAWINGS\GIS\Woodward Court, Mirfield GIS.aprx

Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, GeoTechnic

## Local Facilities

### Education

- ① Crossley Fields Junior & Infant School
- ② Wellhouse Pre School
- ③ The Mirfield Free Grammar School
- ④ Old Bank Academy
- ⑤ Castle Hall Academy

### Health

- ① Mirfield Health Centre
- ② Boots Pharmacy
- ③ Boots Pharmacy
- ④ Dental Care Centre
- ⑤ Wood Dental

### Recreation

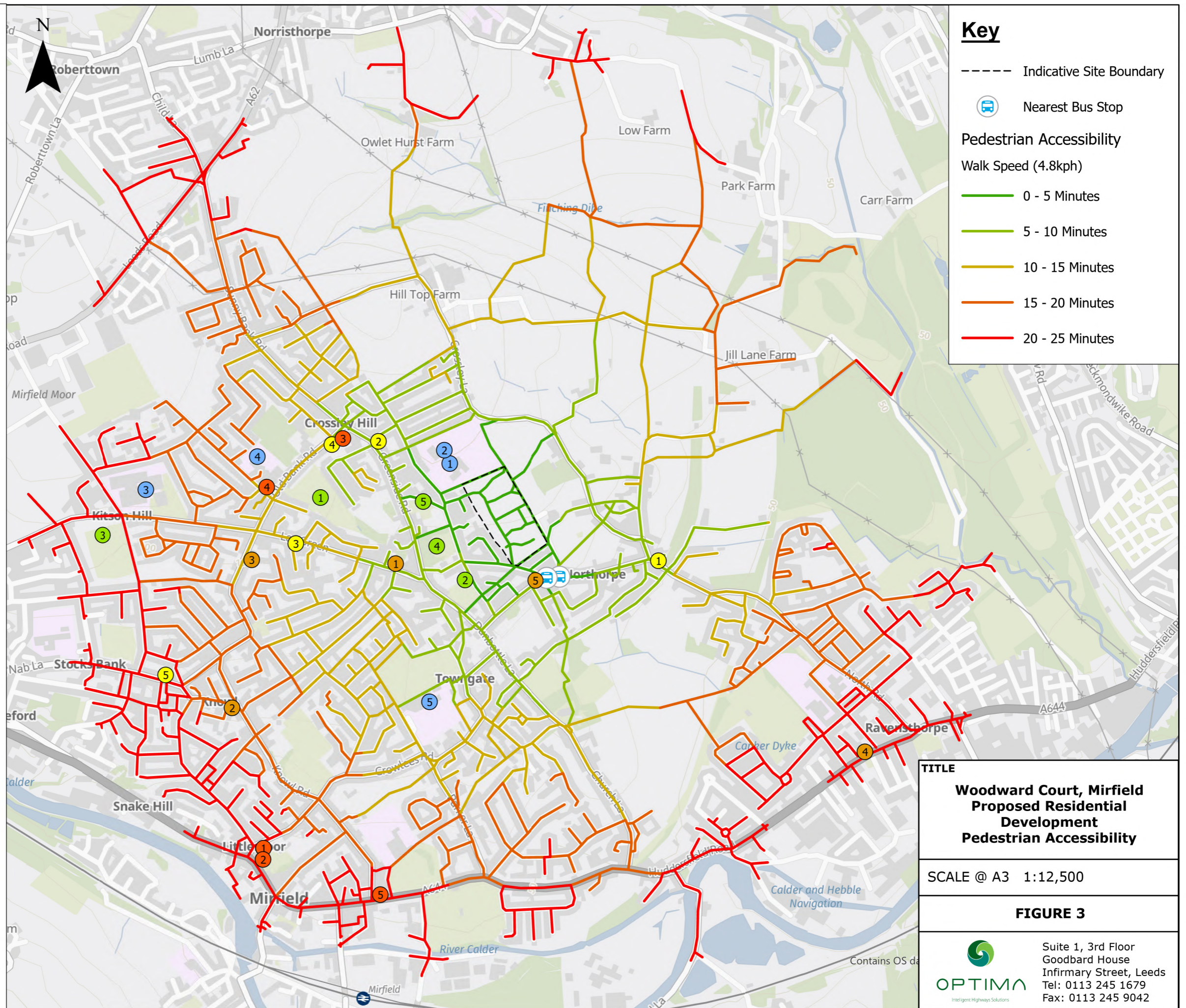
- ① Green Side Estate Recreation Ground
- ② Mirfield Parish Church Cricket Club
- ③ The MFG Sports Centre
- ④ Gilder Hall Field
- ⑤ Katie Philpott School of Dance

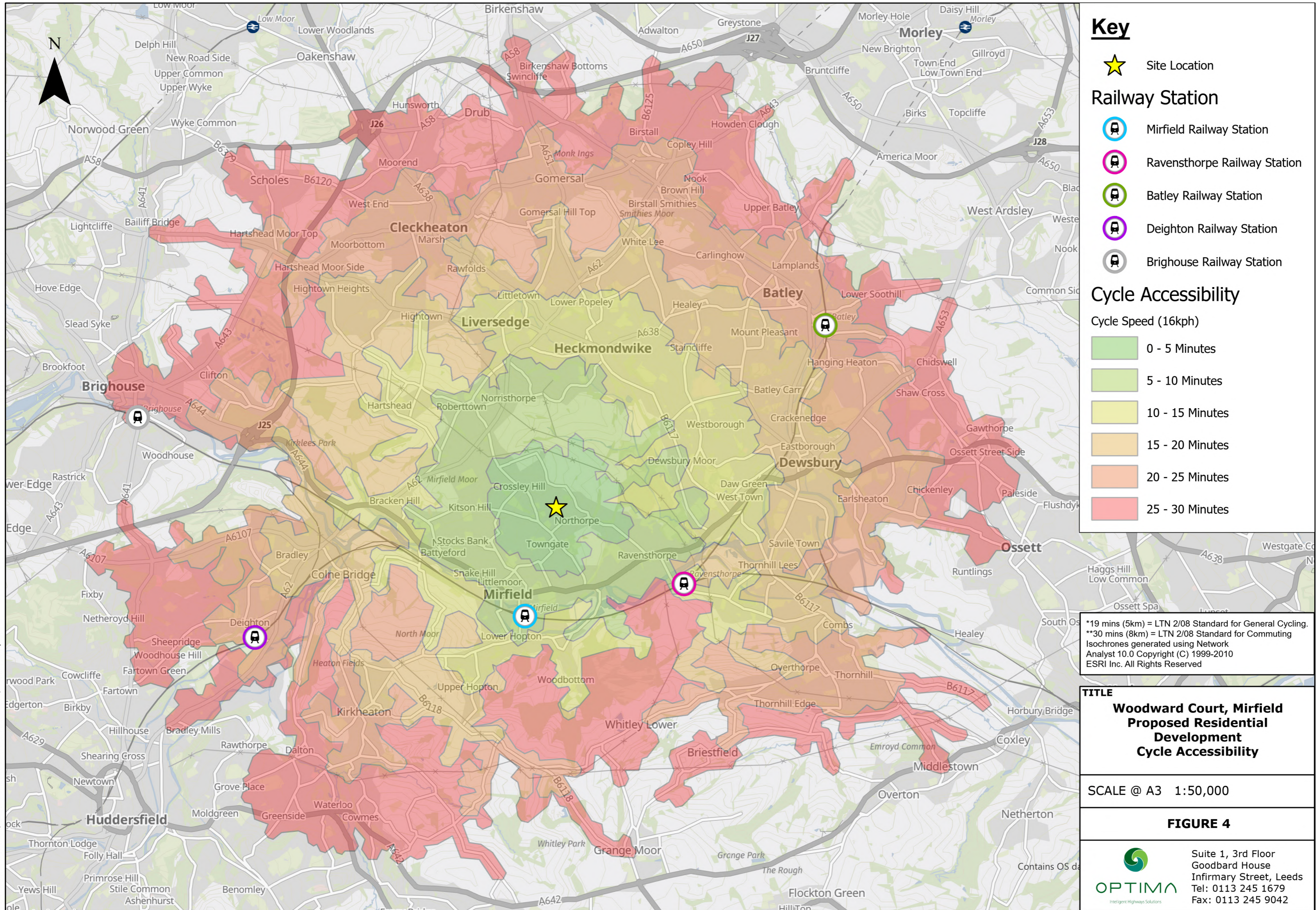
### Retail

- ① Shillbank Stores
- ② One Stop
- ③ 7 Day Express
- ④ Co-op Food - Mirfield
- ⑤ Co-op Food - Nab Lane







### Services

- ① The Shoulder of Mutton Mirfield
- ② The Knowl Drop & Collect Post Office
- ③ Mirfield Community Centre
- ④ Ravensthorpe Post Office
- ⑤ Flash Lane D Post Box



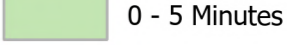
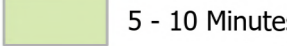
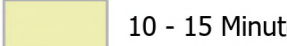
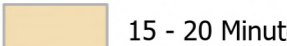
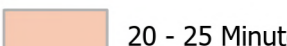
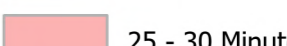


**Key**

-  Site Location
- Railway Station**
-  Mirfield Railway Station
-  Ravensthorpe Railway Station
-  Batley Railway Station
-  Deighton Railway Station
-  Brighouse Railway Station

**Cycle Accessibility**

Cycle Speed (16kph)

-  0 - 5 Minutes
-  5 - 10 Minutes
-  10 - 15 Minutes
-  15 - 20 Minutes
-  20 - 25 Minutes
-  25 - 30 Minutes

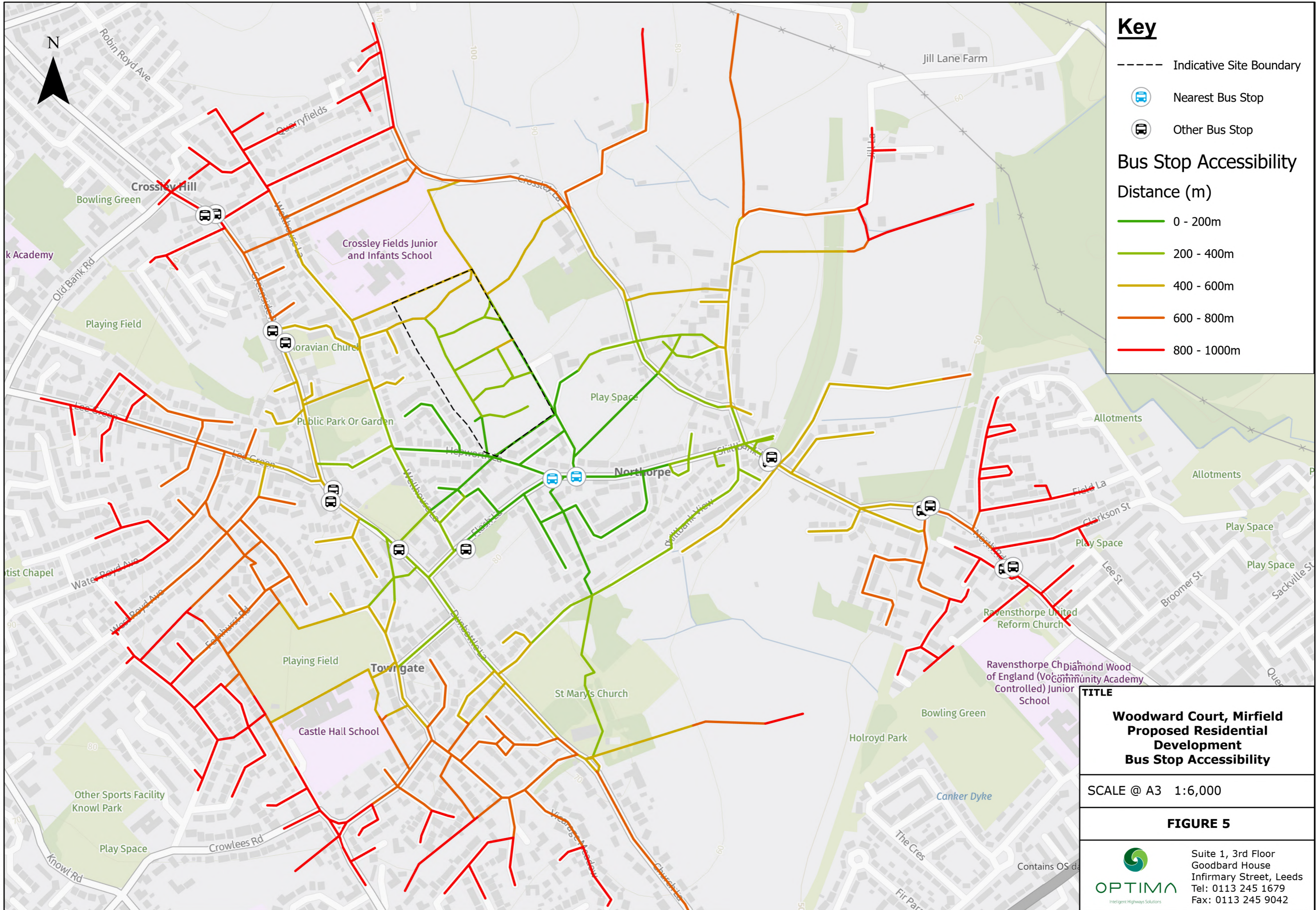
\*19 mins (5km) = LTN 2/08 Standard for General Cycling.  
 \*\*30 mins (8km) = LTN 2/08 Standard for Commuting  
 Isochrones generated using Network Analyst 10.0 Copyright (C) 1999-2010 ESRI Inc. All Rights Reserved

**TITLE**  
**Woodward Court, Mirfield  
 Proposed Residential  
 Development  
 Cycle Accessibility**

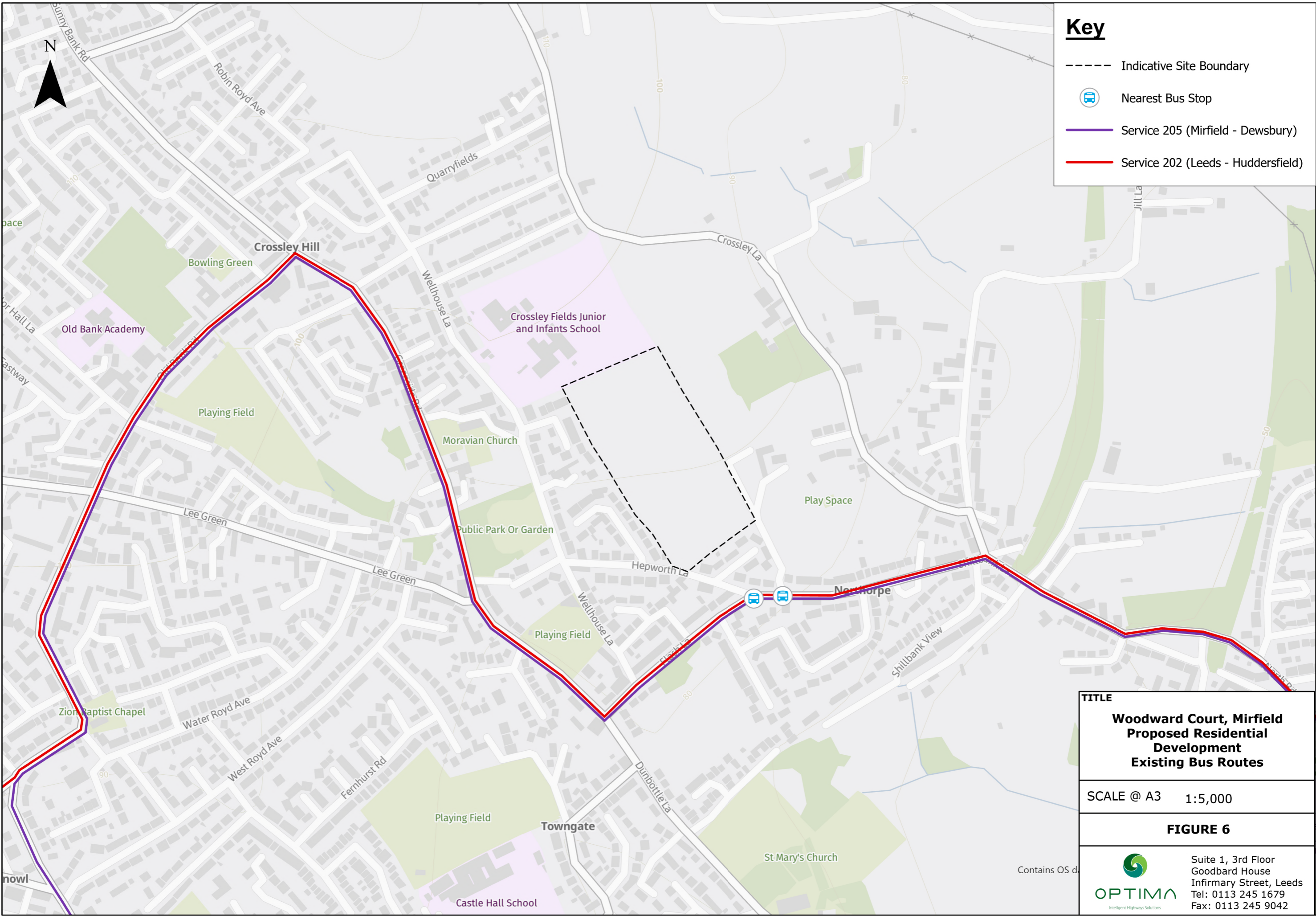
SCALE @ A3 1:50,000

**FIGURE 4**


 Suite 1, 3rd Floor  
 Goodbard House  
 Infirmary Street, Leeds  
 Tel: 0113 245 1679  
 Fax: 0113 245 9042



Path: O:\Woodward Court, Mirfield\DRAWINGS\GIS\Woodward Court, Mirfield GIS.aprx



**Key**

- Indicative Site Boundary
-  Nearest Bus Stop
- Service 205 (Mirfield - Dewsbury)
- Service 202 (Leeds - Huddersfield)

**TITLE**  
**Woodward Court, Mirfield  
 Proposed Residential  
 Development  
 Existing Bus Routes**

SCALE @ A3 1:5,000

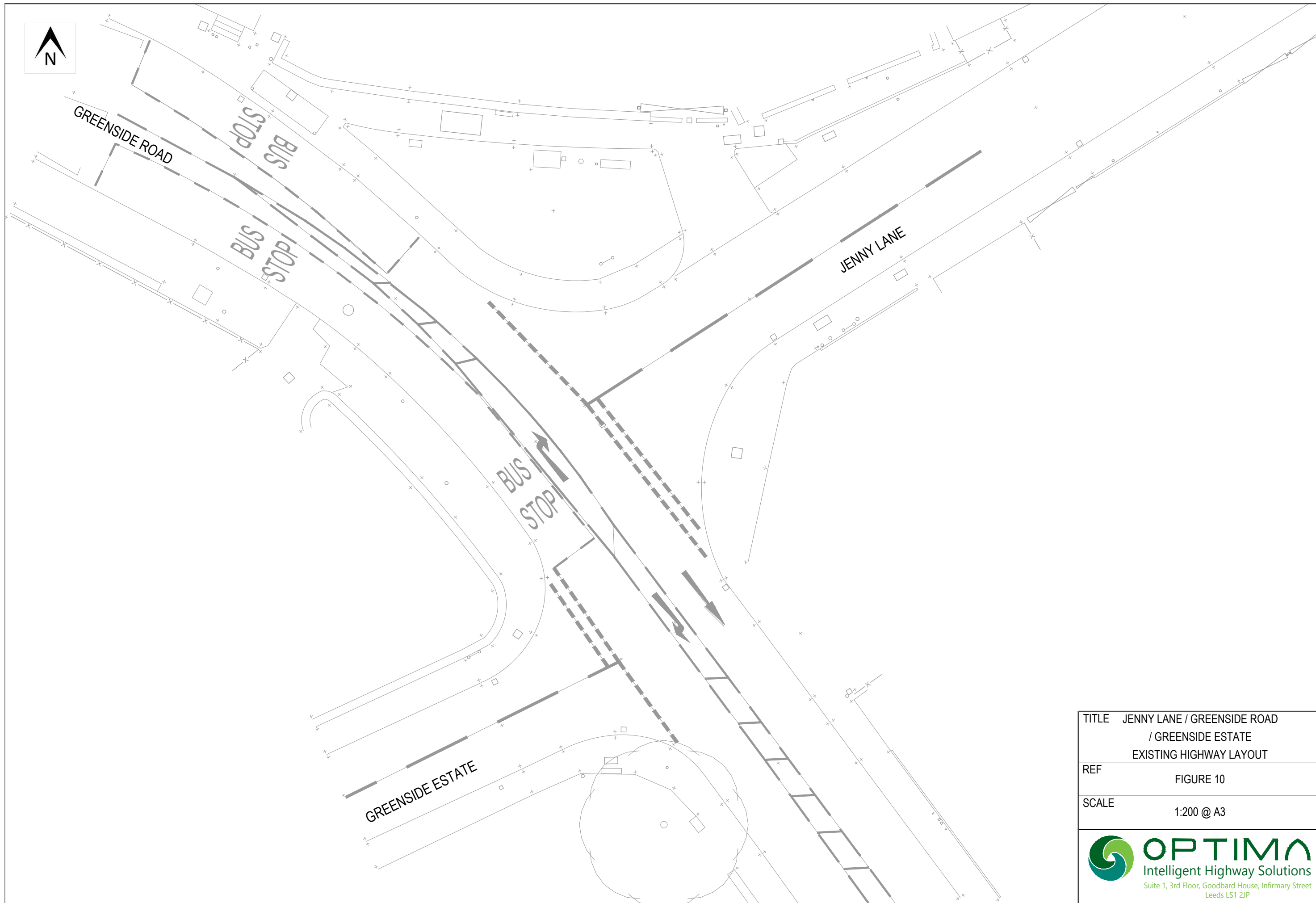
**FIGURE 6**

 **OPTIMA**  
 Intelligent Highways Solutions

Suite 1, 3rd Floor  
 Goodbard House  
 Infirmary Street, Leeds  
 Tel: 0113 245 1679  
 Fax: 0113 245 9042

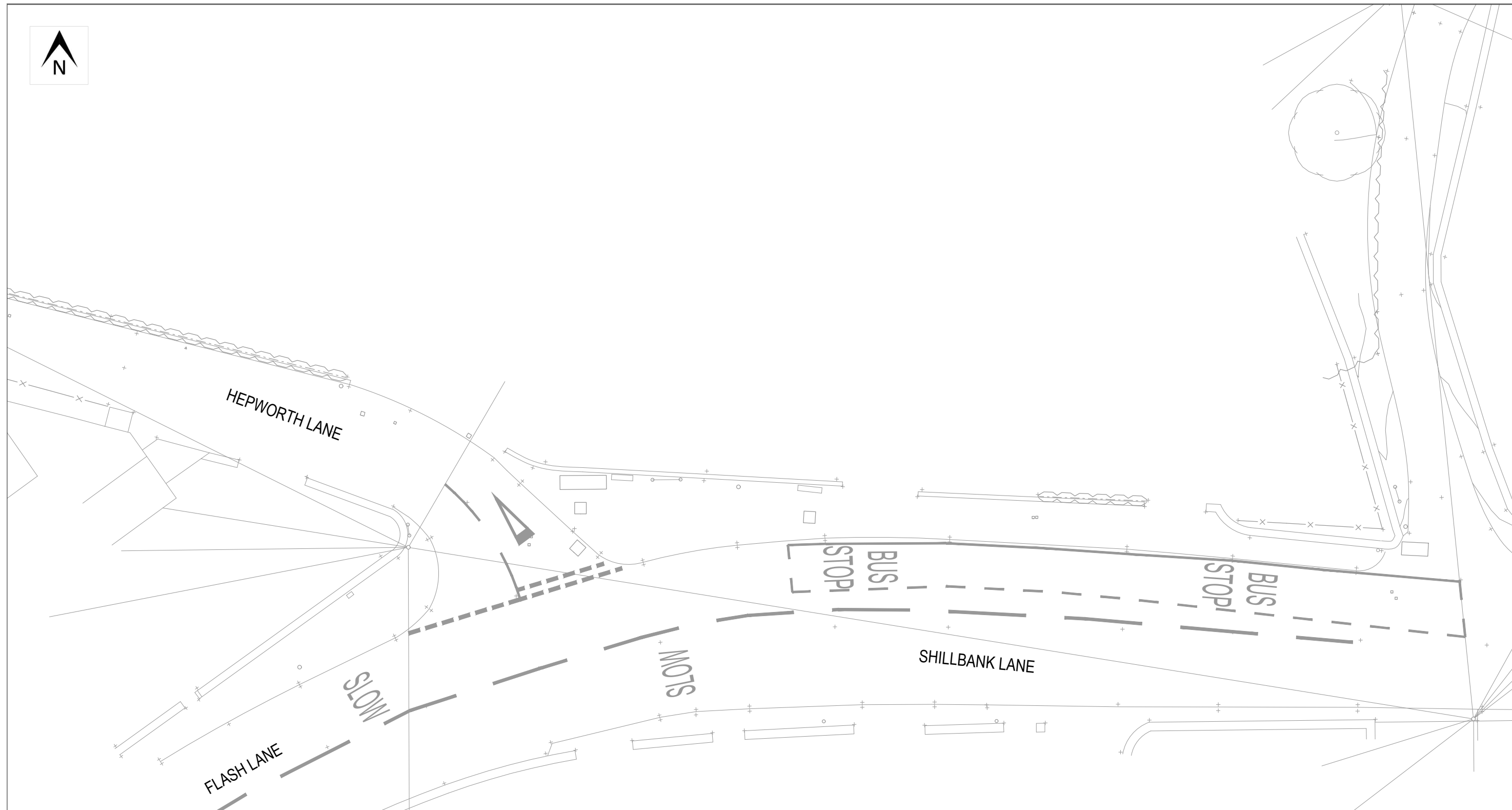
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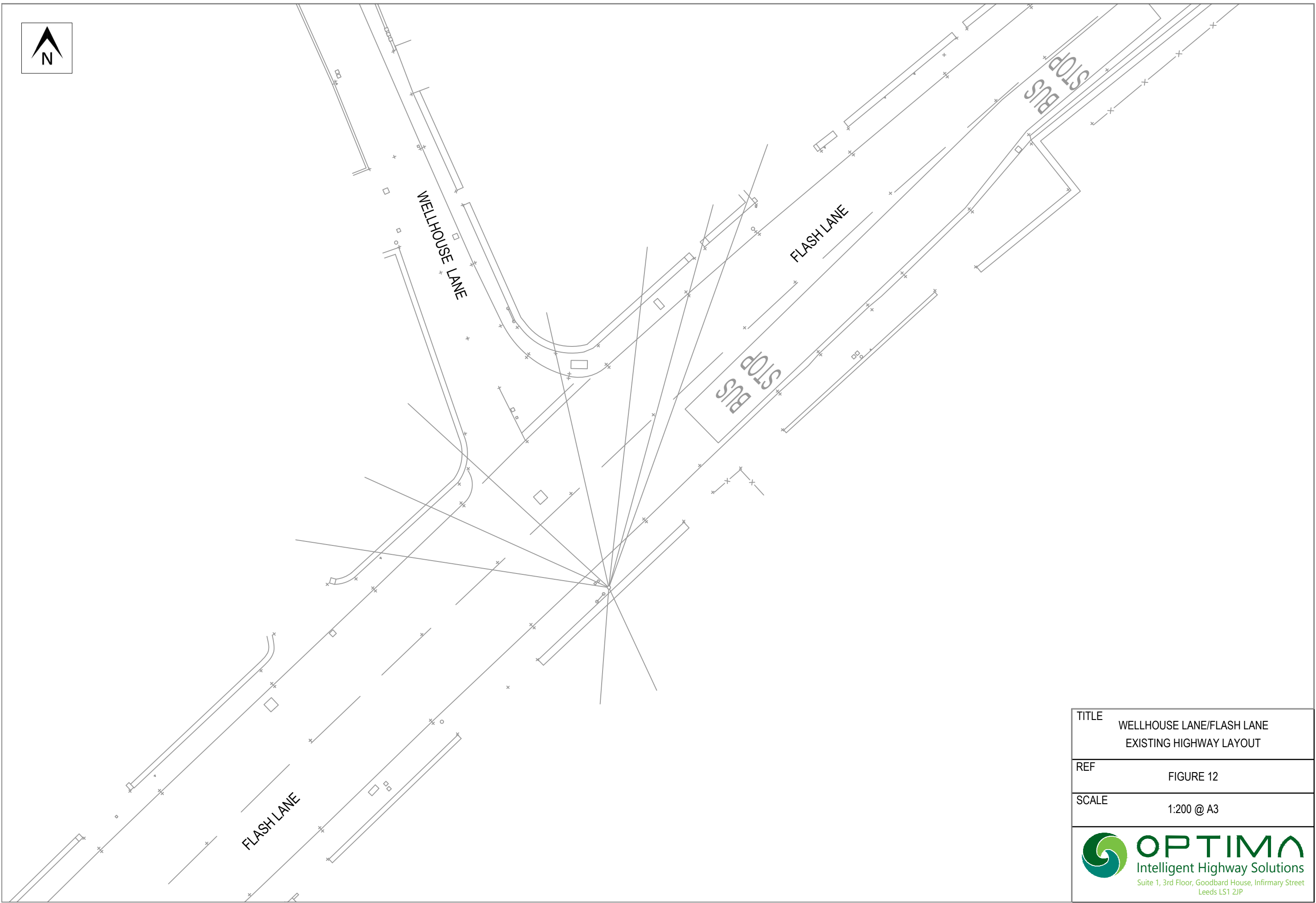
TITLE	JENNY LANE / GREENSIDE ROAD / GREENSIDE ESTATE EXISTING HIGHWAY LAYOUT
REF	FIGURE 10
SCALE	1:200 @ A3





TITLE	HEPWORTH LANE / FLASH LANE / SHILLBANK LANE EXISTING HIGHWAY LAYOUT
REF	FIGURE 11
SCALE	1:200 @ A3



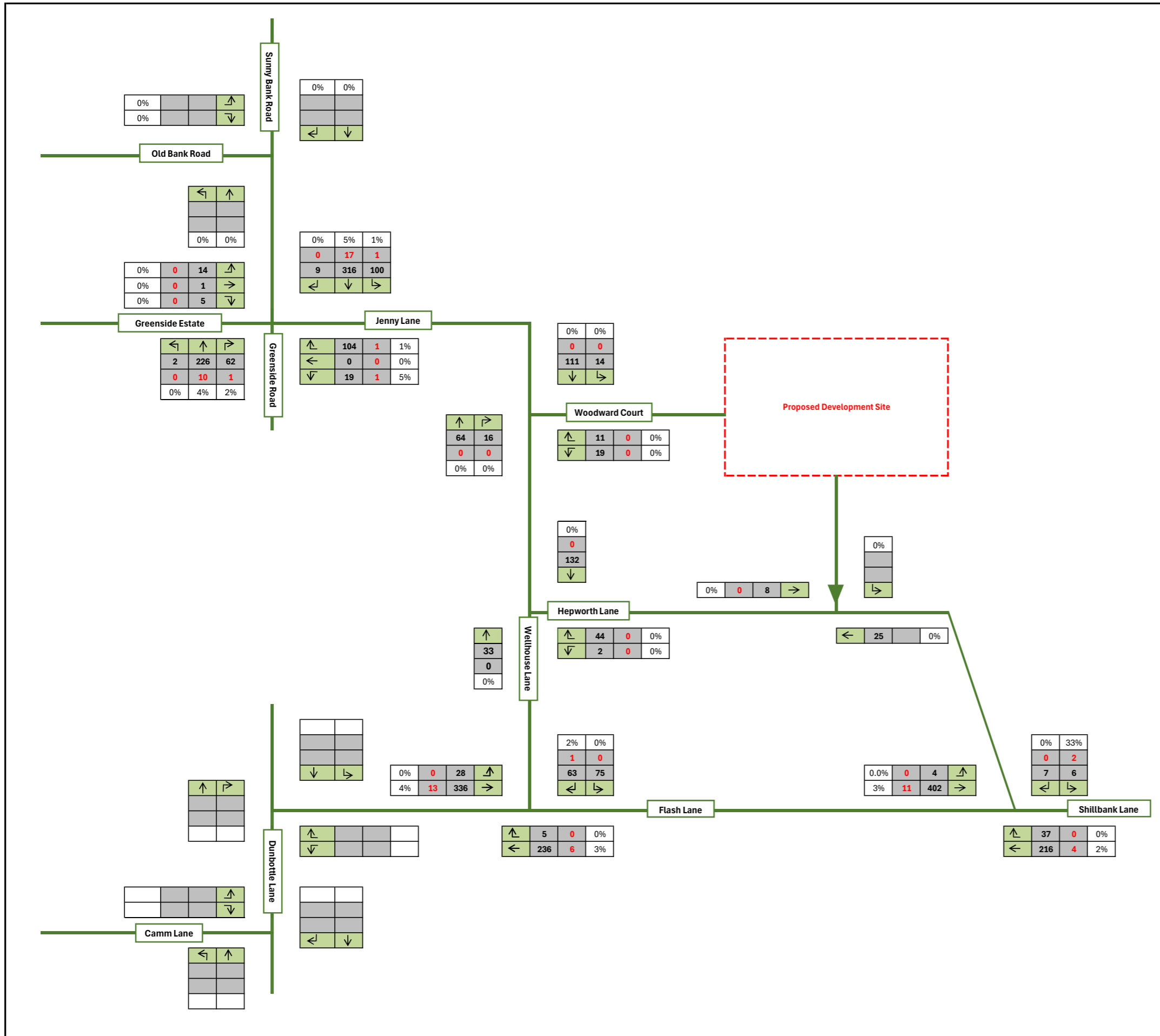


TITLE WELLHOUSE LANE/FLASH LANE  
EXISTING HIGHWAY LAYOUT

REF FIGURE 12

SCALE 1:200 @ A3





**Key:**

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0	Total HGV
0%	HGV Percentage

