Newland Developments
Hoyland Commercial Land

# Transport Assessment

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Fore

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# 1 Introduction

## 1.1 Commission

Fore Consulting Limited (Fore) has been commissioned by Newlands Developments to prepare a Transport Assessment and Travel Plan to accompany a hybrid planning application at a site to the west of Hoyland near Barnsley.

The planning application has been prepared further to the completion of the Hoyland West Masterplan Framework. This has been subject to a public consultation exercise in May and June 2020 and will support the development of significant housing and employment growth. The Hoyland West masterplan framework covers:

- Employment site: ES13 - land west of Sheffield Road.
- Housing site: HS57- land at Tankersley Lane.
- Relocation of Rockingham Sports facility to land at Parkside, Hoyland.

The planning application consists of the follow:

*Hybrid planning application for a development of employment uses (B1, B2 and B8), new link road, associated works including provision of internal access roads, drainage and landscaping.*

- *Outline with all matter reserved apart from means of access for up to 71,515 sq.m of employment uses (B1, B2, B8)*
- *Full application for 31,571 sq.m of B8, new link road including new roundabout to link with Hoyland south Masterplan Area (Local Plan references HS68, HS65, HS61, HS58, HS6, SL5)*

The proposed site is allocated for employment uses in the Barnsley Local Plan which was adopted January 2019, and is identified within the plan as site 'ES13: Land West of Sheffield Road'.

The development proposals are demonstrated on the site plan prepared by pHp Architects, which is provided at Appendix A.

## 1.2 The Site and Surrounding Area

The location of the development is shown on Figure 1 and described below.

Hoyland West is located on land to the west of the town of Hoyland, approximately 6.0km (direct measurement) south of Barnsley. The site is located directly to the south east of Junction 36 of the M1.

The site currently comprises open fields / agricultural land. The Rockingham Community Centre is located at the north east of the site and comprises a cricket field and football pitch. Tankersley Lane bisects the site from east to west, providing a connection between the A61 Westwood New Road and the A6135 Sheffield Road.

The site is bound by Junction 36 of the M1 (known locally as Tankersley Roundabout) and the Birdwell Roundabout to the north, the A6135 Sheffield Road to the east, open fields / agricultural land and a wooded area to the south, and hedgerows segregating the site from the M1 to the west. To the north east, the site is bound by Hoyland Common Primary School, residential properties along Tankersley Lane, a Shell petrol filling station and a service yard.

## 1.3 Purpose of this Report

This Transport Assessment provides a full assessment of the transportation impacts of the development proposals, to assist Barnsley Metropolitan Borough Council (BMBC) and Highways England (HE) in determining the planning application. As agreed with BMBC and HE the Transport Assessment provides an assessment of the proposed site access junctions on the link road and new proposed southern roundabout as listed below:

- All Development Plot Access Junctions.
- Sheffield Road / Link Road Southern Roundabout.
- Sheffield Road / Link Road Priority Junction.
- Sheffield Road / Tankersley Lane Junction.
- Sheffield Road / Parkside Junction.

Outside of these junctions the Barnsley VISSIM model has been used to assess the strategic route impacts of the development, a Modelling Assessment Report has been submitted under separate cover. Image 1 in this report shows the model study area.

A Travel Plan has also been prepared by Fore, and this is submitted under separate cover as part of the planning application.

## 1.4 Structure of the Report

This report is structured as follows:

- Chapter 2 examines the existing conditions on the local transport network.
- Chapter 3 provides an overview of the national and local transport planning policy context in relation to the site and the development proposals.
- Chapter 4 sets out the proposals and describes in detail how the site will be accessed by all modes of transport.
- Chapter 5 details the methodology for estimating the transport impacts of the development.
- Chapter 6 details the trip distribution and assignment.
- Chapter 7 describes the approach to deriving existing traffic flows and estimating future traffic flows.
- Chapter 8 considers the development traffic impact on the highway surrounding the site and presents junction capacity assessments of the proposed access junctions.
- Chapter 9 summaries and concludes the report.

# 2 Existing Situation

## 2.1 Site Location and Land Use

The Hoyland West site is located to the west of the town of Hoyland, approximately 6.0km (direct measurement) south of Barnsley. The site is located directly to the south east of Junction 36 of the M1, as shown at Figure 1.

The site currently comprises open fields / agricultural land. The Rockingham Community Centre is located at the north east of the site and comprises a cricket field and football pitch. Tankersley Lane bisects the site from east to west, providing a connection between the A61 Westwood New Road and the A6135 Sheffield Road.

The site is bound by Junction 36 of the M1 (known locally as Tankersley Roundabout) and the Birdwell Roundabout to the north, the A6135 Sheffield Road to the east, open fields / agricultural land and a wooded area to the south, and hedgerows segregating the site from the M1 to the west. To the north east, the site is bound by Hoyland Common Primary School, residential properties along Tankersley Lane, a Shell petrol filling station and a service yard.

## 2.2 Strategic Road Network

The development is located immediately south east of Junction 36 of the M1, which forms part of the Strategic Road Network and provides connections from the Hoyland District to key regional and national towns and cities such as Barnsley, Sheffield, Rotherham, Leeds, Nottingham, Derby and London.

Junction 36 (Birdwell Interchange) comprises of a roundabout interchange providing connections between the M1 and the A61. The roundabout is signal-controlled and comprises four approaches with three circulating lanes. A shared-use pedestrian and cycle route is provided around the circulating carriageway, linking to uncontrolled crossing points on the slip roads.

## 2.3 Local Highway Network

The local highway network comprises a number of key links and junctions which are described in the following section and highlight on Figure 5. It is noted that a number of junction description locations form part of the 2016 Birdwell Scheme improvements, a junction improvement scheme that was intended to reduce previous levels of traffic delay and provide additional network capacity for a number of future growth sites around the J36 corridor, including the Hoyland West Masterplan.

## A61 Sheffield Road / A6195 Dearne Valley Parkway – Birdwell Roundabout Junction

Birdwell roundabout junction is an elongated roundabout located to the immediate north of the development site connecting the A6195 and the A61.

The A6195 Dearne Valley Parkway northern arm is separated into segregated entry and exit only arms both of which are signal controlled and provide pedestrian crossing facilities. There is a shared footway / cycleway on the nearside lanes on both the northbound and southbound carriageways.

The A6195 eastern arm is separated into segregated entry and exit lanes. The exit lane is single carriageway approximately 5m in width with a shared cycleway / footpath on the nearside of the carriageway. The A6195 entry lane is a dual carriageway approximately 10m in width, the approach to the roundabout is controlled by a signalised pedestrian crossing. There is a shared pedestrian / cycleway on the nearside lane.

The A61 southbound arm is separated into two segregated entry lanes and one exit lane. The entry left only lane is a single carriageway and the ahead lane is a dual carriageway, access onto the roundabout for all movements is signal controlled. The exit carriageway is exit only and has no pedestrians or cyclist provision in order to restrict access to J36 of the M1.

The A61 Sheffield Road westbound arm has a triple entry carriageway and a single exit carriageway. Access onto the roundabout is signal controlled. There is a shared pedestrian / cycleway on the westbound carriageway.

## Cross Keys Roundabout

Cross Keys Roundabout is a 4-arm roundabout located to the north of the development. The roundabout's southern arm will form access to the development site. All arms are single carriageways of approximately 9m in width. Pedestrian islands are provided approximately 5m from the entrance of the roundabout on all arms, except the western arm (A6195) which is segregated into entry and exit lanes an provides no pedestrian crossing facilities.

## Fitzwilliam Roundabout

Fitzwilliam Roundabout follows the same alignment as the Cross Keys Roundabout, except that pedestrian islands are provided on all arms of the roundabout. To the north, the roundabout connects towards the Rockingham Roundabout services and the A6195 Dearne Valley Road. The southern arm of roundabout provides access towards the A6135 Sheffield Road. In addition, the eastern and western arms of the roundabout provide access towards development land.

## A6135 Sheffield Road

The A6135 runs along the western boundary of the development site. To the north, it provides a link to Cross Keys Roundabout and to the south, the A6135 provides connections from Hoyland towards the villages of Harley and Hood Hill. The A6135 is generally a single-lane carriageway, with a speed limit of 30mph in the vicinity of the development, this changes to 50mph at the southern end of the site, south of Parkside Road.

The A6135 Sheffield Road serves as a local distributor road, linking Junction 36 of the M1 with the western fringes of Hoyland. The carriageway is lit, is subject to a 30mph speed limit and is flanked by footways along both sides. The A6135 Sheffield Road forms the northern and southern arms of a four-arm signalised junction with the B6096 Hoyland Road and Tankersley Lane. Waiting restrictions, in the form of double yellow lines, are present along all four approach arms of the junction.

Controlled pedestrian crossings (Pelicans) are provided across the A6135 Sheffield Road (n) and B6096 Hoyland Road arms, located approximately 80m and 65m back from the stoplines respectively. The crossings provide pedestrian connectivity between Hoyland Common Primary School and the eastern side of A6135 Sheffield Road and between the local shops along the B6096 Hoyland Road.

Additionally, uncontrolled pedestrian crossings (dropped kerbs) are provided across all four arms of the junction located in front of the stop lines.

## A6195 Dearne Valley Parkway

The A6195 is a two-lane dual carriageway, located to the north of the development site. The A6195 Dearne Valley Parkway is a two-lane dual carriageway, separated by a raised kerbed central reserve. The road is lit and subject to the national speed limit for its entirety.

The A6195 links directly to Junction 36 of the M1 via a four-arm roundabout with the A61 / A6135 Sheffield Road. The A6195 Dearne Valley Parkway serves as the northern bypass to Hoyland, connecting to a number of local distributor roads via a series of three-arm and four-arm roundabouts.

## A61 Sheffield Road

The A61 is located to the north of the development site. In relation to the site, the A61 Sheffield Road provides a local connection (northbound) towards Birdwell, Worsborough and Barnsley Town centre. In the vicinity of the site the road comprises of a single carriageway with a speed limit of 30mph.

To the west of the M1 Junction 36, the A61 continues westward as the A61 Westwood New Road) offering connections towards the villages of Tankersley and Howbrook and the A616.

## Tankersley Lane

Tankersley Lane runs directly through the centre of the development (from east to west). Tankersley Lane forms the western arm of the four-arm signalised junction with the A6135 Sheffield Road and the B6096 Hoyland Road. Within the immediate vicinity of the junction, Tankersley Lane provides access to a number of residential driveways, which take direct access onto the carriageway.

Tankersley Lane serves as a local access road between Tankersley/Pilley and Hoyland connecting the B6096 Hoyland Road and A6135 Sheffield Road with Church Lane and ultimately the A61 to the far west. The road heads westwards over the M1, before becoming Church Lane immediately beyond an informal three-arm priority junction with Black Lane.

The road is subject to a 30mph speed limit, which increases to the national speed limit approximately 210m west of the signalised junction with the A6135 Sheffield Road / B6096 Hoyland Road. Within the 30mph limit the road is lit and footways are provided on both sides of the road. Beyond that, due to the rural nature of the road, street lighting is not provided though a continuous footway is present on the northern side of the road.

## B6096 Hoyland Road

B6096 Hoyland Road is a single-lane carriageway located to the east of the development. In the vicinity of the site the B6096 has a speed limit of 30mph. The road begins at the crossroad junction with the A6135 Sheffield Road and Tankersley Lane and a local connection through Hoyland towards Wombwell. Street lighting continuous footways are presented on both sides of the road.

## 2.4 Walking

### Walking Catchment

Figure 2 presents an isochrone of a 2.0km walking catchment[1], from an indicative central point within the development site. As can be seen, a number of amenities are located within walking distance of the development, as below:

- To the north of the development adjacent to Cross Keys Roundabout along the A6185, there are a number of retail and food outlets including a Petrol Station, Costa Coffee, Greggs, Starbucks, Taco Bell and KFC.
- An Aldi supermarket is located to the north west of the development along the A61 Sheffield Road.
- To the north east of the development, there is a Jet Petrol Garage and a bar and restaurant located on the A6135. In additional there are also a number of retail and facilities located along the A6135.
- Holyand Common Primary School and Children's Centre is located to the immediate east of the development on A6135 Sheffield Road.
- To the east of the development a number of retail, leisure and health amenities including a pharmacy, Co-op supermarket and post office are located along B6096 Hoyland Road.

Bus stops also lie in these catchments, as discussed later in this Chapter.

### Pedestrian Facilities

Within the vicinity of the development, all roads which provide key walking routes to the site have footways with street lighting. Road crossings are provided by means of a mixture of formal (signal-controlled crossings with traffic signals) and uncontrolled crossing points (dropped kerbs) located at points on the local highway network where there is an adjacent footway.

[1] The Chartered Institution of Highways & Transportation's (CIHT's) *'Guidelines for Providing for Journeys on Foot'* (2000) suggests acceptable walking distances for commuting as Desirable (500m), Acceptable (1.0km) and Preferred Maximum (2.0km).

In addition, pedestrian facilities within the wider vicinity are indicated on Figure 2 and described as follows:

- A footpath located along the northern edge of Tankersley Lane provides a continuous pedestrian connection between the residential areas of Hoyland and Tankersley.
- To the north, a series of pedestrian footpaths and crossing facilities (signalised crossings and dropped kerbs) are provided surrounding Birdwell Roundabout, allowing for pedestrian connections towards local amenities and bus stops.
- Footways are located along either side of the A6195 Sheffield Road, with a pedestrian crossing point located approximately 90m to the north of the junction with Tankersley Lane. Bus stop infrastructure is also located along the A6195.

A number of Public Rights of Way (PRoW) exist within close proximity the development site, as below:

- Footpath 12 runs along the east of the development, connecting Sheffield Road to Tankersley Lane.
- Footpath 26 runs along the south of the development boundary, connecting the A6135 with Black Lane and Bridleway 25 which runs from Black Lane towards B6090 Dike Hill.
- To the north east of the development Cross Keys Lane provides access to Footpath 10 and Footpath 1 which form part of the pedestrian facilities within the Hoyland North Masterplan.

Additional PRoW's exist within convenient walking distance of the development; however, it is unlikely that employees will use these to access the development.

## 2.5 Cycling

Figure 3 shows an 8km cycle catchment from the site, which is taken to be the preferred maximum for a commute to work or study[2], showing that employees living in Hoyland, Tankersley, Worsborough, Barnsley, Wombwell, Wentworth, Chapeltown, High Green and Dodworth can cycle to the development.

National Cycle Network Route 67 is shown on Figure 3 runs to the west of the development site along New Road/ Tankersley Lane and can be accessed from the development land via Tankersley Lane. The route provides a mixture of traffic-free and on-road routes north

[2] Integrating Cycling into Development Proposals, Cycling England, 2009, p4.

towards Barnsley, and south towards Sheffield and Rotherham. The route also forms part of the Trans Pennine Trail, which covers a whole network of routes linking the major urban centres of the region.

In addition, local routes are available in the immediate vicinity of the site, with the A6135 Hoyland Common to Elsecar Park & Ride B6097 route runs within close proximity to the eastern boundary of the site, providing a cycle route between Parkside Road towards Elsecar rail station.

## 2.6 Public Transport

### Bus Network

The development is located to the residential area of Hoyland and as such is served by a number of bus services. There are stops located within the development site along Tankersley Lane, as well as along east of the development site on the A6135 Sheffield Road and to the north along A61 Sheffield Road.

Stops located on Tankersley Lane and the majority of stops located of A6135 Sheffield Road consist of bus stop posts, however a number of stops are sheltered with seating.

Details of the buses serving them are in Table 1 and displayed at Figure 4.

**Table 1: Bus Services**

| No. | Operator | Destinations Served | Daytime Hourly frequency *(First/Last Bus)* | | |
|---|---|---|---|---|---|
| | | | Mon-Fri. | Saturday | Sunday |
| Tankersley Lane | | | | | |
| 72/72a | Stagecoach | Chapeltown - Manvers | 1<br>*0608;1846* | 1<br>*0626;1835* | No service |
| A6135 Sheffield Road | | | | | |
| 2/X2 | Stagecoach | Barnsley Interchange - Birdwell - Hoyland Common - Ecclesfield - Sheffield | 2<br>*0541;2314* | 2<br>*0754;2314* | 1<br>*0906;2314* |
| 66 | | Barnsley Centre - Elsecar Circular | 4<br>*0640;2356* | 4<br>*0635;2356* | 2<br>*0847;2355* |
| 67/67a/67c | | Barnsley - Tankersley - Wombwell | 2<br>*0558;2350* | 2<br>*0524;2350* | 1<br>*0900;2305* |
| A61 Sheffield Road | | | | | |
| X17 | Stagecoach | Barnsley - Meadowhall - Sheffield - Chesterfield - Matlock | 1<br>*0703;2100* | 1<br>*0729;2100* | 1<br>*0954;1801* |
| Services per hour | | | 10 | 10 | 5 |

*Note: Services correct 17/04/2020*

In combination the stops mentioned above offer up to 10 services per hour, providing access to destinations such as Barnsley, Ecclesfield, Wombwell and Sheffield. Most of the services offer early morning services and into the night Monday to Sunday.

## Rail Network

Rail journeys can be planned at http://www.nationalrail.co.uk/ or using the National Rail Enquiries app.

Whilst the site is not directly served by rail, connections can be accessed at Elsecar station, which is approximately 3.2km southeast of the site. The station is situated on the Hallam and Penistone lines served by Northern Rail. At peak times, the station provides two direct services per hour services to Barnsley and Sheffield and intermediate local stations, plus one direct hourly service to Leeds. It should be noted that the Number 66,67a,72 and X2 bus services, which stop within close proximity of the site, provides a connection to the station.

## 2.7 Summary

The development site is well located in relation to the transport network. It is clear that a range of journey purposes by future employees based at the development can be readily undertaken by sustainable transport modes.

# 3 Transport and Planning Policy

This Chapter identifies national and local transport policy that is relevant to the proposed development and sets out how the development proposals respond to and accord with, this policy.

## 3.1 National Policy

### National Planning Policy Framework

A revised *'National Planning Policy Framework'* (NPPF) was published by the Ministry of Housing, Communities and Local Government (MHCLG) on 19 February 2019. It sets out national planning policy for England and in particular how the planning system is to contribute to achieving sustainable development through the following interdependent objectives:

- An economic objective, contributing to building a strong, responsive and competitive economy through ensuring that land of the right type is available in the right places and at the right time to support growth, innovation and improved productivity.

- A social role, supporting strong, vibrant and healthy communities by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being.

- An environmental role, protecting and enhancing the natural, built and historic environment through making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change.

The NPPF sets out a presumption in favour of sustainable development. This means that development proposals that accord with the development plan should be approved without delay. Where there are no relevant development plan polices or the most important polices for determining the application are out-of-date, permission should be granted unless policies in the NPPF provide a clear reason for refusing the development proposed, or any adverse impacts of approving a development would demonstrably outweigh the benefits when assessed against the NPPF as a whole.

Specifically, in relation to transport, the NPPF states that the planning system should manage patterns of growth to address potential impacts of development on transport networks; realise opportunities from existing or proposed transport infrastructure and technology; promote walking, cycling and public transport; identify and assess the

environmental impacts of traffic; and integrate transport consideration into the design of schemes.

In relation to considering development proposals, the NPPF states that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment to ensure the likely impacts of development are assessed.

Paragraph 108 of the NPPF states that:

*"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

- *appropriate opportunities to promote sustainable transport modes can be – or have been - taken up depending on the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users; and,*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

Paragraph 109 states:

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

## Planning Practice Guidance

Planning Practice Guidance (PPG) was launched by the Department for Communities and Local Government on 6 March 2014. It provides advice on when Transport Assessments and Transport Statements are required and what they should contain :

> *"Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a 'lighter-touch' evaluation to be used where this would be more proportionate to the potential impact of the development (i.e. in the case of developments with anticipated limited transport impacts)."*

Furthermore, it states that:

> *"Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework."*

Furthermore, it states that:

*"Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework."*

*And:*

*"The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts."*

## 3.2 Local Policy

### Background

Barnsley's Local Plan was adopted by the Council on 3 January 2019, this document, together with the Joint Waste Plan prepared with Doncaster and Rotherham and adopted in March 2012, are the Statutory Development Plan.