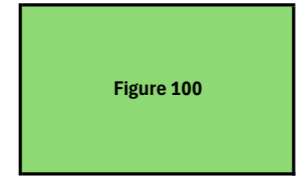
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2025 AM PEAK HOUR EXISTING COUNT  
TRAFFIC FLOWS (08:00 - 09:00)

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

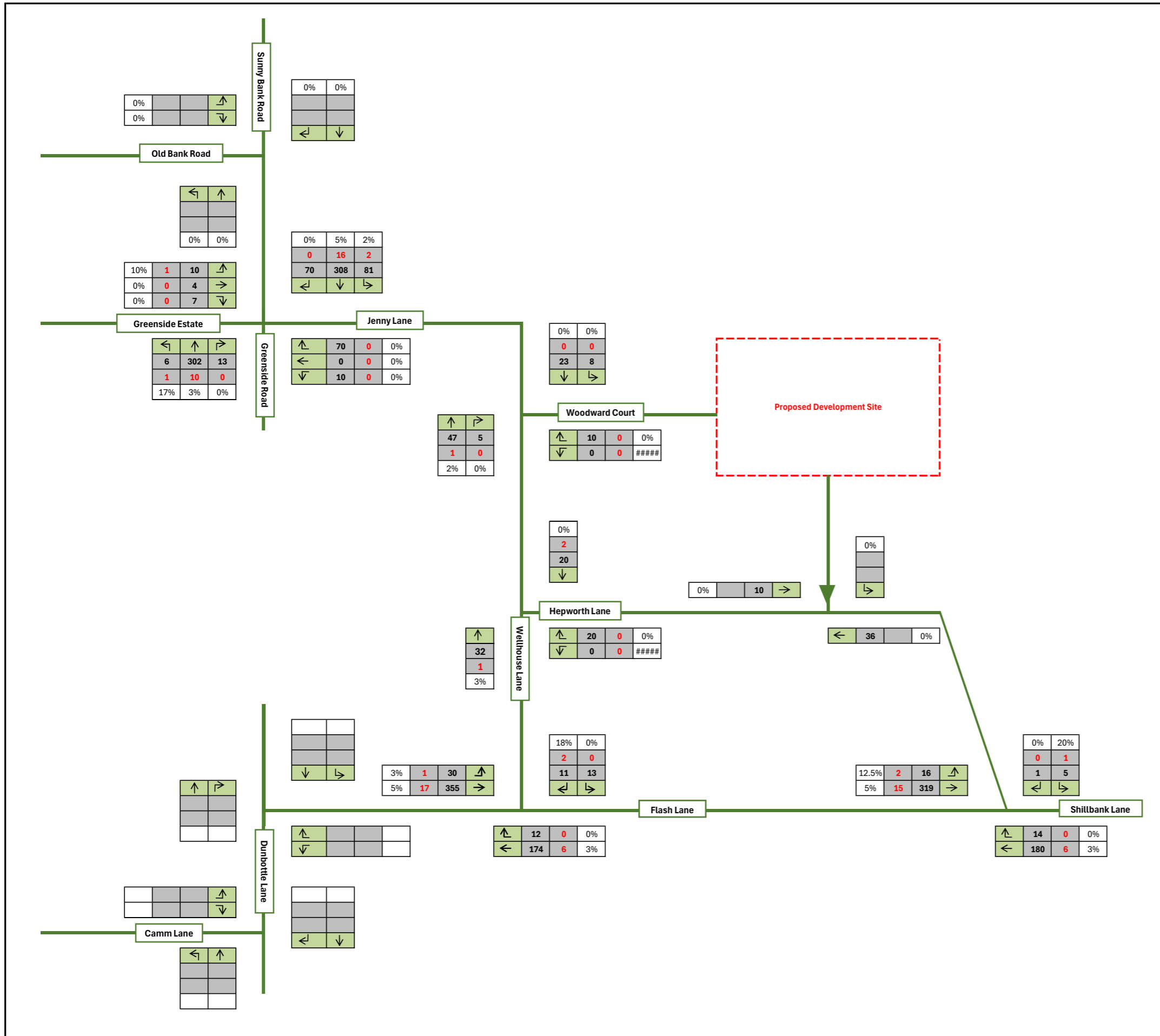
**Quality Control:**

Job Number	25033
Date	02/12/2025
Revision	Initial Issue
Drawn	KP
Checked	CR
Approved	PMO



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Suite 1, 3rd Floor  
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Leeds  
LS1 2JP  
Tel: 0113 245 1679  
[www.optimahighways.com](http://www.optimahighways.com)





**Key:**

- 0 Total Vehicles
- 0 Total HGV
- 0% HGV Percentage

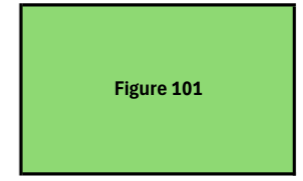
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TRAFFIC FLOWS (16:00 - 17:00)

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

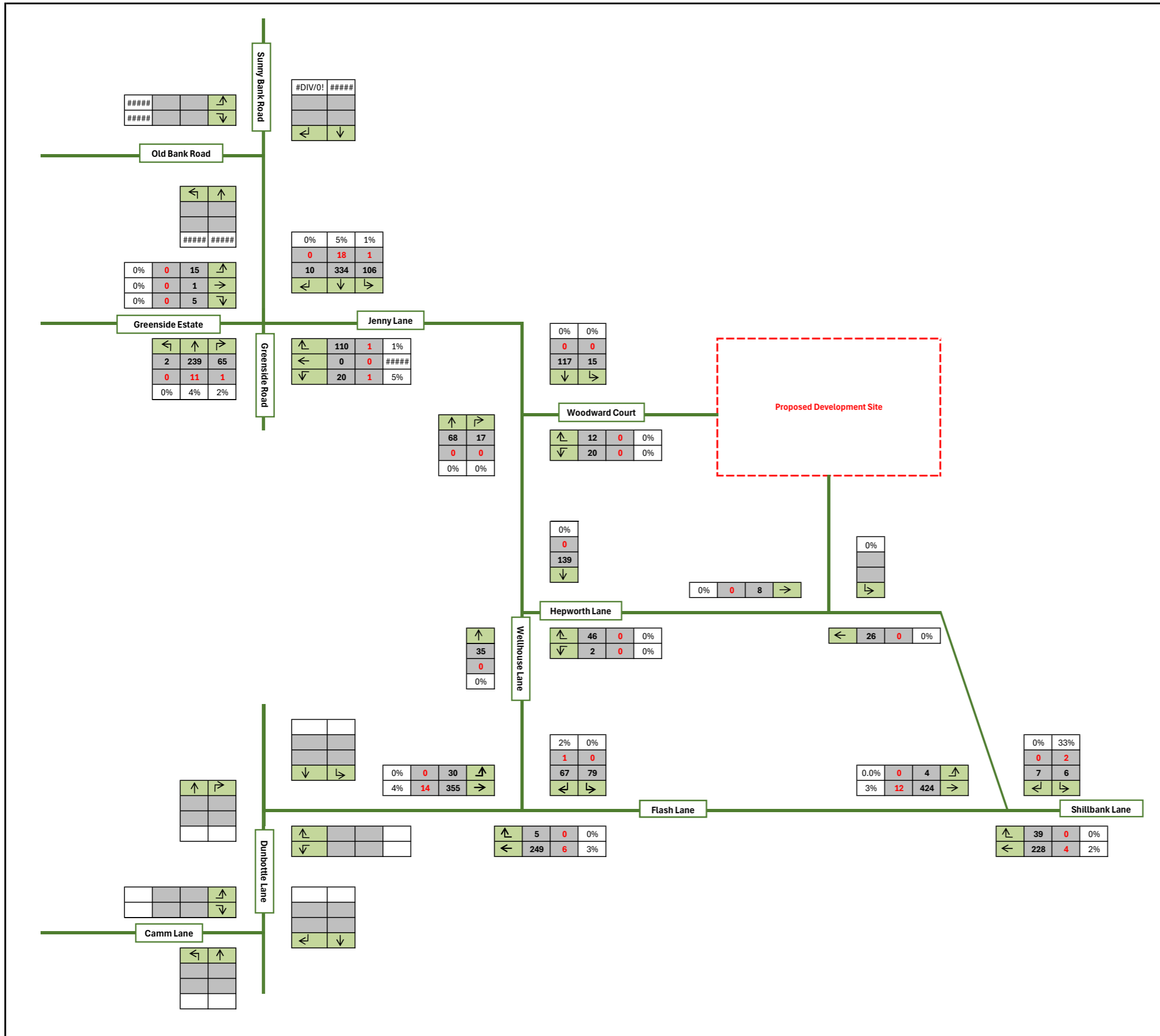
**Quality Control:**

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**Key:**

0	Total Vehicles
0	Total HGV
0%	HGV Percentage

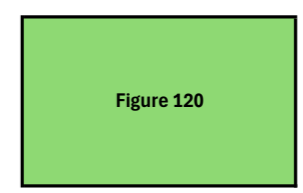
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2030 AM PEAK HOUR BASE TRAFFIC FLOWS

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

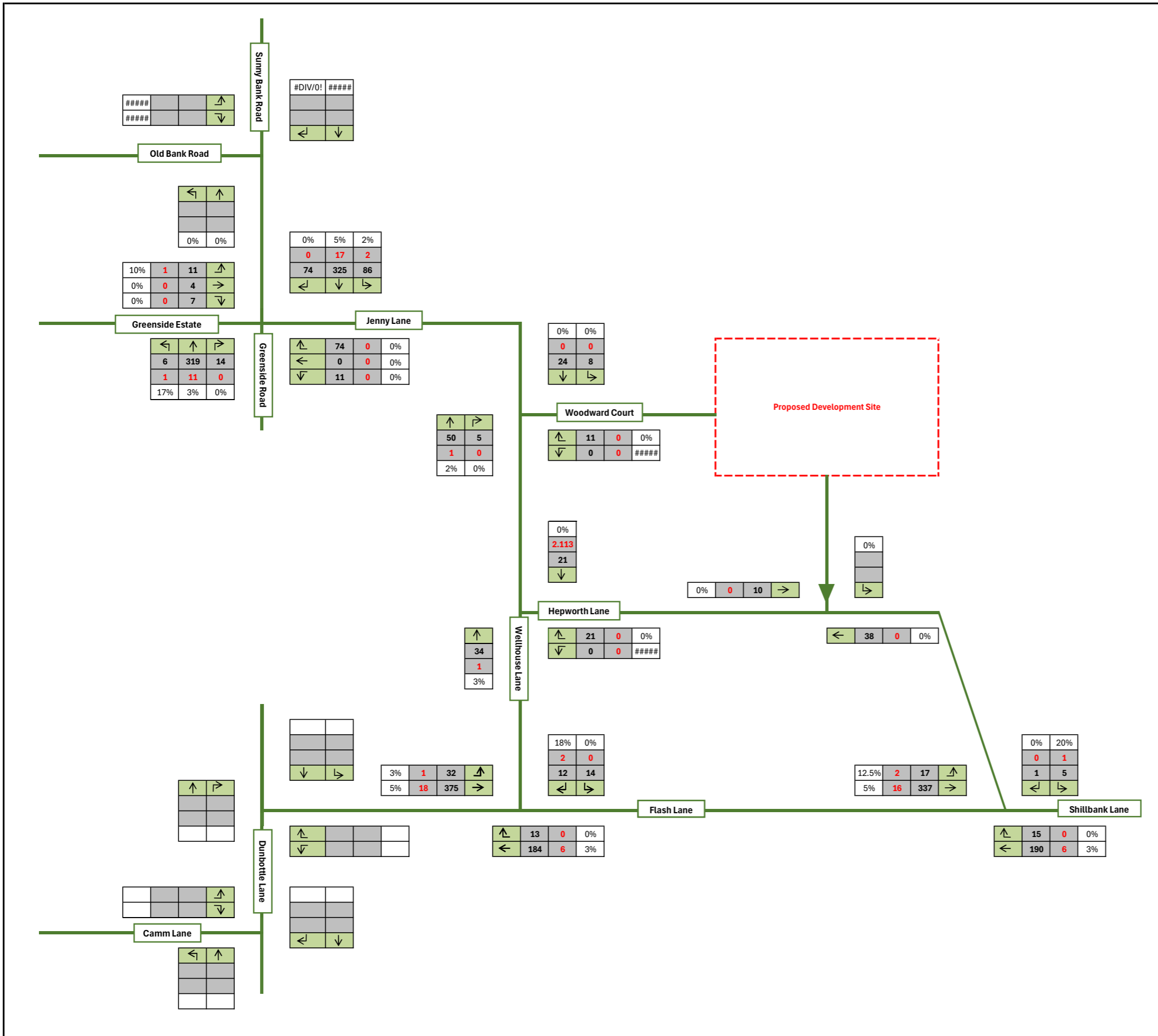
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**Key:**  
 0 Total Vehicles  
 0 Total HGV  
 0% HGV Percentage

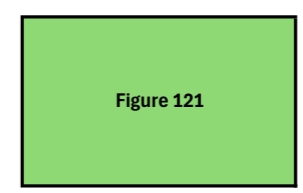
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 2030 PM PEAK HOUR BASE TRAFFIC FLOWS

**Project:**  
 Woodward Court, Mirfield

**Client:**  
 Bellway Homes Limited (Yorkshire)

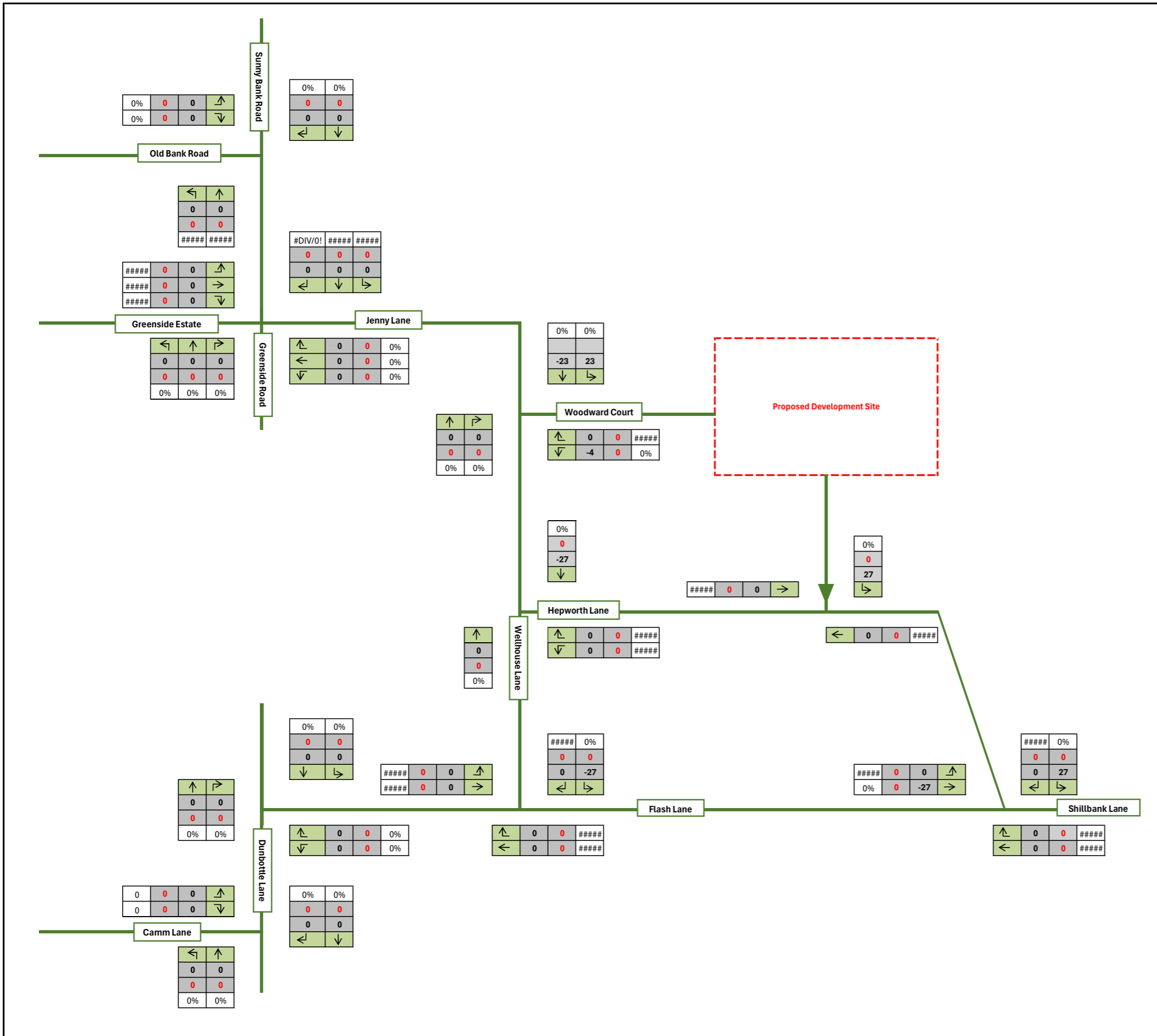
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**Key:**

0	Total Vehicles
0	Total HGV
0%	HGV Percentage

2030 GROWTHED AM WITH 10%  
REDUCTION / GROWTH

**Title:**

2030 AM PEAK HOUR REASSIGNED  
BASETRAFFIC FLOWS

**Project:**

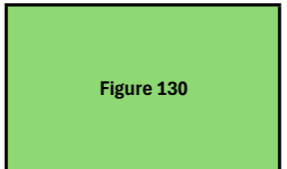
Woodward Court, Mirfield

**Client:**

Bellway Homes Limited (Yorkshire)

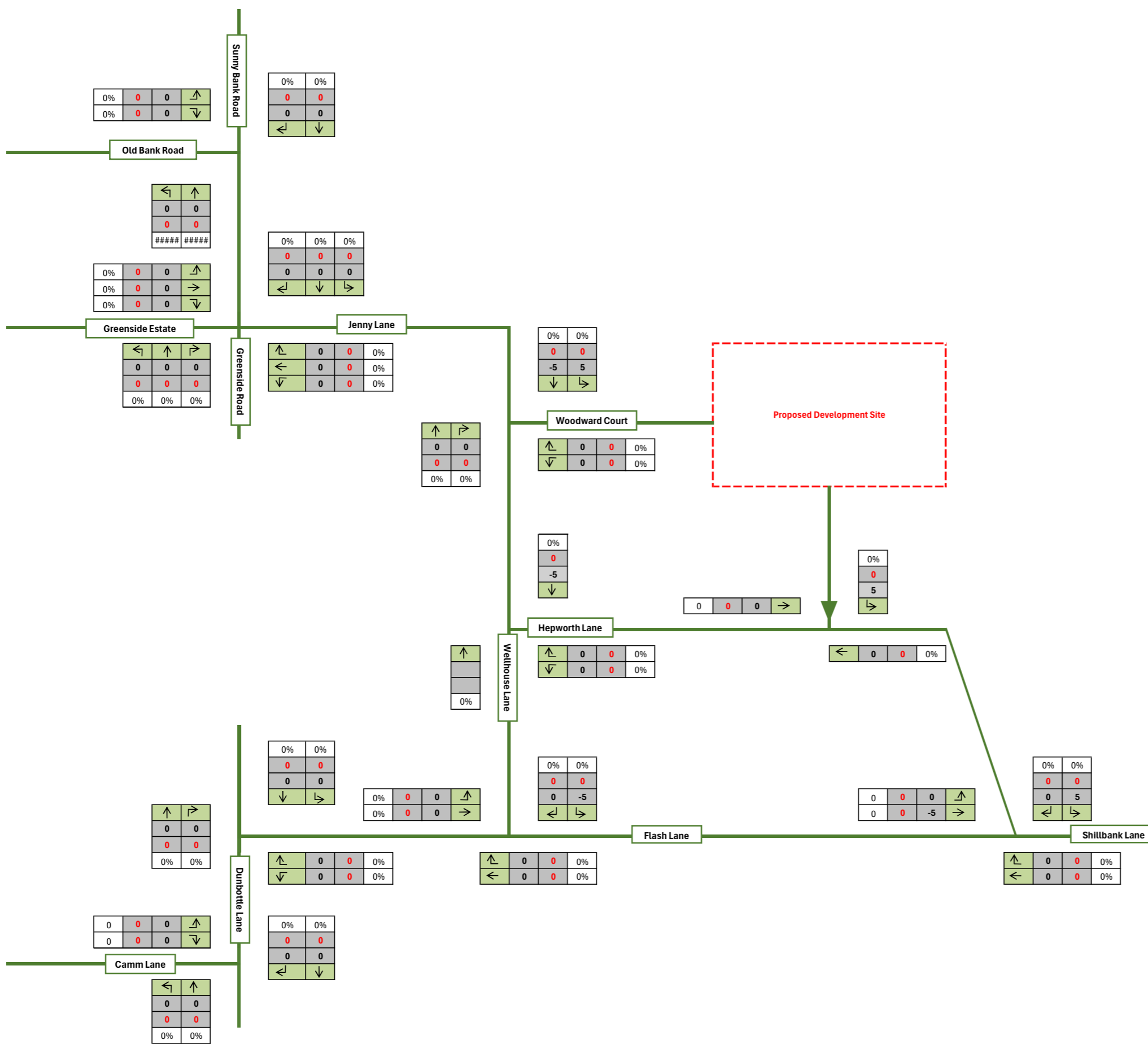
**Quality Control:**

Job Number	25033
Date	02/12/2025
Revision	Initial Issue
Drawn	KP
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Leeds  
LS1 2JP  
Tel: 0113 245 1679  
[www.optimahighways.com](http://www.optimahighways.com)





**Key:**

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0	Total HGV
0%	HGV Percentage

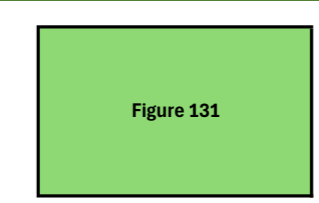
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2030 PM PEAK HOUR REASSIGNED BASE TRAFFIC FLOWS

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

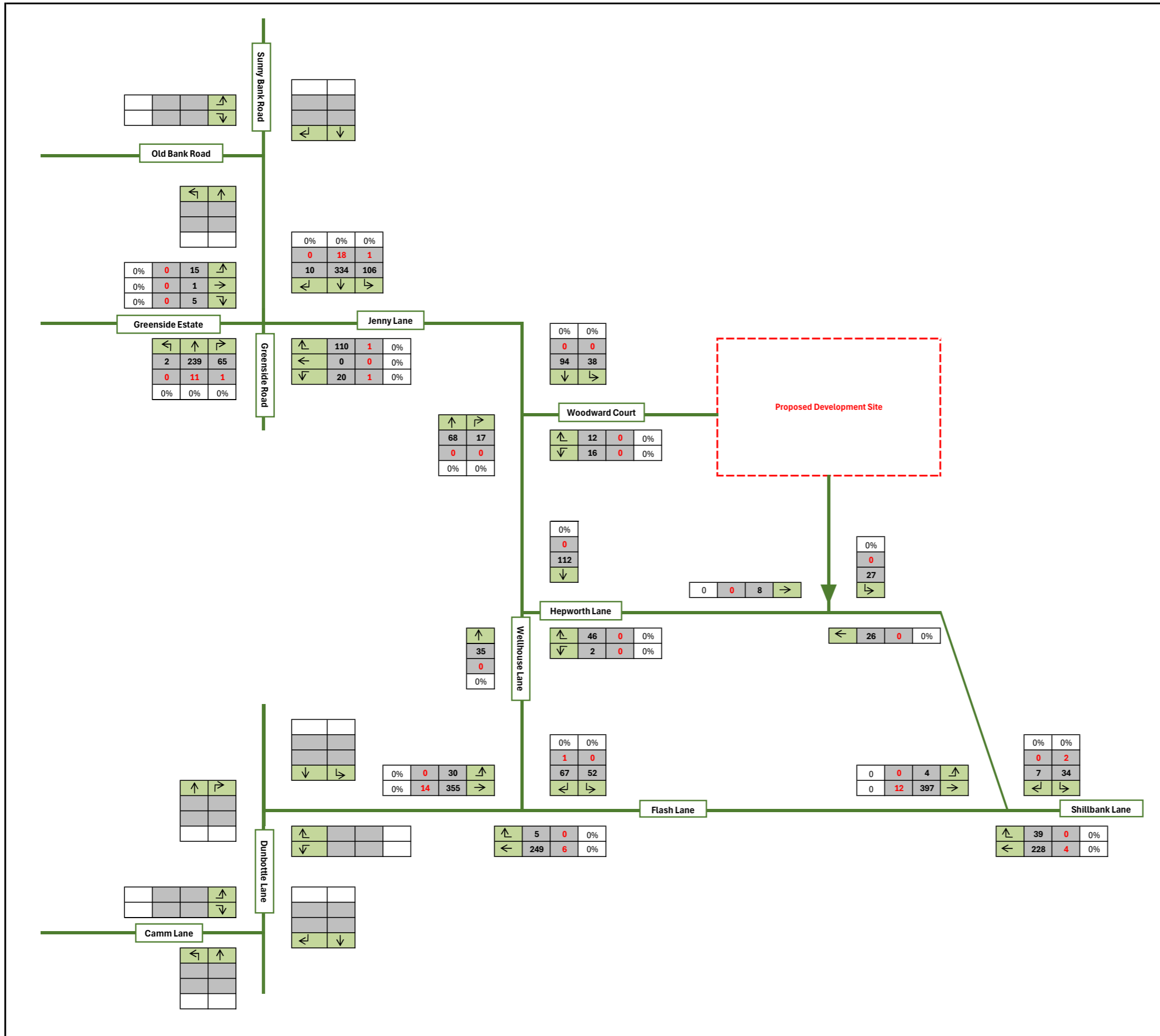
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Date	02/12/2025
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**Key:**

- 0 Total Vehicles
- 0 Total HGV
- 0% HGV Percentage

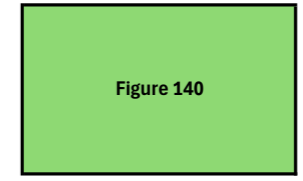
**Title:**  
2030 AM PEAK HOUR BASE TRAFFIC FLOWS (WITH REASSIGNMENT)

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

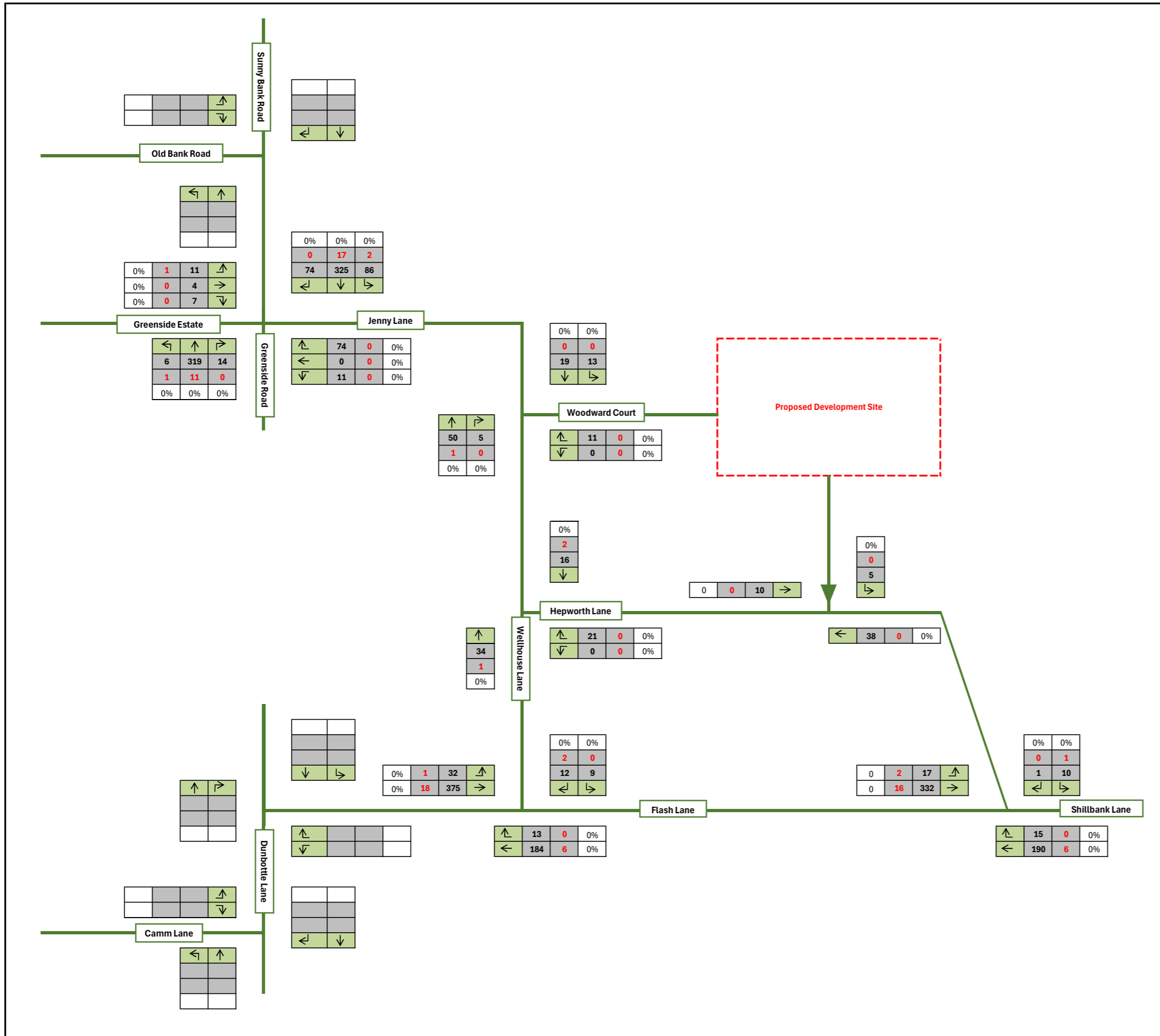
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Job Number	25033
Date	02/12/2025
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**Key:**

- 0 Total Vehicles
- 0 Total HGV
- 0% HGV Percentage

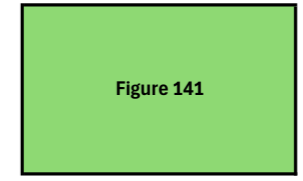
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2030 PM PEAK HOUR BASE TRAFFIC FLOWS (WITH REASSIGNMENT)

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

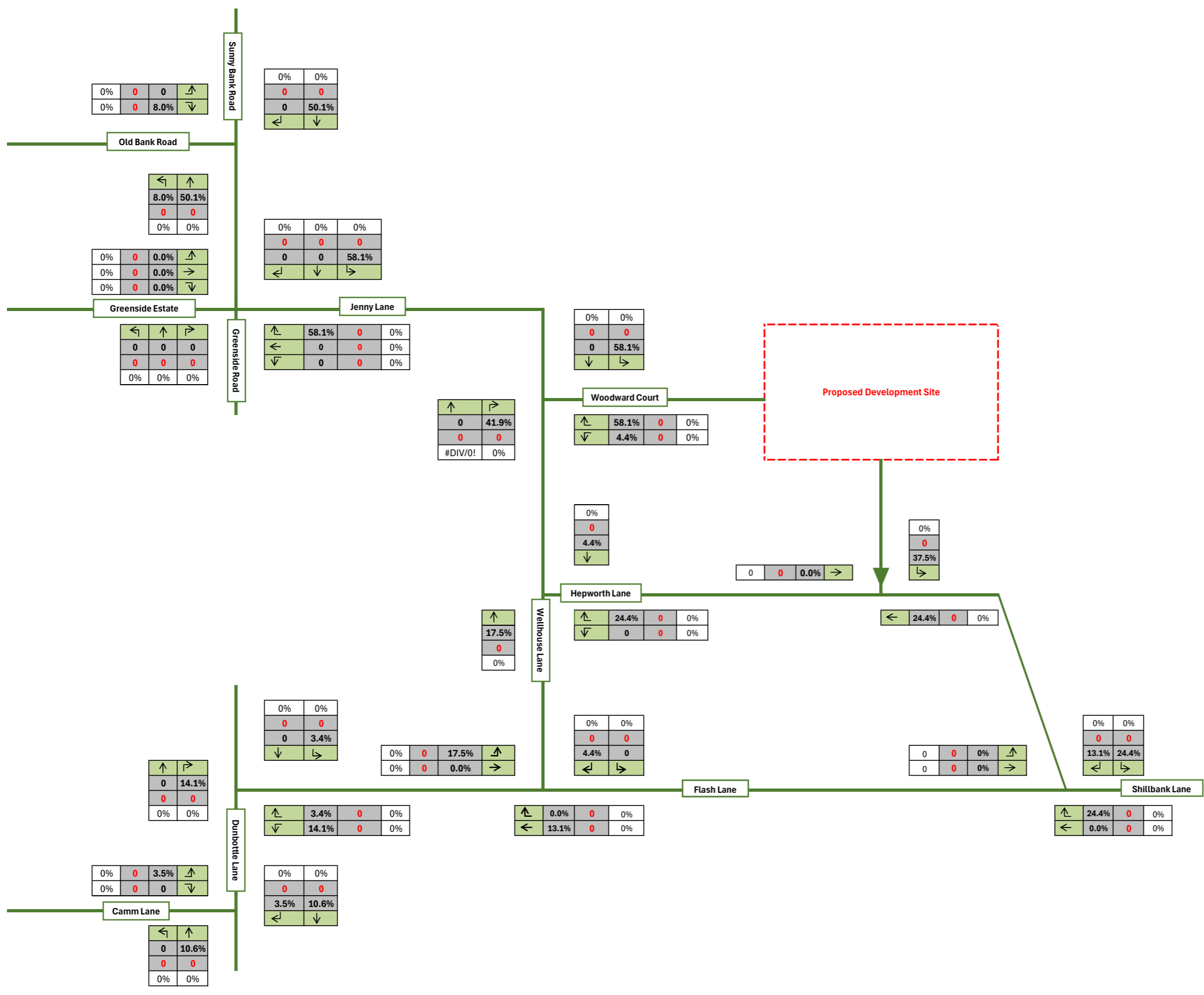
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Job Number	25033
Date	02/12/2025
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Key:

0% Distribution

Title:

RESIDENTIAL DEVELOPMENT  
DISTRIBUTION

Project:

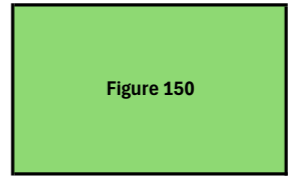
Woodward Court, Mirfield

Client:

Bellway Homes Limited (Yorkshire)

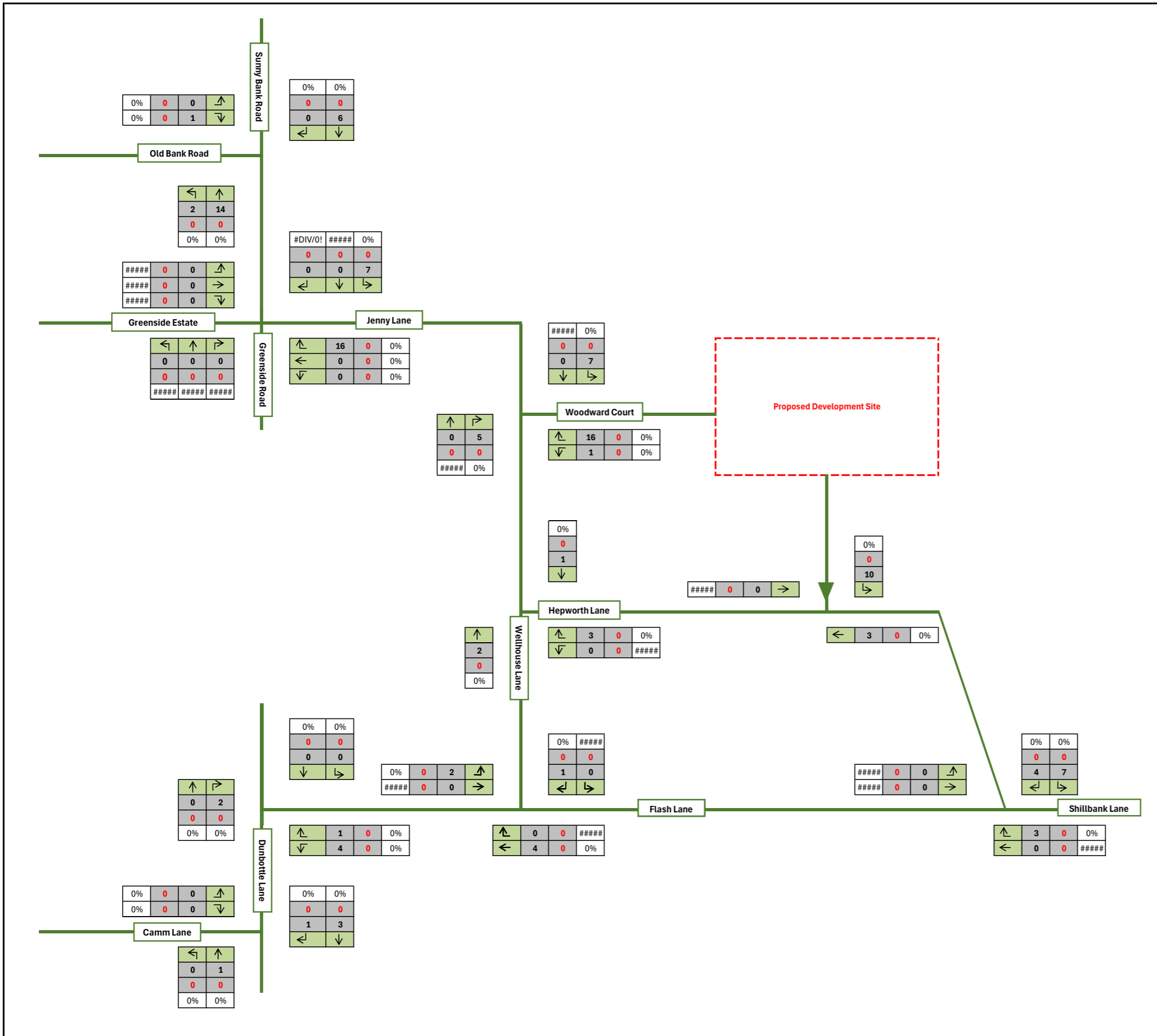
Quality Control:

Job Number	25033
Date	02/12/2025
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**Key:**

0	Total Vehicles
0	Total HGV
0%	HGV Percentage

**Title:**

AM PEAK HOUR DEVELOPMENT TRIP GENERATIONS

**Project:**

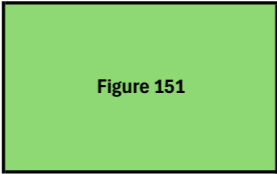
Woodward Court, Mirfield

**Client:**

Bellway Homes Limited (Yorkshire)

**Quality Control:**

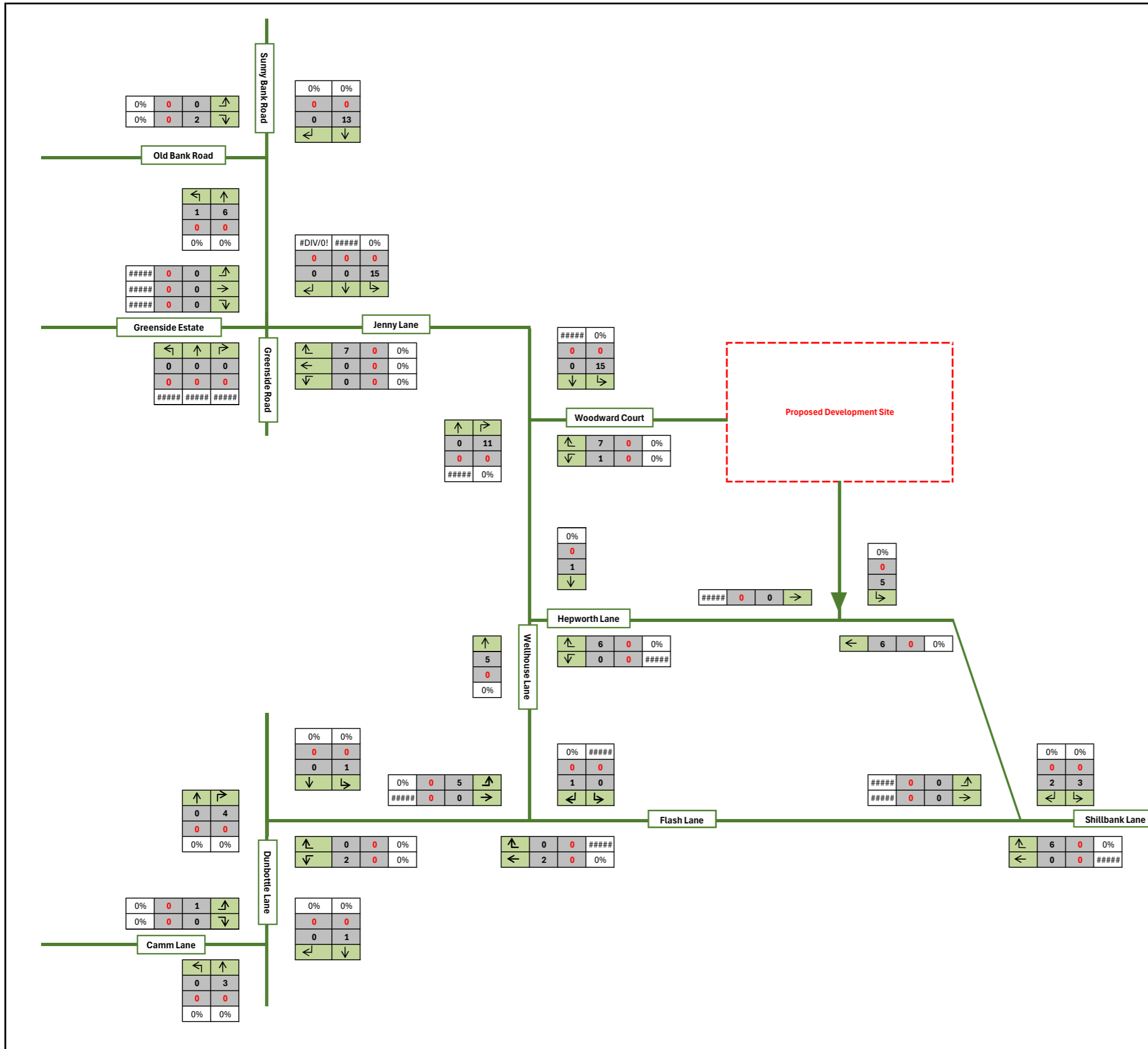
Job Number	25033
Date	02/12/2025
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**Key:**

0	Total Vehicles
0	Total HGV
0%	HGV Percentage

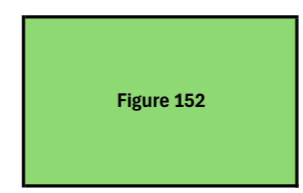
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PM PEAK HOUR DEVELOPMENT TRIP GENERATIONS

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

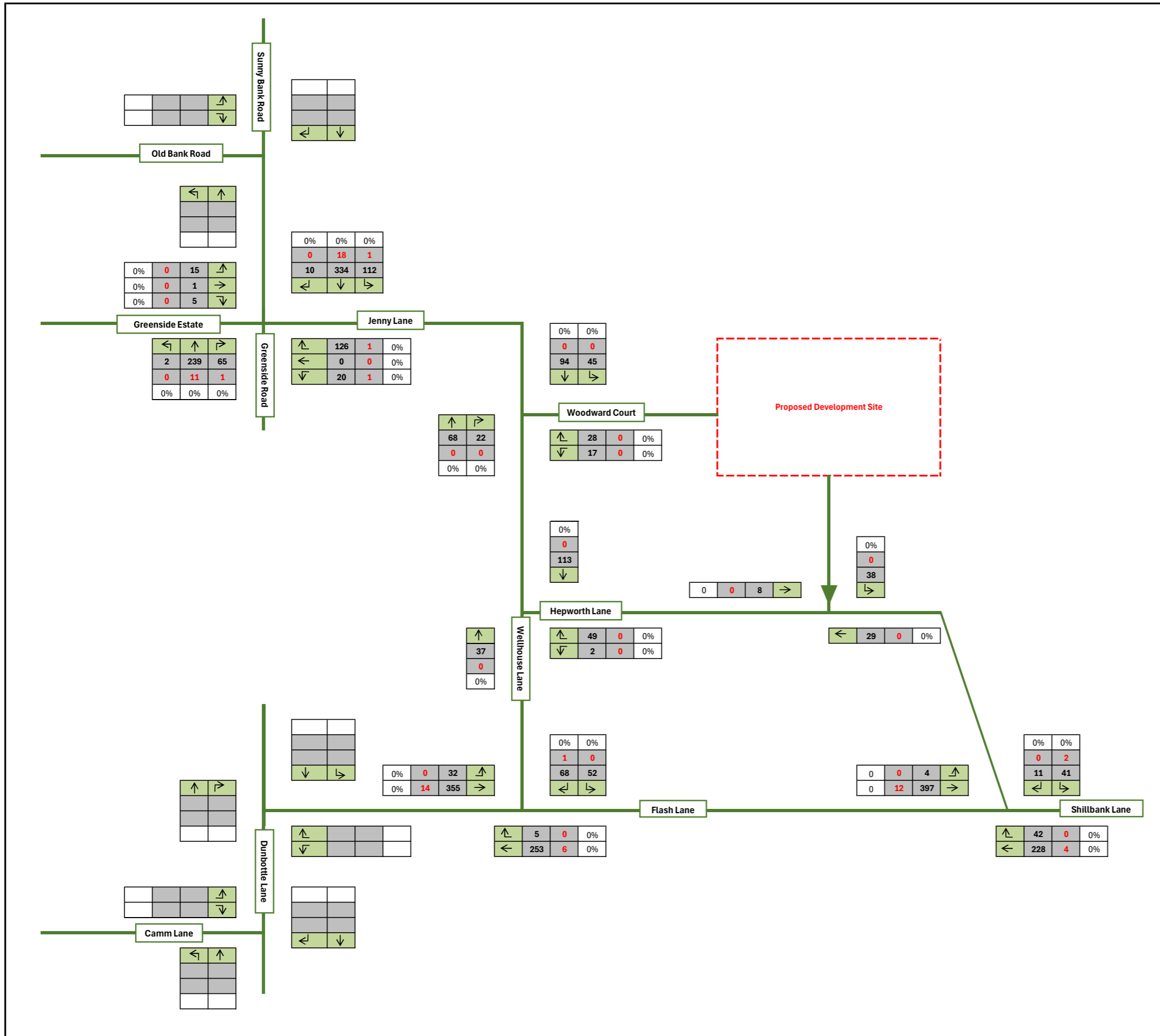
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Job Number	25033
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**Key:**

- 0 Total Vehicles
- 0 Total HGV
- 0% HGV Percentage

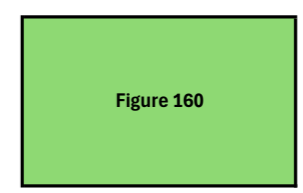
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2030 AM PEAK HOUR DESIGN TRAFFIC FLOWS

**Project:**  
Woodward Court, Mirfield

**Client:**  
Bellway Homes Limited (Yorkshire)

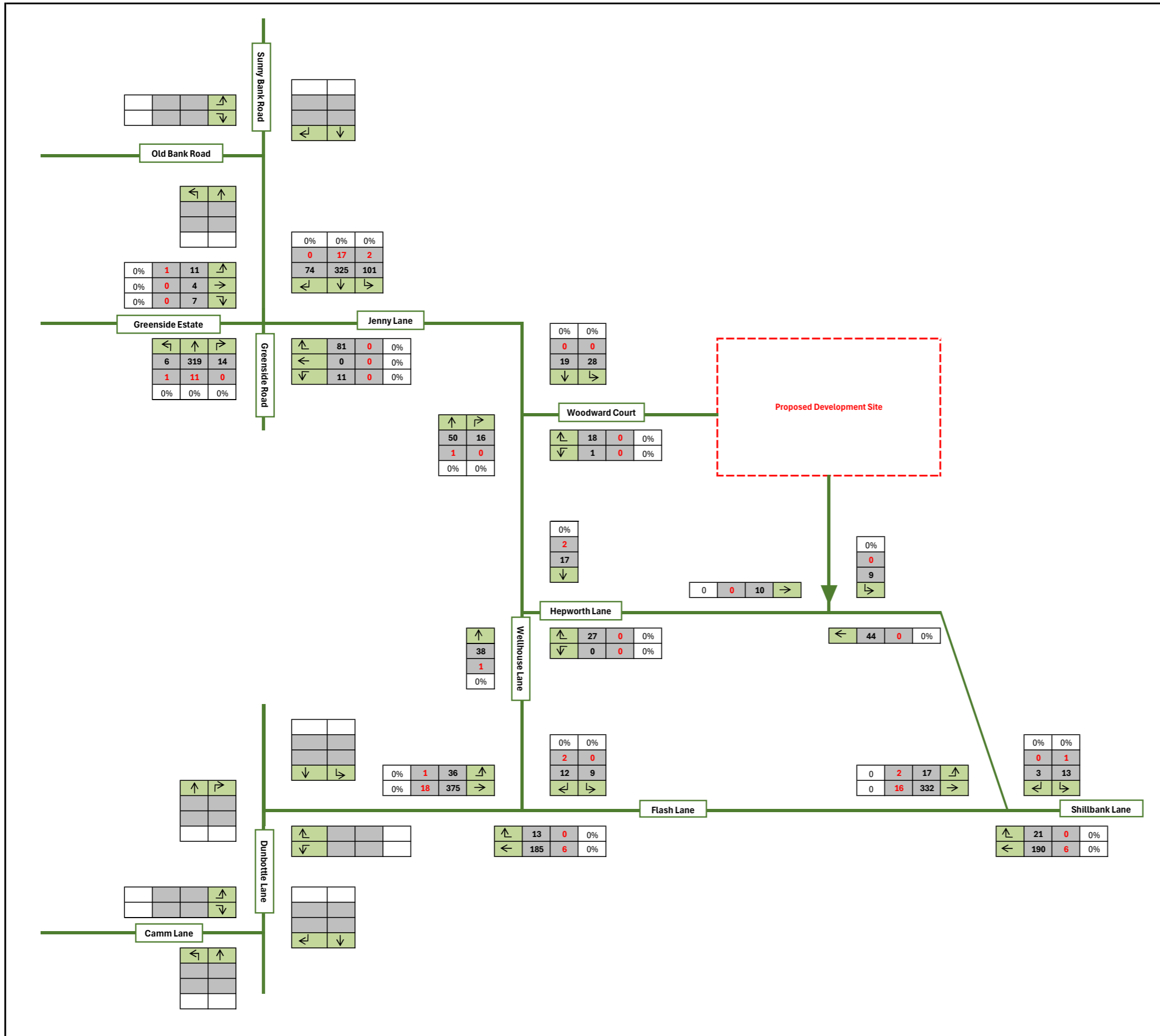
**Quality Control:**

Job Number	25033
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**Key:**  
 0 Total Vehicles  
 0 Total HGV  
 0% HGV Percentage

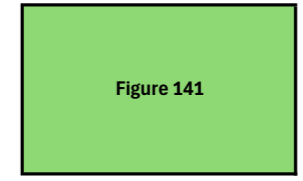
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 2030 PM PEAK HOUR DESIGN TRAFFIC FLOWS

**Project:**  
 Woodward Court, Mirfield

**Client:**  
 Bellway Homes Limited (Yorkshire)

**Quality Control:**

Job Number	25033
Date	02/12/2025
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# Appendices



## **Appendix A 2017/93935/E Application Decision Notice & Highways Consultation Responses (last updated 4<sup>th</sup> October 2018).**



**KIRKLEES METROPOLITAN COUNCIL  
INVESTMENT & REGENERATION SERVICE**

**DEVELOPMENT MANAGEMENT**

**Town and Country Planning Act 1990 (as amended) – SECTION 70**

**DELEGATED DECISION TO DETERMINE PLANNING APPLICATIONS**

**Reference No:** 2017/62/93935/E

**Site Address:** Land off, Woodward Court, Mirfield

**Description:** Erection of 61 dwellings with associated access, drainage, open space and landscaping

**Recommending Officer:** Matthew Woodward

**DECISION - Refused**

**I hereby authorise the refusal of this application for the reasons set out in the agenda of the Strategic Planning Committee dated 25/10/18 and the committee decision authorisation sheet annexed below in respect of the above matter.**

David Wordsworth

***AUTHORISED OFFICER***

**Date: 29-Oct-2018**

Decision Authorisation – Committee Decision

**Committee:** Strategic Planning Committee

**Date of Committee:** 25th October 2018

**Application Number:** 207/93935

**Officer Recommendation:** Approve subject to conditions and S106 Agreement

**Committee Decision:** Refuse

**Summary of Committee Decision** – Committee did not agree with the officer recommendation and considered that the development of Provisional Open Land (POL) and a future Safeguarded designation was unacceptable in principle.

Members also considered that the scheme represented unacceptable highway safety impacts.

- 1) The site is designated as Provision Open Land in the Kirklees Unitary Development Plan, the proposed development conflicts with Unitary Development Plan policy D5. The site is designated as Safeguarded in the Kirklees Publication Draft Local Plan which commands very significant weight as a material planning consideration in the determination of this application. The proposal conflicts with policy PLP6 of the Kirklees Publication Draft Local Plan as permanent forms of development, such as that proposed in this application, which prejudice the long term development options of the land, should only be considered through a change to the allocation through a review of the local plan. The benefits associated with the provision of housing in this case are significantly and demonstrably outweighed by the harm arising from the conflict with the current Provisional Open Land Designation and the emerging Safeguarded designation, contrary to paragraph 139(d) of the National Planning Policy Framework.
- 2) The proposed development would lead to additional traffic impacts on an already constrained local highway network which, by virtue of the existing network of narrow roads, the close proximity of the proposal to the existing school (Crossley Fields Junior and Infant School), and the substandard visibility at the junction of Woodward Court and Wellhouse Lane, would result in an unsafe development which would fail to acceptably mitigate the degree of conflict between all users. The proposed development would lead to an unacceptable highway safety impact, contrary to paragraph 109 of the National Planning Policy

Framework, policy T10 of the Kirklees Unitary Development Plan and policy PLP21 of Kirklees Publication Draft Local Plan.

Plans and specifications schedule:-

<b>Plan Type</b>	<b>Reference</b>	<b>Version</b>	<b>Date Received</b>
House Type	1731-A3-T1.01		
House Type	1731-ACAC-T1.AS		
House Type	1731-A2-T1.01		
House Type	1731-BESW-T3.01		
House Type	1731-ACAC-T1.OP		
House Type	1731-HAMB-T1.AS		17/11/2017
House Type	1731-HAMB-T1.OP		17/11/2017
House Type	1731-HAMB-T2.OP		17/11/2017
House Type	1731-HAWT-T1.AS		17/11/2017
House Type	1731-HAMB-T1.OP		17/11/2017
House Type	1731-HAMB-T2.OP		17/11/2017
House Type	1731-HAWT-T1.AS		17/11/2017
House Type	1731-HAWT-T1.OP		17/11/2017
House Type	1731-HAMB-T2.AS		17/11/2017
House Type	1731-MIDD-T1.AS		17/11/2017
House Type	1731-MULB-T1.AS		17/11/2017
House Type	1731-MIDD-T1.AS		17/11/2017
House Type	1731-ROSE-T1.AS		17/11/2017
House Type	1731-WICK-T1.AS		17/11/2017
House Type	1731-WICK-T1.OP		17/11/2017
House Type	1731-WICK-T2.AS		17/11/2017
House Type	1731-MIDD-T3.AS		17/11/2017
Garage Type	T_SG2 - Single garage		17/11/2017
Garage Type	T_DB2 - Double garage		17/11/2017
House Type	1731-MULB-T1.OP		17/11/2017
Location Plan	1731.02 - Location plan		17/11/2017
Cross-section	1731.05.A	A	09/04/2018
Materials	176		09/04/2018
House Type	MIDD-T1-AS		09/04/2018
Levels Plan with potential route			11/04/2018
House Type	1731-Wick-T2. OP		09/04/2018
Drainage	41034_001K		08/06/2018
Public Open Space	R-2082-1F	F	27/09/2018
Street Scenes	1731.03.B		27/09/2018
Cross-sections	1731.05.B		27/09/2018
House Type	1731-WICK-T2.OP		27/09/2018
Tracking	PL-20042-006	B	02/10/2018
Planning Layout	1731.01.L	L	01/10/2018
Private/Public Plan	1731.10.C	C	01/10/2018

<b>Plan Type</b>	<b>Reference</b>	<b>Version</b>	<b>Date Received</b>
Main Road and Sewer	5841_14C	C	03/10/2018
Drainage Appraisal	41034-001K	K	12/10/2018
Plot Drainage 1	5841_30_01A	A	15/10/2018
Plot Drainage 2	5841_30_02A	A	15/10/2018
Highways Soakaway	5841_41A	A	15/10/2018
Design and Access Statement		V2	20/12/2017
Street Scenes	1731.03		17/11/2017
Arboricultural Report(1)	13602		17/11/2017
Tree Constraints Plan			17/11/2017
Ecological Statement			20/11/2017
Flood Risk Assessment			20/11/2017
Transport Assessment			20/12/2017
Mirfield Heritage Statement Revised			20/12/2017
Ecological Appraisal	R-2937-03.2		09/04/2018
Balderstone Hall Additional Information Heritage Report			09/04/2018
Archaeological Report			09/04/2018
Highways Technical Note			09/04/2018
Geo-environmental Report	1668/1E		09/04/2018
Plot Soakaway Maintenance	41034-001		09/04/2018
Review of Geology and Drainage			09/04/2018
Letter from applicant to address previous points of concern			09/04/2018
Additional letter from application to support Coal Mining Risk Assessment			09/04/2018
Addition information to support Coal Mining Risk Assessment			09/04/2018
Example materials			09/04/2018
Example materials			09/04/2018
Example materials			09/04/2018
Example materials			09/04/2018
Soakaways Results			02/05/2018
Archaeology Assessment Additional Statement			15/05/2018
Letter from applicant to LPA			08/06/2018

<b>Plan Type</b>	<b>Reference</b>	<b>Version</b>	<b>Date Received</b>
Archaeological Evaluation			03/07/2018
Additional Ground Investigation Report			03/07/2018
Soil Strip and Coal Mining Legacy Information	056A		27/09/2018
Trial Trenching Evaluation	8360	2	27/09/2018
Supporting information from applicant			01/10/2018
Letter concerning Soil Stripping	015B		01/10/2018

Pursuant to article 35 (2) of the Town and Country Planning (Development Management Procedure) Order 2015 and guidance in the National Planning Policy Framework, the Local Planning Authority have, where possible, made a pre-application advice service available, complied with the Kirklees Development Management Charter 2015 and otherwise actively engaged with the applicant in dealing with the application. The applicant was approached concerning amendments to the application and the applicant submitted a number of amended plans altering the layout and design of the scheme. Additional information was provided concerning highway impacts, drainage, coal mining risk, public open space and heritage at the request of officers. For the reason set out in the reason for refusal the development would not improve the environmental conditions of the area and is considered to represent an unsustainable form of development.

**Report Dated:** 29/10/2018

**KIRKLEES COUNCIL  
TOWN AND COUNTRY PLANNING ACT 1990  
HIGHWAYS DEVELOPMENT MANAGEMENT**

**PLANNING REF** 2017/62/93935/E0/MW  
**CATEGORY** Small Major

**PROPOSAL** ERECTION OF 61 DWELLINGS  
WITH ASSOCIATED  
ACCESS, DRAINAGE, OPEN SPACE  
AND LANDSCAPING

**LOCATION** LAND OFF WOODWARD COURT  
MIRFIELD

**APPLICANT** DPP

**HDC Ref. No.** K14-2SW/6  
**Highway Officer** Ryan Kinder  
**O. S. Ref.** 209 210  
**Date Received** 02/10/2018  
**Target Date** 09/10/2018  
**Date Returned** 09/10/2018  
**Decision**  
**Route No.** Unclassified  
**Road Name** WOODWARD COURT  
**Adopted** Yes  
**Footpath** MIR 19-10  
**Footpath** pro w emailed 29/11/17  
**Highway scheme** Yes  
TROS NEAR  
**Potential Committee** Yes  
**Local Plan Allocatio**  
**Checked by / date** Sam Lewis 29/11/2017

2017/93935 Woodward Court, Mirfield.

Highway Development Management's (HDM) comments for the above application as follows:

Planning application for the residential development of 61 dwellings made up of 6 no 2 bed units, 25 no 3 bed units and 30 no 4 bed units on land adjacent to Woodward court.

Updated comments 09/10/2018

Further to submission of revised layout (ref 1731.01REV-M), the parking arrangements for plots 11, 12 and 19 are considered acceptable.

HDM still have concerns with the internal layout with regard to possible removal of two turning heads adjacent plots 39 & 42 to form a loop/connecting layout.

-----  
Updated comments 04/10/2018

Further to submission of revised layout (ref 1731.01REV-L), due to the proximity of coal mining features

HDM still have concerns with the internal layout with regard to possible removal of two turning heads adjacent plots 39 & 42 to form a loop/connecting layout.

There is a shortage of off street parking for plots 11, 12 and 19- 3 no off street spaces per dwelling should be provided for each unit of this size. Whilst it's acknowledged that in isolation this shortfall has been accepted previously by HDM, due to the close relationship of these dwellings, there is concern that potential conflict may occur on street leading to obstructions, in particular for refuse collection vehicles.

The current arrangement is therefore not considered acceptable from a HDM prospective.

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Updated comments dated 12/06/2018

Further to submission of revised layout (ref 1731.01REV-G), the parking arrangements for each property is considered acceptable and in line with the Councils parking policy.

HDM still have concerns with the internal layout with regard to possible removal of two turning heads adjacent plots 39 & 42 to form a loop/connecting layout.

Notwithstanding the turning head concerns the proposal would be considered acceptable overall. If planning are minded to approve the application the following highways related conditions should be included.

#### Areas to be surfaced and drained

Unless otherwise agreed in writing, prior to the development being brought into use, the approved vehicle parking areas shall be surfaced and drained in accordance with the Communities and Local Government; and Environment Agencies 'Guidance on the permeable surfacing of front gardens (parking areas)' published 13th May 2009 (ISBN 9781409804864) as amended or superceded; and thereafter retained throughout the lifetime of the development.

Reason: In the interests of highway safety and to achieve a satisfactory layout.

#### Details of junction of new estate road

No development shall take place until details of the junction and associated highway works, between the proposed estate road and Woodward Court have been approved in writing by the Local Planning Authority. No building shall be occupied until the works to provide the junction have been completed in accordance with the approved details.

Reason: To ensure that suitable access is available for the development.

HWNOTE3 The details shall include full sections, details of speed reducing features, construction specifications, drainage works, lighting, signage, white lining, surface finishes, treatment of sight lines together with an independent safety audit covering all aspects of the works.

#### Travel Plan to be submitted

Within the first 3 months of any part of the development being brought into use a travel plan shall be submitted to and approved in writing by the LPA. The travel plan shall include measures to improve and encourage the use of sustainable transport. The measures will include as a minimum:

- the provision of 'live' and other bus/train information;
- provision of METRO passes;
- car sharing facilities
- the upgrade of bus stops and shelters where necessary;
- the introduction of working practices to reduce travel demand and
- the provision of on site cycle facilities and information.

The Travel Plan will include details of when these measures will be introduced.

To support the promotion of the use of sustainable modes the travel plan will also include: how the travel plan will be managed; targets aimed at lowering car use, particularly single occupancy trips, from/to the site; a program for monitoring the travel plan and its progress and how the travel plan and its objective of more sustainable travel will be promoted. The approved travel plan shall thereafter retained throughout the lifetime of the development unless otherwise agreed in writing by the LPA.

Reason: To comply with the Council's sustainability objectives.

#### Internal adoptable roads

No development shall take place until a scheme detailing the proposed internal adoptable estate roads have been submitted to and approved in writing by the Local Planning Authority. The scheme shall include full sections, drainage works, street lighting, signing, surface finishes and the treatment of sight lines, together with an independent safety audit covering all aspects of work. Before any building is brought into use the scheme shall be completed in accordance with the scheme shown on approved plans and retained thereafter.

Reason: To ensure that suitable access is available for the development.

#### Provision of Traffic Calming

Unless otherwise agreed in writing, prior to development commencing, a detailed scheme for the provision Traffic Calming along Wellhouse Lane with associated signing and white lining shall be submitted to and approved in writing by the LPA. The scheme shall include construction specifications, white lining, signing, surface finishes together with an independent Safety Audit covering all aspects of the work. Unless otherwise agreed in writing by the LPA, all of the agreed works shall be implemented before any part of the development is first brought into use.

Reason: In the interests of highway safety and to achieve a satisfactory layout.

#### Construction access

Prior to construction commencing, a schedule of the means of access to the site for construction traffic shall be submitted to and approved in writing by the LPA. The schedule shall include the point of access for construction traffic, details of the times of use of the access, the routing of construction traffic to and from the site, construction workers parking facilities and the provision, use and retention of adequate wheel washing facilities within the site. Unless otherwise agreed in writing by the LPA, all construction arrangements shall be carried out in accordance with the approved schedule throughout the period of construction.

#### Defects Survey

The development shall not commence until a survey of the existing condition of the highway on ----- Woodward Court has been submitted to and approved in writing by the Local Planning Authority. The survey shall include carriageway and footway surfacing, verges, kerbs, edgings, street lighting, signing and white lining. Upon completion of the development and before any building is occupied a highway condition survey identifying a scheme to reinstate any subsequent defects in the condition of the highway on Woodward Court shall be submitted to and approved in writing by the Local Planning

**KIRKLEES COUNCIL  
TOWN AND COUNTRY PLANNING ACT 1990  
HIGHWAYS DEVELOPMENT MANAGEMENT**

**PLANNING REF** 2017/62/93935/E0/MW  
**CATEGORY** Small Major

Authority.

All of the identified works shall be implemented before any part of the development is first brought into use.

Reason: In the interests of highway safety and to ensure the maintenance of the highway

Retaining Walls

No development shall take place until details of the siting, design, structural calculations and material to be used in the construction of retaining walls/ structures near or abutting highway have been approved in writing by the Highways Structures.

Thereafter the development shall not be brought into use until the approved works have been constructed. The said works shall be maintained throughout the life time of the development.

Reason: To ensure that any new retaining structures do not compromise the stability of the highway.

FOOTNOTE (Adoption under Section 38 of the Highways Act)

Footnote; - Adoption under Section 38 of the Highways Act:

It is brought to the Applicants' notice that the Highway Development, Investment & Regeneration, Civic Centre 3, Market Street, Huddersfield HD1 2JR (Kirklees Street Care: 0800 7318765 or 'Highways.Section38@kirklees.gov.uk') must be contacted to discuss road adoption arrangements under Section 38 of the Highways Act 1980.

FOOTNOTE

The granting of planning permission does not authorise the carrying out of works within the highway, for which the written permission of the Council as Highway Authority is required. You are required to consult the Design Engineer, Flint Street, Fartown, Huddersfield (Kirklees Street Care: 0800 7318765) with regard to obtaining this permission and approval of the construction specification. Please also note that the construction of vehicle crossings within the highway is deemed to be major works for the purposes of the New Roads and Street Works Act 1991 (Section 84 and 85). Interference with the highway without such permission is an offence which could lead to prosecution.

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Previous comments dated 22/01/2018

Pre application discussions were undertaken with the applicant and the applicants highways consultant WSP, a scope for the Transport Assessment was reached on the 14 March 2017.