The Barnsley Local Plan considers the future use of all land within the borough, including Barnsley town centre, and establishes policies and proposals up to the year 2033. Once adopted, the Local Plan will be used by BMBC when considering planning applications and to coordinate investment decisions that affect the towns, villages and countryside of Barnsley.

### Barnsley Local Plan 2019

The following policies within the Barnsley Local Plan are of relevance to the development of Barnsley West from a transportation perspective:

**Policy GD1 General Development**

Policy GD1 states that proposals for development will be approved if, amongst other things, adequate access and internal road layouts are provided to allow the complete development of the entire site for residential purposes and to provide appropriate vehicular and pedestrian link throughout the site and into adjacent areas.

**Policy LG2 The Location of Growth**

Policy LG2 states that priority will be given to development to specific locations which include Hoyland (a Principle Town). the Principal Towns will be expected to accommodate significantly more growth than the villages, to accord with their place in the settlement hierarchy.

**Policy E2 The Distribution of New Employment Sites**

Policy E2 suggests that proposed employment land allocations are considered to provide Barnsley with an appropriate mix of large and small sites. Hoyland is allocated 110.9ha of employment land during the Local Plan period.

The development site is allocated for employment, "ES13 - Land West of Sheffield Road"

The development will be subject to the production of a Masterplan Framework including housing site reference HS57. The development will be expected to:

- Provide a link road between the new Birdwell roundabout linking to Tankersley Lane and from there to Sheffield Road.
- Relocate the area of Rockingham Sports Ground that falls within the site boundary to an appropriate location within Hoyland Principal Town. The replacement pitch and associated facilities must be constructed and available for use before development on the existing sports ground site commences.
- Consider impact on residential amenity and include appropriate mitigation where necessary.
- Retain the mature trees and hedgerows.
- Provide a buffer strip at least 10 metres wide along the common boundary with the M1.
- Ensure that development respects the landscape and wider countryside, and incorporates appropriate mitigation measures to address impacts on the adjacent Green Belt and countryside, including the planting of a substantial tree belt at the southern boundary in order to define the new Green Belt boundary.
- Undertake necessary drainage works.
- Provide air quality assessments in accordance with policy Poll 1.

Located adjacent to the proposed development is site HS57 "Land at Tankersley Lane Indicative number of dwellings 101".

The development will be subject to the production of a Masterplan Framework covering the entire site and employment site reference ES13. The Masterplan Framework should demonstrate that proposals will positively support and complement the comprehensive wider development of the area and ensure that development is brought forward in a comprehensive manner.

The development will be expected to:

- Ensure any layout takes account of the relationship between the new development and existing buildings that are not available for redevelopment.
- Provide a buffer between the site and Skiers Wood Local Wildlife Site.
- Provide a landscape buffer between this site and the employment site ES13.
- Produce a detailed ecology report in support of any development proposal.

**Policy T1 Accessibility Priority**

Policy T1 states that developers will work with city region partners and other stakeholders transport investment will be set out in Transport Strategy programmes focused on development-transport corridors to:

- A. Improve sustainable transport and circulation in the Accessibility Improvement Zone (AIZ) area particularly between Principal Towns.
- B. Implement transport network improvements as supported by evidence from modelling, feasibility studies, consultation, surveys, community engagement etc.
- C. Facilitate sustainable transport links to and from existing and proposed employment, interchange, community and leisure and tourism facilities in the borough, including provision for car parking and enhancing the non-car role of the transport corridor shown on the Accessibility Priorities diagram as ‘potential enhanced road based public transport corridor'.
- D. Promote high quality public transport linking the AIZ to significant places of business, employment and national / international interchange in the Leeds - Sheffield City Region corridor including neighbouring Wakefield, Kirklees, Doncaster, Sheffield and Rotherham.
- E. Improve direct public transport and freight links to London, Manchester, other Core Cities, national / international interchanges and the Humber ports.

Hoyland is highlighted within the strategy for ‘potential enhanced road based public transport corridor.

**Policy T3 New Development and Sustainable Travel**

Policy T3 states that new development will be expected to:

- Be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists.
- Provide at least the minimum levels of parking for cycles, motorbikes, scooters, mopeds and disabled people set out in the relevant Supplementary Planning Document.
- Provide a Transport Statement or Assessment in line with guidance set out in the National Planning Policy Framework and guidance including where appropriate regard for cross boundary local authority impacts.
- Provide a Travel Plan Statement or a Travel Plan in accordance with guidance set out in National Planning Policy Framework including where appropriate regard for cross boundary local authority impacts. Travel plans will be secured through a planning obligation or a planning condition.

The policy goes on to explain that where levels of accessibility through public transport, cycling and walking are unacceptable, developers will be expected to take action or make financial contributions, secured through a planning obligation or planning condition.

**Policy T4 New Development and Transport Safety**

Policy T4 states that new development will be expected to be designed and built to provide safe, secure and convenient access for all road users. The policy goes on to explain that if a development is not suitably served by the existing highway, or would create or add to highway safety problems or the efficiency of the highway for all road users, developers will be expected to take mitigating action or to make a financial contribution to make sure the necessary improvements go ahead.

**Policy GS2 Green Ways and Public Rights of Way**

Policy GS2 identifies that where development affects an existing Green Way or Public Right of Way it must either protect the existing route within the development or include an equally convenient and attractive alternative route. Where new development is close to a Green Way or Public Right of Way it may be required to:

- Provide a link to the existing route; and/or
- Improve an existing route; and/or

- Contribute to a new route.

In some cases, developers will be asked to make a financial contribution to meet these requirements.

## 3.3 Summary

This report sets out the transport impacts of the development extension in accordance with national and local planning policy guidance. The proposed development is well situated in relation to existing public transport, walking and cycling networks, ensuring sustainable access within the district and beyond. It therefore accords with the NPPF and relevant local policy.

# 4 Development Proposals

This Chapter presents a description of the proposed development for which planning consent is being sought, and how it will be accessed by all modes.

## 4.1 Land Use

The development will comprise of an employment development located directly to the south east of Junction 36 of the M1. The proposals comprise of 3 development plots, with a central link road running through the site, as follows:

- Plot 1 will comprise of a 31,571 sqm warehouse for B8 use. This unit is applied for in full and will be occupied by Hermes.

- Plot 2 and Plot 3 incorporates an outline application with all matters reserved apart from means of access for up to 71,515 sq.m of employment uses (B1, B2, B8).

The proposals are demonstrated on the drawings presented at Appendix A.

The Hoyland West Masterplan accounts for 36.19ha of employment, and 2.53ha of residential land use. The proposed development is for 32.46ha of employment land use, equating to 90% of the overall masterplan development. The remaining employment and residential land use as referenced in the masterplan fall outside of the red line boundary for this application and will be subject to separate planning applications and assessments as they come forward for development.

## 4.2 Pedestrian and Cycle Access

### Link Road

The development has been designed to ensure that potential users and visitors, regardless of age, gender or any disabilities are able to access and navigate unimpeded through all appropriate areas of each building and surrounding public realm. Appropriate tactile paving, wide footways without obstacles, signage and street lighting will be provided to ensure an attractive pedestrian environment is provided.

New pedestrian infrastructure will be provided throughout the site. The new link road has appropriate pedestrian and cycle facilities, and continuous routes through the development will be accommodated by means of the proposed internal street network.

### Development Plots

New pedestrian infrastructure will be provided through each development plot which tie in with the proposed link road infrastructure. This ensures a continuous route from the link road to each development plot.

Within each development plot covered and secure cycle parking will be provided in accordance with BMBC adopted parking standards[3], as detailed in Table 2.

**Table 2: Minimum Cycle Parking Standards**

| Use Class | Minimum Cycle Parking Standards |
|---|---|
| Offices | 1 long stay space per 400m² Offices gross floor area; and 1 short stay space per 1000m² gross floor area |
| General Industry | BMBC to confirm |
| Storage and Distribution | 1 short stay space per 1000m² gross floor area for visitors; and 1 long stay space per 40 staff |

A total of 60 cycle parking spaces will be provided at Plot 1 (Hermes) of the development, which is above the minimum standards based on the expected number of staff (900).

## 4.3 Vehicular Arrangements

### Vehicular Access

The new link road will connect with the existing road network at three locations: at Cross Keys Roundabout to the north, Tankersley Lane to the west and Sheffield Road to the south. The link road has been designed by RPS and is shown on the Link Road General Arrangement Drawing at Appendix B, along with full vehicle swept path assessments. Briefly the proposed link road is a 10.5m wide single carriageway road with a 40mph design speed and right turning lanes at the specific plot accesses. Along the link road a 2.0m wide footway and 1.5m wide verge are provided along the north/east side of the carriageway, with a 3.0m shared footway/cycleway and 1.5m verge along the south/west side. Eight pedestrian crossing islands are provided along the link road. A shared footway/cycleway link is provided from the link road to Tankersley Lane, providing a pedestrian connection to Hoyland. The Link Road Design Statement is also provided at Appendix B.

[3] Barnsley Parking SPD (2019)

## Cross Keys Roundabout

The proposed new link road will form a fourth arm on the Cross Keys Roundabout, which will be an extension of the existing stub at the roundabout.

## Tankersley Lane

Various options for the future role of Tankersley Lane have been subject to consultation within the Masterplan Development Framework for Hoyland West in May and June 2020.

The preferred solution of the developer as set out within this application is as follows:

- Tankersley Lane East will be closed to vehicular traffic through a Traffic Regulation Order (TRO) to prohibit vehicular traffic. Tankersley Lane East will remain as adopted public highway. However, the road will become a cul de sac from the east at the traffic signal-controlled junction with Sheffield Road.

- Tankersley Lane West will remain open as the minor arm in a new priority junction to be formed with the new link road. This is as shown on the submitted highways drawings that have been prepared by RPS.

As part of the pre-application design process and consultations a meeting was held with the Barnsley Bus Partnership (5 March 2020). The bus operators made it clear they would not be supportive of any development layout which prohibited bus access from Tankersley Lane West through the site. The existing bus services on Tankersley Lane West are SYPTE supported services that provide access to the various local employment sites around the Dearne Valley. The preferred option for bus operators and SYPTE was for buses to continue to access via Tankersley Lane West and diverting onto the new link road, therefore enabling buses to take advantage of the new link road infrastructure as well as the potential extra patronage from the proposed employment uses.

There are currently 425 and 604 (PCU) two-way trips on Tankersley Lane during the AM and PM peak hour, respectively. The predicted development traffic will directly contribute less than 30 (PCU) peak hour two-way trips along Tankersley Lane.

## Sheffield Road

As shown on the development proposals, Sheffield Road to the south of the link road will be re-aligned into the development site and form the link road. A simple three arm priority junction, with a right-hand turning lane, is formed with Sheffield Road to allow access to and from the settlement of Hoyland. To the south of this junction a new four arm roundabout will be provided allowing access into Plot 2. A stub will be provided on the

roundabout to the east, allowing for future access into the Hoyland south allocation site (identified as HS68 in the Local Plan).

### Sheffield Road / Parkside

As shown on the development proposals, Sheffield Road to the south of the link road will be re-aligned and as a result the junction with Parkside will be upgraded from a simple 3-arm priority junction to a 4-arm priority controlled mini-roundabout. At this stage the fourth arm will provide access to open fields/agricultural land, however this site is subject to a separate planning application seeking to provide football pitches.

## Access to Development Plots

The development plot accesses are shown on RPS Drawing 'Link Road General Arrangement' at Appendix B and described in detail below.

### Plot 1 (Hermes)

Plot 1 (Hermes), located in the centre of the site, will have two points of access taken from the link road. The car park access will be in the form of a simple three-arm priority-controlled junction, with a ghost island right- turn lane provided along the link road. The proposed access for operational HGV's will be a three-arm priority-controlled roundabout. The plot access will be a two-lane entry and exit, whilst the link roads will provide two-lane flared entries and single lane exits.

### Plot 2

Plot 2, located in the south of the site, will take access from the proposed southern roundabout on Sheffield Road. The new four arm roundabout will provide access into plot two and a stub will be provided on the roundabout to the east, allowing for future access into the Hoyland south allocation site (identified as HS68 in the Local Plan). The approaches to the roundabout will be two lane flared entries with single lane exits.

### Plot 3

Plot 3, located in the north of the site, will have two points of access, one taken from from Tankersley Lane West, and one taken from the new link road. Both accesses will be simple three-arm priority-controlled junctions, with single carriageway 7.3m wide access roads and 15m radii. Both access junctions will have 40m ghost island right turn lanes.

## Car Parking

BMDC's recommended car parking standards for B2/B1c and B8 use for developments Borough wide (excluding Urban Barnsley) are presented below in Table 3.

**Table 3: Car Parking Standards**

| Use Class | Threshold above which standard applies* | Number of spaces recommended Borough wide (excluding Urban Barnsley) |
|---|---|---|
| B1 | 2500m² | 1 space per 30m² |
| B2 | 2500m² | 1 space per 30-50m² |
| B8 | All developments over 1000m² | 1 space per 3 staff or 1 space per 60m² gross floor area up to 300m² then 1 space per 100m² gross floor area up to 1000m² and 1 space per 150m² gross floor area thereafter |

In addition, electric vehicle charging points (EVCP), disabled bays and motorcycle parking will be provided in accordance with policy, as shown in Table 4.

**Table 4: EVCP, Disabled and Motorcycle Parking Standards**

| Type | Parking Standard |
|---|---|
| Disabled | 1 space for every employee who is a disabled motorist, plus 5% of the total actual provision for visitors and customers plus a further 4% should be capable of enlargement or laid out as enlarged standard spaces. Spaces designated for disabled parking should be close to the building entrances. |
| Electric Vehicle Charging Points | A minimum of 10% of parking for industrial/commercial and retail |
| Motorcycle | 1 space per 20 car parking spaces with an absolute minimum provision of 1 space. In some developments it will also be necessary to consider providing good quality storage lockers for equipment and clothing. |

Plot 2 and 3 are outline planning applications and parking will be provided in line with BMBC's recommended requirements.

At Plot 1 (Hermes), 650 parking spaces will be provided. This provision is appropriate based on the nature of how the proposed unit will operate. Hermes will employ up to 900 members of staff, with more than 300 employees on shift at any time. This provision of parking allows for a sufficient number of parking spaces to be available to accommodate the proposed shift change overs. It is considered that this provision is appropriate given the end user and operation of the site is known.

Of the 650 parking spaces, 42 disabled parking bays, will be provided close to the building entrance. In addition, 33 motorcycle spaces will be provided close to the building entrance.

Plot 2 and 3 are outline planning applications and EV charging spaces will be provided in line with BMBC's requirements. At Plot 1 (Hermes), 34 electric vehicle charging spaces will be provided and ducting for future potential provision of 130.

## 4.4 Public Transport

The development is extremely well located to take advantage of the existing bus services on Sheffield Road and Tankersley Lane, as outlined in Section 2.6. A consultation with the Barnsley Bus Partnership was held Thursday 5 March as outlined in Section 4.3. The bus operators made it clear that the existing bus service on Tankersley Lane would continue to use this route and could be diverted along the link road to take advantage of the extra patronage. The bus operators indicated they would like areas protected for the future provision of bus stop infrastructure along the link road, in order to provide for future services. As such, the proposed link road will provide platforms for bus shelters as shown at Appendix B.

## 4.5 Construction

The construction of the highway and associated works will be undertaken in two phases. Phase 1 will be the infrastructure works and is estimated to take one year to complete. Phase 2 will be solely the buildings works which is estimated to take one year to complete.

Construction works will be undertaken within a 10hr day. The total anticipated duration of the construction works is estimated to be two Years. In terms of trip generation, it is anticipated than on an average weekday phase one will generate a total of 306 two-way daily movements, whilst phase two would vary month to month with a maximum of 318 two-way daily vehicle movements. The expected traffic generation is therefore much lower during construction than operational phase.

A Construction Environmental Management Plan (CEMP) will be required from the contractor in order to control construction activities and to protect road safety and residential amenity. The plan will need to identify measures to mitigate impacts associated with construction traffic on the local and strategic transport networks, which includes the following:

- Scheduling of deliveries to minimise potential disturbance on local residents and conflicts with the highway peak hours.
- Consideration of appropriate routes for construction traffic to access the site.

- Provision of wheel washing facilities at site egress points to minimise the potential for site debris to be transferred to the external highway network.

- Consideration of temporary changes to the speed limit on Sheffield Road in the vicinity of the construction works.

Potential effects would be mitigated, as far as possible, through active community engagement under the considerate constructor's scheme. This will ensure that the public is aware of the construction routes and potential impacts of the construction processes.

## 4.6 Sustainable Travel

A Framework Travel Plan has been prepared as part of the planning application. This provides a 'framework' within which individual occupiers of the development (who meet the Travel Plan threshold) will formulate their own, occupier-specific Travel Plan. In this way, employees based at the development will be given practical support to encourage the use of sustainable modes of transport when travelling.

# 5 Vehicle Trip Generation

## 5.1 Introduction

This Section details the methodology for estimating the Weekday AM and Weekday PM peak hour vehicle trip generations for each development plot within the proposed development.

This Chapter sets out the proposed approach to estimating the Weekday AM and Weekday PM peak traffic demand associated with the development. The methodology was agreed with Highways England during the pre-application scoping and with BMBC during the traffic impact analysis work undertaken by Fore for the Hoyland North and Masterplan Site[4] and Hoyland West and South Masterplan Site[5].

For the purposes of the Transport Assessment, traffic demand will be estimated based on the following land use schedule:

- 103,083sqm of employment land use, which comprises:
    - 31,571sqm of Use Class B8 – Plot 1 (Hermes plot).
    - 69,192sqm of Use Class B2 - Plot 2 & 3.
    - 2,323sqm of Use Class B1 - Plot 3

Whilst it is anticipated that plot 2 and 3 will accommodate a combination of B2 and B8 land use, for robustness in the capacity assessments, these have been assessed as being wholly B2 use which is the higher trip generator.

## 5.2 Trip Generation

The weekday AM and PM peak hour vehicle trip rates identified for the traffic impact analysis work undertaken by Fore for the Hoyland North Masterplan, and the Hoyland West and South Masterplan, were agreed with BMBC and have subsequently been agreed with HE during the pre-application scoping. Given that Hermes is the known end user for Plot 1, then a first principles approach to traffic generation for this plot has been taken, as requested by HE. This approach has been agreed by BMBC.

[4] *Hoyland North Masterplan – Transport and Access Appraisal Report (Issue v4.0)*, Fore Consulting Limited, 2019.
[5] Hoyland West and South Masterplan – *Transport Impact Analysis Report (Issue v0.1)*, Fore Consulting Limited, 2019.

## Hermes Development

A first principles approach has been taken to Plot 1 the Hermes development plot (31,571sqm). The staff trips and operation trips have been broken down separately in the following sections.

## Staff Trip Generation

The Hermes development will operate with approximately 900 staff on site, 500 of these will be permanent warehouse roles, 250 temporary staff roles and 150 management staff. The staff working hours are broken down into three shift patterns spread over a 24 hour period as in the current hubs (currently 6am-2pm, 2pm-10pm, 10pm – 6am). It is understood from Hermes that there are no 9am-5pm shifts.

It is assumed all staff will arrive in the hour before starting and depart in the hour following the end of their shift. As such, given the start and end times of the working shifts no trips by staff will be made during the peak hours.

## Operational Trip Generation

The operational movements of the Hermes depot, plot 1, have been estimated using data from the Hermes site at Rugby, as agreed with Highways England.

The proposed site will operate in a similar manner to the Hermes site in Rugby (21,177 sqm), albeit on a slightly larger scale (31,571sqm). In order to calculate operational trip generation for the proposed site, data was collected at the Rugby site (Appendix C) recording inbound and outbound traffic which is presented in Table 5 for the weekday peak hours.