Subsequently a formal planning application was submitted with a planning layout dwg (ref 1731.01) along with a transport statement from Andrew Moseley associates (ref 20042-001).

Updated comments 18/04/2018

Following previous HDM comments an addendum was submitted by Andrew Moseley associates dated 5th April 2018, the updated comments below are in relation to this and revised drawing submitted (ref 1731.01-rev E)

1.Road safety Audit Stage 1.

Following the stage 1 safety audit it was recommended to relocate the junction plateau and replaced with a speed hump to the north of the junction. This has been investigated further by AMA associated

and it is suggested that the junction plateau should remain as proposed to aid pedestrian movement at the junction of Woodward Court, in particular at busy school periods.

HDM consider this proposal acceptable from a highways prospective.

#### 2.Revised traffic calming proposals.

The proposed traffic calming has been relocated slightly to avoid conflict with driveways, the plateau at the junction of Woodward Court has been extended further into Woodward Court to aid vehicle manoeuvres when entering the junction (in particular motorcycles).

The revision to the traffic calming is considered to be acceptable from a HDM prospective.

#### 3.Speed Surveys

The speed surveys provided (ref appendix E) were undertaken at the achievable visibility splays (2.4m x Y distance), in this instance these are 31m at the northern splay and 43m at the southern splay. The location of the speed surveys are marked on the speed survey location points plan within appendix E. The speed surveys undertaken have been indicated to be within the limits of achievable visibility splays and in dry conditions. The results of the speed surveys have been adjusted to include the wet weather calculation.

To conclude HDM consider this information to be accurate and accept both the results and achievable splays in line with the proposed traffic calming to regulate vehicles to an appropriate speed along Wellhouse Lane.

#### 4.Wellhouse Lane existing parking and control.

During school pick up and drop off time on site observations indicate that parking occurs along the Southern side of the junction with Woodward Court along Wellhouse Lane, however it has been noted by the Councils Highway Safety department that on occasion vehicles have parked on Northern Side of Wellhouse Lane. To ensure this issue is resolved, waiting restrictions are to be provided along Wellhouse Lane on the northern side of the road.

The provision of waiting restrictions would be considered appropriate to deter any parking on the northern side of Wellhouse Lane on the approach to Woodward Court. This would ensure that vehicles travelling along Wellhouse Lane towards the junction are travelling on the correct side of the road not having to overtake any parked vehicles and in the sightlines of traffic emerging from the junction of Woodward Court.

#### 5.Accident data.

The accident data has been provided up to the latest information available. Jan 2012 to Dec 2017.

An additional check has been carried out by the council and can confirm no accidents between 01-02-2013 and 31-01-2018 within a 60m radius of the junction of Woodward Court.

#### 6.Parking provision

The proposals have included the following parking provision:

- 2 - 3 bedroom dwelling: 2 spaces
- 4+ bedroom dwelling: 3 spaces
- 1 visitor space per 4 residential units

1 cycle space per residential unit (desirable)

Garage dimensions (Internal):

Single: 6.0m long x 3.0m wide  
Double: 6.0m long x 5.0m wide

1 electric vehicle charging connection point per dwelling (normally within a garage).

The Council would not wish to see triple width driveways to property frontages this arrangement, all garages should be of the size stated above to count as a parking space, the existing arrangement for internal garage sizes should be reconsidered accordingly.

7.Trip Generation sensitivity test/School Times.

The revised trip generation figures submitted assesses the traffic impact of the development being in the region of 0.7 two way trips per dwelling, this will generate 43 two way movements in the AM 08:00-09:00) and PM17:00-18:00) peak periods.

A comparison to the school peak times which overlaps in the AM only within this period 08:30-9:00 generating 18 two way vehicle movements. The PM school peak of 15:15 – 15:45 generating 14 two way movements.

HDM consider that this development would not have an adverse effect during the school peak periods with AM having some overlap only.

#### 8.Internal Layout

There are two turning heads proposed internally within the site, these have been designed to accommodate a refuse collection vehicle.

To improve connectivity the two turning heads should be connected and built to an adoptable standard. Swept paths for an 11.85m is also required.

HDM would raise concerns over a number of outstanding matters as mentioned above, further information is required relating to these to enable an informed assessment.

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Previous comments dated 22/01/2018

The following Highways Development Management comments are based on the information submitted by Andrew Moseley associates and DPP.

1.Context –Local Highway Network.

Woodward Court is a traditional estate road in character serving approximately 14 properties. From its junction Wellhouse Lane there are 3 vehicular routes connecting with the wider highway network. Wellhouse Lane (two way northbound) to Greenside Road via Jenny Lane, Wellhouse Lane (two way southbound) to Flash Lane, and Hepworth Lane (one way Flash Lane/Shillbank Lane to Wellhouse Lane).

Including side roads bounded by Crossley Lane and Greenside Road, these roads which are subject to a 30mph speed limit serve approximately 350 properties and Crossley Fields Junior School.

Submitted transport Statement by Andrew Moseley Associated ref 20042-001

### Section 3 PROPOSED DEVELOPMENT

#### 3.4.2

Speed surveys, a location of the point that the speed surveys were taken needs indicating, the surveys should have been taken at the location of the achievable extents of visibility.

#### 3.4.4

Seven day speed data and base flows, this information should be presented and summarised in a more legible way, this information is not presented in an acceptable form at present.

#### 3.4.6

It has been suggested that vehicles sometimes park on Well house lane on the Northern approach to Woodward Court. This would make the visibility achievable invalid as drivers would approach on the wrong side of the road. Possible parking restrictions may need to be investigated to resolve this issue.

#### 3.4.7

The accident date is not up to date, accident data should be provided up to the end of October 2017.

#### 3.6

Parking provision, the proposed parking should be in line with the councils parking policy as outlined in the internal layout comments below.

### Section 6 POTENTIAL DEVELOPMENT IMPACTS

#### 6.2.1

Highways Development Management considers trip rates in the region of 0.7 per dwelling to be more representative of new residential development within the Kirklees area and as such further clarification and discussion with the applicant is required in this regard. Previous agreed TRICS data (as per Sanderson TA submission ref 2014/91282) should be adopted for this site.

#### General comments

During the period running up and after the school start (0855hrs) and finish (1520hrs) and (1530hrs) times Woodward court is heavily parked up by parents taking their children to and from school. Conflicting vehicle movements together with adult and children pedestrian movements are not uncommon during these periods.

No information has been provided on the school peak periods and how this will affect the network and TRIP distributions.

No information has been provided in relation to how any liaison with the school has been carried out to

manage the parking situation on Woodward Court.  
No junction analysis has been provided on the surrounding network in terms of on street parking data/surveys, queuing observations at school start and finish times.

#### Woodward Court Junction with Wellhouse Lane - Visibility

With regard to visibility along Wellhouse Lane from the junction of Woodward Court, speed readings have been undertaken and details summarised in the Transport Statement. The location that the speed readings have been undertaken should be confirmed, further discussions in relation to this will need to be agreed with Highways Development Management.

#### Internal Layout

In line with the councils parking policy the following parking provision should be provided:

- 2 - 3 bedroom dwelling: 2 spaces
- 4+ bedroom dwelling: 3 spaces
- 1 visitor space per 4 residential units
- 1 cycle space per residential unit (desirable)

#### Garage dimensions (Internal):

- Single: 6.0m long x 3.0m wide
- Double: 6.0m long x 5.0m wide

1 electric vehicle charging connection point per dwelling (normally within a garage).

The internal layout should be designed to maintain vehicle speeds of 15 -20 mph, this ideally should be achieved through horizontal alignment.

The two turning heads at the north east end of the site should be linked together to form a circular route, this will remove isolation for residents and ensure refuse collection is carried out more efficiently. A plan with vehicle swept paths for refuse collection vehicles 11.85m in length, and two way movements on the spinal roads will also need to be demonstrated.

There is currently no provision for refuse storage within the property boundaries or refuse collection points adjacent to private driveways. Before development commences details of storage and access for collection of wastes from the premises will need to be provided.

Plans detailing the proposed internal adoptable estate roads should be submitted and approved in writing by the Local Planning Authority. The scheme should include full sections, drainage works, street lighting, signing, surface finishes and the treatment of sight lines, together with an independent safety audit covering all aspects of work.

#### Section 38 Issues

2.0m transitions should be provided at end of footways after ramps onto shared surface areas for pedestrians.

Plans indicating full sections and proposed gradients should be provided.

Individual single width driveways should be a minimum width of 3.0m

Further discussions should be carried out as soon as practically possible with our section 38 department to avoid any adoption issues.

A stage 1 safety audit should be carried out on the proposed highway works and internal layout and submitted accordingly.

WYCA have been consulted and they make the following comments:  
Other comments:

To encourage the use of sustainable transport as a realistic alternative to the car, the developer needs to fund a package of sustainable travel measures. We recommend that the developer contributes towards sustainable travel incentives to encourage the use of sustainable modes of transport. Leeds City Council have recently introduced a sustainable travel fund. The fund can be used to purchase a range of sustainable travel measures including discounted MetroCards (Residential MetroCard Scheme) for all or part of the site. This model could be used at this site.

The payment schedule, mechanism and administration of the fund would have to be agreed with Kirklees Council and WYCA and detailed in a planning condition or S106 agreement. As an indication of the cost should the normal RMC scheme be applied based on a bus only ticket, the contribution appropriate for this development would be £30,195.00. This equates to Bus Only Residential MCards.

A link should be provided to the existing PROW at the southern end of the site.

Further information is requested based on the comments raised above. Please also see separate consultation responses from the councils Lead Local Flood, and Landscape departments.

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**Town and Country Planning Act 1990**

**Town and Country Planning (Development Management Procedure) (England)  
Order 2015**

**REFUSAL OF PERMISSION FOR DEVELOPMENT**

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**Application Number: 2017/62/93935/E**

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**To:** Claire Linley,  
DPP  
1, City Square  
Leeds  
LS1 2ES

**For:** Bellway Homes Ltd (Yorkshire Division)

**In pursuance of its powers under the above-mentioned Act and Order the KIRKLEES COUNCIL (hereinafter called "The Council") as Local Planning Authority hereby refuses to permit:-**

ERECTION OF 61 DWELLINGS WITH ASSOCIATED ACCESS, DRAINAGE,  
OPEN SPACE AND LANDSCAPING

**At:** LAND OFF, WOODWARD COURT, MIRFIELD

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**In accordance with the plan(s) and applications submitted to the Council on 22-Nov-2017. The reasons for the Council's decision to refuse permission for the development are:**

1) The site is designated as Provision Open Land in the Kirklees Unitary Development Plan, the proposed development conflicts with Unitary Development Plan Policy D5. The site is designated as Safeguarded in the Kirklees Publication Draft Local Plan which commands very significant weight as a material planning consideration in the determination of this application. The proposal conflicts with Policy PLP6 of the Kirklees Publication Draft Local Plan as permanent forms of development, such as that proposed in this application, which prejudice the long term development options of the land, should only be considered through a change to the allocation through a review of the local plan. The benefits associated with the provision of housing in this case are significantly and demonstrably outweighed by the harm arising from the conflict with the current Provisional Open Land Designation and the emerging Safeguarded designation, contrary to paragraph 139(d) of the National Planning Policy Framework.

2) The proposed development would lead to additional traffic impacts on an already constrained local highway network which, by virtue of the existing network of narrow roads, the close proximity of the proposal to the existing school (Crossley Fields Junior and Infant School), and the substandard visibility at the junction of Woodward Court and Wellhouse Lane, would result in an unsafe development which would fail to acceptably mitigate the degree of conflict between all users. The proposed development would lead to an unacceptable highway safety impact, contrary to paragraph 109 of the National Planning Policy Framework, Policy T10 of the Kirklees Unitary Development Plan and Policy PLP21 of Kirklees Publication Draft Local Plan.

Plans and specifications schedule:-

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Levels Plan with potential route			11/04/2018
House Type	1731-Wick-T2. OP		09/04/2018
Drainage	41034_001K		08/06/2018
Public Open Space	R-2082-1F	F	27/09/2018
Street Scenes	1731.03.B		27/09/2018

<b>Plan Type</b>	<b>Reference</b>	<b>Version</b>	<b>Date Received</b>
Cross-sections	1731.05.B		27/09/2018
House Type	1731-WICK-T2.OP		27/09/2018
Tracking	PL-20042-006	B	02/10/2018
Planning Layout	1731.01.L	L	01/10/2018
Private/Public Plan	1731.10.C	C	01/10/2018
Main Road and Sewer	5841_14C	C	03/10/2018
Drainage Appraisal	41034-001K	K	12/10/2018
Plot Drainage 1	5841_30_01A	A	15/10/2018
Plot Drainage 2	5841_30_02A	A	15/10/2018
Highways Soakaway	5841_41A	A	15/10/2018
Design and Access Statement		V2	20/12/2017
Street Scenes	1731.03		17/11/2017
Arboricultural Report(1)	13602		17/11/2017
Tree Constraints Plan			17/11/2017
Ecological Statement			20/11/2017
Flood Risk Assessment			20/11/2017
Transport Assessment			20/12/2017
Mirfield Heritage Statement Revised			20/12/2017
Ecological Appraisal	R-2937-03.2		09/04/2018
Balderstone Hall Additional Information Heritage Report			09/04/2018
Archaeological Report			09/04/2018
Highways Technical Note			09/04/2018
Geo-environmental Report	1668/1E		09/04/2018
Plot Soakaway Maintenance	41034-001		09/04/2018
Review of Geology and Drainage			09/04/2018
Letter from applicant to address previous points of concern			09/04/2018
Additional letter from application to support Coal Mining Risk Assessment			09/04/2018
Addition information to support Coal Mining Risk Assessment			09/04/2018
Example materials			09/04/2018
Example materials			09/04/2018
Example materials			09/04/2018
Example materials			09/04/2018
Soakaways Results			02/05/2018

<b>Plan Type</b>	<b>Reference</b>	<b>Version</b>	<b>Date Received</b>
Archaeology Assessment Additional Statement			15/05/2018
Letter from applicant to LPA			08/06/2018
Archaeological Evaluation			03/07/2018
Additional Ground Investigation Report			03/07/2018
Soil Strip and Coal Mining Legacy Information	056A		27/09/2018
Trial Trenching Evaluation	8360	2	27/09/2018
Supporting information from applicant			01/10/2018
Letter concerning Soil Stripping	015B		01/10/2018

Pursuant to article 35 (2) of the Town and Country Planning (Development Management Procedure) Order 2015 and guidance in the National Planning Policy Framework, the Local Planning Authority have, where possible, made a pre-application advice service available, complied with the Kirklees Development Management Charter 2015 and otherwise actively engaged with the applicant in dealing with the application. The applicant was approached concerning amendments to the application and the applicant submitted a number of amended plans altering the layout and design of the scheme. Additional information was provided concerning highway impacts, drainage, coal mining risk, public open space and heritage at the request of officers. For the reason set out in the reason for refusal the development would not improve the environmental conditions of the area and is considered to represent an unsustainable form of development.

**The application has been publicised by notice(s) in the vicinity of the site. It is respectfully requested that the notice(s) now be removed and responsibly disposed of to avoid harm to the appearance of the area**

## **Development within a Coal Mining Area**

The proposed development lies within an area that has been defined by the Coal Authority as containing potential hazards arising from former coal mining activity. These hazards can include: mine entries (shafts and adits); shallow coal workings; geological features (fissures and break lines); mine gas and previous surface mining sites. Although such hazards are seldom readily visible, they can often be present and problems can occur in the future, particularly as a result of development taking place.

It is recommended that information outlining how the former mining activities affect the proposed development, along with any mitigation measures required (for example the need for gas protection measures within the foundations), be submitted alongside any subsequent application for Building Regulations approval (if relevant). Any form of development over or within the influencing distance of a mine entry can be dangerous and raises significant safety and engineering risks and exposes all parties to potential financial liabilities. As a general precautionary principle, the Coal Authority considers that the building over or within the influencing distance of a mine entry should wherever possible be avoided. In exceptional circumstance where this is unavoidable, expert advice must be sought to ensure that a suitable engineering design is developed and agreed with regulatory bodies which takes into account of all the relevant safety and environmental risk factors, including gas and mine-water. Your attention is drawn to the Coal Authority Policy in relation to new development and mine entries available at:

<https://www.gov.uk/government/publications/building-on-or-within-the-influencing-distance-of-mine-entries>

Any intrusive activities which disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits) requires a Coal Authority Permit. Such activities could include site investigation boreholes, digging of foundations, piling activities, other ground works and any subsequent treatment of coal mine workings and coal mine entries for ground stability purposes. Failure to obtain a Coal Authority Permit for such activities is trespass, with the potential for court action.

Property specific summary information on past, current and future coal mining activity can be obtained from: [www.groundstability.com](http://www.groundstability.com) or a similar service provider.

If any of the coal mining features are unexpectedly encountered during development, this should be reported immediately to the Coal Authority on 0345 762 6848. Further information is available on the Coal Authority website at:

[www.gov.uk/government/organisations/the-coal-authority](http://www.gov.uk/government/organisations/the-coal-authority)

## **Appeals to the Secretary of State**

- If you are aggrieved by the decision of your Local Planning Authority to refuse permission for the proposed development then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.
- If an enforcement notice is served or has been served relating to the same or substantially the same land and development as in your application and if you want to appeal against the local planning authority's decision on your application, then you must do so within:
  - i) 28 days from the date of this notice where the enforcement notice has been served,
  - ii) 28 days of the date of service of the enforcement notice or,
  - iii) the specified period starting from the date of this notice,whichever period expires earlier.
- If you want to appeal against your Local Planning Authority's decision then you must do so within the specified period, starting on the date of this notice.
- The "specified period" is 12 weeks where the development relates to a "minor commercial application" as defined within the Town and Country Planning (Development Management Procedure) Order 2010 (as amended), or 6 months in any other case.
- Appeals must be made using a form which you can get from the Secretary of State at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN (Tel: 0303 444 5000) or online at <https://www.gov.uk/planning-inspectorate>  
Further information on the Planning Appeal process can be found online at the Planning Inspectorates website <https://www.gov.uk/government/organisations/planning-inspectorate>.
- You must use the correct Planning Appeal Form when making your appeal. If requesting forms from the Planning Inspectorate, please state the type of application that the appeal relates to so they can send you the appeal form you require.
- The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.
- The Secretary of State need not consider an appeal if it seems to him that the Local Planning Authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.
- In practice, the Secretary of State does not refuse to consider appeals solely because the Local Planning Authority based their decision on a direction given by him.

**Please note, only the applicant possesses the right of appeal.**

### **Purchase Notices**

- If either the Local Planning Authority or the Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.

In these circumstances, the owner may serve a purchase notice on the Council. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

An important part of improving our service is to review your feedback on the way that we have dealt with your planning application(s). Please take a couple of minutes to email your comments to [dc.admin@kirklees.gov.uk](mailto:dc.admin@kirklees.gov.uk) so that we can work on continually improving our customer service. Thank you.

**Dated:** 29-Oct-2018

**Signed:**



**Karl Battersby**  
**Strategic Director Economy and Infrastructure**

### **Decision Documents**

The decision notice indicates which documents relate to the decision. These documents can be viewed online at the Planning Services website at [www.kirklees.gov.uk/planning](http://www.kirklees.gov.uk/planning), and by clicking on the 'search and view existing planning applications and decisions' and by searching for application number 2017/62/93935/E .

If a paper copy of the decision notice or decided plans are required please email [planning.contactcentre@kirklees.gov.uk](mailto:planning.contactcentre@kirklees.gov.uk) or telephone 01484 414746 with the application number. There may be a charge for this service.

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All communications should be sent to one of the following address:

**E-mail:** [planning.contactcentre@kirklees.gov.uk](mailto:planning.contactcentre@kirklees.gov.uk)

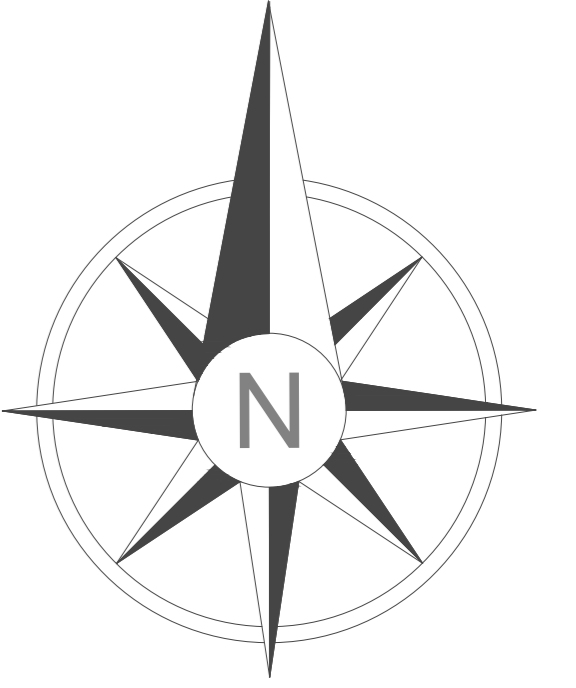
**Write to:** Planning Services  
Investment and Regeneration  
PO Box B93, Civic Centre III  
Off Market Street, Huddersfield  
HD1 2JR

---

## Appendix B Site Layout Plan (Parker Peel dwg 2520-SI-02F)



# WOODWARD COURT, MIRFIELD



## DRAWING LEGEND:

- RED LINE BOUNDARY
- AFFORDABLE UNITS
- EXISTING TREES/HEDGEROWS TO BE RETAINED
- TREES/HEDGEROWS TO BE REMOVED
- LANDSCAPE - PLEASE REFER TO LANDSCAPE ARCHITECTS DRAWINGS
- VISITOR PARKING BAY
- ON STREET VISITOR PARKING SPACE
- BIN COLLECTION POINTS FOR SHARED DRIVES
- INDICATIVE CONNECTIONS TO PUBLIC RIGHT OF WAY (PROW)

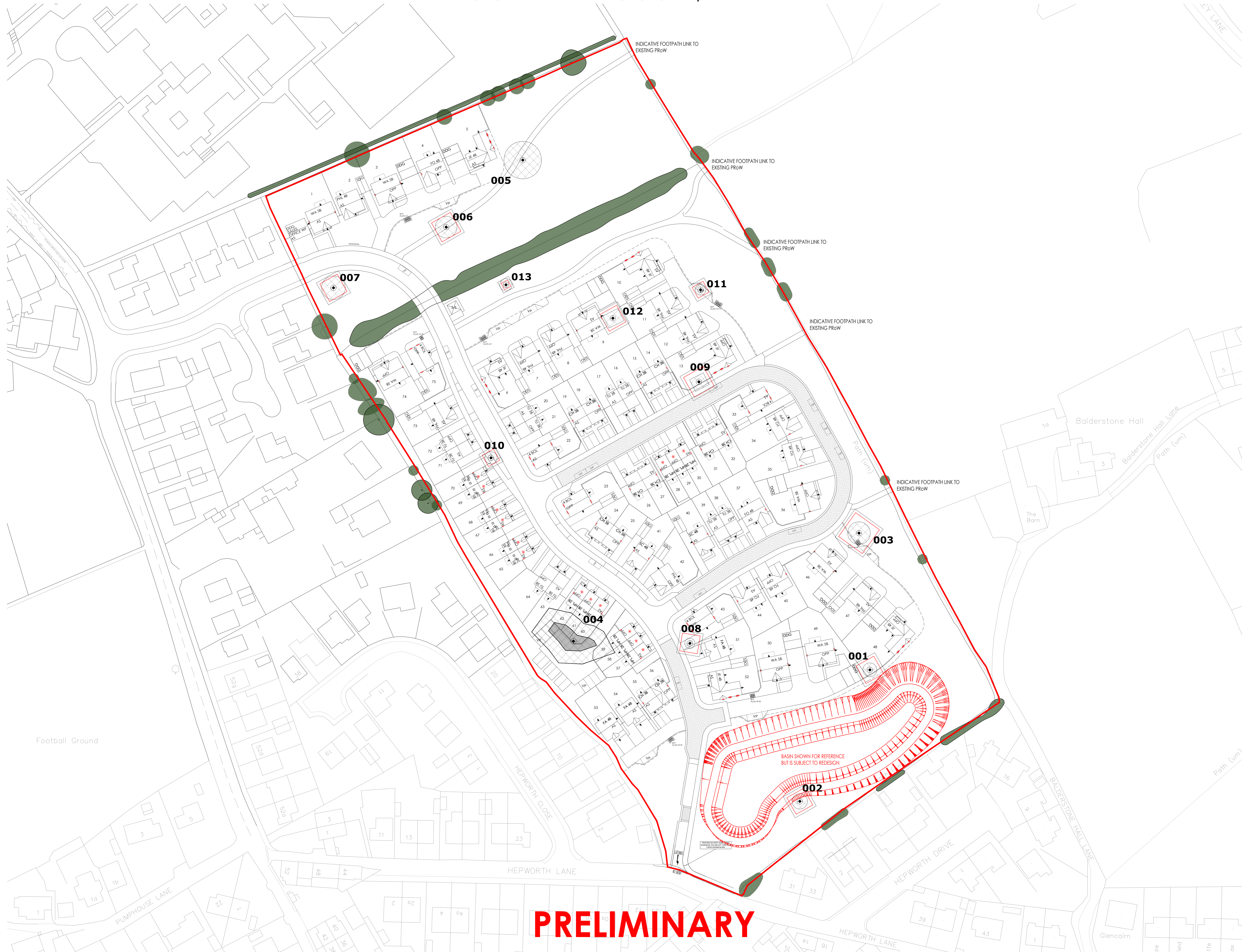
WOODWARD COURT, MIRFIELD SCHEDULE OF ACCOMMODATION							
House Type	Bed No./Storey	Building Regs.	Type	Parking	Sq.#	No. Units	Total Sq.#
<b>Freehold</b>							
Chandler	38/2	M4(1)	End	PS	937	12	11244
Turner	38/2	M4(1)	End	PS	906	10	9060
Farrier	38/2	M4(1)	Det	PS	1152	3	3456
Scrivener	38/2	M4(1)	Det	PS	1197	2	2394
Southern Life	48/2	M4(2)	Det	SG	1356	5	6780
Philosopher Life	48/2	M4(2)	Det	SG	1489	8	11912
Forester	48/2	M4(1)	Det	IG	1802	6	9012
Jeweller	48/2	M4(1)	Det	SG	1713	6	10278
Watchmaker	38/2	M4(1)	Det	SG	1800	8	15040
<b>Freehold Total</b>						<b>40</b>	<b>79,076</b>
<b>Affordable</b>							
Hooper Life	28/2	M4(2)	End	PS	776	6	4656
Hooper Life	28/2	M4(2)	MIS	PS	776	3	2328
Bolster	38/2.5	M4(1)	End	PS	1038	6	6228
<b>Affordable Total</b>						<b>15</b>	<b>13,212</b>
<b>Affordable Site Percentage</b>						<b>20%</b>	
<b>Gross Area</b>				<b>Total</b>		<b>75</b>	<b>92,288</b>
<b>Net Area</b>				<b>Net Area</b>		<b>6.55 acres</b>	<b>4.73 ha</b>
<b>Open Space (inc. Allotment and BNG habitat zone)</b>				<b>Net Coverage</b>		<b>4.52 acres</b>	<b>1.83 ha</b>
<b>Net Density</b>				<b>Net Density</b>		<b>28 dph</b>	<b>14,090 sq./acre</b>
Single Garage	19	Double Garage	9	Twin Garage	0		
Visitor Parking Bay	9	On Street Visitor Parking	13				

- 0m 10m 20m 30m 40m 50m
- F Road alignment adjusted in front of plots 37-40. Additional space for soft landscaping in front of plots 26-32. Footpath links shown indicatively to PROW on eastern boundary. Nov 25
  - E Plot 12 garage pulled forward. Nov 25
  - D Garages to plots 3,5 and 48 moved forward. Plot 5 and 48 moved to accommodate. Nov 25
  - C Garages to plots 5 and 48 moved forward. Nov 25
  - B Layout updated to clients markup. Oct 25
  - A One way junction and road included. Turning head adjacent to plots 42, 50-55 redesigned and plots changed to utilise space gained from amended turning head design. Oct 25

**SITE LAYOUT - 2520-SL-02F**  
**WOODWARD COURT, MIRFIELD**  
**BELLWAY HOMES**  
 SCALE: 1:500@A0 - OCTOBER 2025  
**PARKER PEEL**  
 ARCHITECTURAL  
 e: info@parkerpeel.co.uk w: www.parkerpeel.co.uk t: 01924 921 860

PRELIMINARY

SITE LAYOUT PLAN - 1:500



## **Appendix C Highways Development Management team Pre-App Consultation Response**



# Pre-Application Consultation Request

## Town and Country Planning Act 1990

Observations By:	KC, Highways Development Management
------------------	--

Application No.	2025/20746
Proposed Development:	Pre application for residential development
Location:	Land off, Woodward Court, Mirfield, WF14 0PY
Applicant/Agent:	Paul Butler PB Planning Ltd
Planning Officer	Katie Chew

Your comments on the above proposal are requested. Please e-mail your comments to the DC Admin in either a Microsoft Word or PDF Document to [DC.Admin@kirklees.gov.uk](mailto:DC.Admin@kirklees.gov.uk) by **26-Aug-2025**.

The submitted plans and documents for the application can be viewed using Documents from Anite or Anite, please use the application number above.

If I do not receive your response by **26-Aug-2025** then the application may be decided without the benefit of your views.

Dated: 12-Aug-2025

Mathias Franklin  
Head of Planning and Development

<b>Consultation Response from KC, Highways Development Management</b>		
<b>2025/20746 at Land off, Woodward Court, Mirfield, WF14 0PY</b>		
<b>Pre application for residential development</b>		
<b>Date Responded:25/09/2025</b>	<b>Responding Officer: Ryan Kinder</b>	<b>Responding Ref: K14-2SW/6</b>
<p>2025/20746 Land off Woodward Court, Mirfield.</p> <p>Highway Development Management's (HDM) comments for the above application as follows:</p> <p>Pre Planning application for erection of residential development for 75 dwellings, with access taken via Woodward Court.</p> <p>Principle of development from a highways perspective.          It should be noted that a previous application has been refused (ref 2017/93935), of this the second reason for refusal included highways as follows:</p> <p>2) The proposed development would lead to additional traffic impacts on an already constrained local highway network which, by virtue of the existing network of narrow roads, the close proximity of the proposal to the existing school (Crossley Fields Junior and Infant School), and the substandard visibility at the junction of Woodward Court and Wellhouse Lane, would result in an unsafe development which would fail to acceptably mitigate the degree of conflict between all users. The proposed development would lead to an unacceptable highway safety impact, contrary to paragraph 109 of the National Planning Policy Framework, Policy T10 of the Kirklees Unitary Development Plan and Policy PLP21 of Kirklees Publication Draft Local Plan.</p> <p>It is considered that any future submissions need to demonstrate that the above reason is dealt with in satisfactory manner to ensure that Highways can fully support any development moving forward.</p> <p>The current nature of Well House Lane on the initial section from the junction of Flash Lane is substandard to accommodate any further development, there is limited intervisibility and a lack of passing places with the road being single track in width.</p> <p>The existing footway are less than 1.0m in width and only provided on one side of the carriageway making it less than desirable for pedestrians, this would be considered unacceptable for a new development based on current design standards.</p> <p>A Transport Assessment for this application is considered necessary given the history and location of the site, with a scoping brief be agreed with the Council prior to any submissions.</p> <p>A Travel Plan will be required, with sustainable travel contributions payable accordingly.</p> <p>The Councils Highway Safety team have been consulted regarding the application and have provided the following observations regarding the surrounding network:</p> <p>One-way westbound along Hepworth Lane, one-way southbound along Wellhouse Lane.          Room for buildouts where Wellhouse Lane meets Flash Lane, to improve visibility whilst not removing on-street parking. Scope for buildouts where Hepworth Lane meets Wellhouse Lane, to improve</p>		

visibility up Wellhouse when coming out of Hepworth and radius for left turn, no conflicts from the left with one-way in-situ. Scope to widen Flash Lane through Hepworth Lane and provide central lane for sheltered right turns in (expensive, useful, but not essential).

One-way along these roads would give far more scope to better manage on-street parking and/or improve footways for pedestrians along the narrower sections. Measures could then be taken to cover off most of the concerns raised under '1. Local Highways Network' comments, assuming the Developer was happy to pay for them.

Maximum diversion around a minute long for the most inconvenienced residents (access to Grove Street for northeast bound vehicles on Flash Lane) so should be acceptable, good arguments on road safety grounds for doing it though. Only one collision around 'the triangle' in past 5 years, however, go back further and there have been a lot more. Average of one injury collision every two years, most of which occur at or close to Flash Lane / Hepworth Lane junction (8 of 12 / 67% over 24 years), also some pedestrian casualties.

The safety team have tried previously to implement safety improvements but have been unsuccessful in delivering these due to concerns raised by residents.

Further discussions will be required with the applicant and the Councils Safety team to determine what measures can be implemented to address the reason for refusal on the previous application.

Proposed site access.

Suitable visibility splays should be demonstrated accordingly, it is acknowledged these may not be for the full required 2.4m x 43m due to the road layout, however these should be maximised and any shortfall justified by way of traffic/speed surveys accordingly.

Internal Layout.

The internal arrangements should accord with the Councils Supplementary Planning Document – Highway Design Guide.

Private shared driveways serving more than one dwelling should be a minimum of 4.5m in width, some indicative driveways appear to be less than this.

Parking.

As of the adoption of the Local Plan Kirklees Council no longer has car parking standards. Policy LP22 sets out the criteria for establishing parking requirements for new developments, which should be evidence based within the planning application submission. General guidance for the parking requirements are outlined below:

2 – 3 bedroom dwelling: 2 spaces

4+ bedroom dwelling: 3 spaces

1 visitor space per 4 residential units (off street bays parallel to carriageway being 2.5m plus 1.m hard margin).

1 cycle space per residential unit (desirable)

Single driveways to be a minimum of 3m wide by 5.5m long.

Double driveways to be a minimum of 5.0m wide x 5.5m long.

Garage dimensions (Internal):

Single: 6.0m long x 3.0m wide

Double: 6.0m long x 5.0m wide

1 electric vehicle charging connection point per dwelling (normally within a garage).

A stage 1 safety audit and designers response is required and submitted as part of the access, internal layout and off site improvements, the brief will need agreeing prior to any undertaking and in line with GG119.

Visibility splays and forward visibility envelopes should be demonstrated and achievable within the adopted highway. A 20m centreline radius will be required on internal bends.

Information on gradients with suitable long section dwgs are requested with finished gradients indicated. A shared surface arrangement will only be accepted for adoption should a minimum gradient of 1:20 be achievable, otherwise a footway down at least one side of the internal road will be required.

A highways area plan must be provided detailing the extent of roads to be adopted, this will form part of any approved plans. Should the status of roads be then changed post planning, a section 73 application will be required to vary this accordingly.

Refuse storage and collection arrangements should be demonstrated and be in accordance with Local Plan Policy LP24 part d(vi). Swept paths for an 11.85m refuse collection vehicle are required and should take into account any on street parking and two way vehicle movements in particular on junctions and any tight bends.

## Appendix D KC Highway Adoption Data





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Scale = 1:1250  
maps@kirklees.gov.uk

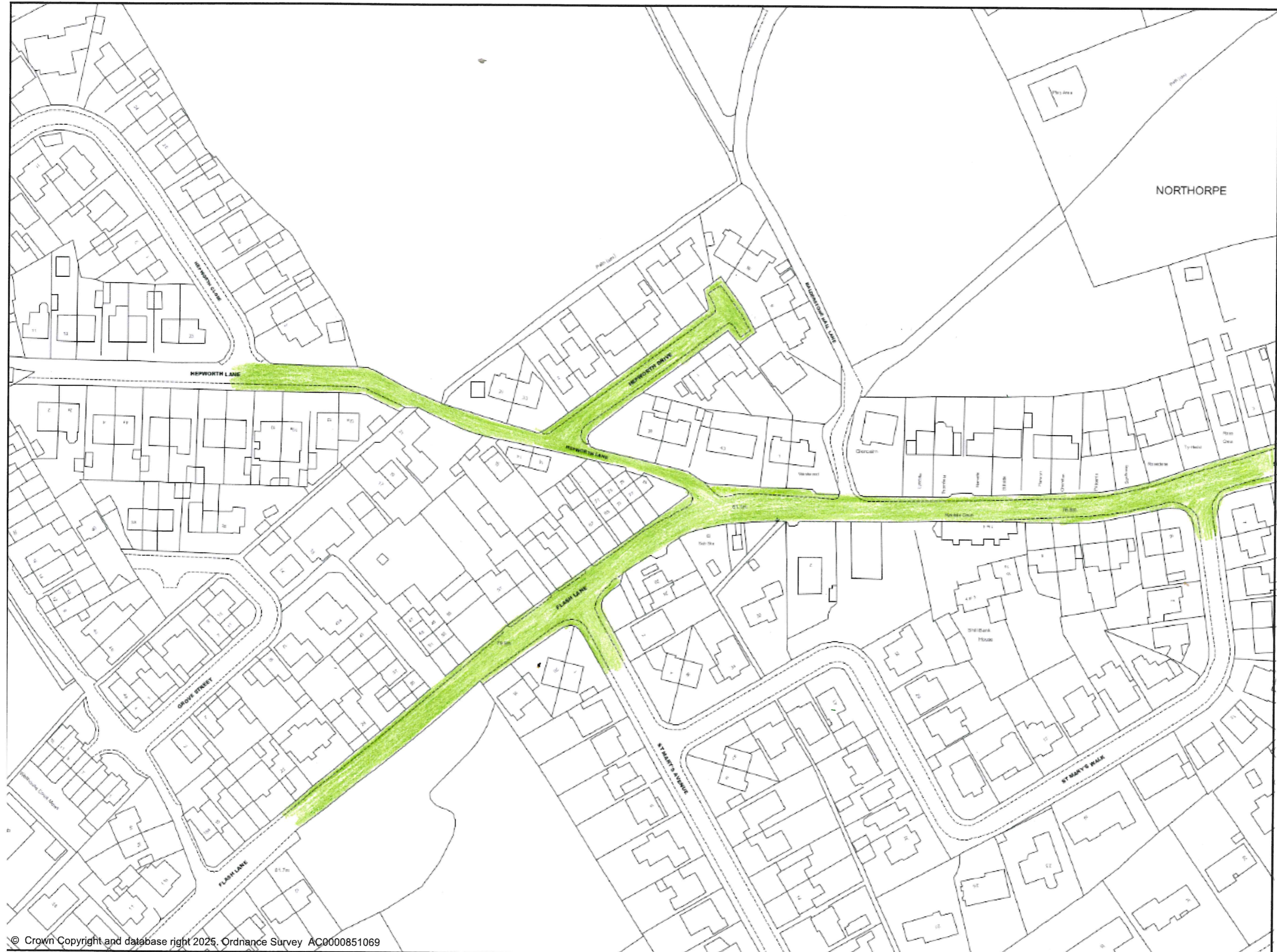
© Crown Copyright and database right 2025. Ordnance Survey AC0000851069

NORTHORPE

Scale = 1:1250

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database right 2025.  
Ordnance Survey  
AC0000851069

[maps@kirklees.gov.uk](mailto:maps@kirklees.gov.uk)



## Appendix E Traffic Survey Data (available on request)

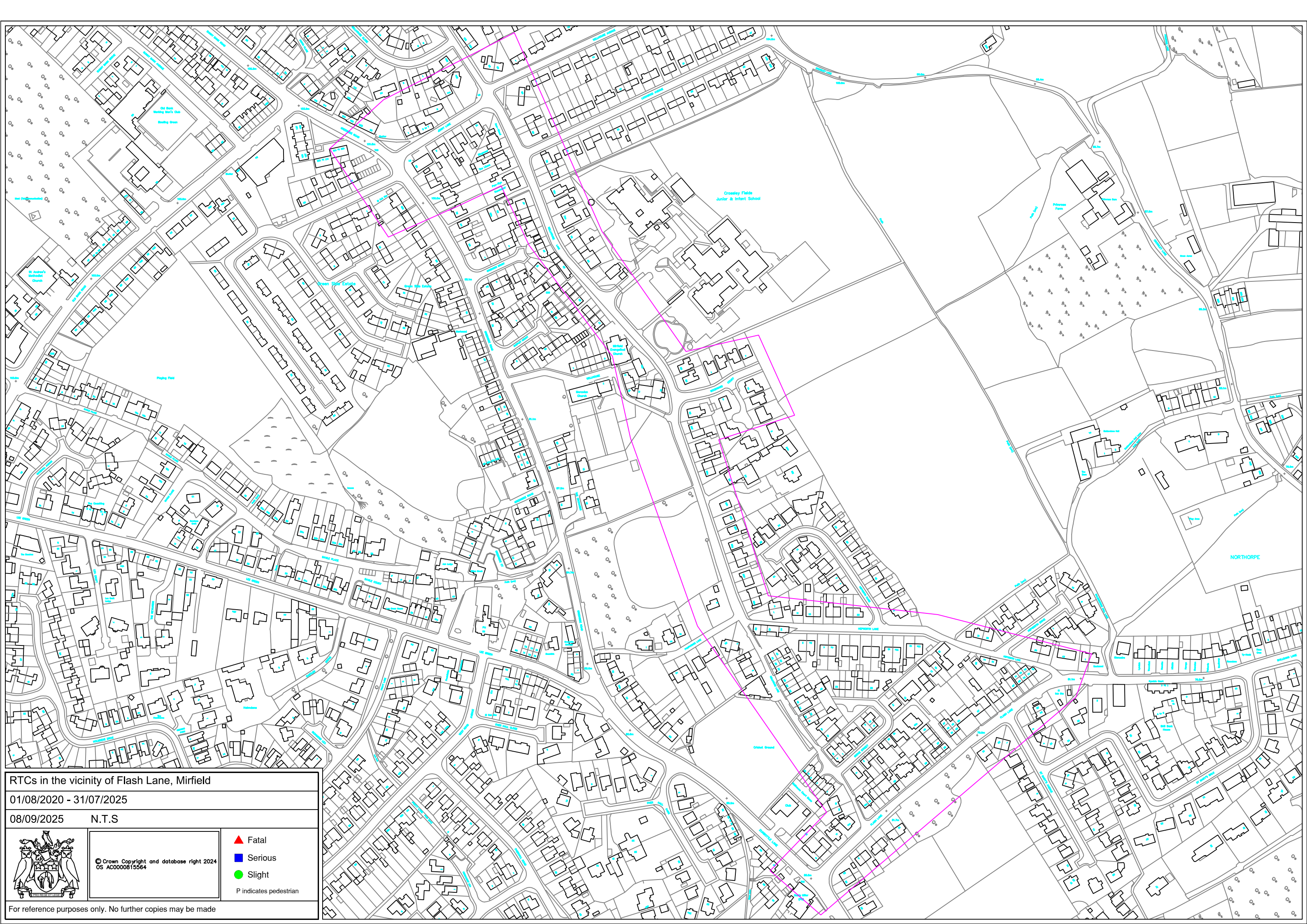


## Appendix F Personal Injury Collision Data



Title: RTCs in the vicinity of Flash Lane, Mirfield


No accident records found for this search





**RTCs in the vicinity of Flash Lane, Mirfield**


01/08/2020 - 31/07/2025

08/09/2025 N.T.S

 © Crown Copyright and database right 2024  
OS AC0000815564

 Fatal

 Serious

 Slight

P indicates pedestrian

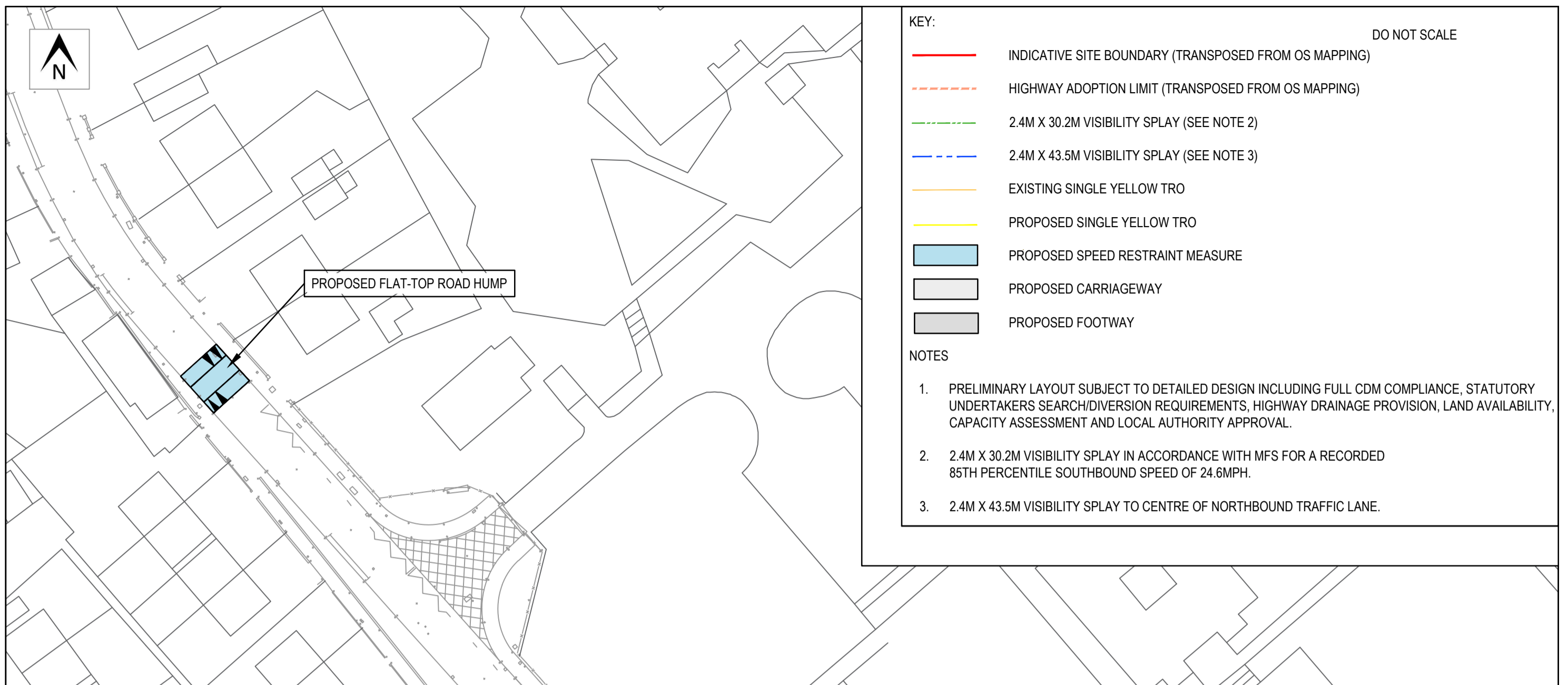
For reference purposes only. No further copies may be made

## Appendix G (not used)

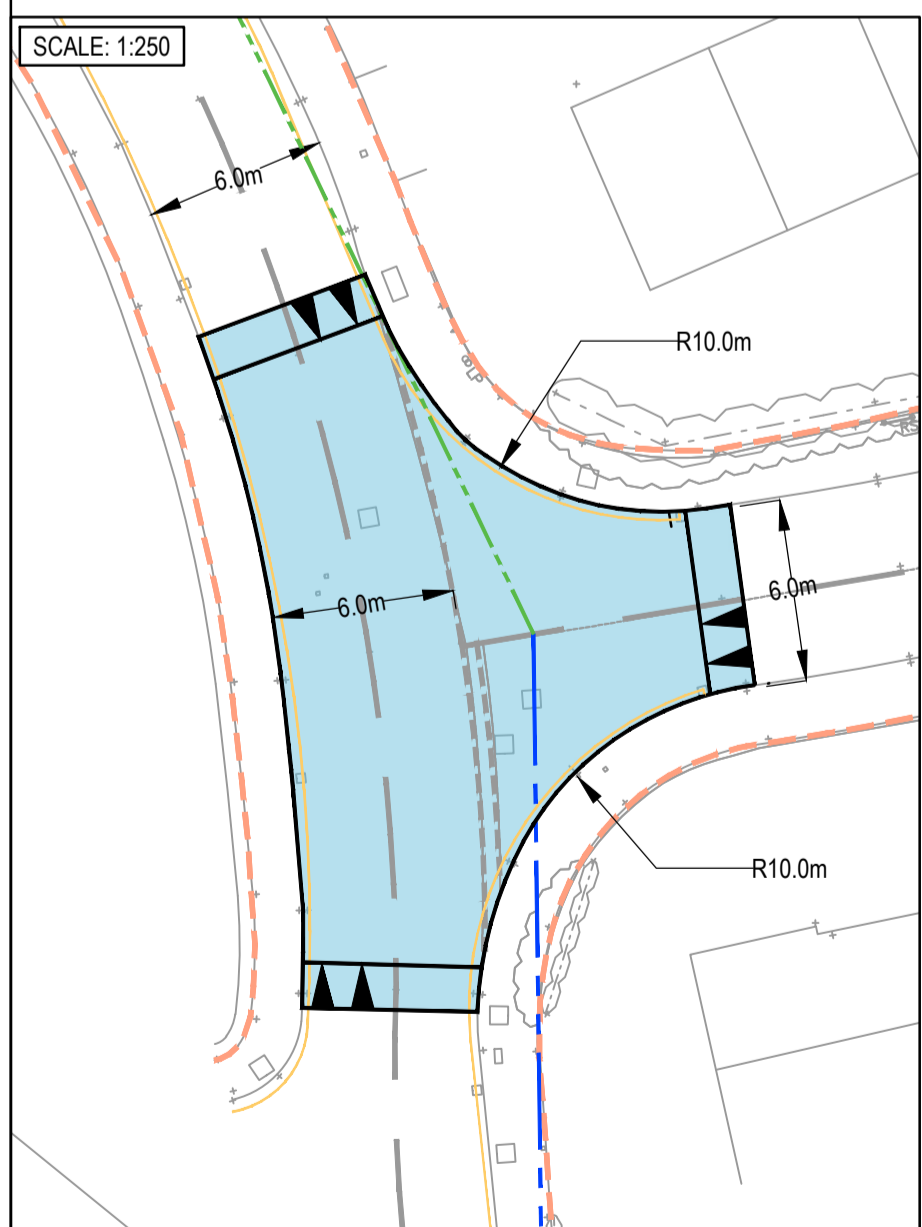
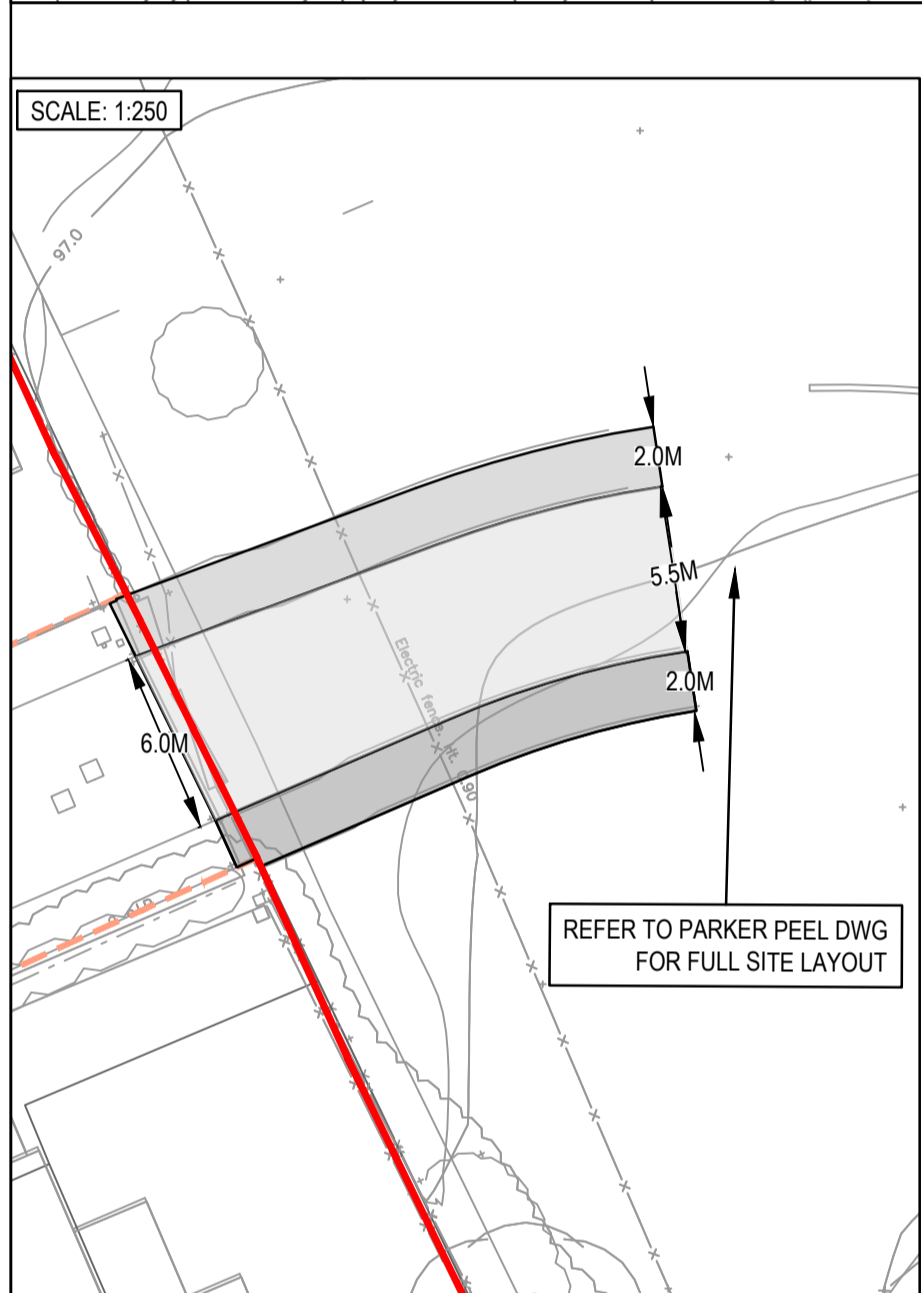


## **Appendix H Proposed Woodward Court Site Access & Wellhouse Lane Improvements (Optima Drawing.25033/GA/02)**





- KEY:
- INDICATIVE SITE BOUNDARY (TRANPOSED FROM OS MAPPING)
  - - - HIGHWAY ADOPTION LIMIT (TRANPOSED FROM OS MAPPING)
  - - - 2.4M X 30.2M VISIBILITY SPLAY (SEE NOTE 2)
  - - - 2.4M X 43.5M VISIBILITY SPLAY (SEE NOTE 3)
  - EXISTING SINGLE YELLOW TRO
  - PROPOSED SINGLE YELLOW TRO
  - PROPOSED SPEED RESTRAINT MEASURE
  - PROPOSED CARRIAGEWAY
  - PROPOSED FOOTWAY
- NOTES
1. PRELIMINARY LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY, CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
  2. 2.4M X 30.2M VISIBILITY SPLAY IN ACCORDANCE WITH MFS FOR A RECORDED 85TH PERCENTILE SOUTHBOUND SPEED OF 24.6MPH.
  3. 2.4M X 43.5M VISIBILITY SPLAY TO CENTRE OF NORTHBOUND TRAFFIC LANE.



CROSSLEY FIELDS JUNIOR AND INFANT SCHOOL

WELLHOUSE LANE

WOODWARD COURT

EXISTING TRO: NO PARKING MON TO FRI 08:00 TO 09:30AM 03:00 TO 04:00PM

EXISTING TRO: NO PARKING MON TO FRI 08:00 TO 09:30AM 03:00 TO 04:00PM

EXISTING OVERGROWN VEGETATION TO BE CUT BACK/MAINTAINED BY OWNER/COUNCIL TO ENSURE VISIBILITY CAN BE ACHIEVED

EXISTING 2.4M X 29.3M VISIBILITY SPLAY (TO KERBLINE)

2.4M X 30.2M VISIBILITY SPLAY

2.4M X 43.5M VISIBILITY SPLAY (TO CENTRE OF NORTHBOUND LANE)

6.1M

PROPOSED EXTENSION OF EXISTING TRAFFIC REGULATION ORDER (YELLOW LINING)

PROPOSED FLAT-TOP ROAD HUMPS

SCALE: 1:500

REV	DATE	BY	DESCRIPTION	CHK	APP
-	02/12/25	KP	INITIAL ISSUE	PMO	PMO
STATUS: PRELIMINARY					

PROJECT	WOODWARD COURT, MIRFIELD
DRAWING TITLE	PROPOSED WOODWARD COURT SITE ACCESS AND WELLHOUSE LANE SPEED RESTRAINT IMPROVEMENTS

CLIENT	BELLWAY HOMES LIMITED (YORKSHIRE)		
CHECKED	APPROVED	DRG No.	
PMO	PMO	25033/GA/02	
DRAWN BY:	SCALE @ A2 AS SHOWN	DATE	REV.
KP		DECEMBER 2025	-

Intelligent Highway Solutions  
Suite 1, 3rd Floor, Goodbard House, Infirmary Street  
Leeds LS1 2JP  
optimahighways.com  
T 0113 245 1679

## Appendix I (not used)

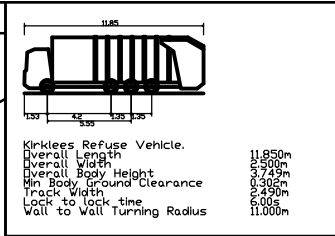


## **Appendix J Proposed Hepworth Lane Site Egress (Optima Drawing No.25033-GA-10)**

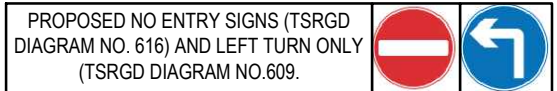




DO NOT SCALE

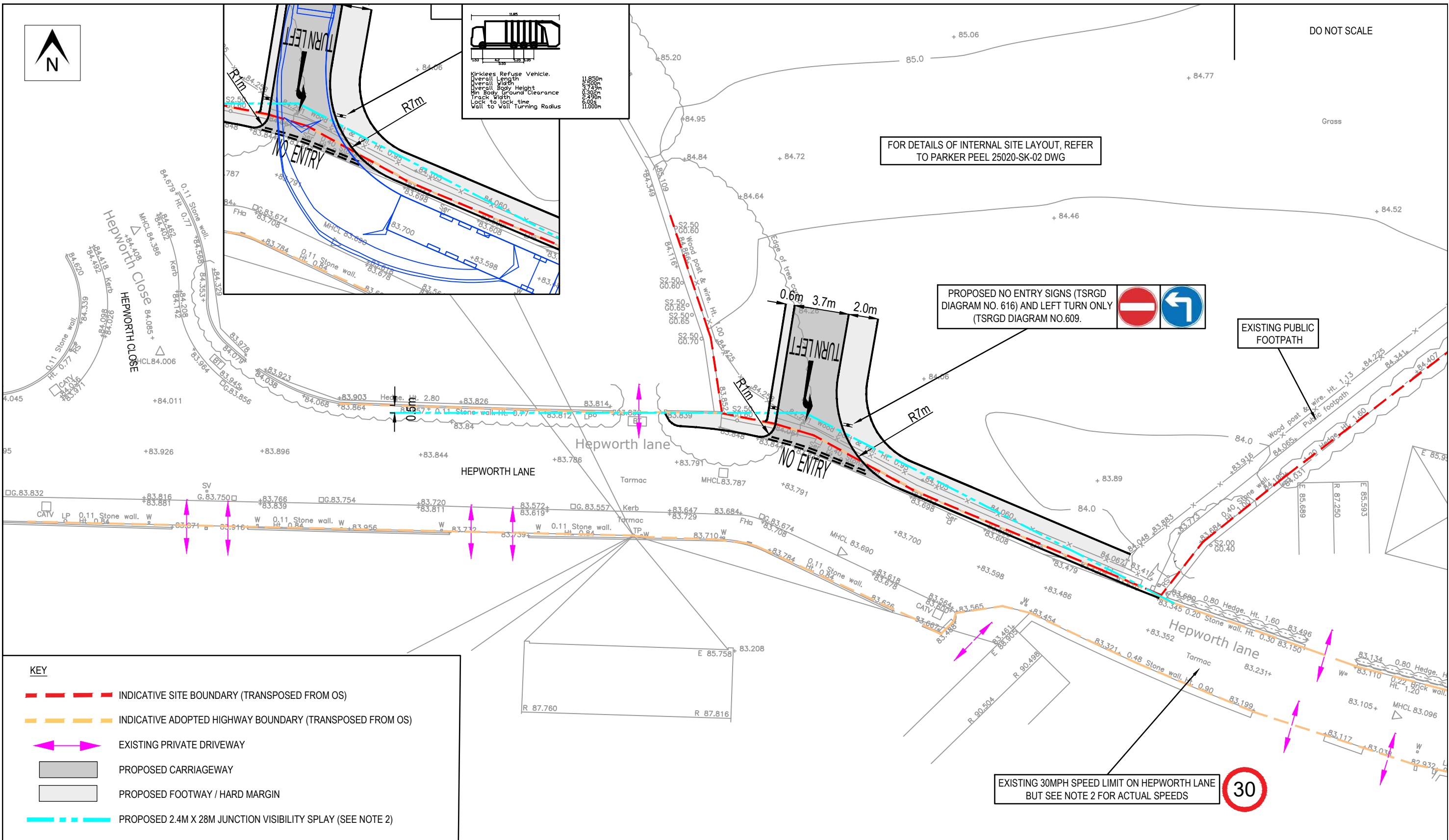


FOR DETAILS OF INTERNAL SITE LAYOUT, REFER TO PARKER PEEL 25020-SK-02 DWG



EXISTING PUBLIC FOOTPATH

EXISTING 30MPH SPEED LIMIT ON HEPWORTH LANE BUT SEE NOTE 2 FOR ACTUAL SPEEDS



**KEY**

- INDICATIVE SITE BOUNDARY (TRANSPosed FROM OS)
- INDICATIVE ADOPTED HIGHWAY BOUNDARY (TRANSPosed FROM OS)
- ↔ EXISTING PRIVATE DRIVEWAY
- PROPOSED CARRIAGEWAY
- PROPOSED FOOTWAY / HARD MARGIN
- PROPOSED 2.4M X 28M JUNCTION VISIBILITY SPLAY (SEE NOTE 2)

**NOTES**

- LAYOUT SUBJECT TO DETAILED DESIGN INCLUDING FULL CDM COMPLIANCE, STATUTORY UNDERTAKERS SEARCH/ DIVERSION REQUIREMENTS, HIGHWAY DRAINAGE PROVISION, LAND AVAILABILITY, CAPACITY ASSESSMENT AND LOCAL AUTHORITY APPROVAL.
- WESTBOUND 85TH PERCENTILE SPEED IS 21.8MPH WHICH EQUATES TO A REQUIRED VISIBILITY SPEED OF 2.4M X 28M. EASTBOUND 85TH PERCENTILE SPEED IS 21.7MPH WHICH EQUATES TO A REQUIRED VISIBILITY SPEED OF 2.4M X 28M.