**Table 5: Hermes Rugby Site Operational Trips - Plot 1**

| Hour Start | | LGV Trips (Veh) | | | HGV Trips (Veh) | | | Total Trips (Veh) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Arr | Dep | Tot | Arr | Dep | Tot | Arr | Dep | Tot |
| Weekday AM Peak | 07:00-08:00 | 39 | 0 | 39 | 29 | 33 | 62 | 68 | 33 | 101 |
| | 08:00-09:00 | 38 | 0 | 38 | 23 | 18 | 41 | 61 | 18 | 79 |
| Weekday PM Peak | 16:00-17:00 | 0 | 0 | 0 | 17 | 35 | 52 | 17 | 35 | 52 |
| | 17:00-18:00 | 0 | 0 | 0 | 22 | 22 | 44 | 22 | 22 | 44 |

The trip generation from the existing Hermes site in Rugby (Table 5) has then been factored up to reflect the increase in floor area of the proposed development site. The resulting trip generation is presented in Table 6.

**Table 6: Proposed Site Hermes Trip Generation - Plot 1**

| Hour Start | | LGV Trips (Veh) | | | HGV Trips (Veh) | | | Total Trips (Veh) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Arr | Dep | Tot | Arr | Dep | Tot | Arr | Dep | Tot |
| Weekday AM Peak | 07:00-08:00 | 49 | 0 | 49 | 36 | 42 | 78 | 85 | 42 | 127 |
| | 08:00-09:00 | 48 | 0 | 48 | 29 | 22 | 51 | 76 | 22 | 99 |
| | Average | 48 | 0 | 48 | 33 | 32 | 64 | 81 | 32 | 113 |
| Weekday PM Peak | 16:00-17:00 | 0 | 0 | 0 | 21 | 44 | 65 | 21 | 44 | 65 |
| | 17:00-18:00 | 0 | 0 | 0 | 28 | 27 | 55 | 28 | 27 | 55 |
| | Average | 0 | 0 | 0 | 24 | 36 | 60 | 24 | 36 | 60 |

At the request of BMBC two separate methodologies are applied to the Hermes trip generation. For the purposes of the local junction modelling the average of the two peak hours is assessed. Whilst the assessment of the local and strategic highway network using the Hoyland VISSIM model will continue to use the four individual hours across the two modelled peak periods.

## Proposed Development Unknown Occupiers

The trip rates that are agreed were derived from the TRICS database, following interrogation of survey sites based on the criteria set out in Table 7. The trips rates used are those as agreed with Highways England and BMBC.

**Table 7: TRICS Search Criteria**

| Proposed Land Use | TRICS Land Use | TRICS Sub-Category | Location |
|---|---|---|---|
| Employment (B2) | 02-Employment | D – Industrial Units | Edge of Town / Suburban |
| Employment (B1) | 02-Employment | A - Office | |

## Vehicle Trip Generation

The agreed vehicle trip rates are set out in Table 8 for the typical Weekday AM (0800-0900 hours) and PM (1700-1800 hours) peak hours.

**Table 8: Weekday Vehicle Trip Rates (Total Vehicles)**

| Time Period | Vehicle Trip Rates (Total Vehicles) | | |
|---|---|---|---|
| | Arrivals | Departures | Total |
| Employment - B2 (per 100 sqm) | | | |
| Weekday AM Peak Hour (0800 – 0900) | 0.211 | 0.059 | 0.270 |
| Weekday PM Peak Hour (1700 – 1800) | 0.067 | 0.194 | 0.261 |
| Employment – B1 (per 100 sqm) | | | |
| Weekday AM Peak Hour (0800 – 0900) | 1.164 | 0.126 | 1.290 |
| Weekday PM Peak Hour (1700 – 1800) | 0.099 | 1.075 | 1.174 |

Table 9 shows the corresponding Weekday AM and PM peak hour vehicle trip generations for each development plot.

**Table 9: Vehicle Trip Generation by Development Plot**

| Development Plot | Vehicle Trips (Veh) | | | | | |
|---|---|---|---|---|---|---|
| | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | Arr. | Dep. | Total | Arr. | Dep. | Total |
| Plot 2 - B2 (47,258 sqm) | 100 | 28 | 128 | 32 | 92 | 123 |
| Plot 3 - B2 (21,934 sqm) | 46 | 13 | 59 | 15 | 43 | 57 |
| Plot 3 - B1 (2,323 sqm) | 27 | 3 | 30 | 2 | 25 | 27 |
| Total | 173 | 44 | 217 | 49 | 159 | 208 |

*Note: Numbers rounded to nearest whole number*

## HGV Trip Generation

For the employment element of the site, the agreed HGV trip rates are set out in Table 8 for the typical Weekday AM (0800-0900 hours) and PM (1700-1800 hours) peak hours. The B1 office and residential sites will not generate any HGV movements.

**Table 10: Weekday HGV Trip Rates (Total HGVs)**

| Time Period | HGV Trip Rates (Total HGVs) | | |
|---|---|---|---|
| | Arrivals | Departures | Total |
| Employment - B2 (per 100 sqm) | | | |
| Weekday AM Peak Hour (0800 – 0900) | 0.025 | 0.026 | 0.051 |
| Weekday PM Peak Hour (1700 – 1800) | 0.006 | 0.002 | 0.008 |

Table 11 shows the corresponding Weekday AM and PM peak hour HGV trip generations for each development plot.

**Table 11: HGV Trip Generation by Development Plot**

| Development Plot | HGV Trips (HGV) | | | | | |
|---|---|---|---|---|---|---|
| | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | Arr. | Dep. | Total | Arr. | Dep. | Total |
| Plot 2 - B2 (47,258 sqm) | 12 | 12 | 24 | 3 | 1 | 4 |
| Plot 3 - B2 (21,934 sqm) | 5 | 6 | 11 | 1 | 0 | 2 |
| Plot 3 - B1 (2,323 sqm) | - | - | - | - | - | - |
| Total | 17 | 18 | 35 | 4 | 1 | 6 |

*Note: Numbers may not total due to rounding.*

## 5.3 Total Development Trip Generation

Table 12 presents the total development vehicle trip generation for the weekday AM and PM peak hour.

**Table 12: Total Development Vehicle Trip Generation**

| Development Plot | Vehicle Trips (Veh) | | | | | |
|---|---|---|---|---|---|---|
| | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | Arr. | Dep. | Total | Arr. | Dep. | Total |
| Plot 2 - B2 (47,258 sqm) | 100 | 28 | 128 | 32 | 92 | 123 |
| Plot 3 - B2 (21,934 sqm) | 46 | 13 | 59 | 15 | 43 | 57 |
| Plot 3 - B1 (2,323 sqm) | 27 | 3 | 30 | 2 | 25 | 27 |
| Plot 1 Hermes B8 (31,571 sqm) | 81 | 32 | 113 | 24 | 36 | 60 |
| Total | 254 | 76 | 329 | 73 | 195 | 268 |

Table 13 presents the total development HGV trip generation for the weekday AM and PM peak hour.

**Table 13: Total Development HGV Trip Generation**

| Development Plot | HGV Trips (Veh) | | | | | |
|---|---|---|---|---|---|---|
| | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | Arr. | Dep. | Total | Arr. | Dep. | Total |
| Plot 2 - B2 (47,258 sqm) | 12 | 12 | 24 | 3 | 1 | 4 |
| Plot 3 - B2 (21,934 sqm) | 5 | 6 | 11 | 1 | 0 | 2 |
| Plot 3 - B1 (2,323 sqm) | - | - | - | - | - | - |
| Plot 1 Hermes B8 (31,571 sqm) | 33 | 32 | 64 | 24 | 36 | 60 |
| Total | 50 | 50 | 100 | 29 | 37 | 66 |

The Tables above shows that the proposed development is predicted to generate 329 and 268 two-way vehicle trips during the Weekday AM and PM peak hours, respectively. Of this total, the HGV trip generation is 100 and 66 two-way vehicle trips during the Weekday AM and PM peak hours, respectively.

The development trips have been converted into equivalent PCU values[6].

**Table 14: Total Development PCU Trip Generation**

| Development Plot | Vehicle Trips (PCU) | | | | | |
|---|---|---|---|---|---|---|
| | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | Arr. | Dep. | Total | Arr. | Dep. | Total |
| Plot 2 - B2 (47,258 sqm) | 112 | 40 | 152 | 35 | 93 | 124 |
| Plot 3 - B2 (21,934 sqm) | 51 | 19 | 70 | 16 | 43 | 59 |
| Plot 3 - B1 (2,323 sqm) | 27 | 3 | 30 | 2 | 25 | 27 |
| Plot 1 Hermes B8 (31,571 sqm) | 114 | 64 | 177 | 48 | 72 | 120 |
| Total | 304 | 126 | 429 | 102 | 232 | 334 |

[6] TAG UNIT M3.1 Highway Assignment Modelling. Department for Transport. May 2020.

# 6 Trip Distribution and Assignment

## 6.1 Introduction

This Section considers the predicted distribution and route assignment of the vehicle trips onto the study highway network. It should be noted that the assumptions apply equally to the Weekday AM and Weekday PM peak hours and have been agreed at the scoping stage with HE and BMBC.

## 6.2 Vehicle Trip Distribution

Peak hour trips associated with the development are likely to consist predominantly of commuter journeys. The vehicle trip distribution associated with the development plots has therefore been estimated based on the dataset, WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level), as taken from the 2011 Census. The vehicle trip distribution has been calculated considering commuter journeys of those who work in the Barnsley 028, 029 and 30 MSOAs i.e. as per the agreed trip distribution methodology identified as part of Fore's previous work for Hoyland North.

Destinations have been broken down into MSOAs for the districts of Barnsley, Sheffield, Rotherham and Doncaster; for other destinations, the local authority district has been used.

The vehicle trip distribution is summarised in Table 15.

**Table 15: Vehicle Trip Distribution**

| Ref. | Route | Vehicle Trip Distribution |
|---|---|---|
| | | Employment |
| 1 | M1 (South) | 10.8% |
| 2 | M1 (North) | 14.6% |
| 3 | The Walk | 1.1% |
| 4 | A61 Sheffield Road | 8.8% |
| 5 | A6195 Dearne Valley Parkway (East) | 12.2% |
| 6 | Hoyland Road | 15.5% |
| 7 | Parkside Road | 4.5% |
| 8 | A6135 Sheffield Road | 20.4% |
| 9 | A616 (East) | 0.0% |
| 10 | A61 Westwood New Road | 3.8% |
| 11 | A616 (West) | 6.4% |
| 12 | Maple Road | 0.0% |
| 13 | Wentworth Way | 1.8% |
| 14 | New Road | 0.1% |
| Total | | 100.0% |

## HGV Trip Distribution

The distribution of vehicle trips has been estimated using a population-based gravity model, the catchment of which has been set at a driving time of 600 minutes. This is considered appropriate for the development proposals (on the basis that the Hermes depot, whilst predominantly serving the north of England with Rugby serving the south, will be operational to all sites within the UK). The full gravity model as agreed with HE and BMBC is included at Appendix D and summarised in Table 16. The distribution is applied across all trips from all HGV generators within the development.

**Table 16: HGV Trip Distribution**

| Ref. | Route | HGV Trip Distribution |
|---|---|---|
| 1 | M1 (North) | 35% |
| 2 | A6195 | 10% |
| 3 | M1 (South) | 22% |
| 4 | A616 | 9% |
| 5 | A61 Westwood New Road | 17% |
| 6 | A61 Sheffield Road | 6% |
| Total | | 100% |

## 6.3 Route Assignment

The predicted traffic generations for each individual development plot have been assigned onto the highway network. Where a choice of routes is available, the proportion of trips using each route has been estimated to reflect the likely preferred choice of travel time and distance.

The development trips will access the local highway network via the Sheffield Road / A6195 roundabout located at the north of the site, Tankersley Lane (west only) in the centre of the site or Sheffield Road to the south, whichever is the most appropriate location depending on the trip origin/destination.

Vehicle trip generation associated with the proposed development has been assigned to the highway network using the vehicle trip distribution set out in Table 7. The resulting traffic flows are demonstrated in PCU's on Figure 6 and Figure 7 for the weekday development AM and PM peak hour, respectively.

It should be noted that for the purposes of the Figures plot 3 development traffic has been assigned to the access from the link road. However, a sensitivity test is carried out which assumes all of the plot 3 development trips use the second access on Tankersley Lane. The sensitivity test is provided in Chapter 8.

## 6.4 Link Road Traffic Re-assignment

The proposed new link road will provide a new direct access from Sheffield Road to J36 and the A1695, reducing traffic on Sheffield Road through Hoyland Common. The new link roads will form a priority-controlled junction with Sheffield Road to the south of the

proposed site. The proposed layout encourages through traffic to continue along the new link road and discourages through trips from using Sheffield Road. It is noted that not all traffic will be re-assigned onto the link road, a number of trips will have origins and destinations in the local area and will therefore still seek to access local services and dwellings within Hoyland Common. Also taken into account in the re-assignment is the closure of Tankersley Lane east of the proposed link road, as such vehicles will be diverted onto the link road in order to continue their journey.

In order to establish the level of traffic re-assignment a traffic count undertaken at the Sheffield Road / Hoyland Road / Tankersley Lane junction was used.

Table 17 presents the individual traffic movements at the junction and highlights what assumptions and changes have been made as a result of the proposed link road.

**Table 17: Link Road Existing (Do Minimum) Traffic Re-assignment**

| Sheffield Road / Hoyland Road / Tankersley Lane | | Re-assignment Routes | % Re-assigned |
|---|---|---|---|
| Approach | Turning Movement | | |
| Sheffield Road North | Left | Unaffected | N/A |
| | Ahead | Diverted onto link road at Sheffield Rd Roundabout | 95% |
| | Right | Diverted onto link road – right turn onto Tankersley Lane | 95% |
| Hoyland Road | Left | Unaffected | N/A |
| | Ahead | Diverted onto link road via Sheffield Rd Roundabout | 95% |
| | Right | Unaffected | N/A |
| Sheffield Road South | Left | Diverted onto link road – left turn onto Tankersley Lane | 95% |
| | Ahead | Diverted onto link road at Sheffield Road south | 95% |
| | Right | Unaffected | N/A |
| Tankersley Lane | Left | Diverted left onto the link road | 95% |
| | Ahead | Diverted left onto the link road – right onto Sheffield Road | 95% |
| | Right | Diverted right onto the link road | 95% |

The proposed re-assignment accounts for the alternative route options using the link road, whilst still accounting for the small number of trips (5%) that would continue to pass through Hoyland Common for those with origins and destinations in the local area. Figure 8 and Figure 9 present the re-assignment of Do Minimum traffic resulting from the proposed link road.

# 7 Existing and Future Traffic Flows

## 7.1 Introduction

This chapter describes the approach to deriving existing traffic flows and sets out the methodology for estimating future traffic flows.

## 7.2 Traffic Surveys

Base traffic flows have been derived from turning count surveys, commissioned by BMBC and undertaken on Wednesday 13th March 2019. Fully classified turning count surveys were undertaken at the following locations:

- Site 1: Westwood Roundabout.
- Site 2: Westwood New Road / Church Lane / Wentworth Way.
- Site 3: A61 / Westwood New Road.
- Site 4: Sheffield Road / A6195.
- Site 5: A6135 Sheffield Road / Hoyland Road / Tankersley Lane.
- Site 6: A61 Sheffield Road / The Walk.
- Site 7: Rockingham Roundabout.
- Site 8: Shortwood Roundabout.
- Site 9: M1 Junction 36.

Further to these surveys a turning count survey was undertaken at the Tankersley Lane / New Road junction on Tuesday 3 March 2020.

The resulting 2019 Base Traffic Flows are set out on Figure 10 and Figure 11 for the weekday AM and PM peak hours, respectively.

The peak hours (the hour with the maximum hourly flow observed) are summarised in Table 18. For robustness, peak hour flows at each junction are used for the purposes of the Transport Assessment.

**Table 18: Peak Hour Identification at Surveyed Junctions**

| Junction | AM Peak Hour | PM Peak Hour |
|---|---|---|
| Westwood Roundabout | 07:00-08:00 | 16:15-17:15 |
| Westwood New Road / Church Lane / Wentworth Way | 07:00-08:00 | 16:15-17:15 |
| A61 / Westwood New Road | 07:00-08:00 | 16:15-17:15 |
| Sheffield Road / A6195 | 07:30-08:30 | 16:30-17:30 |
| A6135 Sheffield Road / Hoyland Road / Tankersley Lane | 07:30-08:30 | 16:30-17:30 |
| A61 Sheffield Road / The Walk | 07:30-08:30 | 16:30:17:30 |
| Rockingham Roundabout | 07:15-08:15 | 16:15-17:15 |
| Shortwood Roundabout | 07:30-08:30 | 16:15-17:15 |
| M1 Junction 36 | 07:15-08:15 | 16:15-17:15 |
| Tankersley Lane / New Road | 07:45-08:45 | 16:45-17:45 |

## 7.3 Assessment Periods

The periods considered for this assessment are the weekday AM and PM peak hours - representing the weekday hours with the maximum likely combination of existing traffic and development-associated traffic.

Peak hour flows for the surveyed junctions are used for the purposes of this assessment, as outlined in Table 17. Development traffic flows are considered on the basis of the development peak hours during the AM and PM peak periods, identified as 08:00 to 09:00 and 17:00 to 18:00.

It should be noted that the peak hours identified - for development traffic generation and base traffic flows at each junction – do not match exactly. The assessment therefore represents a robust, 'worst-case' scenario, since traffic flows in practice are therefore likely to be more dispersed than as forecast in this assessment.

## 7.4 Assessment Years and Traffic Growth

An assessment year of 2029 is considered for the purposes of this assessment as agreed with HE. This reflects the estimated programme for construction and occupation of the full development.

It is proposed that the traffic impacts of the development once completed will be considered for the purposes of capacity analysis of the highway network. This will be based on the base traffic flows identified by the surveys, including appropriate NTEM/TEMPro background growth, as presented in Table 19, and committed developments.

**Table 19: local Traffic Growth Factors - Barnsley 028 MSOA**

| Peak Period | Local Traffic Growth 2019 to 2029 |
|---|---|
| Weekday AM peak period | 1.0901 |
| Weekday PM peak period | 1.0909 |

### Committed Developments

As agreed with Highways England, the traffic impacts associated with the following committed developments have been considered for the future year assessment scenarios:

- 2018/1039: Land off Lidgett Lane/ Pilley Green, Pilley – residential development of up to 72 dwellings.
- 2017/1341: Land off New Road, Pilley – residential development of up to 56 dwellings.
- 2018/1361: Land off New Road, Tankersley – residential development up to 29 dwellings.
- 2016/1531: Land north of Hawshaw Lane – outline application for residential development up to 100 dwellings.
- 2019/1573: Rockingham Phase 2 and 3, Hoyland – hybrid application for B1C, B2 and B8 employment floorspace with a development quantum of up to 1.1m sqft (102,193sqm).

The total traffic impact, within the agreed development study area, of the committed developments is demonstrated on Figure 12 and Figure 13 for the weekday AM and PM peak hours, respectively.

## Assessment Scenarios

The proposed assessment scenarios are set out below.

## 2019 Base Year

The 2019 Base scenario will be derived from the surveyed traffic flow data, with the peak hours for the highway network adopted. All classified traffic data will be converted into equivalent PCU values.

## Future Assessment Year Do Minimum

The Future Year 2029 Do Minimum scenario is considered to represent a future year situation on the local highway network, without the proposed development taking place. In addition to the 2019 Base scenario, all relevant traffic growth, committed developments and planned transport improvements will be implemented.

The resulting Do Minimum Traffic Flows are set out on Figure 14 and Figure 15 for the weekday AM and PM peak hours, respectively.

## Future Assessment Year With Development

The Future Year 2029 With Development scenario is considered to represent a future year situation on the local highway network, with the proposed development taking place. The traffic flows will be derived by adding the Development Traffic Flows (which reflect the likely trip generation for the development at maturity) to the link road re-assignment flows and the Future Year Do Minimum Traffic Flows. In addition, changes to the layout of the highway network, as outlined by the proposed development, will be included.

The resulting 'With Development' Traffic Flows are set out on Figure 16 and Figure 17 for the weekday AM and PM peak hours, respectively.