PROJECT						CLIENT			
WOODWARD COURT MIRFIELD						BELLWAY HOMES			
DRAWING TITLE						CHECKED	APPROVED	DRG No.	
PROPOSED HEPWORTH LANE SECONDARY SITE ACCESS						PMO	PMO	25033/GA/02	
STATUS						DRAWN BY:	SCALE @ A3	DATE	REV.
PRELIMINARY						KP	1:250	OCT 2025	-

Intelligent Highway Solutions  
Suite 1, 3rd Floor, Goodbard House, Infirmity Street  
Leeds LS1 2JP  
optimahighways.com T 0113 245 1679

## Appendix K TRICS Vehicular Trip Rates



## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
 Category : A - HOUSES PRIVATELY OWNED  
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	CT CENTRAL BEDFORDSHIRE	1 days
	ES EAST SUSSEX	4 days
	EX ESSEX	2 days
	HC HAMPSHIRE	5 days
	HF HERTFORDSHIRE	1 days
	KC KENT	3 days
	SC SURREY	1 days
	WB WEST BERKSHIRE	1 days
	WS WEST SUSSEX	3 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	10 days
	SF SUFFOLK	1 days
09	NORTH	
	DH DURHAM	2 days
	IM ISLE OF MAN	2 days
11	SCOTLAND	
	AS ABERDEENSHIRE	1 days

*This section displays the number of survey days per TRICS® sub-region in the selected set*

## Primary Filtering selection:

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: No of Dwellings  
 Actual Range: 50 to 150 (units: )  
 Range Selected by User: 50 to 150 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 18/09/24

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Monday	6 days
Tuesday	13 days
Wednesday	7 days
Thursday	8 days
Friday	4 days

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

Manual count	34 days
Directional ATC Count	4 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

Suburban Area (PPS6 Out of Centre)	7
Edge of Town	31

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone	35
Out of Town	1
No Sub Category	2

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	8 days - Selected
Servicing vehicles Excluded	39 days - Selected

## Secondary Filtering selection:

Use Class:

C3 38 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS@.*

Population within 500m Range:

All Surveys Included

## Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	5 days
5,001 to 10,000	10 days
10,001 to 15,000	10 days
15,001 to 20,000	8 days
20,001 to 25,000	4 days
25,001 to 50,000	1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

5,001 to 25,000	7 days
25,001 to 50,000	5 days
50,001 to 75,000	4 days
75,001 to 100,000	5 days
100,001 to 125,000	2 days
125,001 to 250,000	13 days
250,001 to 500,000	2 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

0.6 to 1.0	8 days
1.1 to 1.5	29 days
1.6 to 2.0	1 days

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

Yes	26 days
No	12 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	37 days
2 Poor	1 days

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

1	AS-03-A-02 FARROCHIE ROAD STONEHAVEN	MIXED HOUSES		ABERDEENSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		131	
	<i>Survey date: WEDNESDAY</i>		<i>20/04/22</i>	<i>Survey Type: MANUAL</i>
2	CT-03-A-03 ARLESEY ROAD STOTFOLD	MIXED HOUSES		CENTRAL BEDFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		73	
	<i>Survey date: TUESDAY</i>		<i>27/06/23</i>	<i>Survey Type: MANUAL</i>
3	DC-03-A-11 A350 SHAFTESBURY	MIXED HOUSES		DORSET
	Edge of Town No Sub Category Total No of Dwellings:		141	
	<i>Survey date: TUESDAY</i>		<i>31/10/23</i>	<i>Survey Type: MANUAL</i>
4	DH-03-A-01 GREENFIELDS ROAD BISHOP AUCKLAND	SEMI DETACHED		DURHAM
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		50	
	<i>Survey date: TUESDAY</i>		<i>28/03/17</i>	<i>Survey Type: MANUAL</i>
5	DH-03-A-03 PILGRIMS WAY DURHAM	SEMI -DETACHED & TERRACED		DURHAM
	Edge of Town Residential Zone Total No of Dwellings:		57	
	<i>Survey date: FRIDAY</i>		<i>19/10/18</i>	<i>Survey Type: MANUAL</i>
6	ES-03-A-07 NEW ROAD HAILSHAM HELLINGLY	MIXED HOUSES & FLATS		EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings:		91	
	<i>Survey date: THURSDAY</i>		<i>07/11/19</i>	<i>Survey Type: MANUAL</i>
7	ES-03-A-08 WRESTWOOD ROAD BEXHILL	MIXED HOUSES & FLATS		EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings:		110	
	<i>Survey date: WEDNESDAY</i>		<i>12/10/22</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

8	ES-03-A-10 WATERGATE BEXHILL-ON-SEA	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 139 <i>Survey date: THURSDAY 28/09/23</i>		<i>Survey Type: MANUAL</i>
9	ES-03-A-14 RATTLE ROAD NEAR EASTBOURNE STONE CROSS	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 120 <i>Survey date: TUESDAY 30/04/24</i>		<i>Survey Type: MANUAL</i>
10	EX-03-A-02 MANOR ROAD CHIGWELL GRANGE HILL	DETACHED & SEMI-DETACHED	ESSEX
	Edge of Town Residential Zone Total No of Dwellings: 97 <i>Survey date: MONDAY 27/11/17</i>		<i>Survey Type: MANUAL</i>
11	EX-03-A-03 KESTREL GROVE RAYLEIGH	MIXED HOUSES	ESSEX
	Edge of Town Residential Zone Total No of Dwellings: 123 <i>Survey date: MONDAY 27/09/21</i>		<i>Survey Type: MANUAL</i>
12	HC-03-A-23 CANADA WAY LIPHOOK	HOUSES & FLATS	HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 62 <i>Survey date: TUESDAY 19/11/19</i>		<i>Survey Type: MANUAL</i>
13	HC-03-A-27 DAIRY ROAD ANDOVER	MIXED HOUSES	HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 73 <i>Survey date: TUESDAY 16/11/21</i>		<i>Survey Type: MANUAL</i>
14	HC-03-A-28 EAGLE AVENUE WATERLOOVILLE LOVEDEAN	MIXED HOUSES & FLATS	HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 125 <i>Survey date: MONDAY 08/11/21</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

15	HC-03-A-36 HAVANT ROAD EMSWORTH	MIXED HOUSES & FLATS	HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	145	
	<i>Survey date: TUESDAY</i>	<i>12/09/23</i>	<i>Survey Type: MANUAL</i>
16	HC-03-A-37 REDFIELDS LANE FLEET CHURCH CROOKHAM	MIXED HOUSES	HAMPSHIRE
	Edge of Town Residential Zone Total No of Dwellings:	50	
	<i>Survey date: WEDNESDAY</i>	<i>27/03/24</i>	<i>Survey Type: MANUAL</i>
17	HF-03-A-07 BAKER STREET POTTERS BAR	MIXED HOUSES & BUNGALOWS	HERTFORDSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	92	
	<i>Survey date: MONDAY</i>	<i>25/03/24</i>	<i>Survey Type: MANUAL</i>
18	IM-03-A-04 NEW CASTLETOWN ROAD DOUGLAS	MIXED HOUSES	ISLE OF MAN
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	73	
	<i>Survey date: MONDAY</i>	<i>20/05/24</i>	<i>Survey Type: MANUAL</i>
19	IM-03-A-06 MOORAGH PROMENADE RAMSEY	MIXED HOUSES	ISLE OF MAN
	Edge of Town Residential Zone Total No of Dwellings:	129	
	<i>Survey date: THURSDAY</i>	<i>23/05/24</i>	<i>Survey Type: MANUAL</i>
20	KC-03-A-03 HYTHE ROAD ASHFORD WILLESBOROUGH	MIXED HOUSES & FLATS	KENT
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	51	
	<i>Survey date: THURSDAY</i>	<i>14/07/16</i>	<i>Survey Type: MANUAL</i>
21	KC-03-A-04 KILN BARN ROAD AYLESFORD DITTON	SEMI-DETACHED & TERRACED	KENT
	Edge of Town Residential Zone Total No of Dwellings:	110	
	<i>Survey date: FRIDAY</i>	<i>22/09/17</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

22	KC-03-A-10 HEADCORN ROAD STAPLEHURST	MIXED HOUSES		KENT
	Edge of Town Residential Zone Total No of Dwellings:		106	
	<i>Survey date: TUESDAY</i>		<i>09/05/23</i>	<i>Survey Type: MANUAL</i>
23	NF-03-A-14 BEAUFORT WAY GREAT YARMOUTH BRADWELL	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		150	
	<i>Survey date: THURSDAY</i>		<i>05/10/17</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
24	NF-03-A-24 HUNSTANTON ROAD HUNSTANTON	MIXED HOUSES & FLATS		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		127	
	<i>Survey date: WEDNESDAY</i>		<i>22/09/21</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
25	NF-03-A-25 WOODFARM LANE GORLESTON-ON-SEA	MIXED HOUSES & FLATS		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		55	
	<i>Survey date: TUESDAY</i>		<i>21/09/21</i>	<i>Survey Type: MANUAL</i>
26	NF-03-A-26 HEATH DRIVE HOLT	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		91	
	<i>Survey date: WEDNESDAY</i>		<i>22/09/21</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
27	NF-03-A-33 LONDON ROAD ATTLEBOROUGH	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		143	
	<i>Survey date: THURSDAY</i>		<i>29/09/22</i>	<i>Survey Type: MANUAL</i>
28	NF-03-A-34 NORWICH ROAD SWAFFHAM	MIXED HOUSES		NORFOLK
	Edge of Town Out of Town Total No of Dwellings:		80	
	<i>Survey date: TUESDAY</i>		<i>27/09/22</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

29	NF-03-A-35 REPTON AVENUE NORWICH	MIXED HOUSES & FLATS		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		116	
	<i>Survey date: WEDNESDAY</i>		<i>28/09/22</i>	<i>Survey Type: MANUAL</i>
30	NF-03-A-36 LONDON ROAD WYMONDHAM	MIXED HOUSES		NORFOLK
	Edge of Town No Sub Category Total No of Dwellings:		75	
	<i>Survey date: THURSDAY</i>		<i>29/09/22</i>	<i>Survey Type: MANUAL</i>
31	NF-03-A-49 BRANDON ROAD SWAFFHAM	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		141	
	<i>Survey date: FRIDAY</i>		<i>14/09/18</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
32	NF-03-A-52 LYNNSPORT WAY KING'S LYNN	MIXED HOUSES		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		130	
	<i>Survey date: TUESDAY</i>		<i>07/11/23</i>	<i>Survey Type: MANUAL</i>
33	SC-03-A-11 FOLLY HILL FARNHAM	MIXED HOUSES		SURREY
	Edge of Town Residential Zone Total No of Dwellings:		96	
	<i>Survey date: TUESDAY</i>		<i>14/05/24</i>	<i>Survey Type: MANUAL</i>
34	SF-03-A-07 FOXHALL ROAD IPSWICH	MIXED HOUSES		SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		73	
	<i>Survey date: THURSDAY</i>		<i>09/05/19</i>	<i>Survey Type: MANUAL</i>
35	WB-03-A-03 DORKING WAY READING CALCOT	MIXED HOUSES		WEST BERKSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		108	
	<i>Survey date: FRIDAY</i>		<i>09/09/22</i>	<i>Survey Type: MANUAL</i>
36	WS-03-A-14 TODDINGTON LANE LITTLEHAMPTON WICK	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings:		117	
	<i>Survey date: WEDNESDAY</i>		<i>20/10/21</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

37	WS-03-A-19	MIXED HOUSES & FLATS	WEST SUSSEX
	TURNERS HILL ROAD EAST GRINSTEAD		
	Edge of Town Residential Zone		
	Total No of Dwellings:	92	
	Survey date: MONDAY	15/05/23	Survey Type: MANUAL
38	WS-03-A-22	MIXED HOUSES & FLATS	WEST SUSSEX
	SHOPWHYKE ROAD CHICHESTER		
	Edge of Town Residential Zone		
	Total No of Dwellings:	129	
	Survey date: TUESDAY	19/03/24	Survey Type: MANUAL

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SF-03-A-10	covid

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	38	102	0.086	38	102	0.298	38	102	0.384
08:00 - 09:00	38	102	0.153	38	102	0.373	38	102	0.526
09:00 - 10:00	38	102	0.134	38	102	0.172	38	102	0.306
10:00 - 11:00	38	102	0.127	38	102	0.160	38	102	0.287
11:00 - 12:00	38	102	0.135	38	102	0.143	38	102	0.278
12:00 - 13:00	38	102	0.161	38	102	0.148	38	102	0.309
13:00 - 14:00	38	102	0.162	38	102	0.160	38	102	0.322
14:00 - 15:00	38	102	0.170	38	102	0.189	38	102	0.359
15:00 - 16:00	38	102	0.261	38	102	0.184	38	102	0.445
16:00 - 17:00	38	102	0.272	38	102	0.170	38	102	0.442
17:00 - 18:00	38	102	0.344	38	102	0.160	38	102	0.504
18:00 - 19:00	38	102	0.268	38	102	0.135	38	102	0.403
19:00 - 20:00	1	97	0.062	1	97	0.052	1	97	0.114
20:00 - 21:00	1	97	0.031	1	97	0.021	1	97	0.052
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.366			2.365			4.731

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

Trip rate parameter range selected:	50 - 150 (units: )
Survey date range:	01/01/16 - 18/09/24
Number of weekdays (Monday-Friday):	38
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

# Appendix L Woodward Court / Wellhouse Lane Junctions 9 Output



<b>Junctions 11</b>
<b>PICADY 11 - Priority Intersection Module</b>
Version: 11.1.0.2307 © Copyright TRL Software Limited, 2024
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
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**Filename:** Woodhouse Court - Wellhouse Lane.j11  
**Path:** O:\Woodward Court, Mirfield\ANALYSIS\CAPACITY\Priority Junctions  
**Report generation date:** 26/11/2025 09:44:42

- »D1 - 2025 | Existing | AM
- »D2 - 2025 | Existing | PM
- »D3 - 2030 | Growthed | AM
- »D4 - 2030 | Growthed | PM
- »D5 - 2030 | Base | AM
- »D6 - 2030 | Base | PM
- »D7 - 2030 | Design | AM
- »D8 - 2030 | Design | PM

**Summary of junction performance**

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
<b>2025 - Existing</b>												
<b>Stream B-AC</b>	D1	0.1	6.73	0.06	A	559 %	D2	0.0	7.26	0.02	A	900 %
<b>Stream C-AB</b>		0.0	6.09	0.03	A	[Stream B-AC]		0.0	5.91	0.01	A	∅
<b>2030 - Growthed</b>												
<b>Stream B-AC</b>	D3	0.1	6.80	0.06	A	519 %	D4	0.0	7.29	0.02	A	900 %
<b>Stream C-AB</b>		0.0	6.09	0.03	A	[Stream B-AC]		0.0	5.89	0.01	A	∅
<b>2030 - Base</b>												
<b>Stream B-AC</b>	D5	0.1	6.82	0.06	A	569 %	D6	0.0	7.28	0.02	A	900 %
<b>Stream C-AB</b>		0.0	6.09	0.03	A	[Stream B-AC]		0.0	5.89	0.01	A	∅
<b>2030 - Design</b>												
<b>Stream B-AC</b>	D7	0.1	7.56	0.09	A	388 %	D8	0.0	7.40	0.04	A	891 %
<b>Stream C-AB</b>		0.1	6.17	0.05	A	[Stream B-AC]		0.0	6.01	0.03	A	[Stream B-AC]

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.*

**File summary**

**File Description**

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	16/09/2025
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	OPTIMA\optima
<b>Description</b>	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

**Analysis Options**

PICADY short flare model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 11.1	5.75					✓	Delay	0.85	36.00	20.00		

**Demand Set Summary**

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15	✓
D2	2025	Existing	PM	ONE HOUR	15:45	17:15	15	✓
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030	Growthed	PM	ONE HOUR	15:45	17:15	15	✓
D5	2030	Base	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030	Base	PM	ONE HOUR	15:45	17:15	15	✓
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15	✓
D8	2030	Design	PM	ONE HOUR	15:45	17:15	15	✓

**Analysis Set Details**

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# D1 - 2025 | Existing | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.32	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	559	Stream B-AC	1.32	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	Wellhouse Lane (N)		Major
B	Woodward Court		Minor
C	Wellhouse Lane (S)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Wellhouse Lane (S)	6.00			36.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Woodward Court	One lane	3.56	22	22

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	523	0.095	0.241	0.152	0.344
B-C	674	0.103	0.261	-	-
C-B	595	0.230	0.230	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	125	100.000
B - Woodward Court		ONE HOUR	✓	30	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	80	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	14	111
	B - Woodward Court	11	0	19
	C - Wellhouse Lane (S)	64	16	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	6.73	0.1	A	28	41
C-AB	0.03	6.09	0.0	A	16	24
C-A					57	86
A-B					13	19
A-C					102	153

### Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	6	0.00	581	0.039	22	0.0	0.0	6.441	A
C-AB	13	3	0.00	606	0.022	13	0.0	0.0	6.071	A
C-A	47	12	0.00			47				
A-B	11	3	0.00			11				
A-C	84	21	0.00			84				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	27	7	0.00	576	0.047	27	0.0	0.0	6.560	A
C-AB	16	4	0.00	608	0.026	16	0.0	0.0	6.076	A
C-A	56	14	0.00			56				
A-B	13	3	0.00			13				
A-C	100	25	0.00			100				

## 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	0.00	568	0.058	33	0.0	0.1	6.727	A
C-AB	20	5	0.00	612	0.033	20	0.0	0.0	6.084	A
C-A	68	17	0.00			68				
A-B	15	4	0.00			15				
A-C	122	31	0.00			122				

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	0.00	568	0.058	33	0.1	0.1	6.727	A
C-AB	20	5	0.00	612	0.033	20	0.0	0.0	6.087	A
C-A	68	17	0.00			68				
A-B	15	4	0.00			15				
A-C	122	31	0.00			122				

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	27	7	0.00	576	0.047	27	0.1	0.0	6.561	A
C-AB	16	4	0.00	608	0.026	16	0.0	0.0	6.080	A
C-A	56	14	0.00			56				
A-B	13	3	0.00			13				
A-C	100	25	0.00			100				

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	6	0.00	581	0.039	23	0.0	0.0	6.447	A
C-AB	13	3	0.00	606	0.022	13	0.0	0.0	6.074	A
C-A	47	12	0.00			47				
A-B	11	3	0.00			11				
A-C	84	21	0.00			84				

# D2 - 2025 | Existing | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.11	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	900		1.11	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Existing	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	31	100.000
B - Woodward Court		ONE HOUR	✓	10	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	53	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	8	23
	B - Woodward Court	10	0	0
	C - Wellhouse Lane (S)	48	5	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	7.26	0.0	A	9	14
C-AB	0.01	5.91	0.0	A	5	7
C-A					44	66
A-B					7	11
A-C					21	32

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	0.00	512	0.015	7	0.0	0.0	7.138	A
C-AB	4	1.00	0.00	614	0.007	4	0.0	0.0	5.903	A
C-A	36	9	0.00			36				
A-B	6	2	0.00			6				
A-C	17	4	0.00			17				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	0.00	510	0.018	9	0.0	0.0	7.190	A
C-AB	5	1	0.00	617	0.008	5	0.0	0.0	5.875	A
C-A	43	11	0.00			43				
A-B	7	2	0.00			7				
A-C	21	5	0.00			21				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	0.00	506	0.022	11	0.0	0.0	7.265	A
C-AB	6	2	0.00	623	0.010	6	0.0	0.0	5.838	A
C-A	52	13	0.00			52				
A-B	9	2	0.00			9				
A-C	25	6	0.00			25				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	0.00	506	0.022	11	0.0	0.0	7.265	A
C-AB	6	2	0.00	623	0.010	6	0.0	0.0	5.840	A
C-A	52	13	0.00			52				
A-B	9	2	0.00			9				
A-C	25	6	0.00			25				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	0.00	510	0.018	9	0.0	0.0	7.191	A
C-AB	5	1	0.00	617	0.008	5	0.0	0.0	5.878	A
C-A	43	11	0.00			43				
A-B	7	2	0.00			7				
A-C	21	5	0.00			21				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	0.00	512	0.015	8	0.0	0.0	7.138	A
C-AB	4	1	0.00	614	0.007	4	0.0	0.0	5.906	A
C-A	36	9	0.00			36				
A-B	6	2	0.00			6				
A-C	17	4	0.00			17				

# D3 - 2030 | Growthed | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.34	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	519	Stream B-AC	1.34	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	132	100.000
B - Woodward Court		ONE HOUR	✓	32	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	85	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	15	117
	B - Woodward Court	12	0	20
	C - Wellhouse Lane (S)	68	17	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	6.80	0.1	A	29	44
C-AB	0.03	6.09	0.0	A	17	26
C-A					61	91
A-B					14	21
A-C					107	161

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	24	6	0.00	578	0.042	24	0.0	0.0	6.493	A
C-AB	14	3	0.00	607	0.023	14	0.0	0.0	6.071	A
C-A	50	13	0.00			50				
A-B	11	3	0.00			11				
A-C	88	22	0.00			88				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	0.00	572	0.050	29	0.0	0.1	6.622	A
C-AB	17	4	0.00	609	0.028	17	0.0	0.0	6.077	A
C-A	59	15	0.00			59				
A-B	13	3	0.00			13				
A-C	105	26	0.00			105				

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	0.00	564	0.062	35	0.1	0.1	6.804	A
C-AB	21	5	0.00	613	0.035	21	0.0	0.0	6.085	A
C-A	72	18	0.00			72				
A-B	17	4	0.00			17				
A-C	129	32	0.00			129				

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	0.00	564	0.062	35	0.1	0.1	6.804	A
C-AB	21	5	0.00	613	0.035	21	0.0	0.0	6.086	A
C-A	72	18	0.00			72				
A-B	17	4	0.00			17				
A-C	129	32	0.00			129				

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	0.00	572	0.050	29	0.1	0.1	6.623	A
C-AB	17	4	0.00	609	0.028	17	0.0	0.0	6.078	A
C-A	59	15	0.00			59				
A-B	13	3	0.00			13				
A-C	105	26	0.00			105				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	24	6	0.00	578	0.042	24	0.1	0.0	6.497	A
C-AB	14	3	0.00	607	0.023	14	0.0	0.0	6.072	A
C-A	50	13	0.00			50				
A-B	11	3	0.00			11				
A-C	88	22	0.00			88				

# D4 - 2030 | Growthed | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.13	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	900		1.13	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	Growthed	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	32	100.000
B - Woodward Court		ONE HOUR	✓	11	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	8	24
	B - Woodward Court	11	0	0
	C - Wellhouse Lane (S)	51	5	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	7.29	0.0	A	10	15
C-AB	0.01	5.89	0.0	A	5	7
C-A					46	70
A-B					7	11
A-C					22	33

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	0.00	511	0.016	8	0.0	0.0	7.156	A
C-AB	4	1	0.00	615	0.007	4	0.0	0.0	5.890	A
C-A	38	10	0.00			38				
A-B	6	2	0.00			6				
A-C	18	5	0.00			18				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	0.00	509	0.019	10	0.0	0.0	7.212	A
C-AB	5	1	0.00	619	0.008	5	0.0	0.0	5.860	A
C-A	45	11	0.00			45				
A-B	7	2	0.00			7				
A-C	22	5	0.00			22				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	0.00	506	0.024	12	0.0	0.0	7.292	A
C-AB	6	2	0.00	625	0.010	6	0.0	0.0	5.819	A
C-A	56	14	0.00			56				
A-B	9	2	0.00			9				
A-C	26	7	0.00			26				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	0.00	506	0.024	12	0.0	0.0	7.292	A
C-AB	6	2	0.00	625	0.010	6	0.0	0.0	5.820	A
C-A	56	14	0.00			56				
A-B	9	2	0.00			9				
A-C	26	7	0.00			26				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	0.00	509	0.019	10	0.0	0.0	7.213	A
C-AB	5	1	0.00	619	0.008	5	0.0	0.0	5.863	A
C-A	45	11	0.00			45				
A-B	7	2	0.00			7				
A-C	22	5	0.00			22				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	0.00	511	0.016	8	0.0	0.0	7.159	A
C-AB	4	1	0.00	615	0.007	4	0.0	0.0	5.893	A
C-A	38	10	0.00			38				
A-B	6	2	0.00			6				
A-C	18	5	0.00			18				

# D5 - 2030 | Base | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.25	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	569	Stream B-AC	1.25	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	Base	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	132	100.000
B - Woodward Court		ONE HOUR	✓	28	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	85	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	38	94
	B - Woodward Court	12	0	16
	C - Wellhouse Lane (S)	68	17	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	6.82	0.1	A	26	39
C-AB	0.03	6.09	0.0	A	17	26
C-A					61	91
A-B					35	52
A-C					86	129

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	572	0.037	21	0.0	0.0	6.531	A
C-AB	14	3	0.00	607	0.023	14	0.0	0.0	6.071	A
C-A	50	13	0.00			50				
A-B	29	7	0.00			29				
A-C	71	18	0.00			71				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	566	0.044	25	0.0	0.0	6.649	A
C-AB	17	4	0.00	609	0.028	17	0.0	0.0	6.077	A
C-A	59	15	0.00			59				
A-B	34	9	0.00			34				
A-C	85	21	0.00			85				

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	0.00	559	0.055	31	0.0	0.1	6.815	A
C-AB	21	5	0.00	613	0.035	21	0.0	0.0	6.085	A
C-A	72	18	0.00			72				
A-B	42	10	0.00			42				
A-C	103	26	0.00			103				

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	0.00	559	0.055	31	0.1	0.1	6.815	A
C-AB	21	5	0.00	613	0.035	21	0.0	0.0	6.086	A
C-A	72	18	0.00			72				
A-B	42	10	0.00			42				
A-C	103	26	0.00			103				

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	566	0.044	25	0.1	0.0	6.650	A
C-AB	17	4	0.00	609	0.028	17	0.0	0.0	6.078	A
C-A	59	15	0.00			59				
A-B	34	9	0.00			34				
A-C	85	21	0.00			85				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	572	0.037	21	0.0	0.0	6.538	A
C-AB	14	3	0.00	607	0.023	14	0.0	0.0	6.072	A
C-A	50	13	0.00			50				
A-B	29	7	0.00			29				
A-C	71	18	0.00			71				

# D6 - 2030 | Base | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.13	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	900		1.13	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	Base	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	32	100.000
B - Woodward Court		ONE HOUR	✓	11	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	13	19
	B - Woodward Court	11	0	0
	C - Wellhouse Lane (S)	51	5	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.02	7.28	0.0	A	10	15
C-AB	0.01	5.89	0.0	A	5	7
C-A					46	70
A-B					12	18
A-C					17	26

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	0.00	512	0.016	8	0.0	0.0	7.148	A
C-AB	4	1	0.00	615	0.007	4	0.0	0.0	5.890	A
C-A	38	10	0.00			38				
A-B	10	2	0.00			10				
A-C	14	4	0.00			14				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	0.00	510	0.019	10	0.0	0.0	7.203	A
C-AB	5	1	0.00	619	0.008	5	0.0	0.0	5.860	A
C-A	45	11	0.00			45				
A-B	12	3	0.00			12				
A-C	17	4	0.00			17				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	0.00	507	0.024	12	0.0	0.0	7.280	A
C-AB	6	2	0.00	625	0.010	6	0.0	0.0	5.819	A
C-A	56	14	0.00			56				
A-B	14	4	0.00			14				
A-C	21	5	0.00			21				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	0.00	507	0.024	12	0.0	0.0	7.280	A
C-AB	6	2	0.00	625	0.010	6	0.0	0.0	5.822	A
C-A	56	14	0.00			56				
A-B	14	4	0.00			14				
A-C	21	5	0.00			21				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	0.00	510	0.019	10	0.0	0.0	7.203	A
C-AB	5	1	0.00	619	0.008	5	0.0	0.0	5.863	A
C-A	45	11	0.00			45				
A-B	12	3	0.00			12				
A-C	17	4	0.00			17				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	2	0.00	512	0.016	8	0.0	0.0	7.151	A
C-AB	4	1	0.00	615	0.007	4	0.0	0.0	5.893	A
C-A	38	10	0.00			38				
A-B	10	2	0.00			10				
A-C	14	4	0.00			14				

# D7 - 2030 | Design | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.80	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	388	Stream B-AC	1.80	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	139	100.000
B - Woodward Court		ONE HOUR	✓	45	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	90	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	45	94
	B - Woodward Court	28	0	17
	C - Wellhouse Lane (S)	68	22	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	7.56	0.1	A	41	62
C-AB	0.05	6.17	0.1	A	23	34
C-A					60	90
A-B					41	62
A-C					86	129

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	0.00	540	0.063	34	0.0	0.1	7.101	A
C-AB	18	5	0.00	606	0.030	18	0.0	0.0	6.123	A
C-A	50	12	0.00			50				
A-B	34	8	0.00			34				
A-C	71	18	0.00			71				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	0.00	534	0.076	40	0.1	0.1	7.289	A
C-AB	22	6	0.00	608	0.036	22	0.0	0.0	6.143	A
C-A	59	15	0.00			59				
A-B	40	10	0.00			40				
A-C	85	21	0.00			85				

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	0.00	526	0.094	49	0.1	0.1	7.558	A
C-AB	28	7	0.00	611	0.045	28	0.0	0.1	6.168	A
C-A	71	18	0.00			71				
A-B	50	12	0.00			50				
A-C	103	26	0.00			103				

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	12	0.00	526	0.094	50	0.1	0.1	7.558	A
C-AB	28	7	0.00	611	0.045	28	0.1	0.1	6.169	A
C-A	71	18	0.00			71				
A-B	50	12	0.00			50				
A-C	103	26	0.00			103				

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	10	0.00	534	0.076	41	0.1	0.1	7.292	A
C-AB	22	6	0.00	608	0.036	22	0.1	0.0	6.145	A
C-A	59	15	0.00			59				
A-B	40	10	0.00			40				
A-C	85	21	0.00			85				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	8	0.00	540	0.063	34	0.1	0.1	7.112	A
C-AB	18	5	0.00	606	0.030	18	0.0	0.0	6.127	A
C-A	50	12	0.00			50				
A-B	34	8	0.00			34				
A-C	71	18	0.00			71				

# D8 - 2030 | Design | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.84	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	891	Stream B-AC	1.84	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030	Design	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Wellhouse Lane (N)		ONE HOUR	✓	47	100.000
B - Woodward Court		ONE HOUR	✓	19	100.000
C - Wellhouse Lane (S)		ONE HOUR	✓	67	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	28	19
	B - Woodward Court	18	0	1
	C - Wellhouse Lane (S)	51	16	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A - Wellhouse Lane (N)	B - Woodward Court	C - Wellhouse Lane (S)
From	A - Wellhouse Lane (N)	0	0	0
	B - Woodward Court	0	0	0
	C - Wellhouse Lane (S)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	7.40	0.0	A	17	26
C-AB	0.03	6.01	0.0	A	16	24
C-A					46	68
A-B					26	39
A-C					17	26

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	0.00	514	0.028	14	0.0	0.0	7.195	A
C-AB	13	3	0.00	613	0.021	13	0.0	0.0	6.002	A
C-A	38	9	0.00			38				
A-B	21	5	0.00			21				
A-C	14	4	0.00			14				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	0.00	511	0.033	17	0.0	0.0	7.281	A
C-AB	16	4	0.00	616	0.025	16	0.0	0.0	5.994	A
C-A	45	11	0.00			45				
A-B	25	6	0.00			25				
A-C	17	4	0.00			17				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	507	0.041	21	0.0	0.0	7.400	A
C-AB	19	5	0.00	621	0.031	19	0.0	0.0	5.984	A
C-A	54	14	0.00			54				
A-B	31	8	0.00			31				
A-C	21	5	0.00			21				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	507	0.041	21	0.0	0.0	7.400	A
C-AB	19	5	0.00	621	0.031	19	0.0	0.0	5.984	A
C-A	54	14	0.00			54				
A-B	31	8	0.00			31				
A-C	21	5	0.00			21				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	0.00	511	0.033	17	0.0	0.0	7.282	A
C-AB	16	4	0.00	616	0.025	16	0.0	0.0	5.995	A
C-A	45	11	0.00			45				
A-B	25	6	0.00			25				
A-C	17	4	0.00			17				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	0.00	514	0.028	14	0.0	0.0	7.202	A
C-AB	13	3	0.00	613	0.021	13	0.0	0.0	6.005	A
C-A	38	9	0.00			38				
A-B	21	5	0.00			21				
A-C	14	4	0.00			14				

## Appendix M Jenny Lane / Greenside Road Junctions 9 Output



Junctions 11
PICADY 11 - Priority Intersection Module
Version: 11.1.0.2307 © Copyright TRL Software Limited, 2024
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
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**Filename:** Jenny Lane - Greenside Lane.j11  
**Path:** O:\Woodward Court, Mirfield\ANALYSIS\CAPACITY\Priority Junctions  
**Report generation date:** 26/11/2025 08:42:12

- »D1 - 2025 | Existing | AM
- »D2 - 2025 | Existing | PM
- »D3 - 2030 | Growthed | AM
- »D4 - 2030 | Growthed | PM
- »D7 - 2030 | Design | AM
- »D8 - 2030 | Design | PM

**Summary of junction performance**

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
<b>2025 - Existing</b>												
Stream B-CD	D1	0.1	12.50	0.05	B	50 % [Stream B-AD]	D2	0.0	7.28	0.02	A	72 % [Stream B-AD]
Stream B-AD		0.5	14.81	0.34	B			0.3	12.65	0.21	B	
Stream A-BCD		0.0	6.68	0.02	A			0.2	6.98	0.14	A	
Stream D-ABC		0.0	8.10	0.05	A			0.1	9.60	0.06	A	
Stream C-ABD		0.2	8.36	0.15	A			0.0	8.02	0.03	A	
<b>2030 - Growthed</b>												
Stream B-CD	D3	0.1	8.12	0.05	A	44 % [Stream B-AD]	D4	0.0	7.43	0.02	A	63 % [Stream B-AD]
Stream B-AD		0.5	15.38	0.34	C			0.3	13.34	0.23	B	
Stream A-BCD		0.0	6.73	0.02	A			0.2	7.02	0.15	A	
Stream D-ABC		0.1	8.17	0.05	A			0.1	9.74	0.06	A	
Stream C-ABD		0.2	8.48	0.16	A			0.0	8.14	0.03	A	
<b>2030 - Design</b>												
Stream B-CD	D7	0.1	8.45	0.05	A	36 % [Stream B-AD]	D8	0.0	7.54	0.02	A	58 % [Stream B-AD]
Stream B-AD		0.6	16.63	0.39	C			0.3	13.80	0.25	B	
Stream A-BCD		0.0	6.73	0.02	A			0.2	7.00	0.15	A	
Stream D-ABC		0.1	8.19	0.05	A			0.1	9.77	0.06	A	
Stream C-ABD		0.2	8.50	0.16	A			0.0	8.20	0.03	A	

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.*

**File summary**

**File Description**

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	19/09/2025
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	OPTIMA\optima
<b>Description</b>	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

**Analysis Options**

PICADY short flare model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 11.1	5.75					✓	Delay	0.85	36.00	20.00		

**Demand Set Summary**

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15	✓
D2	2025	Existing	PM	ONE HOUR	13:45	15:15	15	✓
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030	Growthed	PM	ONE HOUR	13:45	15:15	15	✓
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15	✓
D8	2030	Design	PM	ONE HOUR	13:45	15:15	15	✓

**Analysis Set Details**

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# D1 - 2025 | Existing | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.93	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	50	Stream B-AD	2.93	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	Greenside Road (N)		Major
B	Jenny Lane		Minor
C	Greenside Road (S)		Major
D	Greenside Estate		Minor

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - Greenside Road (N)	6.50		✓	2.20	90.0	✓	1.00
C - Greenside Road (S)	6.50		✓	2.20	0.0	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Jenny Lane	One lane plus flare		10.00	5.10	2.80	2.80	2.80	✓	1.00	29	48
D - Greenside Estate	One lane	2.75								16	17

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	626	-	-	-	-	-	-	0.237	0.339	0.237	-	-	-
B-A	536	0.095	0.241	0.241	-	-	-	0.152	0.345	-	0.241	0.241	0.121
B-C	636	0.095	0.241	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	497	0.088	0.224	0.224	-	-	-	0.141	0.319	0.141	-	-	-
B-D, offside lane	536	0.095	0.241	0.241	-	-	-	0.152	0.345	0.152	-	-	-
C-B	574	0.218	0.218	0.311	-	-	-	-	-	-	-	-	-
D-A	619	-	-	-	-	-	-	0.234	-	0.093	-	-	-
D-B, nearside lane	479	0.136	0.136	0.308	-	-	-	0.216	0.216	0.085	-	-	-
D-B, offside lane	479	0.136	0.136	0.308	-	-	-	0.216	0.216	0.085	-	-	-
D-C	479	-	0.136	0.308	0.108	0.216	0.216	0.216	0.216	0.085	-	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Greenside Road (N)		ONE HOUR	✓	443	100.000
B - Jenny Lane		ONE HOUR	✓	125	100.000
C - Greenside Road (S)		ONE HOUR	✓	301	100.000
D - Greenside Estate		ONE HOUR	✓	20	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	101	333	9
	B - Jenny Lane	105	0	0	20
	C - Greenside Road (S)	236	63	0	2
	D - Greenside Estate	14	1	5	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	0	0	0
	B - Jenny Lane	0	0	0	0
	C - Greenside Road (S)	0	0	0	0
	D - Greenside Estate	0	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.05	12.50	0.1	B	12	17
B-AD	0.34	14.81	0.5	B	103	155
A-BCD	0.02	6.68	0.0	A	8	13
A-B					93	139
A-C					305	458
D-ABC	0.05	8.10	0.0	A	18	28
C-ABD	0.15	8.36	0.2	A	61	92
C-D					2	3
C-A					213	320

## Main Results for each time segment

## 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	9	2	0.00	369	0.024	9	0.0	0.0	9.988	A
B-AD	85	21	0.00	420	0.203	84	0.0	0.3	10.683	B
A-BCD	7	2	0.00	571	0.012	7	0.0	0.0	6.375	A
A-B	76	19	0.00			76				
A-C	251	63	0.00			251				
D-ABC	15	4	0.00	501	0.030	15	0.0	0.0	7.409	A
C-ABD	49	12	0.00	518	0.095	49	0.0	0.1	7.668	A
C-D	1	0.37	0.00			1				
C-A	176	44	0.00			176				

## 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	11	3	0.00	342	0.033	11	0.0	0.0	10.872	B
B-AD	101	25	0.00	397	0.255	101	0.3	0.3	12.124	B
A-BCD	8	2	0.00	562	0.015	8	0.0	0.0	6.503	A
A-B	91	23	0.00			91				
A-C	299	75	0.00			299				
D-ABC	18	4	0.00	486	0.037	18	0.0	0.0	7.683	A
C-ABD	60	15	0.00	511	0.116	59	0.1	0.1	7.962	A
C-D	2	0.44	0.00			2				
C-A	209	52	0.00			209				

## 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	15	4	0.00	303	0.048	14	0.0	0.0	12.474	B
B-AD	123	31	0.00	366	0.336	122	0.3	0.5	14.732	B
A-BCD	10	3	0.00	549	0.018	10	0.0	0.0	6.679	A
A-B	111	28	0.00			111				
A-C	367	92	0.00			367				
D-ABC	22	6	0.00	467	0.047	22	0.0	0.0	8.097	A
C-ABD	75	19	0.00	506	0.149	75	0.1	0.2	8.353	A
C-D	2	0.54	0.00			2				
C-A	254	64	0.00			254				

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	15	4	0.00	303	0.048	15	0.0	0.1	12.496	B
B-AD	123	31	0.00	366	0.336	123	0.5	0.5	14.811	B
A-BCD	10	3	0.00	549	0.018	10	0.0	0.0	6.682	A
A-B	111	28	0.00			111				
A-C	367	92	0.00			367				
D-ABC	22	6	0.00	466	0.047	22	0.0	0.0	8.100	A
C-ABD	75	19	0.00	506	0.149	75	0.2	0.2	8.359	A
C-D	2	0.54	0.00			2				
C-A	254	64	0.00			254				

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	11	3	0.00	342	0.033	11	0.1	0.0	10.897	B
B-AD	101	25	0.00	397	0.255	102	0.5	0.3	12.207	B
A-BCD	8	2	0.00	562	0.015	8	0.0	0.0	6.505	A
A-B	91	23	0.00			91				
A-C	299	75	0.00			299				
D-ABC	18	4	0.00	486	0.037	18	0.0	0.0	7.688	A
C-ABD	60	15	0.00	511	0.116	60	0.2	0.1	7.974	A
C-D	2	0.44	0.00			2				
C-A	209	52	0.00			209				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	9	2	0.00	369	0.024	9	0.0	0.0	10.012	B
B-AD	85	21	0.00	420	0.203	85	0.3	0.3	10.779	B
A-BCD	7	2	0.00	571	0.012	7	0.0	0.0	6.380	A
A-B	76	19	0.00			76				
A-C	251	63	0.00			251				
D-ABC	15	4	0.00	500	0.030	15	0.0	0.0	7.416	A
C-ABD	49	12	0.00	518	0.095	49	0.1	0.1	7.685	A
C-D	1	0.37	0.00			1				
C-A	176	44	0.00			176				

# D2 - 2025 | Existing | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		1.98	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	72	Stream B-AD	1.98	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Existing	PM	ONE HOUR	13:45	15:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Greenside Road (N)		ONE HOUR	✓	477	100.000
B - Jenny Lane		ONE HOUR	✓	80	100.000
C - Greenside Road (S)		ONE HOUR	✓	332	100.000
D - Greenside Estate		ONE HOUR	✓	22	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	83	324	70
	B - Jenny Lane	70	0	10	0
	C - Greenside Road (S)	312	13	0	7
	D - Greenside Estate	11	4	7	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Heavy Vehicle %

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	0	0	0
	B - Jenny Lane	0	0	0	0
	C - Greenside Road (S)	0	0	0	0
	D - Greenside Estate	0	0	0	0

## Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.02	7.28	0.0	A	9	14
B-AD	0.21	12.65	0.3	B	64	96
A-BCD	0.14	6.98	0.2	A	70	105
A-B					75	113
A-C					293	439
D-ABC	0.06	9.60	0.1	A	20	30
C-ABD	0.03	8.02	0.0	A	12	18
C-D					6	10
C-A					286	429

## Main Results for each time segment

## 13:45 - 14:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	8	2	0.00	550	0.014	7	0.0	0.0	6.633	A
B-AD	53	13	0.00	417	0.126	52	0.0	0.1	9.839	A
A-BCD	55	14	0.00	594	0.093	55	0.0	0.1	6.670	A
A-B	62	15	0.00			62				
A-C	242	60	0.00			242				
D-ABC	17	4	0.00	446	0.037	16	0.0	0.0	8.385	A
C-ABD	10	2	0.00	496	0.020	10	0.0	0.0	7.408	A
C-D	5	1	0.00			5				
C-A	235	59	0.00			235				

## 14:00 - 14:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	9	2	0.00	532	0.017	9	0.0	0.0	6.881	A
B-AD	63	16	0.00	394	0.160	63	0.1	0.2	10.864	B
A-BCD	68	17	0.00	596	0.114	68	0.1	0.1	6.817	A
A-B	74	18	0.00			74				
A-C	288	72	0.00			288				
D-ABC	20	5	0.00	426	0.046	20	0.0	0.0	8.854	A
C-ABD	12	3	0.00	482	0.025	12	0.0	0.0	7.660	A
C-D	6	2	0.00			6				
C-A	280	70	0.00			280				

## 14:15 - 14:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	11	3	0.00	506	0.022	11	0.0	0.0	7.278	A
B-AD	77	19	0.00	362	0.213	77	0.2	0.3	12.625	B
A-BCD	86	22	0.00	602	0.143	86	0.1	0.2	6.975	A
A-B	90	22	0.00			90				
A-C	349	87	0.00			349				
D-ABC	24	6	0.00	399	0.061	24	0.0	0.1	9.601	A
C-ABD	15	4	0.00	463	0.032	15	0.0	0.0	8.020	A
C-D	8	2	0.00			8				
C-A	343	86	0.00			343				

## 14:30 - 14:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	11	3	0.00	505	0.022	11	0.0	0.0	7.281	A
B-AD	77	19	0.00	362	0.213	77	0.3	0.3	12.655	B
A-BCD	86	22	0.00	602	0.143	86	0.2	0.2	6.980	A
A-B	90	22	0.00			90				
A-C	349	87	0.00			349				
D-ABC	24	6	0.00	399	0.061	24	0.1	0.1	9.604	A
C-ABD	15	4	0.00	463	0.032	15	0.0	0.0	8.021	A
C-D	8	2	0.00			8				
C-A	343	86	0.00			343				

## 14:45 - 15:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	9	2	0.00	532	0.017	9	0.0	0.0	6.885	A
B-AD	63	16	0.00	394	0.160	63	0.3	0.2	10.900	B
A-BCD	68	17	0.00	596	0.114	68	0.2	0.1	6.826	A
A-B	74	18	0.00			74				
A-C	288	72	0.00			288				
D-ABC	20	5	0.00	426	0.046	20	0.1	0.0	8.862	A
C-ABD	12	3	0.00	482	0.025	12	0.0	0.0	7.665	A
C-D	6	2	0.00			6				
C-A	280	70	0.00			280				

## 15:00 - 15:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	8	2	0.00	550	0.014	8	0.0	0.0	6.641	A
B-AD	53	13	0.00	417	0.126	53	0.2	0.1	9.883	A
A-BCD	55	14	0.00	594	0.093	55	0.1	0.1	6.682	A
A-B	62	15	0.00			62				
A-C	242	60	0.00			242				
D-ABC	17	4	0.00	445	0.037	17	0.0	0.0	8.396	A
C-ABD	10	2	0.00	496	0.020	10	0.0	0.0	7.414	A
C-D	5	1	0.00			5				
C-A	235	59	0.00			235				

# D3 - 2030 | Growthed | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.89	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	44	Stream B-AD	2.89	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Greenside Road (N)		ONE HOUR	✓	469	100.000
B - Jenny Lane		ONE HOUR	✓	132	100.000
C - Greenside Road (S)		ONE HOUR	✓	318	100.000
D - Greenside Estate		ONE HOUR	✓	21	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	107	352	10
	B - Jenny Lane	111	0	21	0
	C - Greenside Road (S)	250	66	0	2
	D - Greenside Estate	15	1	5	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Heavy Vehicle %

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	0	0	0
	B - Jenny Lane	0	0	0	0
	C - Greenside Road (S)	0	0	0	0
	D - Greenside Estate	0	0	0	0

## Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.05	8.12	0.1	A	19	29
B-AD	0.34	15.38	0.5	C	102	153
A-BCD	0.02	6.73	0.0	A	9	14
A-B					98	147
A-C					323	484
D-ABC	0.05	8.17	0.1	A	19	29
C-ABD	0.16	8.48	0.2	A	65	97
C-D					2	3
C-A					225	338

## Main Results for each time segment

## 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	16	4	0.00	532	0.030	16	0.0	0.0	6.970	A
B-AD	84	21	0.00	413	0.202	83	0.0	0.2	10.853	B
A-BCD	8	2	0.00	569	0.013	8	0.0	0.0	6.413	A
A-B	81	20	0.00			81				
A-C	265	66	0.00			265				
D-ABC	16	4	0.00	500	0.032	16	0.0	0.0	7.435	A
C-ABD	52	13	0.00	515	0.100	51	0.0	0.1	7.747	A
C-D	1	0.37	0.00			1				
C-A	186	47	0.00			186				

## 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	19	5	0.00	507	0.037	19	0.0	0.0	7.375	A
B-AD	100	25	0.00	389	0.256	99	0.2	0.3	12.405	B
A-BCD	9	2	0.00	559	0.016	9	0.0	0.0	6.548	A
A-B	96	24	0.00			96				
A-C	316	79	0.00			316				
D-ABC	19	5	0.00	485	0.039	19	0.0	0.0	7.725	A
C-ABD	63	16	0.00	509	0.123	63	0.1	0.1	8.058	A
C-D	2	0.44	0.00			2				
C-A	221	55	0.00			221				

## 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	23	6	0.00	467	0.050	23	0.0	0.1	8.107	A
B-AD	122	31	0.00	356	0.343	122	0.3	0.5	15.293	C
A-BCD	11	3	0.00	546	0.021	11	0.0	0.0	6.733	A
A-B	118	29	0.00			118				
A-C	387	97	0.00			387				
D-ABC	23	6	0.00	464	0.050	23	0.0	0.1	8.167	A
C-ABD	80	20	0.00	504	0.158	79	0.1	0.2	8.469	A
C-D	2	0.54	0.00			2				
C-A	268	67	0.00			268				

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	23	6	0.00	466	0.050	23	0.1	0.1	8.120	A
B-AD	122	31	0.00	356	0.343	122	0.5	0.5	15.381	C
A-BCD	11	3	0.00	546	0.021	11	0.0	0.0	6.734	A
A-B	118	29	0.00			118				
A-C	387	97	0.00			387				
D-ABC	23	6	0.00	464	0.050	23	0.1	0.1	8.170	A
C-ABD	80	20	0.00	504	0.158	80	0.2	0.2	8.478	A
C-D	2	0.54	0.00			2				
C-A	268	67	0.00			268				

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	19	5	0.00	506	0.037	19	0.1	0.0	7.387	A
B-AD	100	25	0.00	389	0.256	100	0.5	0.4	12.498	B
A-BCD	9	2	0.00	559	0.016	9	0.0	0.0	6.552	A
A-B	96	24	0.00			96				
A-C	316	79	0.00			316				
D-ABC	19	5	0.00	485	0.039	19	0.1	0.0	7.730	A
C-ABD	63	16	0.00	509	0.123	63	0.2	0.2	8.070	A
C-D	2	0.44	0.00			2				
C-A	221	55	0.00			221				

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	16	4	0.00	531	0.030	16	0.0	0.0	6.984	A
B-AD	84	21	0.00	413	0.202	84	0.4	0.3	10.949	B
A-BCD	8	2	0.00	569	0.013	8	0.0	0.0	6.416	A
A-B	81	20	0.00			81				
A-C	265	66	0.00			265				
D-ABC	16	4	0.00	500	0.032	16	0.0	0.0	7.442	A
C-ABD	52	13	0.00	515	0.100	52	0.2	0.1	7.767	A
C-D	1	0.37	0.00			1				
C-A	186	47	0.00			186				

# D4 - 2030 | Growthed | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.06	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	63	Stream B-AD	2.06	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	Growthed	PM	ONE HOUR	13:45	15:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Greenside Road (N)		ONE HOUR	✓	504	100.000
B - Jenny Lane		ONE HOUR	✓	85	100.000
C - Greenside Road (S)		ONE HOUR	✓	351	100.000
D - Greenside Estate		ONE HOUR	✓	23	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	88	342	74
	B - Jenny Lane	74	0	11	0
	C - Greenside Road (S)	330	14	0	7
	D - Greenside Estate	12	4	7	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Heavy Vehicle %

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	0	0	0
	B - Jenny Lane	0	0	0	0
	C - Greenside Road (S)	0	0	0	0
	D - Greenside Estate	0	0	0	0

## Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.02	7.43	0.0	A	10	15
B-AD	0.23	13.34	0.3	B	68	102
A-BCD	0.15	7.02	0.2	A	75	112
A-B					79	119
A-C					309	463
D-ABC	0.06	9.74	0.1	A	21	32
C-ABD	0.03	8.14	0.0	A	13	20
C-D					6	10
C-A					303	454

## Main Results for each time segment

## 13:45 - 14:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	8	2	0.00	545	0.015	8	0.0	0.0	6.702	A
B-AD	56	14	0.00	410	0.136	55	0.0	0.2	10.115	B
A-BCD	59	15	0.00	594	0.099	58	0.0	0.1	6.711	A
A-B	66	16	0.00			66				
A-C	255	64	0.00			255				
D-ABC	17	4	0.00	444	0.039	17	0.0	0.0	8.430	A
C-ABD	11	3	0.00	492	0.022	11	0.0	0.0	7.482	A
C-D	5	1	0.00			5				
C-A	248	62	0.00			248				

## 14:00 - 14:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	10	2	0.00	526	0.019	10	0.0	0.0	6.975	A
B-AD	67	17	0.00	386	0.173	66	0.2	0.2	11.271	B
A-BCD	72	18	0.00	597	0.121	72	0.1	0.1	6.863	A
A-B	78	19	0.00			78				
A-C	303	76	0.00			303				
D-ABC	21	5	0.00	424	0.049	21	0.0	0.1	8.929	A
C-ABD	13	3	0.00	477	0.027	13	0.0	0.0	7.751	A
C-D	6	2	0.00			6				
C-A	296	74	0.00			296				

## 14:15 - 14:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	12	3	0.00	497	0.024	12	0.0	0.0	7.423	A
B-AD	81	20	0.00	351	0.232	81	0.2	0.3	13.301	B
A-BCD	93	23	0.00	605	0.153	92	0.1	0.2	7.018	A
A-B	95	24	0.00			95				
A-C	368	92	0.00			368				
D-ABC	25	6	0.00	395	0.064	25	0.1	0.1	9.736	A
C-ABD	16	4	0.00	458	0.035	16	0.0	0.0	8.135	A
C-D	8	2	0.00			8				
C-A	363	91	0.00			363				

## 14:30 - 14:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	12	3	0.00	497	0.024	12	0.0	0.0	7.427	A
B-AD	81	20	0.00	351	0.232	81	0.3	0.3	13.343	B
A-BCD	93	23	0.00	605	0.153	93	0.2	0.2	7.024	A
A-B	95	24	0.00			95				
A-C	368	92	0.00			368				
D-ABC	25	6	0.00	395	0.064	25	0.1	0.1	9.739	A
C-ABD	16	4	0.00	458	0.035	16	0.0	0.0	8.138	A
C-D	8	2	0.00			8				
C-A	363	91	0.00			363				

## 14:45 - 15:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	10	2	0.00	526	0.019	10	0.0	0.0	6.983	A
B-AD	67	17	0.00	385	0.173	67	0.3	0.2	11.315	B
A-BCD	72	18	0.00	597	0.121	72	0.2	0.2	6.872	A
A-B	78	19	0.00			78				
A-C	303	76	0.00			303				
D-ABC	21	5	0.00	424	0.049	21	0.1	0.1	8.937	A
C-ABD	13	3	0.00	477	0.027	13	0.0	0.0	7.754	A
C-D	6	2	0.00			6				
C-A	296	74	0.00			296				

## 15:00 - 15:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	8	2	0.00	545	0.015	8	0.0	0.0	6.710	A
B-AD	56	14	0.00	410	0.136	56	0.2	0.2	10.169	B
A-BCD	59	15	0.00	594	0.099	59	0.2	0.1	6.726	A
A-B	66	16	0.00			66				
A-C	255	64	0.00			255				
D-ABC	17	4	0.00	444	0.039	17	0.1	0.0	8.442	A
C-ABD	11	3	0.00	492	0.022	11	0.0	0.0	7.485	A
C-D	5	1	0.00			5				
C-A	248	62	0.00			248				

# D7 - 2030 | Design | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		3.25	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	36	Stream B-AD	3.25	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Greenside Road (N)		ONE HOUR	✓	475	100.000
B - Jenny Lane		ONE HOUR	✓	148	100.000
C - Greenside Road (S)		ONE HOUR	✓	318	100.000
D - Greenside Estate		ONE HOUR	✓	21	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	113	352	10
	B - Jenny Lane	127	0	21	0
	C - Greenside Road (S)	250	66	0	2
	D - Greenside Estate	15	1	5	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Heavy Vehicle %

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	0	0	0
	B - Jenny Lane	0	0	0	0
	C - Greenside Road (S)	0	0	0	0
	D - Greenside Estate	0	0	0	0

## Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.05	8.45	0.1	A	19	29
B-AD	0.39	16.63	0.6	C	117	175
A-BCD	0.02	6.73	0.0	A	9	14
A-B					104	155
A-C					323	484
D-ABC	0.05	8.19	0.1	A	19	29
C-ABD	0.16	8.50	0.2	A	65	97
C-D					2	3
C-A					225	338

## Main Results for each time segment

## 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	16	4	0.00	525	0.030	16	0.0	0.0	7.073	A
B-AD	96	24	0.00	414	0.231	94	0.0	0.3	11.237	B
A-BCD	8	2	0.00	569	0.013	8	0.0	0.0	6.412	A
A-B	85	21	0.00			85				
A-C	265	66	0.00			265				
D-ABC	16	4	0.00	499	0.032	16	0.0	0.0	7.445	A
C-ABD	52	13	0.00	515	0.100	51	0.0	0.1	7.763	A
C-D	1	0.37	0.00			1				
C-A	186	47	0.00			186				

## 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	19	5	0.00	496	0.038	19	0.0	0.0	7.538	A
B-AD	114	29	0.00	389	0.293	114	0.3	0.4	13.034	B
A-BCD	9	2	0.00	559	0.016	9	0.0	0.0	6.547	A
A-B	102	25	0.00			102				
A-C	316	79	0.00			316				
D-ABC	19	5	0.00	484	0.039	19	0.0	0.0	7.738	A
C-ABD	63	16	0.00	508	0.124	63	0.1	0.1	8.078	A
C-D	2	0.44	0.00			2				
C-A	221	55	0.00			221				

## 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	23	6	0.00	450	0.051	23	0.0	0.1	8.432	A
B-AD	140	35	0.00	356	0.393	139	0.4	0.6	16.500	C
A-BCD	11	3	0.00	546	0.021	11	0.0	0.0	6.731	A
A-B	124	31	0.00			124				
A-C	387	97	0.00			387				
D-ABC	23	6	0.00	463	0.050	23	0.0	0.1	8.186	A
C-ABD	80	20	0.00	503	0.158	79	0.1	0.2	8.496	A
C-D	2	0.54	0.00			2				
C-A	268	67	0.00			268				

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	23	6	0.00	449	0.051	23	0.1	0.1	8.451	A
B-AD	140	35	0.00	356	0.393	140	0.6	0.6	16.633	C
A-BCD	11	3	0.00	546	0.021	11	0.0	0.0	6.732	A
A-B	124	31	0.00			124				
A-C	387	97	0.00			387				
D-ABC	23	6	0.00	463	0.050	23	0.1	0.1	8.189	A
C-ABD	80	20	0.00	503	0.158	80	0.2	0.2	8.505	A
C-D	2	0.54	0.00			2				
C-A	268	67	0.00			268				

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	19	5	0.00	495	0.038	19	0.1	0.0	7.555	A
B-AD	114	29	0.00	389	0.293	115	0.6	0.4	13.165	B
A-BCD	9	2	0.00	559	0.016	9	0.0	0.0	6.549	A
A-B	102	25	0.00			102				
A-C	316	79	0.00			316				
D-ABC	19	5	0.00	484	0.039	19	0.1	0.0	7.743	A
C-ABD	63	16	0.00	508	0.124	63	0.2	0.2	8.092	A
C-D	2	0.44	0.00			2				
C-A	221	55	0.00			221				

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	16	4	0.00	524	0.030	16	0.0	0.0	7.090	A
B-AD	96	24	0.00	413	0.231	96	0.4	0.3	11.363	B
A-BCD	8	2	0.00	569	0.013	8	0.0	0.0	6.415	A
A-B	85	21	0.00			85				
A-C	265	66	0.00			265				
D-ABC	16	4	0.00	499	0.032	16	0.0	0.0	7.451	A
C-ABD	52	13	0.00	514	0.100	52	0.2	0.1	7.782	A
C-D	1	0.37	0.00			1				
C-A	186	47	0.00			186				

# D8 - 2030 | Design | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		2.14	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	58	Stream B-AD	2.14	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030	Design	PM	ONE HOUR	13:45	15:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Greenside Road (N)		ONE HOUR	✓	519	100.000
B - Jenny Lane		ONE HOUR	✓	92	100.000
C - Greenside Road (S)		ONE HOUR	✓	351	100.000
D - Greenside Estate		ONE HOUR	✓	23	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	103	342	74
	B - Jenny Lane	81	0	11	0
	C - Greenside Road (S)	330	14	0	7
	D - Greenside Estate	12	4	7	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Heavy Vehicle %

		To			
		A - Greenside Road (N)	B - Jenny Lane	C - Greenside Road (S)	D - Greenside Estate
From	A - Greenside Road (N)	0	0	0	0
	B - Jenny Lane	0	0	0	0
	C - Greenside Road (S)	0	0	0	0
	D - Greenside Estate	0	0	0	0

## Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	0.02	7.54	0.0	A	10	15
B-AD	0.25	13.80	0.3	B	74	111
A-BCD	0.15	7.00	0.2	A	75	112
A-B					93	139
A-C					309	463
D-ABC	0.06	9.77	0.1	A	21	32
C-ABD	0.03	8.20	0.0	A	13	20
C-D					6	10
C-A					303	454

## Main Results for each time segment

## 13:45 - 14:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	8	2	0.00	541	0.015	8	0.0	0.0	6.751	A
B-AD	61	15	0.00	410	0.149	60	0.0	0.2	10.286	B
A-BCD	59	15	0.00	596	0.099	59	0.0	0.1	6.698	A
A-B	77	19	0.00			77				
A-C	255	64	0.00			255				
D-ABC	17	4	0.00	443	0.039	17	0.0	0.0	8.443	A
C-ABD	11	3	0.00	489	0.022	11	0.0	0.0	7.520	A
C-D	5	1	0.00			5				
C-A	248	62	0.00			248				

## 14:00 - 14:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	10	2	0.00	521	0.019	10	0.0	0.0	7.043	A
B-AD	73	18	0.00	385	0.189	73	0.2	0.2	11.528	B
A-BCD	72	18	0.00	598	0.121	72	0.1	0.1	6.844	A
A-B	91	23	0.00			91				
A-C	303	76	0.00			303				
D-ABC	21	5	0.00	423	0.049	21	0.0	0.1	8.948	A
C-ABD	13	3	0.00	474	0.027	13	0.0	0.0	7.800	A
C-D	6	2	0.00			6				
C-A	296	74	0.00			296				

## 14:15 - 14:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	12	3	0.00	490	0.025	12	0.0	0.0	7.532	A
B-AD	89	22	0.00	350	0.255	89	0.2	0.3	13.752	B
A-BCD	93	23	0.00	608	0.153	93	0.1	0.2	6.989	A
A-B	111	28	0.00			111				
A-C	368	92	0.00			368				
D-ABC	25	6	0.00	394	0.064	25	0.1	0.1	9.764	A
C-ABD	16	4	0.00	455	0.035	16	0.0	0.0	8.200	A
C-D	8	2	0.00			8				
C-A	363	91	0.00			363				

## 14:30 - 14:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	12	3	0.00	490	0.025	12	0.0	0.0	7.537	A
B-AD	89	22	0.00	350	0.255	89	0.3	0.3	13.796	B
A-BCD	93	23	0.00	608	0.153	93	0.2	0.2	6.997	A
A-B	111	28	0.00			111				
A-C	368	92	0.00			368				
D-ABC	25	6	0.00	394	0.064	25	0.1	0.1	9.767	A
C-ABD	16	4	0.00	455	0.035	16	0.0	0.0	8.201	A
C-D	8	2	0.00			8				
C-A	363	91	0.00			363				

## 14:45 - 15:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	10	2	0.00	521	0.019	10	0.0	0.0	7.052	A
B-AD	73	18	0.00	385	0.189	73	0.3	0.2	11.580	B
A-BCD	72	18	0.00	598	0.121	73	0.2	0.2	6.854	A
A-B	91	23	0.00			91				
A-C	303	76	0.00			303				
D-ABC	21	5	0.00	423	0.049	21	0.1	0.1	8.957	A
C-ABD	13	3	0.00	474	0.027	13	0.0	0.0	7.804	A
C-D	6	2	0.00			6				
C-A	296	74	0.00			296				

## 15:00 - 15:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	8	2	0.00	541	0.015	8	0.0	0.0	6.757	A
B-AD	61	15	0.00	410	0.149	61	0.2	0.2	10.344	B
A-BCD	59	15	0.00	595	0.099	59	0.2	0.1	6.716	A
A-B	77	19	0.00			77				
A-C	255	64	0.00			255				
D-ABC	17	4	0.00	443	0.039	17	0.1	0.0	8.455	A
C-ABD	11	3	0.00	489	0.022	11	0.0	0.0	7.523	A
C-D	5	1	0.00			5				
C-A	248	62	0.00			248				

# Appendix N Proposed Hepworth Lane Site Egress Junctions 9 Output



<h1>Junctions 11</h1>
<h2>PICADY 11 - Priority Intersection Module</h2>
Version: 11.1.0.2307 © Copyright TRL Software Limited, 2024
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**Filename:** Hepworth Lane Egress.j11  
**Path:** O:\Woodward Court, Mirfield\ANALYSIS\CAPACITY\Priority Junctions  
**Report generation date:** 27/11/2025 10:14:19

»D1 - 2025 | Base | AM  
 »D2 - 2025 | Base | PM

**Summary of junction performance**

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
<b>2025 - Base</b>												
<b>Stream B-AC</b>	D1	0.1	5.41	0.06	A	900 %	D2	0.0	5.17	0.01	A	900 %
<b>Stream C-AB</b>		0.0	0.00	0.00	A	∅		0.0	0.00	0.00	A	∅

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.*

**File summary**

**File Description**

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	26/11/2025
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	OPTIMA\optima
<b>Description</b>	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

**Analysis Options**

PICADY short flare model	Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 11.1		✓	Delay	0.85	36.00	20.00

**Demand Set Summary**

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Base	AM	ONE HOUR	07:45	09:15	15
D2	2025	Base	PM	ONE HOUR	15:45	17:15	15

**Analysis Set Details**

ID	Network flow scaling factor (%)
A1	100.000

# D1 - 2025 | Base | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Entry Only	Two-way		2.74	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	900		2.74	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	Hepworth Lane (W)		Major
B	Site Egress		Minor
C	Hepworth Lane (E)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Hepworth Lane (E)	6.00			0.0	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Egress	One lane	3.96	14	37

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	548	0.100	0.252	0.159	0.361
B-C	709	0.109	0.275	-	-
C-B	574	0.222	0.222	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Base	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hepworth Lane (W)		✓	8	100.000
B - Site Egress		✓	38	100.000
C - Hepworth Lane (E)		✓	29	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Hepworth Lane (W)	B - Site Egress	C - Hepworth Lane (E)
From	A - Hepworth Lane (W)	0	0	8
	B - Site Egress	0	0	38
	C - Hepworth Lane (E)	29	0	0

## Vehicle Mix

Heavy Vehicle %

		To		
		A - Hepworth Lane (W)	B - Site Egress	C - Hepworth Lane (E)
From	A - Hepworth Lane (W)	0	0	0
	B - Site Egress	0	0	0
	C - Hepworth Lane (E)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	5.41	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	0.00	708	0.040	28	0.0	5.297	A
C-AB	0	0.00	1145	0.000	0	0.0	0.000	A
C-A	22	0.00			22			
A-B	0	0.00			0			
A-C	6	0.00			6			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	0.00	707	0.048	34	0.1	5.346	A
C-AB	0	0.00	1145	0.000	0	0.0	0.000	A
C-A	26	0.00			26			
A-B	0	0.00			0			
A-C	7	0.00			7			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	0.00	707	0.059	42	0.1	5.411	A
C-AB	0	0.00	1144	0.000	0	0.0	0.000	A
C-A	32	0.00			32			
A-B	0	0.00			0			
A-C	9	0.00			9			

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	0.00	707	0.059	42	0.1	5.411	A
C-AB	0	0.00	1144	0.000	0	0.0	0.000	A
C-A	32	0.00			32			
A-B	0	0.00			0			
A-C	9	0.00			9			

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	0.00	707	0.048	34	0.1	5.349	A
C-AB	0	0.00	1145	0.000	0	0.0	0.000	A
C-A	26	0.00			26			
A-B	0	0.00			0			
A-C	7	0.00			7			

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	0.00	708	0.040	29	0.0	5.300	A
C-AB	0	0.00	1145	0.000	0	0.0	0.000	A
C-A	22	0.00			22			
A-B	0	0.00			0			
A-C	6	0.00			6			

# D2 - 2025 | Base | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Entry Only	Two-way		0.74	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	900		0.74	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Base	PM	ONE HOUR	15:45	17:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hepworth Lane (W)		✓	10	100.000
B - Site Egress		✓	9	100.000
C - Hepworth Lane (E)		✓	44	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Hepworth Lane (W)	B - Site Egress	C - Hepworth Lane (E)
From	A - Hepworth Lane (W)	0	0	10
	B - Site Egress	0	0	9
	C - Hepworth Lane (E)	44	0	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Hepworth Lane (W)	B - Site Egress	C - Hepworth Lane (E)
From	A - Hepworth Lane (W)	0	0	0
	B - Site Egress	0	0	0
	C - Hepworth Lane (E)	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	5.17	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	0.00	707	0.010	7	0.0	5.138	A
C-AB	0	0.00	1145	0.000	0	0.0	0.000	A
C-A	33	0.00			33			
A-B	0	0.00			0			
A-C	8	0.00			8			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	0.00	707	0.011	8	0.0	5.150	A
C-AB	0	0.00	1144	0.000	0	0.0	0.000	A
C-A	40	0.00			40			
A-B	0	0.00			0			
A-C	9	0.00			9			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	0.00	706	0.014	10	0.0	5.168	A
C-AB	0	0.00	1143	0.000	0	0.0	0.000	A
C-A	48	0.00			48			
A-B	0	0.00			0			
A-C	11	0.00			11			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	0.00	706	0.014	10	0.0	5.168	A
C-AB	0	0.00	1143	0.000	0	0.0	0.000	A
C-A	48	0.00			48			
A-B	0	0.00			0			
A-C	11	0.00			11			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	0.00	707	0.011	8	0.0	5.150	A
C-AB	0	0.00	1144	0.000	0	0.0	0.000	A
C-A	40	0.00			40			
A-B	0	0.00			0			
A-C	9	0.00			9			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	0.00	707	0.010	7	0.0	5.138	A
C-AB	0	0.00	1145	0.000	0	0.0	0.000	A
C-A	33	0.00			33			
A-B	0	0.00			0			
A-C	8	0.00			8			

# Appendix O Hepworth Lane / Flash Lane / Shillbank Lane Junctions 9 Output



# Junctions 11

## PICADY 11 - Priority Intersection Module

Version: 11.1.0.2307  
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Filename: (new file)

Path:

Report generation date: 27/11/2025 10:11:06

»D1 - 2025 | Existing | AM  
 »D2 - 2025 | Existing | PM  
 »D3 - 2030 | Growthed | AM  
 »D4 - 2030 | Growthed | PM  
 »D5 - 2030 | Base | AM  
 »D6 - 2030 | Base | PM  
 »D7 - 2030 | Design | AM  
 »D8 - 2030 | Design | PM

### Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
<b>2025 - Existing</b>												
Stream B-AC	D1	0.0	7.81	0.03	A	196 %	D2	0.0	6.47	0.01	A	324 %
Stream C-AB		0.2	5.91	0.09	A	[Stream B-AC]		0.0	5.76	0.03	A	[Stream B-AC]
<b>2030 - Growthed</b>												
Stream B-AC	D3	0.0	7.94	0.04	A	182 %	D4	0.0	6.54	0.01	A	301 %
Stream C-AB		0.2	5.90	0.10	A	[Stream B-AC]		0.1	5.74	0.04	A	[Stream B-AC]
<b>2030 - Base</b>												
Stream B-AC	D5	0.1	7.36	0.09	A	194 %	D6	0.0	6.44	0.02	A	309 %
Stream C-AB		0.2	5.86	0.10	A	[Stream B-AC]		0.1	5.74	0.04	A	[Stream B-AC]
<b>2030 - Design</b>												
Stream B-AC	D7	0.1	7.69	0.11	A	174 %	D8	0.0	6.74	0.03	A	280 %
Stream C-AB		0.2	5.90	0.11	A	[Stream B-AC]		0.1	5.79	0.05	A	[Stream B-AC]

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

### File summary

#### File Description

Title	
Location	
Site number	
Date	27/11/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\optima
Description	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

**Analysis Options**

PICADY short flare model	Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 11.1		✓	Delay	0.85	36.00	20.00