# 8 Transport Assessment: Highway Network

## 8.1 Introduction

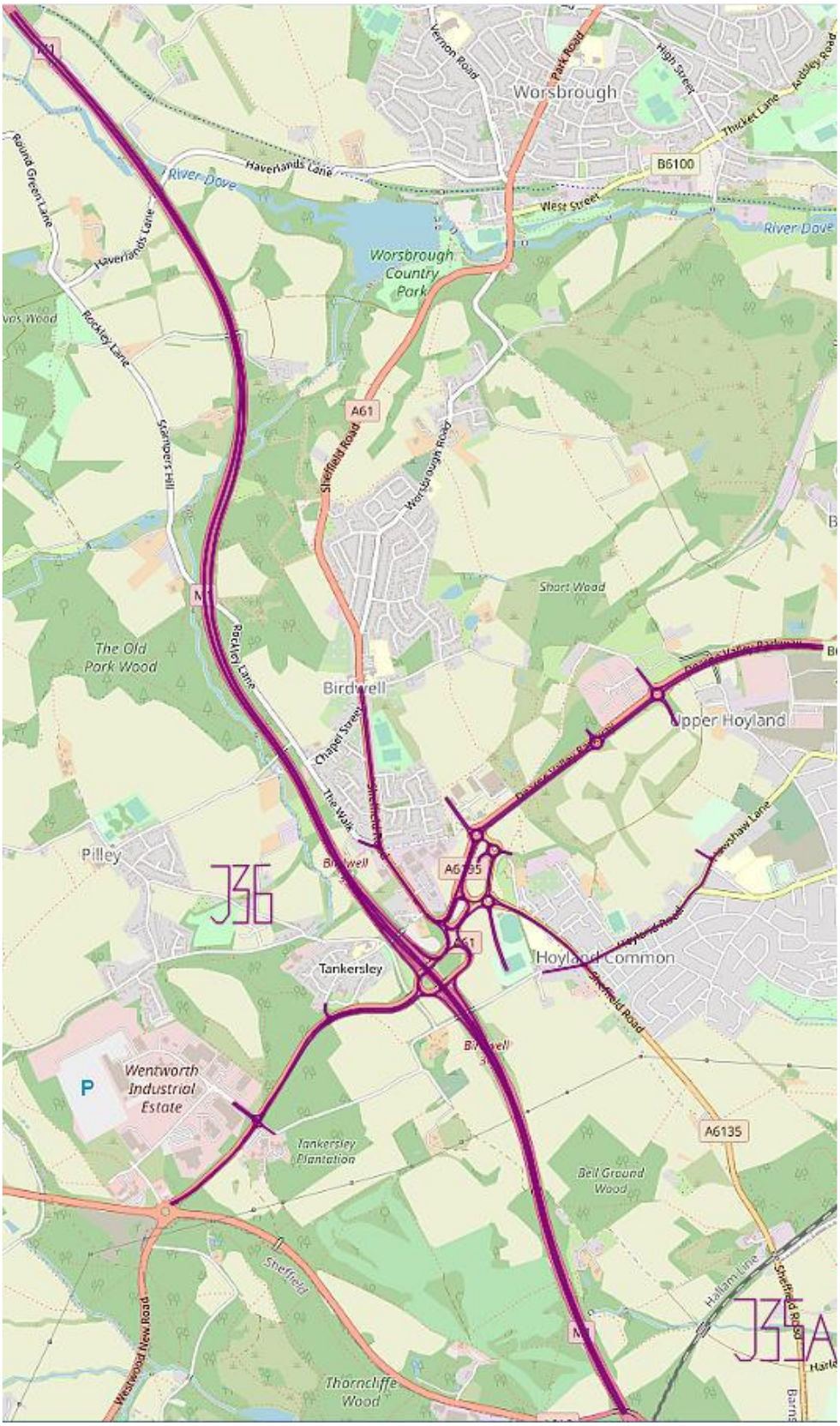
This chapter provides an assessment of the capacity of the key junctions within the study area.

## 8.2 VISSIM Modelling

As agreed with HE and BMBC the assessment of the network will be undertaken using Junctions9 software for the plot access junctions and southern roundabout, whilst the validated VISSIM model for the Birdwell Interchange will be utilised for the assessment of the impact at the other junctions. Image 1 provided below is taken from the modelling report and outlines the study area and junctions assessed within the VISSIM modelling that has been undertaken by Aecom. A report by Aecom[7] detailing the impact of the development proposals on the agreed study area is provided under separate cover, however a short summary is also provided below.

[7] Hoyland West VISSIM Modelling Assessment. AECOM. 26 June 2020.

**Image 1: VISSIM Model Study Area (source: Aecom)**



The assessment scenarios for the VISSIM modelling are as follows:

### Future Year Do Minimum Scenario

The Future Year 2029 Do Minimum scenario will be the '2029 Rockingham development + Hoyland North Masterplan without Sherwood Rbt – Hawshaw Lane link road.' As modelled for the Rockingham Phase 2 and 3 development.

This scenario is considered to represent the worst-case scenario and therefore allows a robust assessment. It is noted that the model excludes the Westwood Roundabout where a signalised improvement scheme is under construction. Westwood roundabout is included within the 2019 base model, however on the basis that the new Westwood roundabout has taken into consideration the Local Plan quantum, and the improvements should be able to accommodate the development coming forward, then the removal of the Westwood Roundabout / non-inclusion of the signalised version will not have a material effect on the operation of M1 Junction 36. This approach is considered appropriate and is in line with the modelling work undertaken for the Rockingham planning application, this again will allow direct comparison with the Rockingham modelling.

### Future Year With Development Scenario

The Future Year 2029 With Development scenario is considered to represent a future year situation on the local highway network, with the proposed development taking place. The VISSIM model will add the development traffic flows onto the Do Minimum flows and adjust existing traffic flows to account for re-assignment resulting from the new link road. The VISSIM model will not include the proposed link road, as the model study area does not include the relevant areas required to assess the link road. The link road and new local junctions will therefore be assessed separately.

## 8.2.1 VISSIM Modelling Report Summary

The VISSIM modelling results show a significant benefit to the local road network through the provision of the link road. The latent demand graphs indicate clearly that in the Do Minimum scenario there are vehicles unable to enter the network due to queueing extending beyond the model extents, particularly in the PM peak period. The Do Minimum modelling results show there is latent demand on the Sheffield Road south entry to the model and increased queuing on all arms of the Sheffield Road / Tankersley Lane crossroads. This means the queue on the Sheffield Road NB approach to the junction exceeds the length of the modelled link, so some vehicles are unable to enter the network. However in the Do Something scenario the latent demand is almost entirely removed due to the new Hoyland West link road which redistributes traffic and alleviates the congestion at the crossroads.

Table 20 provides the average queue lengths for the Hoyland West Link Road approach to Birdwell roundabout.

**Table 20: Link Road Average Queues**

| Time Period | Approach | Queue (PCUs) | |
|---|---|---|---|
| AM Peak | Hoyland West Link Road | 3 | 1 |
| PM Peak | Hoyland West Link Road | 8 | 1 |

These results demonstrate that on average the predicted queues on the proposed link road will not extend back past the proposed plot 3 access junction (located approximately 120m south of the roundabout).

The full modelling report is provided under separate cover.

## 8.3 Link Road Access Junctions

Junctions 9 models have been developed to reflect the proposed layout of the new junctions on the new link road. Amongst other performance indicators and statistics, the program calculates the maximum Ratio of Flow to Capacity (RFC) and the maximum average queue length (Q) on each approach (measured in PCU).

The RFC is a key indicator of the likely performance of a turning movement at a junction under a given set of traffic flows. An RFC of 0.85 is widely accepted as being the level at which a junction's operational capacity is reached. However, an RFC in excess is 0.85 does not indicate a situation that is inherently unacceptable; it indicates that further consideration of operating conditions (including impacts on queues and delay) is appropriate.

The model results are shown in Table 21 for the scenario with the development in place and in full at Appendix E.

**Table 21: Link Road Access Junctions Modelling Summary**

| Approach | Weekday AM Peak Hour | | Weekday PM Peak Hour | |
|---|---|---|---|---|
| | RFC | Q | RFC | Q |
| Plot 3 Link Road Access – 2029 With Development | | | | |
| Plot 3 Access LT | 0.04 | 0.1 | 0.09 | 0.1 |
| Plot 3 Access RT | 0.02 | 0.0 | 0.11 | 0.1 |
| Link Road north | 0.10 | 0.1 | 0.02 | 0.0 |
| Hermes Plot Access Rbt – 2029 With Development | | | | |
| Link Road south | 0.33 | 0.5 | 0.31 | 0.5 |
| Hermes Plot Access | 0.06 | 0.1 | 0.07 | 0.1 |
| Link Road north | 0.31 | 0.5 | 0.32 | 0.5 |
| Plot 2 Link Road Access Rbt – 2029 With Development | | | | |
| Sheffield Road south | 0.36 | 0.6 | 0.34 | 0.5 |
| Plot 2 Access | 0.04 | 0.1 | 0.09 | 0.1 |
| Link Road north | 0.31 | 0.5 | 0.33 | 0.5 |
| Link Road / Sheffield Road – 2029 With Development | | | | |
| Sheffield Road LT | 0.19 | 0.2 | 0.17 | 0.2 |
| Sheffield Road RT | 0.05 | 0.1 | 0.00 | 0.0 |
| Link Road north | 0.14 | 0.2 | 0.20 | 0.3 |
| Link Road / Tankersley Lane – 2029 With Development | | | | |
| Tankersley Lane LT | 0.42 | 0.7 | 0.47 | 0.9 |
| Tankersley Lane RT | 0.42 | 0.7 | 0.46 | 0.8 |
| Link Road north | 0.34 | 0.5 | 0.46 | 0.9 |

The assessment demonstrates that the access junctions along the link road will operate satisfactorily during the AM and PM peak hours, with negligible queueing. It should be noted that for the Hermes plot access roundabout, the Hermes entry width has been modelled as a single lane (3.5m wide) in order to robustly assess the junction given that uneven lane usage is present.

## 8.4 Sensitivity Tests

### 8.4.1 Plot 3 Access

As outlined in Chapter 6.3 a sensitivity test has been carried out which assumes that all Plot 3 development traffic will use the access of Tankersley Lane. The two junctions affected by this change are the plot access and the Tankersley Lane / Link Road junction.

The model results are shown in Table 22 for the scenario with the development in place and in full at Appendix F.

**Table 22: Plot 3 Sensitivity Test Junctions Modelling Summary**

| Approach | Weekday AM Peak Hour | | Weekday PM Peak Hour | |
|---|---|---|---|---|
| | RFC | Q | RFC | Q |
| Plot 3 Tankersley Lane Access – 2029 With Development | | | | |
| Plot 3 Access LT | 0.03 | 0.0 | 0.10 | 0.1 |
| Plot 3 Access RT | 0.00 | 0.0 | 0.02 | 0.0 |
| Link Road north | 0.12 | 0.1 | 0.03 | 0.0 |
| Link Road / Tankersley Lane – 2029 With Development Sensitivity | | | | |
| Link Road south | 0.46 | 0.9 | 0.61 | 1.6 |
| Tankersley Lane | 0.47 | 0.9 | 0.61 | 1.5 |
| Link Road north | 0.44 | 0.8 | 0.49 | 1.0 |

The assessment demonstrates that if all traffic used the Plot 3 Tankersley Lane access then the affected junctions will operate satisfactorily during the AM and PM peak hours, with negligible queueing.

### 8.4.2 Hoyland West Masterplan Plots 4,5 and 6

A further sensitivity test has been carried out to assess the impacts of the Hoyland West Masterplan. Plots 4, 5 and 6 are not being applied for as part of this application and will be subject to their own planning application and assessments, however at this stage a sensitivity test 2 scenario will include plots 4, 5 and 6 as committed developments.

Full details of plots 4, 5 and 6 are not known at this stage however the Hoyland West emerging masterplan presents each plot size by hectare. As such the ratio of floorspace to hectare as used for plot 3, in these development proposals, has been used to calculate

floorspace for employment plots 4 and 5. The traffic demand will therefore be estimated based on the following land use schedule:

- Plot 4 – 2.03ha employment (9,674sqm floorspace).
- Plot 5 – 1.7ha employment (8,102sqm floorspace).
- Plot 6 – 101 residential dwellings.

The residential trip rates are taken from Hoyland North planning application as well as the transport work undertaken for the Hoyland West and South masterplan. The trip rates and subsequent trip generation is presented in Table 23.

**Table 23: Plot 6 Residential Trip Generation**

| Peak Period | Vehicle Trip Rates (Trips per Dwellings) | | | Vehicle Trips (PCU) | | |
|---|---|---|---|---|---|---|
| | Arr | Dep | Tot | Arr | Dep | Tot |
| Weekday AM Peak | 0.134 | 0.381 | 0.515 | 14 | 38 | 52 |
| Weekday PM Peak | 0.330 | 0.162 | 0.492 | 33 | 16 | 50 |

For the purposes of this sensitivity test the distribution of traffic for the employment plots remains the same as used for the employment plots being applied for in this application. The trips will access the local highway network via the Sheffield Road / A6195 roundabout located at the north of the site, Tankersley Lane (west only) in the centre of the site or Sheffield Road to the south, whichever is the most appropriate location depending on the trip origin/destination.

For the residential plot the trip distribution has considered commuter journeys of residents of the Barnsley 028, 029 and 030 middle layer super output areas (MSOAs), i.e. as per the agreed trip distribution methodology identified as part of Fore's previous work for Hoyland North.

The resulting extra committed development trips resulting from Plots 4, 5 and 6 are presented on Figure 18 and Figure 19.

### 8.4.3 VISSIM

The impact at the key junctions within the VISSIM model study area in 2029 Do Something Sensitivity Test 2 (2029 DSST2) scenario are summarised in Table 24.

**Table 24: VISSIM Modelling Traffic Flows Comparison**

| Junction | Approach | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | Plots 4,5,6 (PCU) | 2029 DSST2 (PCU) | % of Total | Plots 4,5,6 (PCU) | 2029 DSST2 (PCU) | % of Total |
| Link Road / Sheffield Road Roundabout | A6195 | 22 | 639 | 3.4% | 19 | 780 | 2.4% |
| | Sheffield Road north | 6 | 290 | 2.1% | 6 | 73 | 8.2% |
| | Sheffield Road south | 20 | 553 | 3.6% | 9 | 479 | 1.9% |
| | Proposed Link Road | 10 | 670 | 1.5% | 16 | 726 | 2.2% |
| Total Junction | | 58 | 2152 | 2.7% | 50 | 2058 | 2.4% |
| Sheffield Road / Hoyland Road / Tankersley Lane | Sheffield Road north | 7 | 386 | 1.8% | 17 | 574 | 3.0% |
| | Hoyland Road | 8 | 634 | 1.3% | 6 | 570 | 1.1% |
| | Sheffield Road south | 27 | 118 | 22.9% | 15 | 124 | 12.1% |
| | Tankersley Lane | 0 | 14 | 0.0% | 0 | 16 | 0.0% |
| Total Junction | | 42 | 1152 | 3.6% | 38 | 1284 | 3.0% |

As shown the impacts at the Link Road / Sheffield Road Roundabout are not significant, with an increase in traffic flows of less than 3% in the AM and PM peak across the junction, which is considered less than typical daily variation. Notwithstanding this the results from the VISSIM model of the core scenario show no issues at this junction in the 2029 Do Something scenario with journey times actually decreasing on some approaches compared to the Do Minimum as a result of the link road. Average queues from the VISSIM Do Something modelling, on Sheffield Road and the proposed Link Road are presented in Table 25.

**Table 25: VISSIM Modelling Queue Statistics**

| Junction | Approach | Average Queue | | | |
|---|---|---|---|---|---|
| | | AM Peak | | PM Peak | |
| | | 07:00-08:00 | 08:00-09:00 | 16:00-17:00 | 17:00-18:00 |
| Link Road / Sheffield Road Roundabout | Sheffield Road south | 0 | 0 | 1 | 1 |
| | Proposed Link Road | 3 | 8 | 1 | 1 |

It is therefore considered that the impact of the committed developments plots 4,5 and 6 are negligible and the junction would continue to operate within capacity. No further assessment is considered necessary as part of this application.

As shown the impacts at the Sheffield Road / Hoyland Road / Tankersley Lane Junction are not significant, with an increase in traffic flows of less than 4% in the AM and PM peak across the junction, which is considered less than typical daily variation. The development proposals result in a reduction of 875 and 971 PCUs in the AM and PM peak hours at this junction, as a result of the proposed link road. Therefore, the junction will still experience significant flow reduction and capacity benefits, no further assessment is therefore considered necessary.

### 8.4.4 Link Road Accesses

As show on Figure 18 and 19 the impact of the committed development Plots 4, 5 and 6 at the junctions within the study area are minimal. Notwithstanding this junction capacity assessments have been undertaken. Access arrangements for plots 4 and 6 are unknown at this stage, once applications for these plots come forward then details of access and capacity assessments would be undertaken as part of a planning application. A summary of the capacity assessments are provided in Table 26 and the full outputs provided at Appendix F.

**Table 26: Plots 4, 5 and 6 Sensitivity Test Junctions Modelling Summary**

| Approach | Weekday AM Peak Hour | | Weekday PM Peak Hour | |
|---|---|---|---|---|
| | RFC | Q | RFC | Q |
| Plot 3 Link Road Access - 2029 With Development | | | | |
| Plot 3 Access LT | 0.04 | 0.1 | 0.09 | 0.1 |
| Plot 3 Access RT | 0.02 | 0.0 | 0.11 | 0.1 |
| Link Road north | 0.10 | 0.1 | 0.02 | 0.0 |
| Hermes Plot Access Rbt - 2029 With Development | | | | |
| Link Road south | 0.35 | 0.6 | 0.32 | 0.5 |
| Hermes Plot Access | 0.09 | 0.1 | 0.09 | 0.1 |
| Link Road north | 0.32 | 0.5 | 0.34 | 0.5 |
| Plot 2 Link Road Access Rbt - 2029 With Development | | | | |
| Sheffield Road south | 0.36 | 0.6 | 0.34 | 0.5 |
| Plot 2 Access | 0.04 | 0.1 | 0.09 | 0.1 |
| Link Road north | 0.31 | 0.5 | 0.33 | 0.5 |
| Link Road / Sheffield Road - 2029 With Development | | | | |
| Sheffield Road LT | 0.20 | 0.2 | 0.15 | 0.2 |
| Sheffield Road RT | 0.09 | 0.1 | 0.02 | 0.0 |
| Link Road north | 0.11 | 0.1 | 0.21 | 0.3 |
| Link Road / Tankersley Lane - 2029 With Development | | | | |
| Tankersley Lane LT | 0.44 | 0.8 | 0.49 | 1.0 |
| Tankersley Lane RT | 0.46 | 0.8 | 0.49 | 0.9 |
| Link Road north | 0.35 | 0.5 | 0.47 | 0.9 |
| Plot 5 Link Road Access - 2029 With Development | | | | |
| Plot 5 Access LT | 0.00 | 0.0 | 0.01 | 0.0 |
| Plot 5 Access RT | 0.02 | 0.0 | 0.04 | 0.0 |
| Link Road north | 0.01 | 0.0 | 0.00 | 0.0 |

As outlined in Chapter 8.4.1 a sensitivity test has been carried out which assumes that all Plot 3 development traffic will use the access off Tankersley Lane. The two junctions affected by this change are the plot access and the Tankersley Lane / Link Road junction.

This sensitivity test has been replicated but with the additional Hoyland West Masterplan plots 4, 5 and 6 included.

The model results are shown in Table 27 for the scenario with the development in place and in full at Appendix F.