**Demand Set Summary**

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15
D2	2025	Existing	PM	ONE HOUR	15:45	17:15	15
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15
D4	2030	Growthed	PM	ONE HOUR	15:45	17:15	15
D5	2030	Base	AM	ONE HOUR	07:45	09:15	15
D6	2030	Base	PM	ONE HOUR	15:45	17:15	15
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15
D8	2030	Design	PM	ONE HOUR	15:45	17:15	15

**Analysis Set Details**

ID	Network flow scaling factor (%)
A1	100.000

# D1 - 2025 | Existing | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.63	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	196	Stream B-AC	0.63	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	Flash Lane		Major
B	Hepworth Lane		Minor
C	Shillbank Lane		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Shillbank Lane	7.95			40.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Hepworth Lane	One lane	3.16	95	80

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	558	0.093	0.235	0.148	0.336
B-C	685	0.096	0.243	-	-
C-B	597	0.212	0.212	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	417	100.000
B - Hepworth Lane		✓	15	100.000
C - Shillbank Lane		✓	257	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	4	413
	B - Hepworth Lane	7	0	8
	C - Shillbank Lane	220	37	0

## Vehicle Mix

Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	7.81	0.0	A
C-AB	0.09	5.91	0.2	A
C-A				
A-B				
A-C				

### Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	0.00	523	0.022	11	0.0	7.032	A
C-AB	37	0.00	647	0.058	37	0.1	5.894	A
C-A	156	0.00			156			
A-B	3	0.00			3			
A-C	311	0.00			311			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	504	0.027	13	0.0	7.335	A
C-AB	48	0.00	659	0.072	48	0.1	5.894	A
C-A	183	0.00			183			
A-B	4	0.00			4			
A-C	371	0.00			371			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	0.00	478	0.035	16	0.0	7.805	A
C-AB	64	0.00	675	0.094	64	0.2	5.892	A
C-A	219	0.00			219			
A-B	4	0.00			4			
A-C	455	0.00			455			

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	0.00	478	0.035	17	0.0	7.806	A
C-AB	64	0.00	675	0.095	64	0.2	5.896	A
C-A	219	0.00			219			
A-B	4	0.00			4			
A-C	455	0.00			455			

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	504	0.027	14	0.0	7.340	A
C-AB	48	0.00	659	0.072	48	0.1	5.897	A
C-A	183	0.00			183			
A-B	4	0.00			4			
A-C	371	0.00			371			

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	0.00	523	0.022	11	0.0	7.033	A
C-AB	38	0.00	648	0.058	38	0.1	5.907	A
C-A	156	0.00			156			
A-B	3	0.00			3			
A-C	311	0.00			311			

# D2 - 2025 | Existing | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.28	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	324	Stream B-AC	0.28	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Existing	PM	ONE HOUR	15:45	17:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	352	100.000
B - Hepworth Lane		✓	7	100.000
C - Shillbank Lane		✓	200	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	18	334
	B - Hepworth Lane	1	0	6
	C - Shillbank Lane	186	14	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	6.47	0.0	A
C-AB	0.03	5.76	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	0.00	596	0.009	5	0.0	6.095	A
C-AB	13	0.00	639	0.021	13	0.0	5.755	A
C-A	137	0.00			137			
A-B	14	0.00			14			
A-C	251	0.00			251			

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	0.00	583	0.011	6	0.0	6.246	A
C-AB	17	0.00	648	0.026	17	0.0	5.703	A
C-A	163	0.00			163			
A-B	16	0.00			16			
A-C	300	0.00			300			

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	0.00	564	0.014	8	0.0	6.469	A
C-AB	22	0.00	661	0.034	22	0.0	5.634	A
C-A	198	0.00			198			
A-B	20	0.00			20			
A-C	368	0.00			368			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	0.00	564	0.014	8	0.0	6.469	A
C-AB	22	0.00	661	0.034	22	0.0	5.634	A
C-A	198	0.00			198			
A-B	20	0.00			20			
A-C	368	0.00			368			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	0.00	583	0.011	6	0.0	6.247	A
C-AB	17	0.00	648	0.026	17	0.0	5.707	A
C-A	163	0.00			163			
A-B	16	0.00			16			
A-C	300	0.00			300			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	0.00	596	0.009	5	0.0	6.098	A
C-AB	14	0.00	639	0.021	14	0.0	5.758	A
C-A	137	0.00			137			
A-B	14	0.00			14			
A-C	251	0.00			251			

# D3 - 2030 | Growthed | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.64	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	182	Stream B-AC	0.64	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	440	100.000
B - Hepworth Lane		✓	15	100.000
C - Shillbank Lane		✓	271	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	4	436
	B - Hepworth Lane	7	0	8
	C - Shillbank Lane	232	39	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.04	7.94	0.0	A
C-AB	0.10	5.90	0.2	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	0.00	518	0.022	11	0.0	7.106	A
C-AB	40	0.00	651	0.062	40	0.1	5.892	A
C-A	164	0.00			164			
A-B	3	0.00			3			
A-C	328	0.00			328			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	498	0.027	13	0.0	7.434	A
C-AB	51	0.00	663	0.077	51	0.1	5.890	A
C-A	192	0.00			192			
A-B	4	0.00			4			
A-C	392	0.00			392			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	0.00	470	0.035	16	0.0	7.943	A
C-AB	69	0.00	680	0.101	69	0.2	5.895	A
C-A	229	0.00			229			
A-B	4	0.00			4			
A-C	480	0.00			480			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	0.00	470	0.035	17	0.0	7.944	A
C-AB	69	0.00	680	0.102	69	0.2	5.899	A
C-A	229	0.00			229			
A-B	4	0.00			4			
A-C	480	0.00			480			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	498	0.027	14	0.0	7.438	A
C-AB	51	0.00	663	0.078	52	0.1	5.898	A
C-A	192	0.00			192			
A-B	4	0.00			4			
A-C	392	0.00			392			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	0.00	518	0.022	11	0.0	7.108	A
C-AB	40	0.00	651	0.062	40	0.1	5.902	A
C-A	164	0.00			164			
A-B	3	0.00			3			
A-C	328	0.00			328			

# D4 - 2030 | Growthed | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.28	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	301	Stream B-AC	0.28	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030	Growthed	PM	ONE HOUR	15:45	17:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	372	100.000
B - Hepworth Lane		✓	7	100.000
C - Shillbank Lane		✓	211	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	19	353
	B - Hepworth Lane	1	0	6
	C - Shillbank Lane	196	15	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	6.54	0.0	A
C-AB	0.04	5.74	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	0.00	592	0.009	5	0.0	6.136	A
C-AB	15	0.00	641	0.023	15	0.0	5.744	A
C-A	144	0.00			144			
A-B	14	0.00			14			
A-C	266	0.00			266			

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	0.00	578	0.011	6	0.0	6.297	A
C-AB	19	0.00	651	0.028	18	0.0	5.691	A
C-A	171	0.00			171			
A-B	17	0.00			17			
A-C	317	0.00			317			

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	0.00	558	0.014	8	0.0	6.536	A
C-AB	25	0.00	665	0.037	24	0.1	5.619	A
C-A	208	0.00			208			
A-B	21	0.00			21			
A-C	389	0.00			389			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	0.00	558	0.014	8	0.0	6.536	A
C-AB	25	0.00	665	0.037	25	0.1	5.620	A
C-A	208	0.00			208			
A-B	21	0.00			21			
A-C	389	0.00			389			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	0.00	578	0.011	6	0.0	6.297	A
C-AB	19	0.00	651	0.028	19	0.0	5.692	A
C-A	171	0.00			171			
A-B	17	0.00			17			
A-C	317	0.00			317			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	0.00	592	0.009	5	0.0	6.138	A
C-AB	15	0.00	641	0.023	15	0.0	5.745	A
C-A	144	0.00			144			
A-B	14	0.00			14			
A-C	266	0.00			266			

# D5 - 2030 | Base | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.90	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	194	Stream B-AC	0.90	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030	Base	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	413	100.000
B - Hepworth Lane		✓	43	100.000
C - Shillbank Lane		✓	271	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	4	409
	B - Hepworth Lane	7	0	36
	C - Shillbank Lane	232	39	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

# Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.09	7.36	0.1	A
C-AB	0.10	5.86	0.2	A
C-A				
A-B				
A-C				

## Main Results for each time segment

### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	0.00	576	0.056	32	0.1	6.610	A
C-AB	40	0.00	654	0.061	40	0.1	5.854	A
C-A	164	0.00			164			
A-B	3	0.00			3			
A-C	308	0.00			308			

### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	0.00	560	0.069	39	0.1	6.906	A
C-AB	51	0.00	667	0.077	51	0.1	5.847	A
C-A	192	0.00			192			
A-B	4	0.00			4			
A-C	368	0.00			368			

### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	0.00	537	0.088	47	0.1	7.355	A
C-AB	69	0.00	685	0.100	68	0.2	5.838	A
C-A	230	0.00			230			
A-B	4	0.00			4			
A-C	450	0.00			450			

### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	0.00	537	0.088	47	0.1	7.355	A
C-AB	69	0.00	685	0.100	69	0.2	5.844	A
C-A	230	0.00			230			
A-B	4	0.00			4			
A-C	450	0.00			450			

### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	0.00	560	0.069	39	0.1	6.909	A
C-AB	51	0.00	667	0.077	51	0.1	5.851	A
C-A	192	0.00			192			
A-B	4	0.00			4			
A-C	368	0.00			368			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	0.00	576	0.056	32	0.1	6.617	A
C-AB	40	0.00	655	0.061	40	0.1	5.864	A
C-A	164	0.00			164			
A-B	3	0.00			3			
A-C	308	0.00			308			

# D6 - 2030 | Base | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.33	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	309	Stream B-AC	0.33	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030	Base	PM	ONE HOUR	15:45	17:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	367	100.000
B - Hepworth Lane		✓	12	100.000
C - Shillbank Lane		✓	211	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	19	348
	B - Hepworth Lane	1	0	11
	C - Shillbank Lane	196	15	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.44	0.0	A
C-AB	0.04	5.74	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	0.00	604	0.015	9	0.0	6.051	A
C-AB	15	0.00	642	0.023	15	0.0	5.737	A
C-A	144	0.00			144			
A-B	14	0.00			14			
A-C	262	0.00			262			

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	0.00	591	0.018	11	0.0	6.209	A
C-AB	19	0.00	652	0.028	18	0.0	5.683	A
C-A	171	0.00			171			
A-B	17	0.00			17			
A-C	313	0.00			313			

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	572	0.023	13	0.0	6.441	A
C-AB	24	0.00	666	0.037	24	0.1	5.610	A
C-A	208	0.00			208			
A-B	21	0.00			21			
A-C	383	0.00			383			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	572	0.023	13	0.0	6.441	A
C-AB	24	0.00	666	0.037	24	0.1	5.613	A
C-A	208	0.00			208			
A-B	21	0.00			21			
A-C	383	0.00			383			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	0.00	591	0.018	11	0.0	6.209	A
C-AB	19	0.00	652	0.028	19	0.0	5.686	A
C-A	171	0.00			171			
A-B	17	0.00			17			
A-C	313	0.00			313			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	0.00	604	0.015	9	0.0	6.053	A
C-AB	15	0.00	642	0.023	15	0.0	5.738	A
C-A	144	0.00			144			
A-B	14	0.00			14			
A-C	262	0.00			262			

# D7 - 2030 | Design | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.06	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	174	Stream B-AC	1.06	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	413	100.000
B - Hepworth Lane		✓	54	100.000
C - Shillbank Lane		✓	274	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	4	409
	B - Hepworth Lane	11	0	43
	C - Shillbank Lane	232	42	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

# Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	7.69	0.1	A
C-AB	0.11	5.90	0.2	A
C-A				
A-B				
A-C				

## Main Results for each time segment

### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	0.00	568	0.072	40	0.1	6.816	A
C-AB	43	0.00	654	0.066	43	0.1	5.884	A
C-A	163	0.00			163			
A-B	3	0.00			3			
A-C	308	0.00			308			

### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	0.00	551	0.088	48	0.1	7.160	A
C-AB	55	0.00	667	0.083	55	0.1	5.882	A
C-A	191	0.00			191			
A-B	4	0.00			4			
A-C	368	0.00			368			

### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	0.00	527	0.113	59	0.1	7.689	A
C-AB	74	0.00	685	0.108	74	0.2	5.891	A
C-A	228	0.00			228			
A-B	4	0.00			4			
A-C	450	0.00			450			

### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	0.00	527	0.113	59	0.1	7.693	A
C-AB	74	0.00	685	0.108	74	0.2	5.895	A
C-A	228	0.00			228			
A-B	4	0.00			4			
A-C	450	0.00			450			

### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49	0.00	551	0.088	49	0.1	7.164	A
C-AB	55	0.00	667	0.083	55	0.1	5.889	A
C-A	191	0.00			191			
A-B	4	0.00			4			
A-C	368	0.00			368			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	0.00	568	0.072	41	0.1	6.824	A
C-AB	43	0.00	655	0.066	43	0.1	5.894	A
C-A	163	0.00			163			
A-B	3	0.00			3			
A-C	308	0.00			308			

# D8 - 2030 | Design | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.47	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	280	Stream B-AC	0.47	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030	Design	PM	ONE HOUR	15:45	17:15	15

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Flash Lane		✓	367	100.000
B - Hepworth Lane		✓	17	100.000
C - Shillbank Lane		✓	217	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	19	348
	B - Hepworth Lane	3	0	14
	C - Shillbank Lane	196	21	0

## Vehicle Mix

### Heavy Vehicle %

		To		
		A - Flash Lane	B - Hepworth Lane	C - Shillbank Lane
From	A - Flash Lane	0	0	0
	B - Hepworth Lane	0	0	0
	C - Shillbank Lane	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	6.74	0.0	A
C-AB	0.05	5.79	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	586	0.022	13	0.0	6.276	A
C-AB	21	0.00	642	0.032	20	0.0	5.789	A
C-A	143	0.00			143			
A-B	14	0.00			14			
A-C	262	0.00			262			

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	0.00	572	0.027	15	0.0	6.463	A
C-AB	26	0.00	652	0.040	26	0.1	5.750	A
C-A	169	0.00			169			
A-B	17	0.00			17			
A-C	313	0.00			313			

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	0.00	552	0.034	19	0.0	6.744	A
C-AB	34	0.00	666	0.051	34	0.1	5.697	A
C-A	205	0.00			205			
A-B	21	0.00			21			
A-C	383	0.00			383			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	0.00	552	0.034	19	0.0	6.744	A
C-AB	34	0.00	666	0.052	34	0.1	5.701	A
C-A	205	0.00			205			
A-B	21	0.00			21			
A-C	383	0.00			383			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	0.00	572	0.027	15	0.0	6.467	A
C-AB	26	0.00	652	0.040	26	0.1	5.753	A
C-A	169	0.00			169			
A-B	17	0.00			17			
A-C	313	0.00			313			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	0.00	586	0.022	13	0.0	6.279	A
C-AB	21	0.00	642	0.032	21	0.0	5.793	A
C-A	143	0.00			143			
A-B	14	0.00			14			
A-C	262	0.00			262			

## Appendix P Wellhouse Lane / Flash Lane Junctions 9 Output



<h1>Junctions 11</h1>
<h2>PICADY 11 - Priority Intersection Module</h2>
Version: 11.1.0.2307 © Copyright TRL Software Limited, 2024
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**Filename:** Wellhouse Lane - Flash Lane.j11  
**Path:** O:\Woodward Court, Mirfield\ANALYSIS\CAPACITY\Priority Junctions  
**Report generation date:** 26/11/2025 07:50:05

- »D1 - 2025 | Existing | AM
- »D2 - 2025 | Existing | PM
- »D3 - 2030 | Growthed | AM
- »D4 - 2030 | Growthed | PM
- »D5 - 2030 | Base | AM
- »D6 - 2030 | Base | PM
- »D7 - 2030 | Design | AM
- »D8 - 2030 | Design | PM

**Summary of junction performance**

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
<b>2025 - Existing</b>												
Stream B-AC	D1	0.5	12.68	0.35	B	72 %	D2	0.1	8.44	0.06	A	218 %
Stream C-AB		0.1	5.02	0.07	A	[Stream B-AC]		0.1	4.92	0.08	A	[Stream C-AB]
<b>2030 - Growthed</b>												
Stream B-AC	D3	0.6	13.34	0.37	B	63 %	D4	0.1	8.59	0.07	A	200 %
Stream C-AB		0.1	4.99	0.08	A	[Stream B-AC]		0.2	4.88	0.09	A	[Stream C-AB]
<b>2030 - Base</b>												
Stream B-AC	D5	0.4	11.28	0.29	B	92 %	D6	0.1	8.06	0.05	A	200 %
Stream C-AB		0.1	4.99	0.08	A	[Stream B-AC]		0.2	4.88	0.09	A	[Stream C-AB]
<b>2030 - Design</b>												
Stream B-AC	D7	0.4	11.34	0.30	B	90 %	D8	0.1	8.08	0.05	A	192 %
Stream C-AB		0.2	5.01	0.08	A	[Stream B-AC]		0.2	4.92	0.10	A	[Stream C-AB]

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.*

**File summary**

**File Description**

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	16/09/2025
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	OPTIMA\optima
<b>Description</b>	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

**Analysis Options**

PICADY short flare model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 11.1	5.75					✓	Delay	0.85	36.00	20.00		

**Demand Set Summary**

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15	✓
D2	2025	Existing	PM	ONE HOUR	15:45	17:15	15	✓
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030	Growthed	PM	ONE HOUR	15:45	17:15	15	✓
D5	2030	Base	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030	Base	PM	ONE HOUR	15:45	17:15	15	✓
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15	✓
D8	2030	Design	PM	ONE HOUR	15:45	17:15	15	✓

**Analysis Set Details**

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# D1 - 2025 | Existing | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.63	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	72	Stream B-AC	2.63	A

## Arms

### Arms

Arm	Name	Description	Arm type
A	Flash Lane (east)		Major
B	Wellhouse Lane		Minor
C	Flash Lane (west)		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.13			62.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.76	15	16

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	479	0.079	0.200	0.126	0.286
B-C	619	0.086	0.218	-	-
C-B	610	0.214	0.214	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Existing	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	247	100.000
B		ONE HOUR	✓	139	100.000
C		ONE HOUR	✓	377	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	242
	B	75	0	64
	C	349	28	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.35	12.68	0.5	B	128	191
C-AB	0.07	5.02	0.1	A	44	67
C-A					302	452
A-B					5	7
A-C					222	333

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	105	26	0.00	468	0.223	104	0.0	0.3	9.836	A
C-AB	32	8	0.00	750	0.043	32	0.0	0.1	5.017	A
C-A	251	63	0.00			251				
A-B	4	0.94	0.00			4				
A-C	182	46	0.00			182				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	125	31	0.00	455	0.275	125	0.3	0.4	10.876	B
C-AB	42	11	0.00	778	0.054	42	0.1	0.1	4.894	A
C-A	297	74	0.00			297				
A-B	4	1	0.00			4				
A-C	218	54	0.00			218				

## 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	38	0.00	437	0.350	152	0.4	0.5	12.629	B
C-AB	58	15	0.00	818	0.071	58	0.1	0.1	4.739	A
C-A	357	89	0.00			357				
A-B	6	1	0.00			6				
A-C	266	67	0.00			266				

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	38	0.00	437	0.350	153	0.5	0.5	12.682	B
C-AB	58	15	0.00	818	0.071	58	0.1	0.1	4.741	A
C-A	357	89	0.00			357				
A-B	6	1	0.00			6				
A-C	266	67	0.00			266				

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	125	31	0.00	455	0.275	126	0.5	0.4	10.942	B
C-AB	42	11	0.00	778	0.054	43	0.1	0.1	4.897	A
C-A	297	74	0.00			297				
A-B	4	1	0.00			4				
A-C	218	54	0.00			218				

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	105	26	0.00	468	0.223	105	0.4	0.3	9.920	A
C-AB	33	8	0.00	750	0.043	33	0.1	0.1	5.022	A
C-A	251	63	0.00			251				
A-B	4	0.94	0.00			4				
A-C	182	46	0.00			182				

# D2 - 2025 | Existing | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.79	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	218	Stream C-AB	0.79	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Existing	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	192	100.000
B		ONE HOUR	✓	26	100.000
C		ONE HOUR	✓	403	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	180
	B	13	0	13
	C	372	31	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	8.44	0.1	A	24	36
C-AB	0.08	4.92	0.1	A	50	76
C-A					319	479
A-B					11	17
A-C					165	248

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	5	0.00	483	0.041	19	0.0	0.0	7.771	A
C-AB	37	9	0.00	769	0.048	36	0.0	0.1	4.914	A
C-A	267	67	0.00			267				
A-B	9	2	0.00			9				
A-C	136	34	0.00			136				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	6	0.00	471	0.050	23	0.0	0.1	8.041	A
C-AB	48	12	0.00	801	0.060	48	0.1	0.1	4.783	A
C-A	314	79	0.00			314				
A-B	11	3	0.00			11				
A-C	162	40	0.00			162				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	0.00	455	0.063	29	0.1	0.1	8.442	A
C-AB	66	17	0.00	846	0.079	66	0.1	0.1	4.621	A
C-A	377	94	0.00			377				
A-B	13	3	0.00			13				
A-C	198	50	0.00			198				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	0.00	455	0.063	29	0.1	0.1	8.444	A
C-AB	66	17	0.00	846	0.079	66	0.1	0.1	4.623	A
C-A	377	94	0.00			377				
A-B	13	3	0.00			13				
A-C	198	50	0.00			198				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	6	0.00	471	0.050	23	0.1	0.1	8.045	A
C-AB	48	12	0.00	801	0.060	48	0.1	0.1	4.784	A
C-A	314	79	0.00			314				
A-B	11	3	0.00			11				
A-C	162	40	0.00			162				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	5	0.00	482	0.041	20	0.1	0.0	7.778	A
C-AB	37	9	0.00	769	0.048	37	0.1	0.1	4.919	A
C-A	267	67	0.00			267				
A-B	9	2	0.00			9				
A-C	136	34	0.00			136				

# D3 - 2030 | Growthed | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.77	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	63	Stream B-AC	2.77	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	Growthed	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	260	100.000
B		ONE HOUR	✓	147	100.000
C		ONE HOUR	✓	398	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	255
	B	79	0	68
	C	368	30	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.37	13.34	0.6	B	135	202
C-AB	0.08	4.99	0.1	A	49	74
C-A					316	474
A-B					5	7
A-C					234	351

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	0.00	465	0.238	109	0.0	0.3	10.090	B
C-AB	36	9	0.00	758	0.047	35	0.0	0.1	4.984	A
C-A	264	66	0.00			264				
A-B	4	0.94	0.00			4				
A-C	192	48	0.00			192				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	0.00	451	0.293	132	0.3	0.4	11.256	B
C-AB	47	12	0.00	788	0.059	47	0.1	0.1	4.859	A
C-A	311	78	0.00			311				
A-B	4	1	0.00			4				
A-C	229	57	0.00			229				

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	40	0.00	432	0.375	161	0.4	0.6	13.270	B
C-AB	65	16	0.00	830	0.078	65	0.1	0.1	4.702	A
C-A	373	93	0.00			373				
A-B	6	1	0.00			6				
A-C	281	70	0.00			281				

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	40	0.00	432	0.375	162	0.6	0.6	13.339	B
C-AB	65	16	0.00	830	0.078	65	0.1	0.1	4.706	A
C-A	373	93	0.00			373				
A-B	6	1	0.00			6				
A-C	281	70	0.00			281				

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	0.00	451	0.293	133	0.6	0.4	11.335	B
C-AB	47	12	0.00	788	0.059	47	0.1	0.1	4.862	A
C-A	311	78	0.00			311				
A-B	4	1	0.00			4				
A-C	229	57	0.00			229				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	0.00	465	0.238	111	0.4	0.3	10.184	B
C-AB	36	9	0.00	758	0.047	36	0.1	0.1	4.990	A
C-A	264	66	0.00			264				
A-B	4	0.94	0.00			4				
A-C	192	48	0.00			192				

# D4 - 2030 | Growthed | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.81	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	200	Stream C-AB	0.81	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	Growthed	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	203	100.000
B		ONE HOUR	✓	28	100.000
C		ONE HOUR	✓	426	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	190
	B	14	0	14
	C	393	33	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.59	0.1	A	26	39
C-AB	0.09	4.88	0.2	A	55	83
C-A					335	503
A-B					12	18
A-C					174	262

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	479	0.044	21	0.0	0.0	7.849	A
C-AB	40	10	0.00	778	0.052	40	0.0	0.1	4.875	A
C-A	281	70	0.00			281				
A-B	10	2	0.00			10				
A-C	143	36	0.00			143				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	467	0.054	25	0.0	0.1	8.146	A
C-AB	53	13	0.00	812	0.065	53	0.1	0.1	4.740	A
C-A	330	83	0.00			330				
A-B	12	3	0.00			12				
A-C	171	43	0.00			171				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	0.00	450	0.069	31	0.1	0.1	8.588	A
C-AB	73	18	0.00	860	0.085	73	0.1	0.2	4.580	A
C-A	396	99	0.00			396				
A-B	14	4	0.00			14				
A-C	209	52	0.00			209				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	0.00	450	0.069	31	0.1	0.1	8.590	A
C-AB	73	18	0.00	860	0.085	73	0.2	0.2	4.583	A
C-A	396	99	0.00			396				
A-B	14	4	0.00			14				
A-C	209	52	0.00			209				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	467	0.054	25	0.1	0.1	8.152	A
C-AB	53	13	0.00	812	0.065	53	0.2	0.1	4.744	A
C-A	330	83	0.00			330				
A-B	12	3	0.00			12				
A-C	171	43	0.00			171				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	479	0.044	21	0.1	0.0	7.862	A
C-AB	40	10	0.00	778	0.052	40	0.1	0.1	4.880	A
C-A	280	70	0.00			280				
A-B	10	2	0.00			10				
A-C	143	36	0.00			143				

# D5 - 2030 | Base | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.08	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	92	Stream B-AC	2.08	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	Base	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	260	100.000
B		ONE HOUR	✓	120	100.000
C		ONE HOUR	✓	398	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	255
	B	52	0	68
	C	368	30	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.29	11.28	0.4	B	110	165
C-AB	0.08	4.99	0.1	A	49	74
C-A					316	474
A-B					5	7
A-C					234	351

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	0.00	483	0.187	89	0.0	0.2	9.122	A
C-AB	36	9	0.00	758	0.047	35	0.0	0.1	4.984	A
C-A	264	66	0.00			264				
A-B	4	0.94	0.00			4				
A-C	192	48	0.00			192				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	27	0.00	470	0.230	108	0.2	0.3	9.929	A
C-AB	47	12	0.00	788	0.059	47	0.1	0.1	4.859	A
C-A	311	78	0.00			311				
A-B	4	1	0.00			4				
A-C	229	57	0.00			229				

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	0.00	451	0.293	132	0.3	0.4	11.244	B
C-AB	65	16	0.00	830	0.078	65	0.1	0.1	4.702	A
C-A	373	93	0.00			373				
A-B	6	1	0.00			6				
A-C	281	70	0.00			281				

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	0.00	451	0.293	132	0.4	0.4	11.276	B
C-AB	65	16	0.00	830	0.078	65	0.1	0.1	4.706	A
C-A	373	93	0.00			373				
A-B	6	1	0.00			6				
A-C	281	70	0.00			281				

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	27	0.00	470	0.230	108	0.4	0.3	9.970	A
C-AB	47	12	0.00	788	0.059	47	0.1	0.1	4.862	A
C-A	311	78	0.00			311				
A-B	4	1	0.00			4				
A-C	229	57	0.00			229				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	0.00	483	0.187	91	0.3	0.2	9.178	A
C-AB	36	9	0.00	758	0.047	36	0.1	0.1	4.990	A
C-A	264	66	0.00			264				
A-B	4	0.94	0.00			4				
A-C	192	48	0.00			192				

# D6 - 2030 | Base | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.74	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	200	Stream C-AB	0.74	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	Base	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	203	100.000
B		ONE HOUR	✓	23	100.000
C		ONE HOUR	✓	426	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	190
	B	9	0	14
	C	393	33	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.05	8.06	0.1	A	21	32
C-AB	0.09	4.88	0.2	A	55	83
C-A					335	503
A-B					12	18
A-C					174	262

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	0.00	499	0.035	17	0.0	0.0	7.468	A
C-AB	40	10	0.00	778	0.052	40	0.0	0.1	4.875	A
C-A	281	70	0.00			281				
A-B	10	2	0.00			10				
A-C	143	36	0.00			143				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	488	0.042	21	0.0	0.0	7.707	A
C-AB	53	13	0.00	812	0.065	53	0.1	0.1	4.740	A
C-A	330	83	0.00			330				
A-B	12	3	0.00			12				
A-C	171	43	0.00			171				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	472	0.054	25	0.0	0.1	8.061	A
C-AB	73	18	0.00	860	0.085	73	0.1	0.2	4.580	A
C-A	396	99	0.00			396				
A-B	14	4	0.00			14				
A-C	209	52	0.00			209				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	472	0.054	25	0.1	0.1	8.063	A
C-AB	73	18	0.00	860	0.085	73	0.2	0.2	4.583	A
C-A	396	99	0.00			396				
A-B	14	4	0.00			14				
A-C	209	52	0.00			209				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	488	0.042	21	0.1	0.0	7.709	A
C-AB	53	13	0.00	812	0.065	53	0.2	0.1	4.744	A
C-A	330	83	0.00			330				
A-B	12	3	0.00			12				
A-C	171	43	0.00			171				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	0.00	499	0.035	17	0.0	0.0	7.473	A
C-AB	40	10	0.00	778	0.052	40	0.1	0.1	4.880	A
C-A	280	70	0.00			280				
A-B	10	2	0.00			10				
A-C	143	36	0.00			143				

# D7 - 2030 | Design | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.11	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	90	Stream B-AC	2.11	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030	Design	AM	ONE HOUR	07:45	09:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	264	100.000
B		ONE HOUR	✓	121	100.000
C		ONE HOUR	✓	400	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	259
	B	52	0	69
	C	368	32	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.30	11.34	0.4	B	111	167
C-AB	0.08	5.01	0.2	A	52	79
C-A					315	472
A-B					5	7
A-C					238	356

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	91	23	0.00	483	0.189	90	0.0	0.2	9.146	A
C-AB	38	9	0.00	757	0.050	38	0.0	0.1	5.004	A
C-A	263	66	0.00			263				
A-B	4	0.94	0.00			4				
A-C	195	49	0.00			195				

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	0.00	469	0.232	109	0.2	0.3	9.972	A
C-AB	50	12	0.00	787	0.063	50	0.1	0.1	4.882	A
C-A	310	77	0.00			310				
A-B	4	1	0.00			4				
A-C	233	58	0.00			233				

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	133	33	0.00	451	0.296	133	0.3	0.4	11.305	B
C-AB	69	17	0.00	830	0.083	69	0.1	0.2	4.735	A
C-A	371	93	0.00			371				
A-B	6	1	0.00			6				
A-C	285	71	0.00			285				

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	133	33	0.00	451	0.296	133	0.4	0.4	11.339	B
C-AB	69	17	0.00	830	0.083	69	0.2	0.2	4.738	A
C-A	371	93	0.00			371				
A-B	6	1	0.00			6				
A-C	285	71	0.00			285				

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	0.00	469	0.232	109	0.4	0.3	10.007	B
C-AB	50	12	0.00	787	0.063	50	0.2	0.1	4.888	A
C-A	310	77	0.00			310				
A-B	4	1	0.00			4				
A-C	233	58	0.00			233				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	91	23	0.00	483	0.189	91	0.3	0.2	9.204	A
C-AB	38	10	0.00	757	0.050	38	0.1	0.1	5.011	A
C-A	263	66	0.00			263				
A-B	4	0.94	0.00			4				
A-C	195	49	0.00			195				

# D8 - 2030 | Design | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.79	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	192	Stream C-AB	0.79	A

## Traffic Demand

### Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030	Design	PM	ONE HOUR	15:45	17:15	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	204	100.000
B		ONE HOUR	✓	23	100.000
C		ONE HOUR	✓	430	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	191
	B	9	0	14
	C	393	37	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.05	8.08	0.1	A	21	32
C-AB	0.10	4.92	0.2	A	62	93
C-A					332	499
A-B					12	18
A-C					175	263

### Main Results for each time segment

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	0.00	498	0.035	17	0.0	0.0	7.478	A
C-AB	45	11	0.00	778	0.058	45	0.0	0.1	4.908	A
C-A	279	70	0.00			279				
A-B	10	2	0.00			10				
A-C	144	36	0.00			144				

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	487	0.042	21	0.0	0.0	7.721	A
C-AB	59	15	0.00	812	0.073	59	0.1	0.1	4.781	A
C-A	327	82	0.00			327				
A-B	12	3	0.00			12				
A-C	172	43	0.00			172				

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	471	0.054	25	0.0	0.1	8.080	A
C-AB	82	21	0.00	860	0.096	82	0.1	0.2	4.634	A
C-A	391	98	0.00			391				
A-B	14	4	0.00			14				
A-C	210	53	0.00			210				

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	6	0.00	471	0.054	25	0.1	0.1	8.082	A
C-AB	82	21	0.00	860	0.096	82	0.2	0.2	4.637	A
C-A	391	98	0.00			391				
A-B	14	4	0.00			14				
A-C	210	53	0.00			210				

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	5	0.00	487	0.042	21	0.1	0.0	7.725	A
C-AB	59	15	0.00	812	0.073	59	0.2	0.1	4.786	A
C-A	327	82	0.00			327				
A-B	12	3	0.00			12				
A-C	172	43	0.00			172				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	17	4	0.00	498	0.035	17	0.0	0.0	7.484	A
C-AB	45	11	0.00	778	0.058	45	0.1	0.1	4.916	A
C-A	279	70	0.00			279				
A-B	10	2	0.00			10				
A-C	144	36	0.00			144				