**Table 27: Plot 3 Sensitivity Test including Plots 4, 5 and 6 Junctions Modelling Summary**

| Approach | Weekday AM Peak Hour | | Weekday PM Peak Hour | |
|---|---|---|---|---|
| | RFC | Q | RFC | Q |
| Plot 3 Tankersley Lane Access – 2029 With Development | | | | |
| Plot 3 Access LT | 0.03 | 0.0 | 0.10 | 0.1 |
| Plot 3 Access RT | 0.00 | 0.0 | 0.02 | 0.0 |
| Link Road north | 0.12 | 0.1 | 0.03 | 0.0 |
| Link Road / Tankersley Lane – 2029 With Development Sensitivity | | | | |
| Link Road south | 0.49 | 1.0 | 0.65 | 1.8 |
| Tankersley Lane | 0.52 | 1.0 | 0.66 | 1.8 |
| Link Road north | 0.45 | 0.9 | 0.49 | 1.0 |

### 8.4.5 Hoyland South Masterplan

A sensitivity test has been carried out for the southern roundabout which includes the Hoyland South Masterplan development. The development is not considered a committed development and will be subject to an individual planning application to assess the traffic impacts. This sensitivity test is to ensure the proposed roundabout which provides access to Hoyland South could feasibly accommodate the masterplan development.

At this stage the Hoyland South Masterplan proposals are for 1,116 dwellings with three points of access. Details of internal layout and access are at this stage unknown, so for the purposes of this assessment it is proposed that 75% of traffic will use the access onto Sheffield Road. This assumption is considered to be extremely robust as it is likely the traffic will be distributed more evenly between the three access points once the precise development proposals for Hoyland South have been developed in the necessary detail.

The proposed trip generation associated with Hoyland South is therefore summarised in Table 28.

**Table 28: Hoyland South Trip Generation**

| Development Plot | Vehicle Trips (Veh) | | | | | |
|---|---|---|---|---|---|---|
| | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
| | Arr. | Dep. | Total | Arr. | Dep. | Total |
| Hoyland South Masterplan (1,116 Dwellings) | 150 | 425 | 575 | 368 | 181 | 549 |
| Hoyland South Masterplan Sheffield Rd Access (75% - 837 Dwellings) | 112 | 319 | 431 | 276 | 136 | 412 |

The model results are shown in Table 29 for the scenario with Hoyland South and in full at Appendix F.

**Table 29:Hoyland South Sensitivity Test Junctions Modelling Summary**

| Approach | Weekday AM Peak Hour | | Weekday PM Peak Hour | |
|---|---|---|---|---|
| | RFC | Q | RFC | Q |
| Plot 3 Tankersley Lane / Hoyland South Access – 2029 With Development and Hoyland South | | | | |
| Sheffield Road south | 0.42 | 0.7 | 0.40 | 0.7 |
| Plot 2 Access | 0.04 | 0.1 | 0.10 | 0.1 |
| Link Road north | 0.36 | 0.6 | 0.46 | 0.9 |
| Hoyland South Access | 0.30 | 0.4 | 0.13 | 0.1 |

## 8.5 Sheffield Road / Parkside Proposed Mini Roundabout

The 2029 With Development and Plots 4, 5 and 6 traffic flows at the proposed Sheffield Road / Parkside Mini Roundabout are presented in Table 30. It should be noted that no traffic count survey has been undertaken at the Sheffield Road / Parkside junction. Base flows have been derived from the Sheffield Road / Hoyland Road / Tankersley Lane traffic survey and DfT traffic count on Parkside.

**Table 30: 2029 With Development and Plots 4, 5 and 6 Sheffield Road / Parkside Traffic Flows**

| Junction | Approach | Traffic Flows (PCU) | |
|---|---|---|---|
| | | AM Peak Hour | PM Peak Hour |
| Sheffield Road / Parkside Mini Roundabout | Sheffield Road north | 130 | 113 |
| | Parkside Road | 141 | 89 |
| | Cul-de-sac | 0 | 0 |
| | Link Road | 101 | 130 |

TRL have issued previous advice noting the difficulties in assessing mini roundabout junctions and as such no junction modelling has been undertaken. However it is noted that given the significant reduction in traffic flows on Sheffield Road through reassignment onto the new link road, as well as the relatively light turning movements as shown in Table 30, no capacity issues are anticipated. It is considered that the junction will operate well within capacity throughout the day, including during the peak hours.

## 8.6 Road Safety

Personal injury accident data has been obtained from www.crashmap.co.uk for the highway network in the vicinity of the site for the most recently available five year period between 1 January 2015 and 31 December 2019 (most recent five year period available).

The study area includes the A6195 Birdwell Roundabout, the M1 J36, and Sheffield Road / Tankersley Lane junction.

A cluster of collisions are shown at Birdwell Roundabout where 9 accidents have been recorded in the most recent 5-year period, one of which resulted in injuries of severe severity. However, it is noted that the roundabout underwent significant improvements which were completed in late 2017. In the two years since the new layout was completed there have been two accidents recorded, one of serious and one of slight severity.

Four accidents have been recorded at the Sheffield Road / Tankersley Lane / Hoyland Road junction. Three of these accidents resulted in injuries of slight severity. One accident resulted in injuries of serious severity.

Eight accidents which resulted in injuries of slight severity were recorded at the M1 Junction 36. All of these incidents were spread across the junction with no clustering.

Having reviewed the accidents in detail there is no evidence to suggest that the proposed development will materially exacerbate the existing situation. The proposed development will reduce traffic on Sheffield Road and at the crossroads. It is considered that the

additional traffic generated by the development will not have any significant adverse impact on highway safety and therefore the effect is negligible.

# 9 Summary and Conclusions

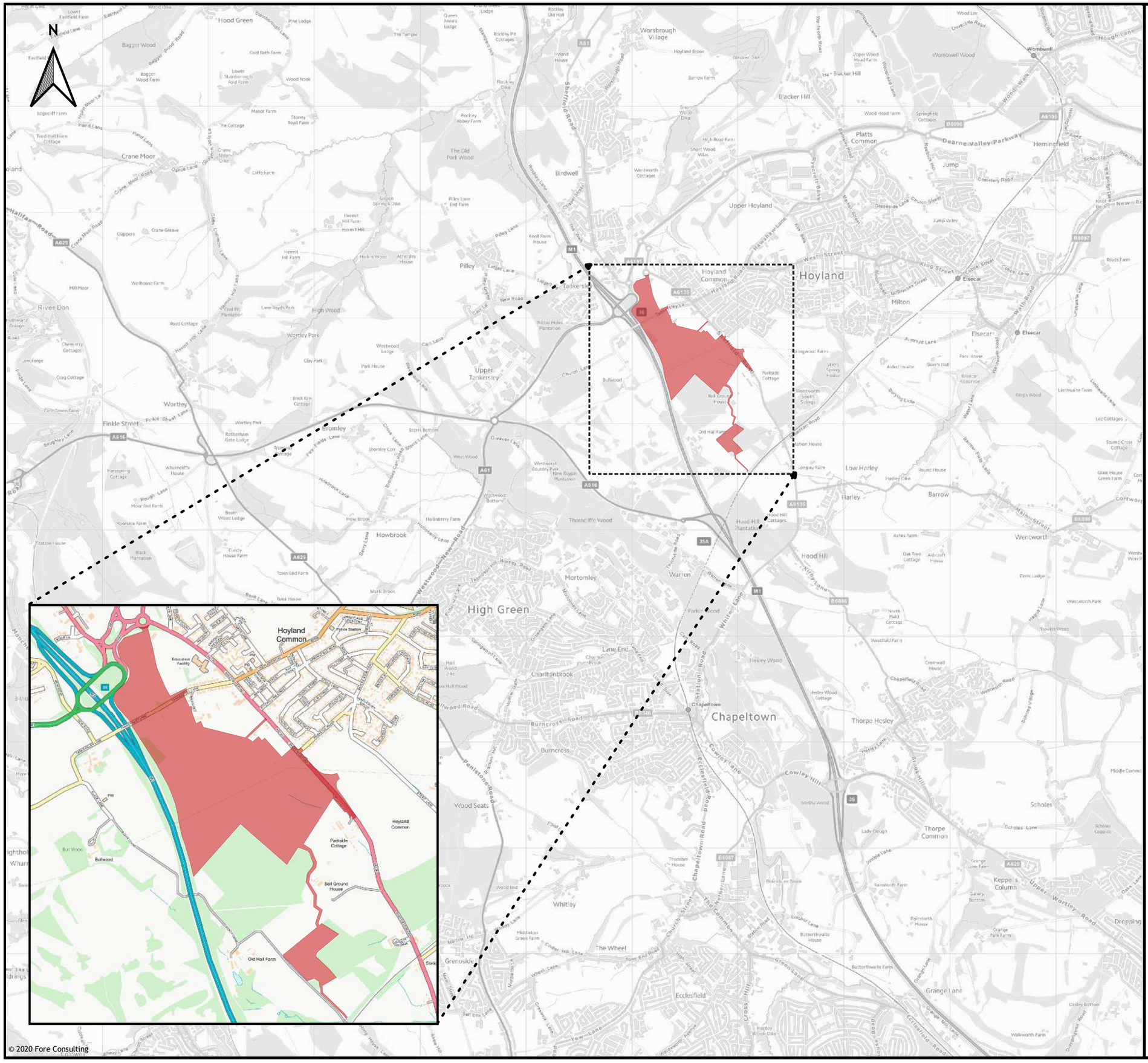
Fore Consulting has prepared this Transport Assessment to be submitted as part of a hybrid planning application for employment development in Hoyland, on land identified as E13 in Barnsley's Local Plan. Planning permission is sought for a new link road through the site and 103,083 sqm of employment land use, comprising a mix of B1, B2 and B8.

This report has examined the existing transport network in the vicinity of the site, considered relevant national and local transport planning policy, outlined the development proposals, and determined the resulting impact on the transport network. The assessment demonstrates the following:

- The proposals fully accord with relevant national and local transport policy.
- The site is well served by public transport. A number of bus stops are located within convenient walking distance of the site, providing frequent services to Barnsley city centre and Sheffield city centre.
- Pedestrian and cycle connections will be provided as part of the link road, which will support the sustainable movement strategy for the proposed development and wider E13 development.
- The proposed link road will reduce traffic through Hoyland and provided a betterment to the local residents on Sheffield Road.
- Vehicular access can be satisfactorily accommodated. The proposed arrangements accord with relevant design standards and are deliverable; either on land under the control of the applicant and/or adopted highway. Junction capacity assessments indicate that the proposed access junctions will be satisfactory in capacity and performance terms.
- The proposed Tankersley Lane access arrangements will provide a substantial betterment in amenity for the residential dwellings on Tankersley Lane east. The arrangement also has the support of the Barnsley bus partnership and HE.

Considering all of the above, it is concluded that the development proposals are acceptable from a transport and highways perspective.

# Figures

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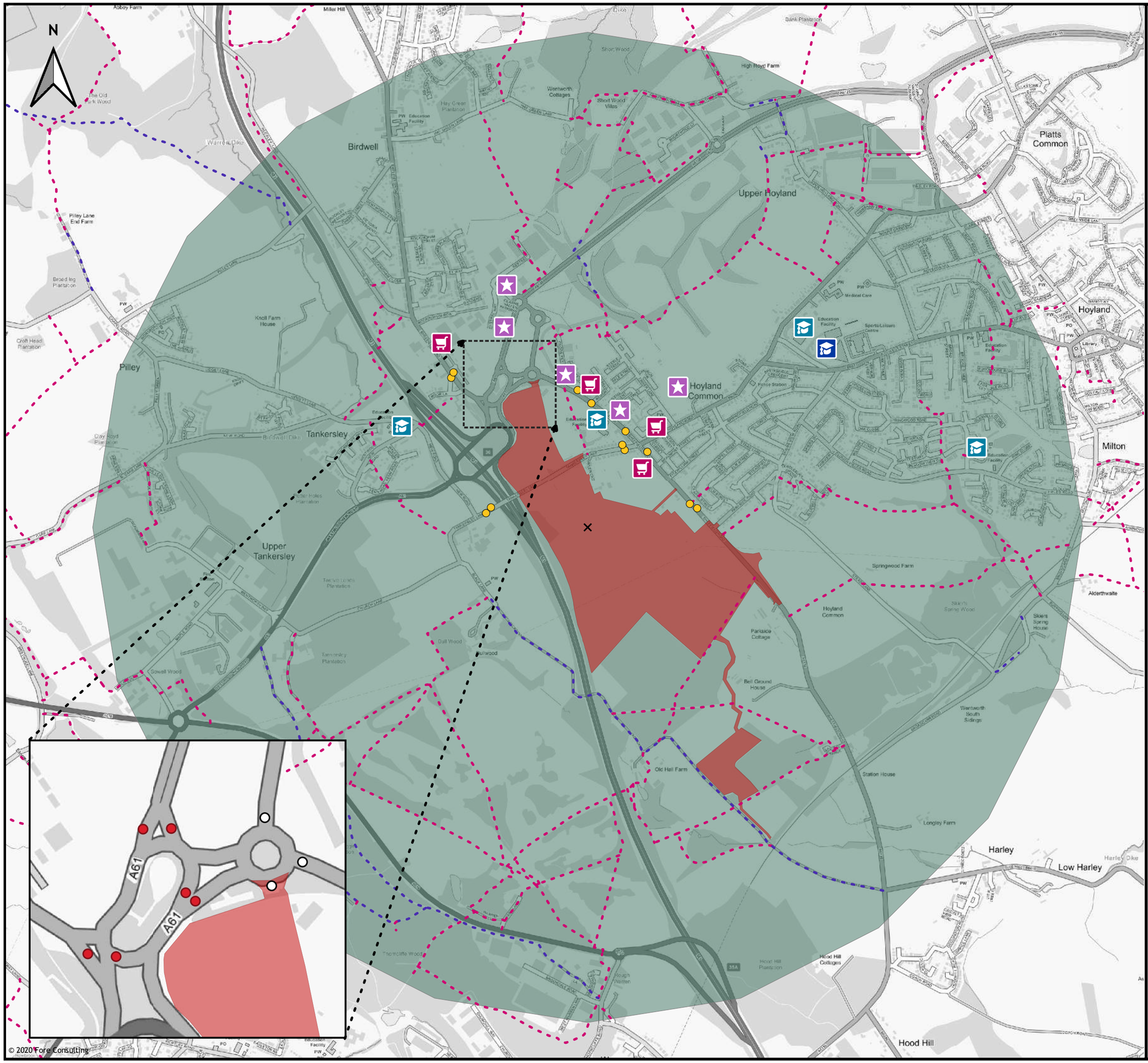
Client:
Newlands Developments

Project:
Hoyland Commercial Land

Figure Title:
Site Location

| Scale: | Figure Status: |
|---|---|
| 1:35000 | Issue |
| **Job Number:** | **Figure Number:** |
| 3560 | Figure 1 |

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Key:

- Indicative Site Boundary
- Walking Catchment Centre Point
- 2.0km Walking Catchment (as the crow flies)

**Local Land Use**

- Bus Stop
- Leisure
- Primary School
- Retail
- Secondary School
- Dropped Kerbs
- Signalised Crossings

**Public Rights of Way**

- Bridleway
- Footpath
- Restricted byway
- National Cycle Network Route 67

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Project:
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Figure Title:
Walking Catchment and Local Land Use

| Scale: | Figure Status: |
|---|---|
| 1:15000 | Issue |
| **Job Number:** | **Figure Number:** |
| 3560 | Figure 2 |

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Key:

- Indicative Site Boundary
- 8.0km Cycle Catchment
- National Cycle Network Route 67
- A6135 Hoyland Common to Elsecar Park & Ride

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Project:
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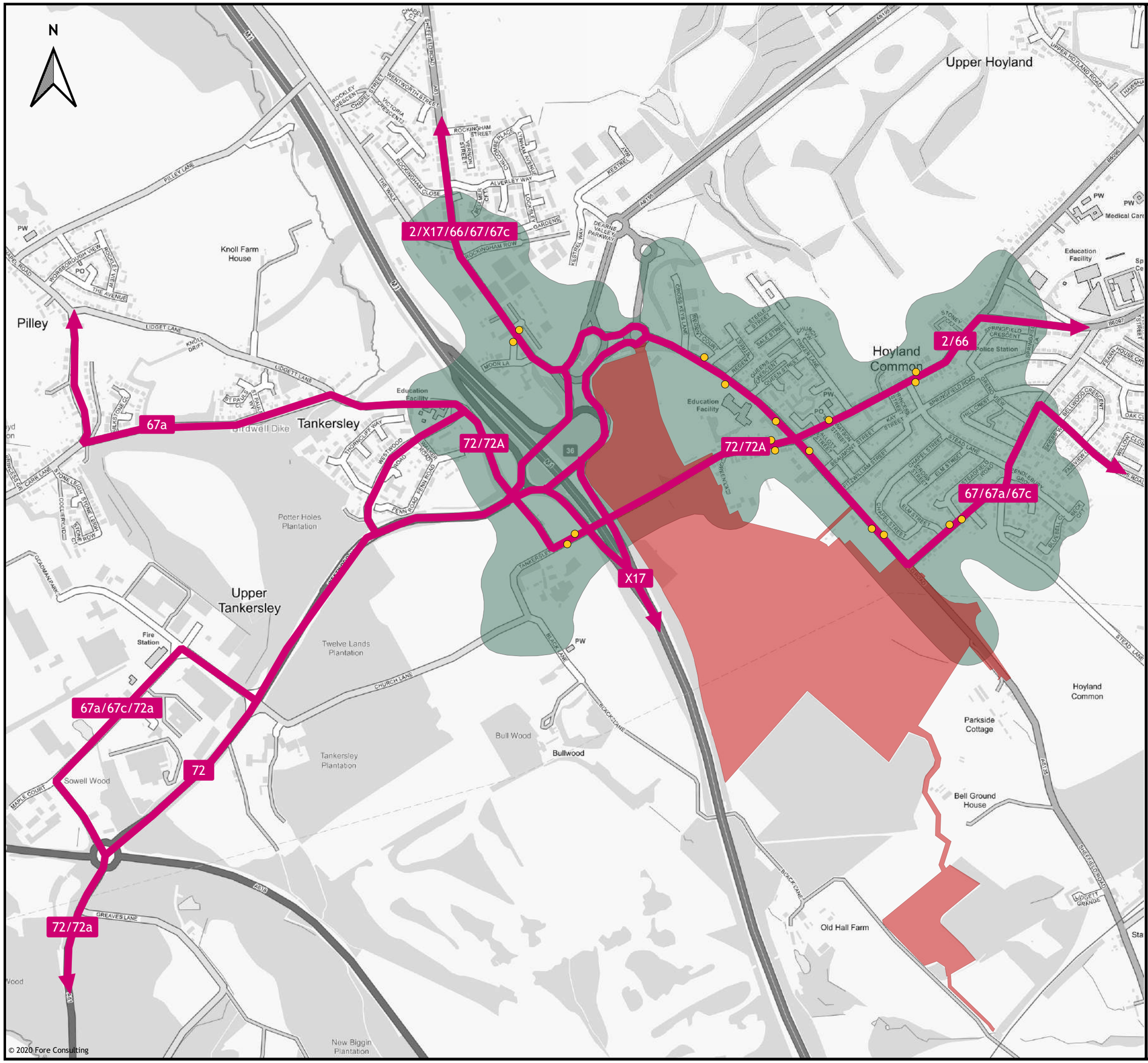
Figure Title:
Cycle Catchment and Long-Distance Cycle Routes

| Scale: | Figure Status: |
|---|---|
| 1:47500 | Issue |
| **Job Number:** | **Figure Number:** |
| 3560 | Figure 3 |

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Key:

- Indicative Site Boundary
- 400m Bus Stop Walking Catchment
- Bus Route
- Bus Stop

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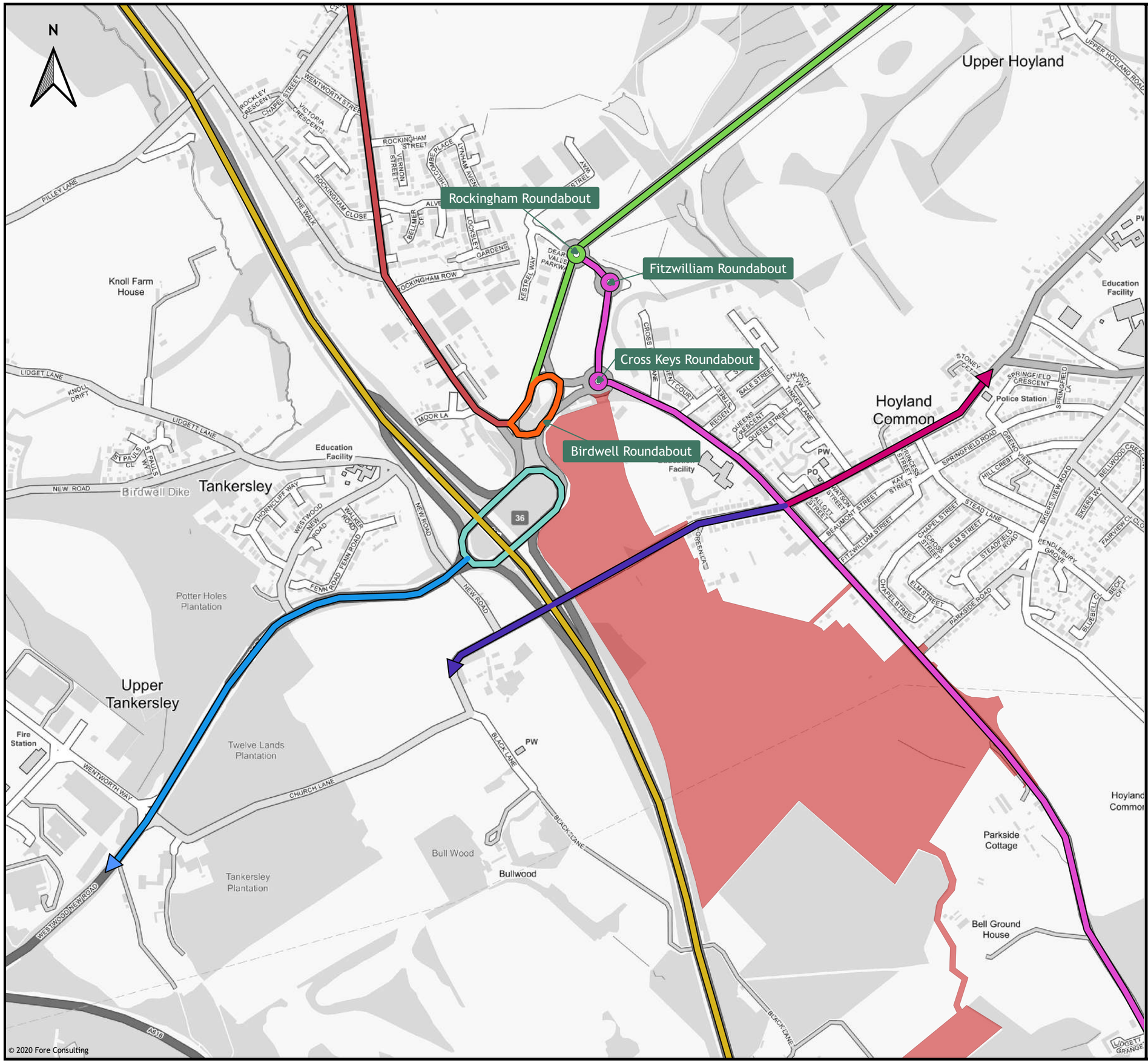
Project:
Hoyland Commerical Land

Figure Title:
Local Public Transport Network

| Scale: | Figure Status: |
|---|---|
| 1:10000 | Issue |
| **Job Number:** | **Figure Number:** |
| 3560 | Figure 4 |




Key:

- Indicative Site Boundary

**Local Highway Network**

- Birdwell Roundabout
- A6195 Dearne Valley Parkway
- A61 Sheffield Road
- A61 Westwood New Road
- A6135 Sheffield Road
- M1 Junction 36
- B6096 Hoyland Road
- Tankersley Lane
- M1

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Client:
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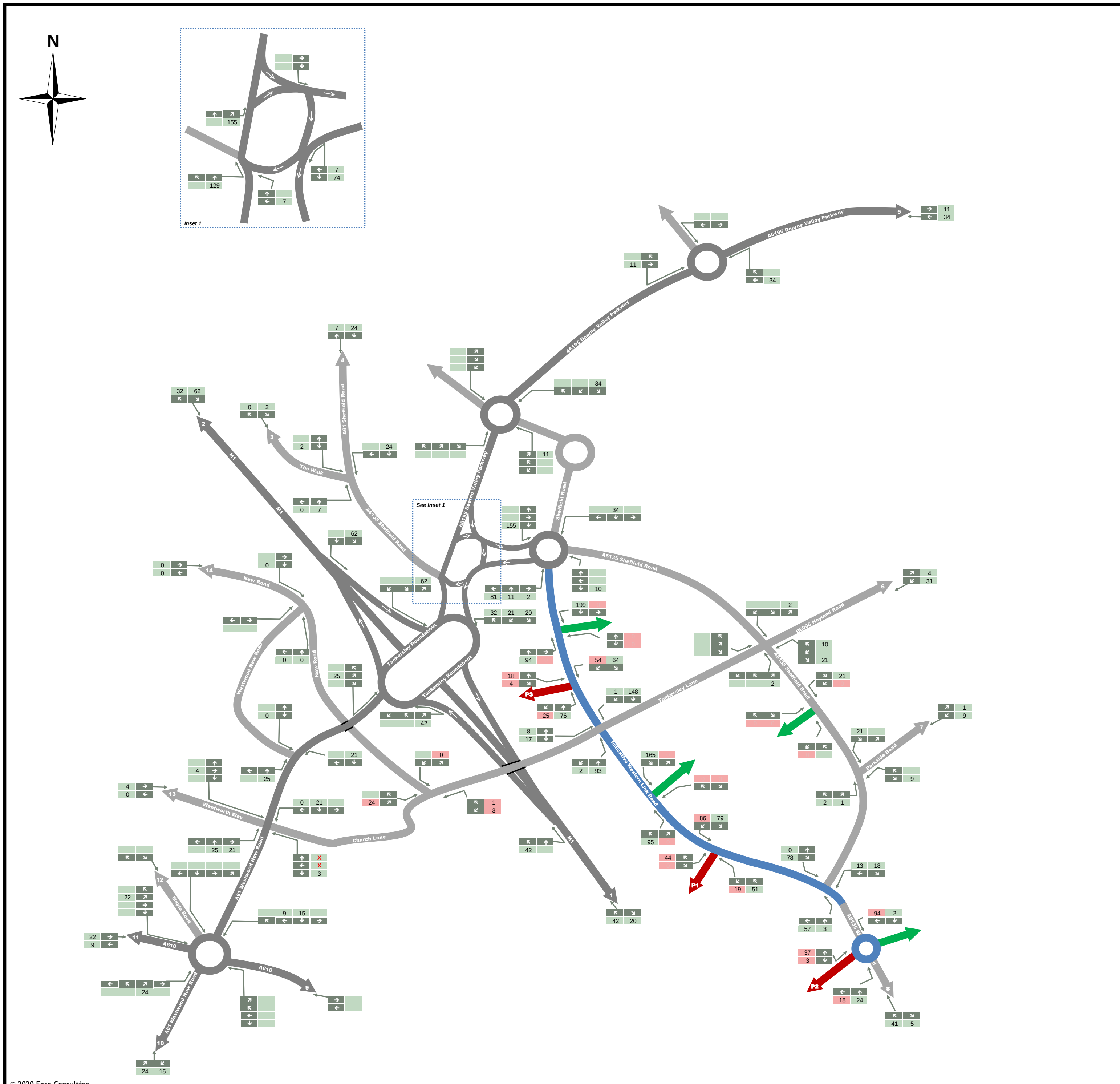
Project:
Hoyland Commerical Land

Figure Title:
Strategic and Local Highway Network

| Scale: | Figure Status: |
|---|---|
| 1:8500 | Issue |
| **Job Number:** | **Figure Number:** |
| 3560 | Figure 5 |

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Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Access (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Client:
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Project:
Hoyland Commercial Land

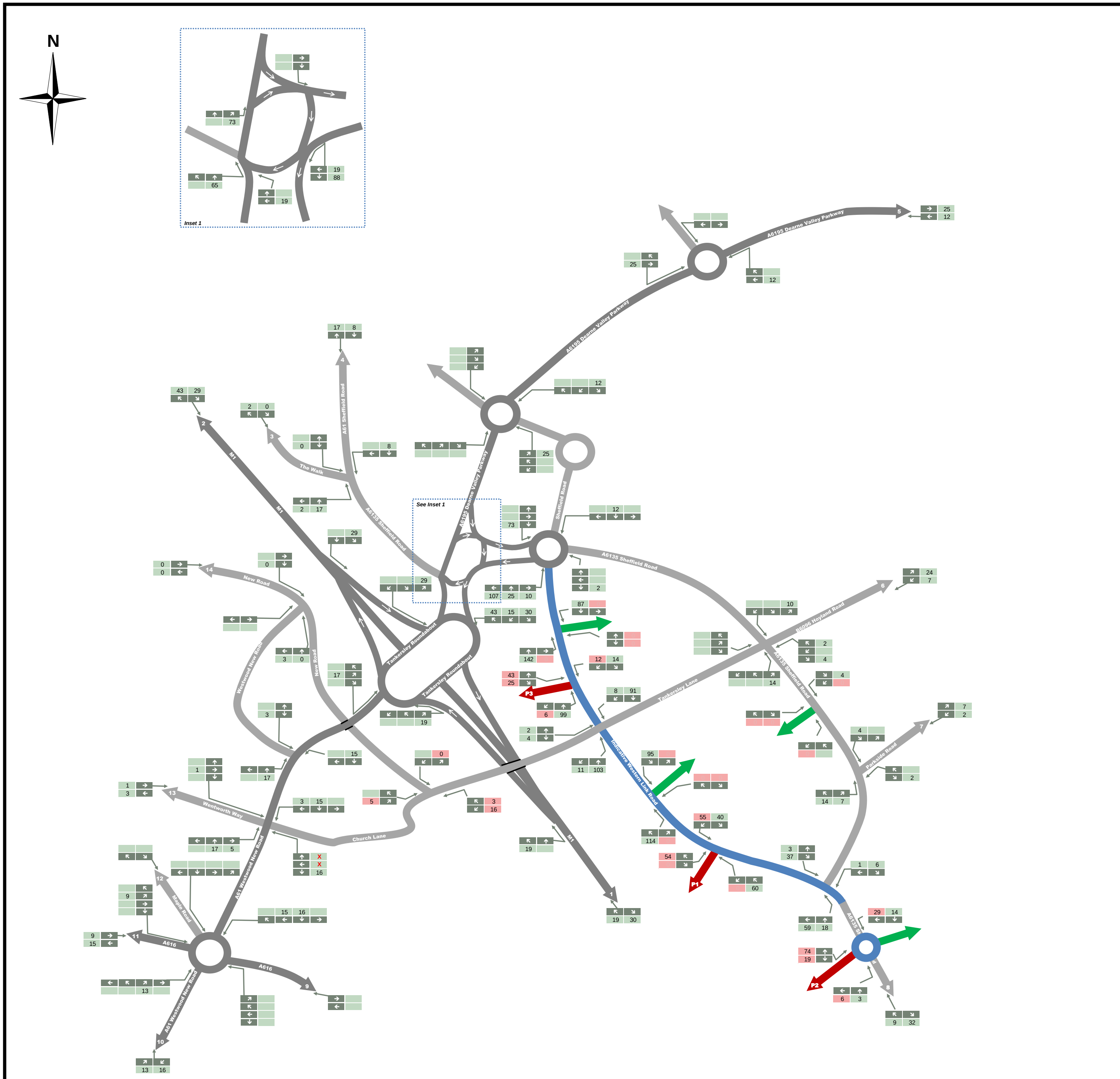
Figure Title:
Total Development Traffic Flows (PCU)
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 6



Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Access (Indicative)

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Project:
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Figure Title:
Total Development Traffic Flows (PCU)
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 7

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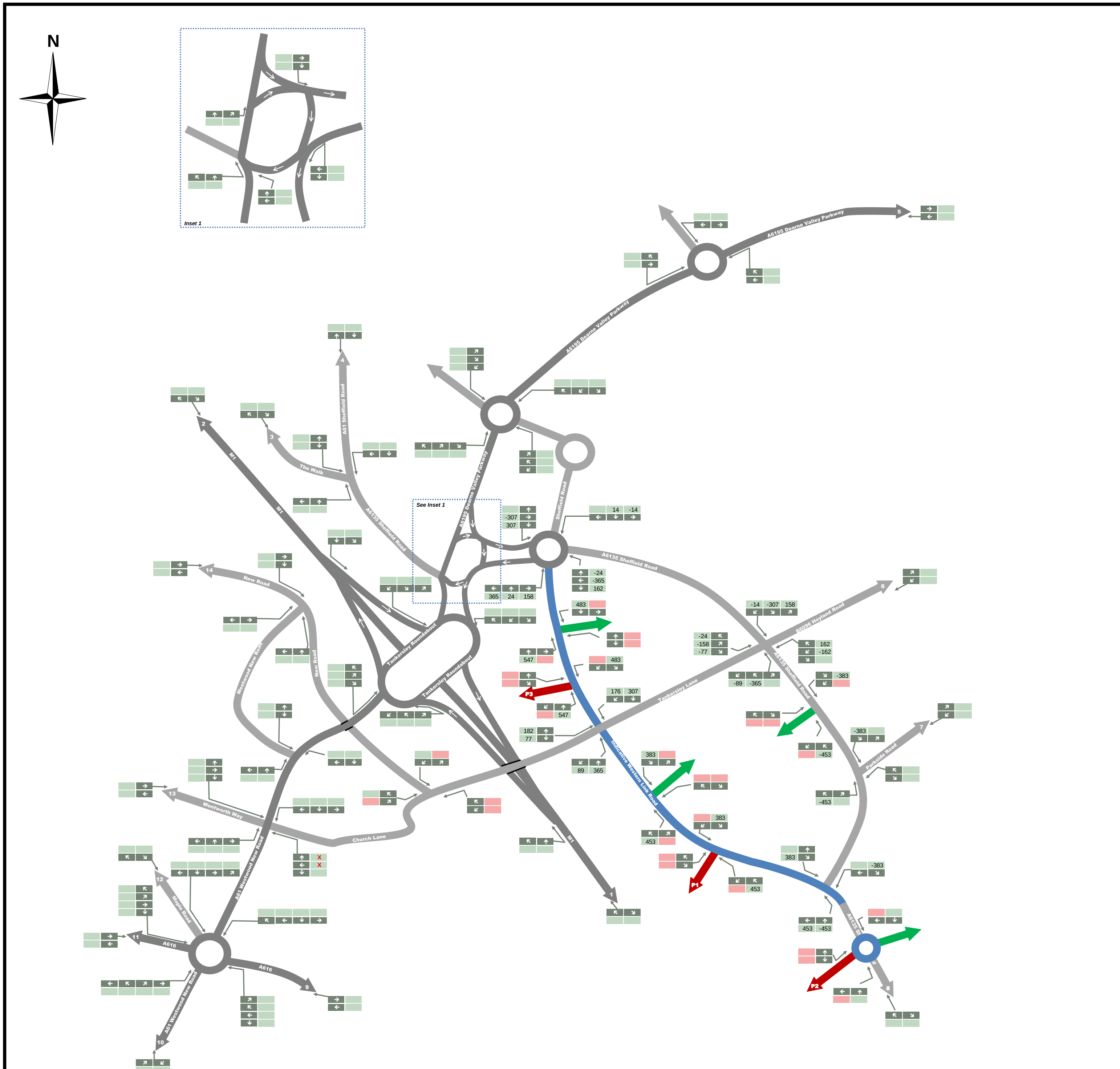


Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Access (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Client:
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Project:
Hoyland Commercial Land

Figure Title:
Link Road Re-assignment
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 8

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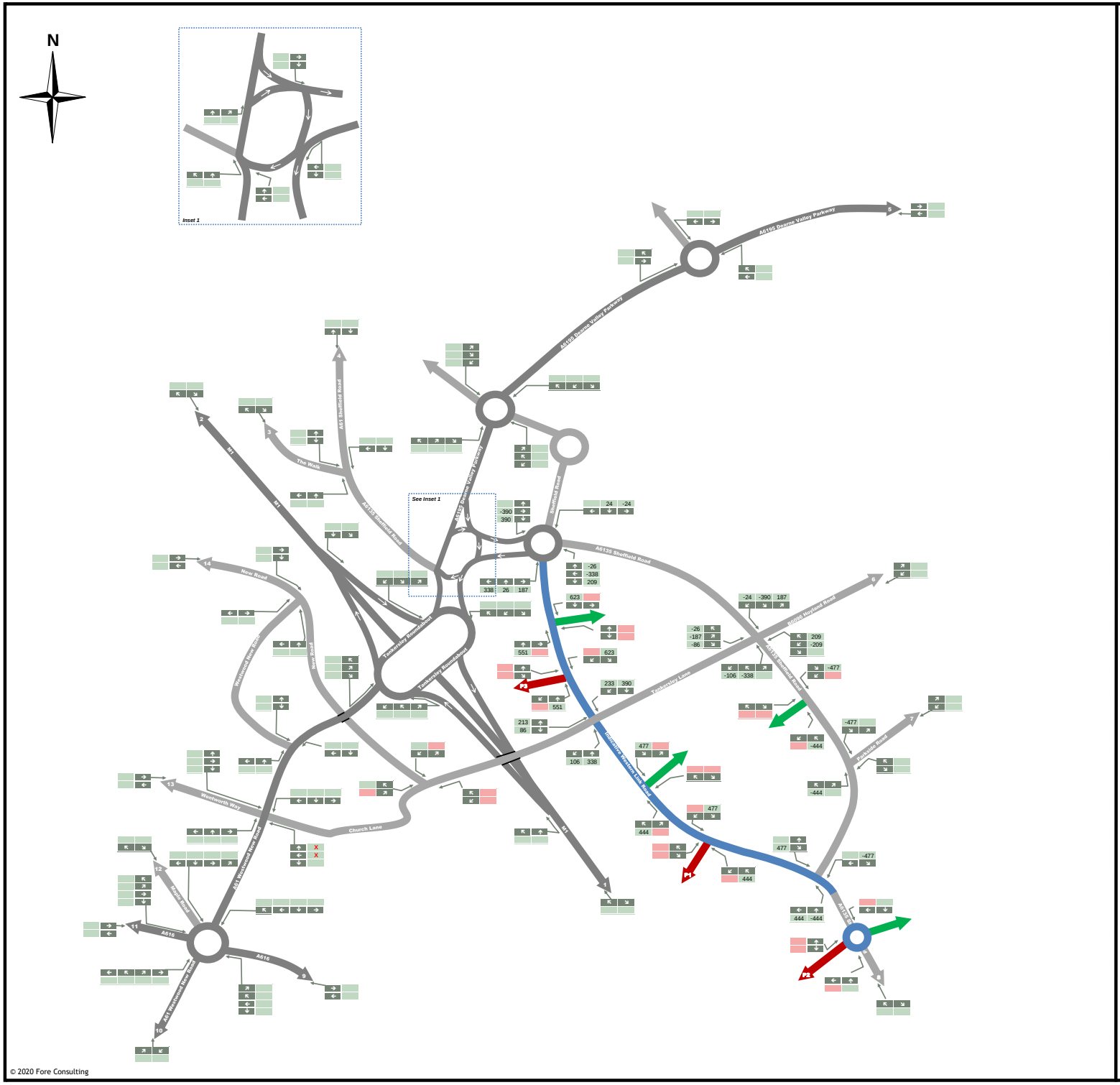


Key:

- Primary Road
- Secondary Road
- Proposed Roads (Indicative)
- Proposed Site Accesses (Indicative)
- Potential Future Accesse (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Project:
Hoyland Commercial Land

Figure Title:
Link Road Re-assignment
PM Peak Hour

| Scale: | Figure Status: |
|---|---|
| Not to scale | Issue |

| Job Number: | Figure Number: |
|---|---|
| 3560 | Figure 9 |

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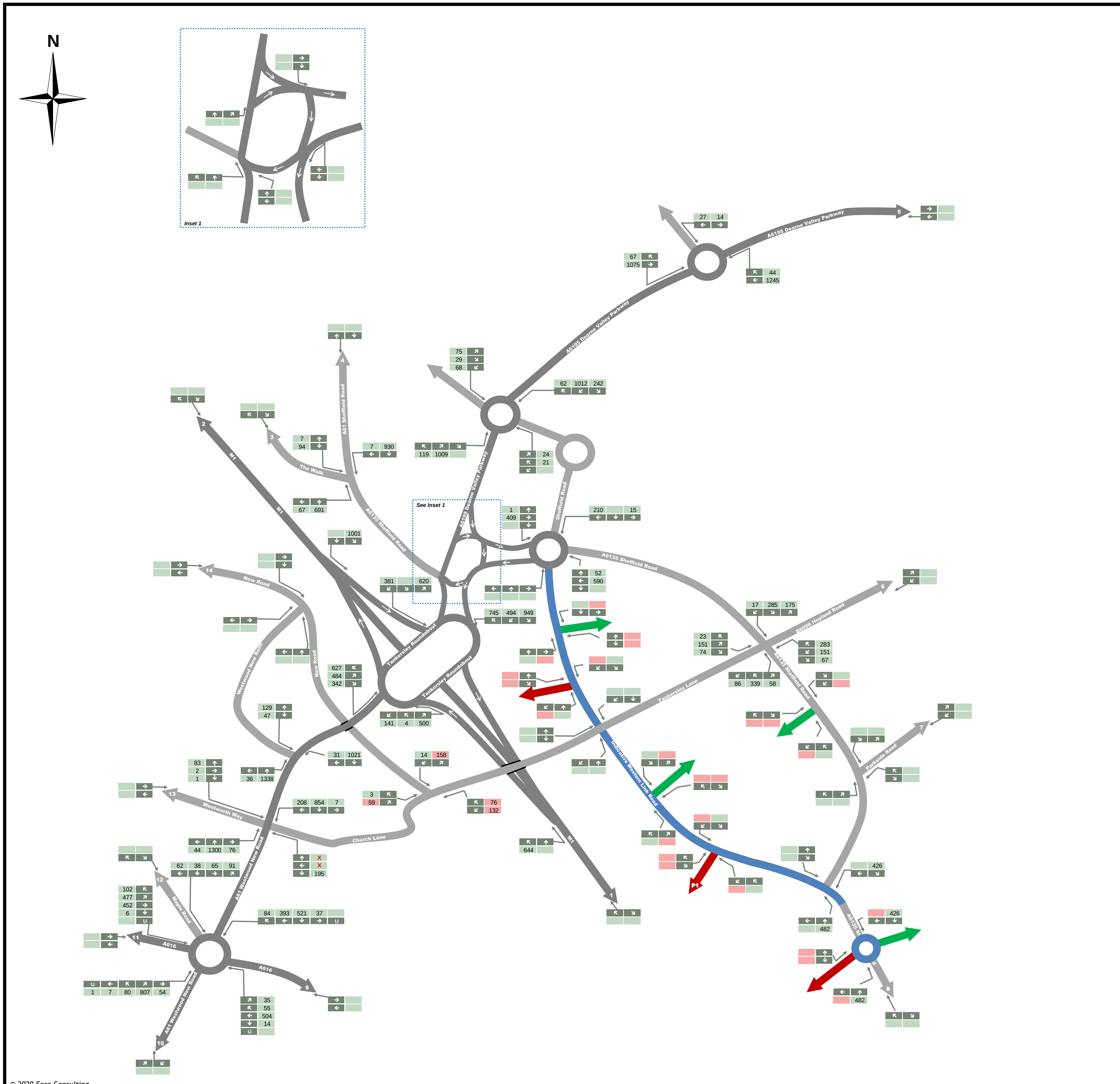


Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Accesse (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.


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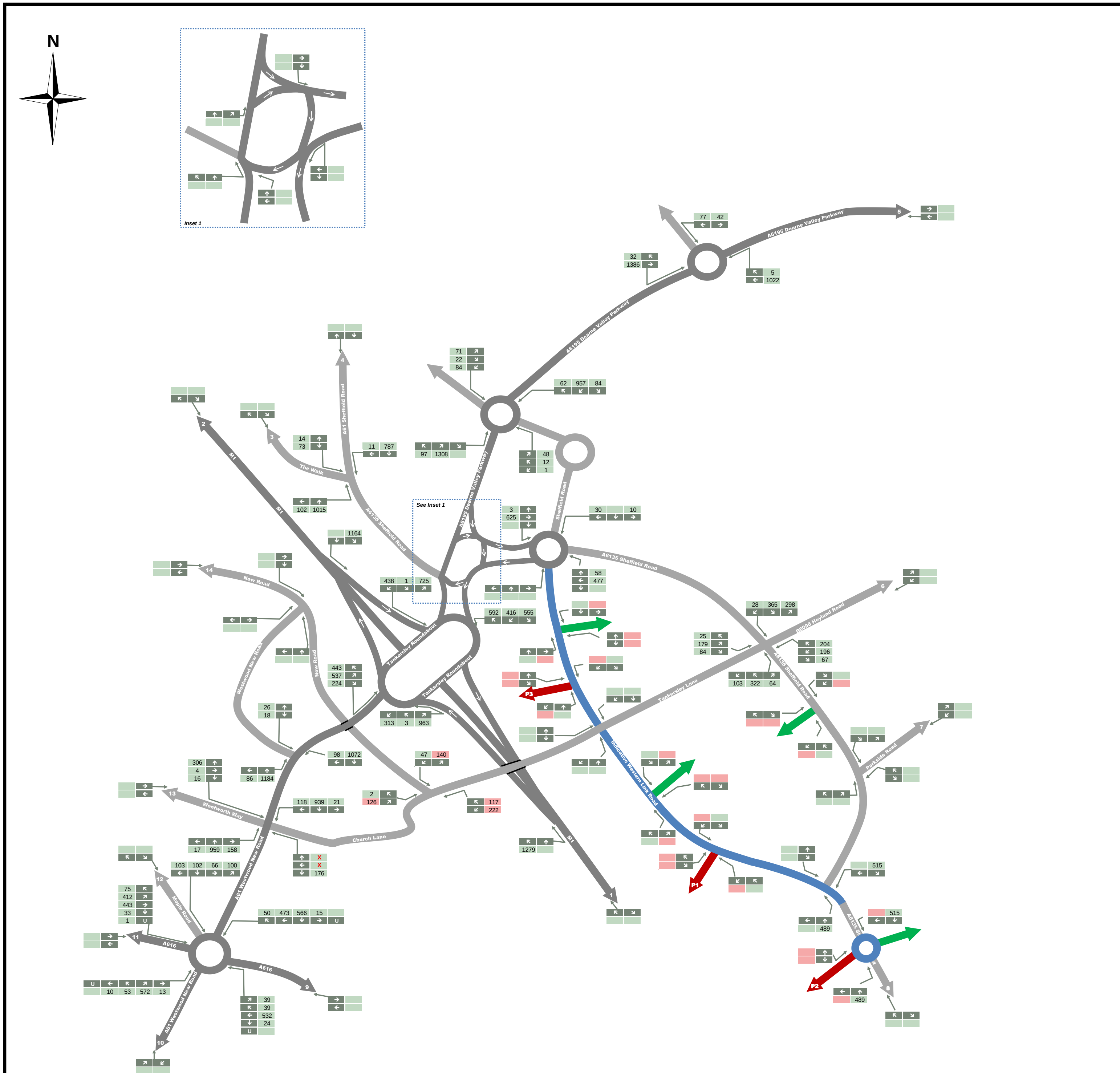
Project:
Hoyland Commercial Land

Figure Title:
2019 Base Traffic Flows
AM Peak Hour

| Scale: | Figure Status: |
|---|---|
| Not to scale | Issue |
| Job Number: 3560 | Figure Number: Figure 10 |




Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Access (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Figure Title:
2019 Base Traffic Flows
PM Peak Hour

| Scale: | Figure Status: |
|---|---|
| Not to scale | Issue |
| Job Number: | Figure Number: |
| 3560 | Figure 11 |

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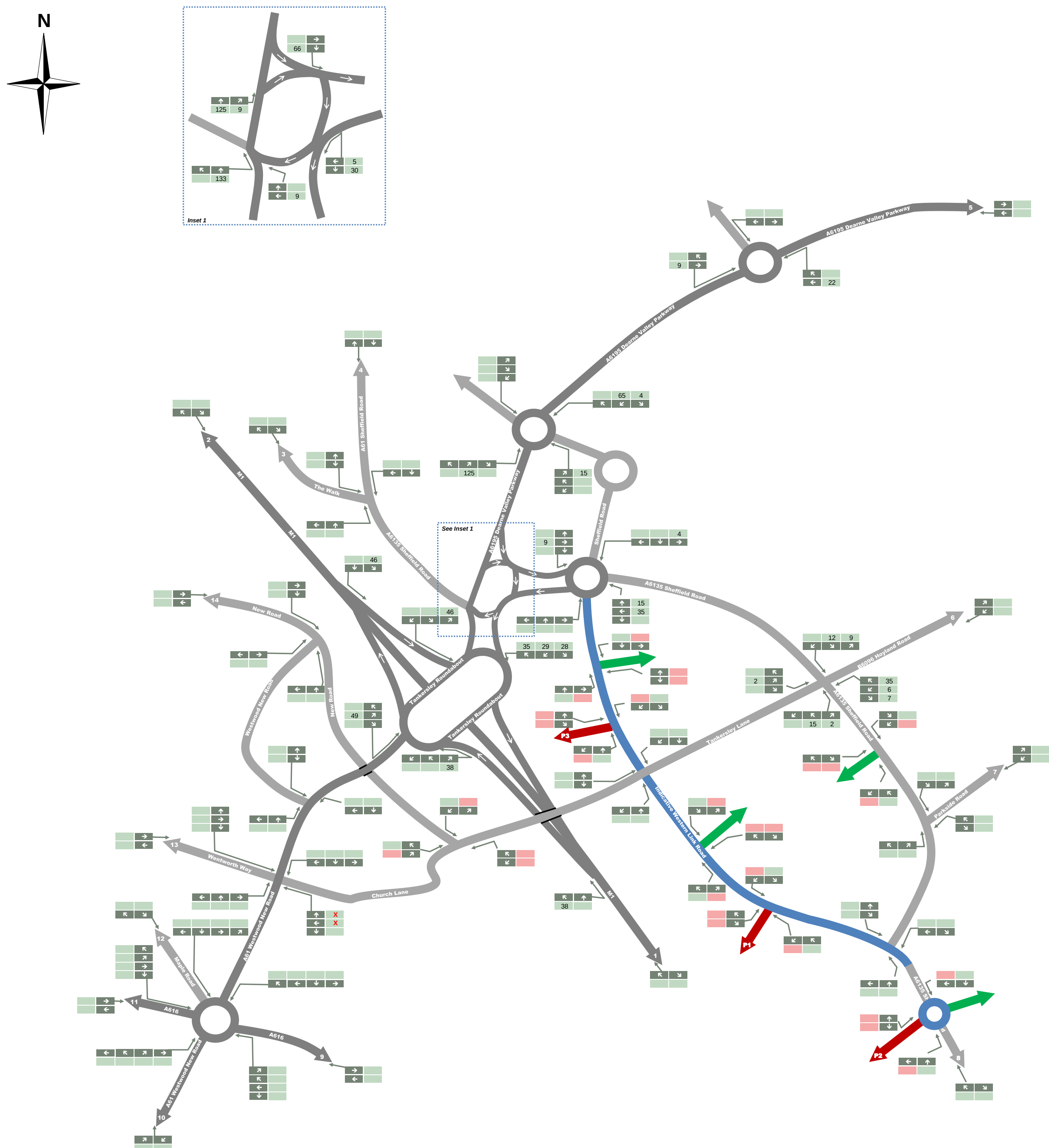


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Key:

- Primary Road
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- Proposed Site Accesses (Indicative)
- Potential Future Access (Indicative)

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Project:
Hoyland Commercial Land

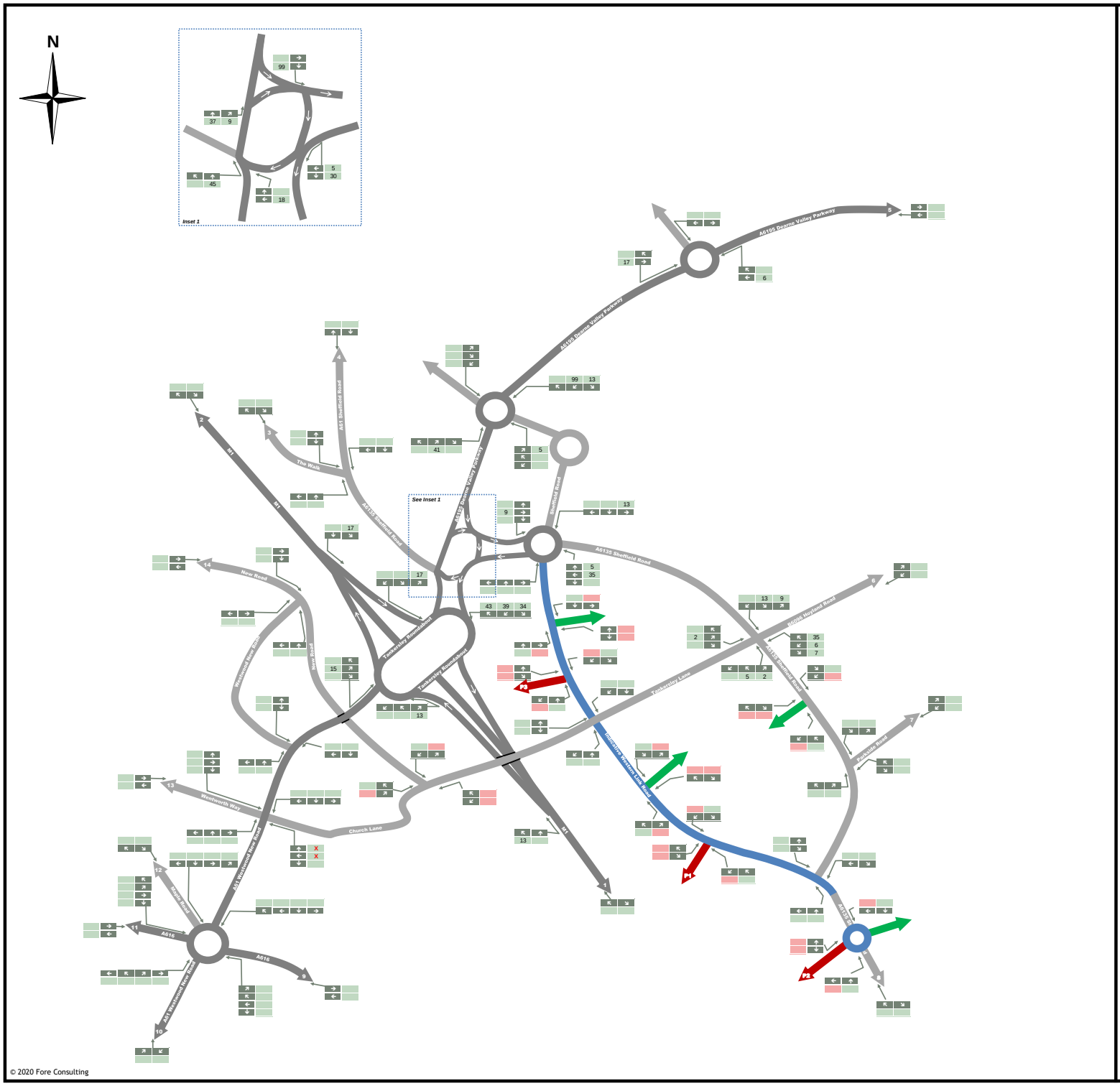
Figure Title:
Total Committed Development Traffic Flows
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 12




Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Accesse (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Project:
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Figure Title:
Total Committed Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 13

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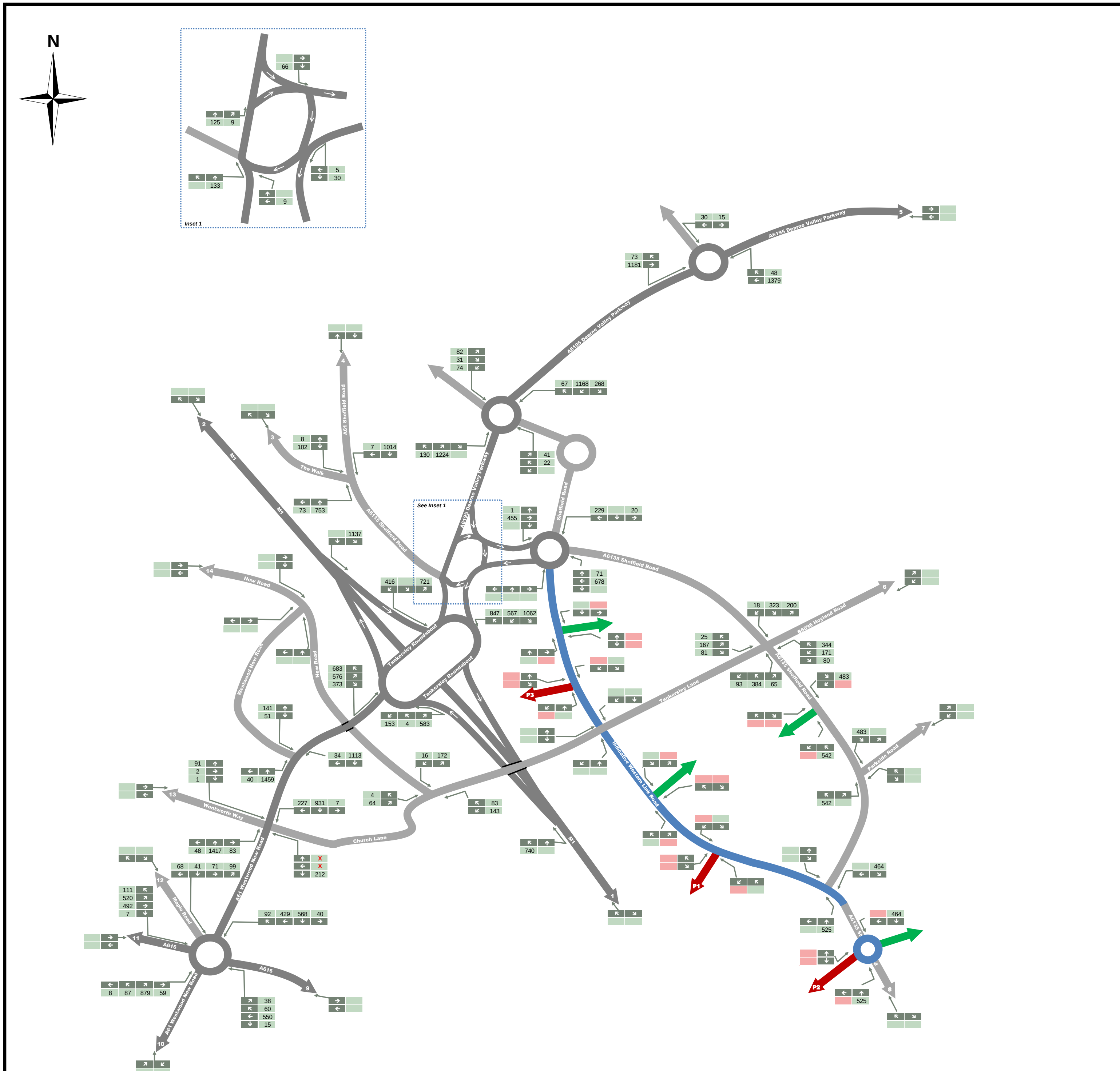


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Key:

- Primary Road
- Secondary Road
- Proposed Roads (Indicative)
- Proposed Site Accesses (Indicative)
- Potential Future Access (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Client:
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Project:
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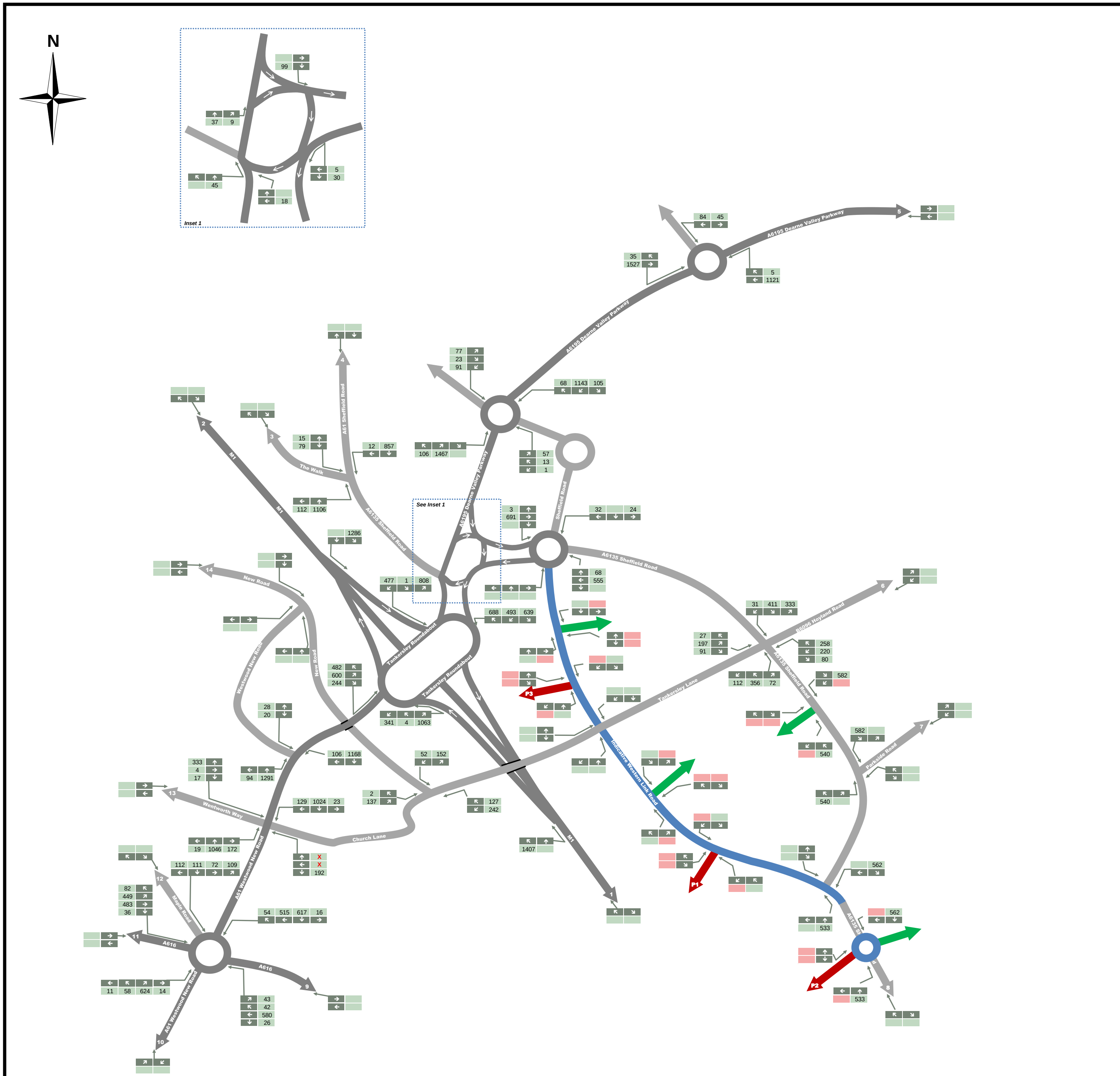
Figure Title:
2029 Do Minimum Traffic Flows
AM Peak Hour

| Scale: | Figure Status: |
|---|---|
| Not to scale | Issue |
| Job Number: | Figure Number: |
| 3560 | Figure 14 |

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Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Access (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Project:
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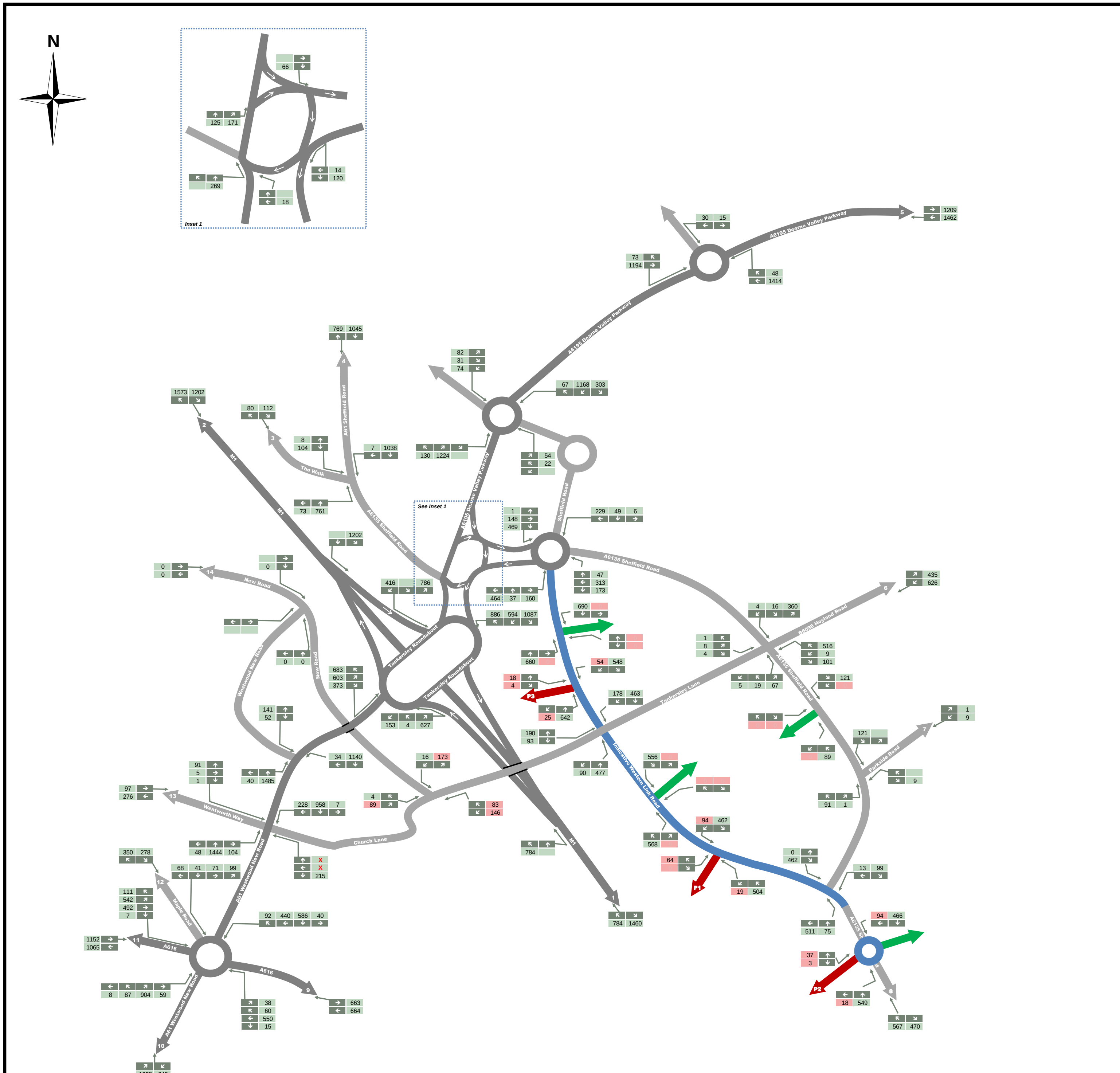
Figure Title:
2029 Do Minimum Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 15

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**Key:**

- Primary Road
- Secondary Road
- Proposed Roads (Indicative)
- Proposed Site Accesses (Indicative)
- Potential Future Access (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Project:
Hoyland Commercial Land

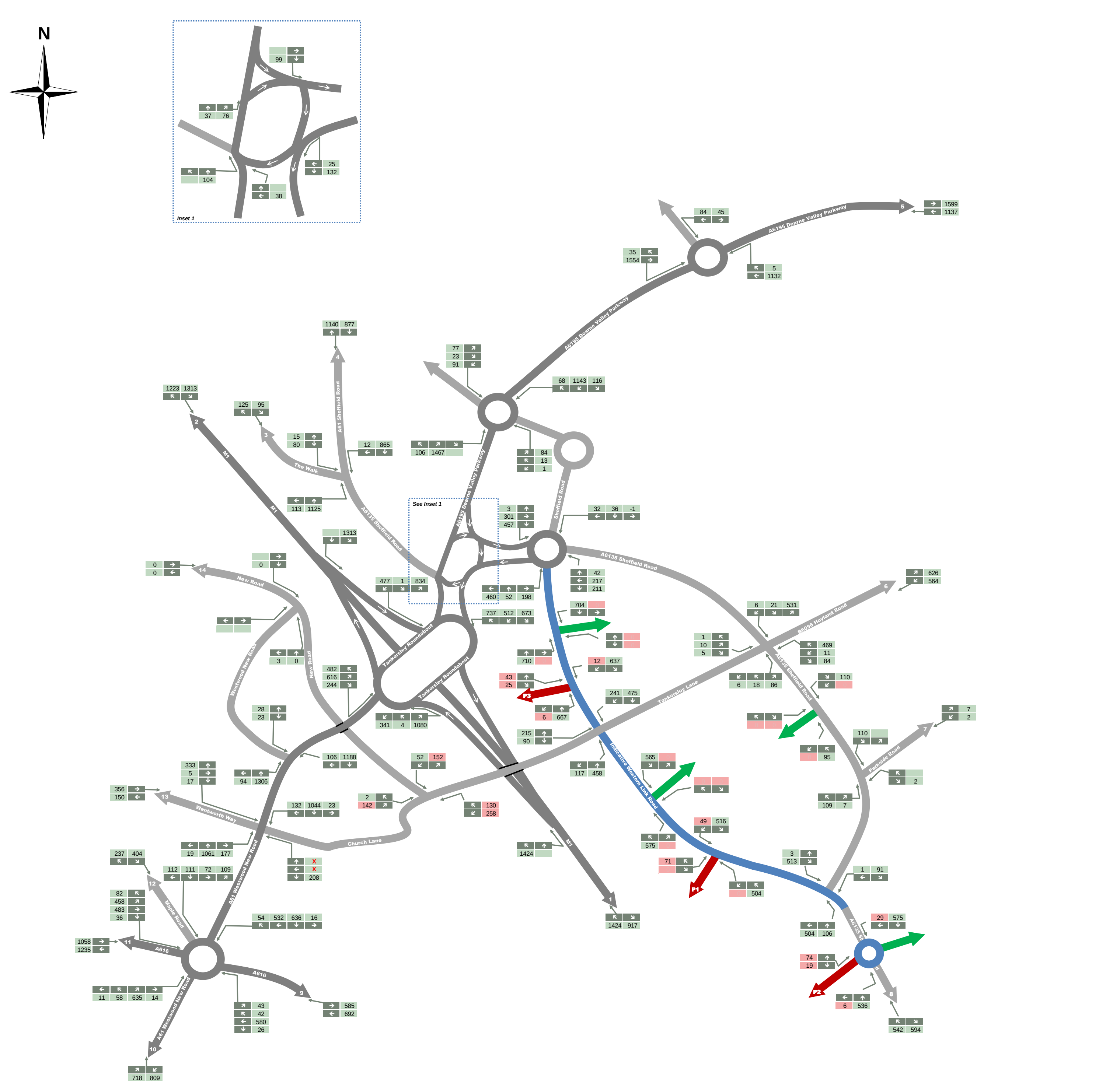
Figure Title:
2029 With Development Traffic Flows
AM Peak Hour

Scale: Not to scale

Figure Status: Issue

Job Number: 3560

Figure Number: Figure 16

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Key:

Primary Road

Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Potential Future Accesse (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Project:
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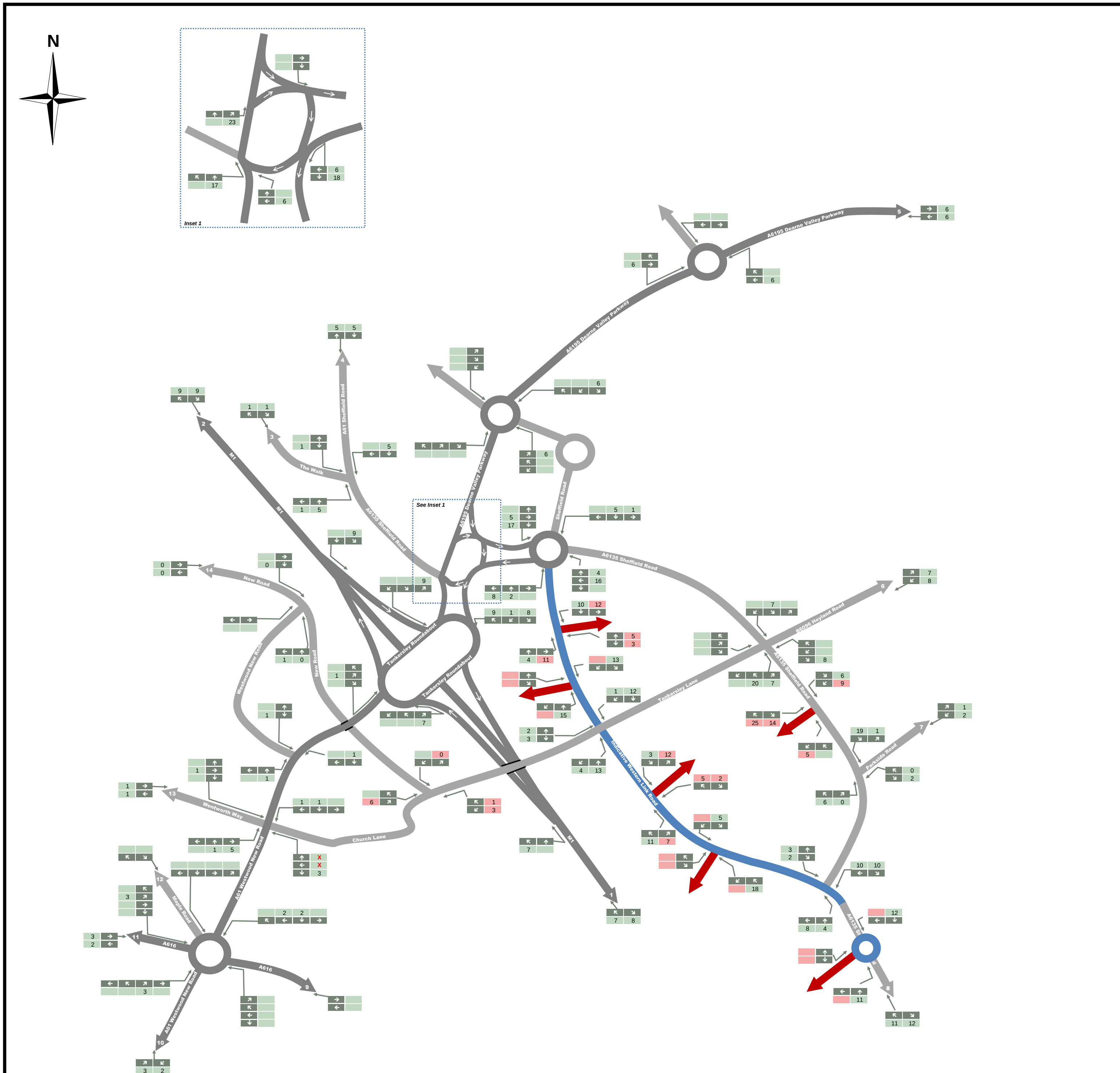
Figure Title:
2029 With Development Traffic Flows
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 17

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Key:

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Proposed Site Accesses (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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Project:
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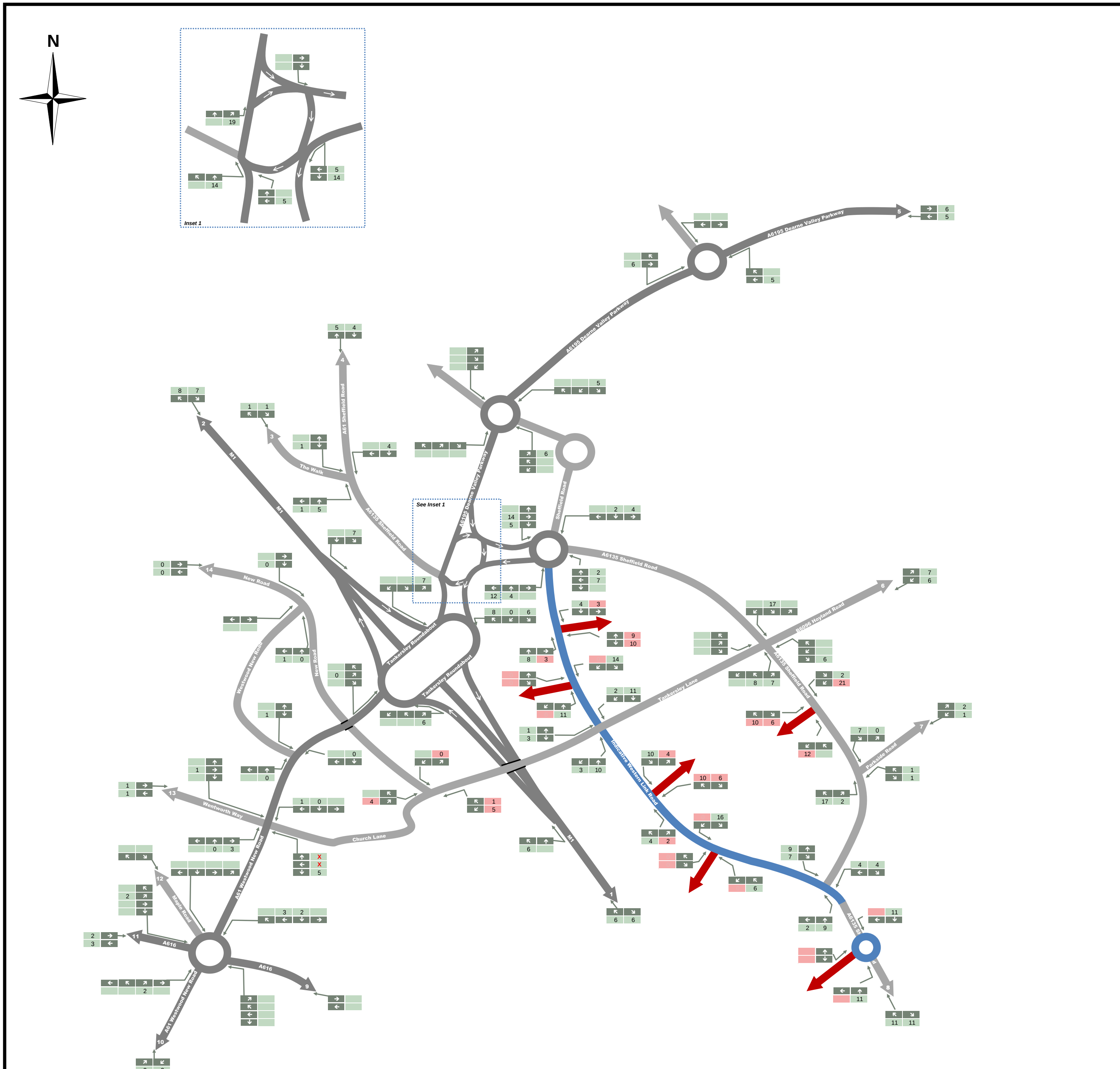
Figure Title:
Committed Development Flows - Hoyland West Masterplan Plots 4,5 and 6
AM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 18

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Key:

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Secondary Road

Proposed Roads (Indicative)

Proposed Site Accesses (Indicative)

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.

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NE1 4DP

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Client:
Newland Developments

Project:
Hoyland Commercial Land

Figure Title:
Committed Development Flows - Hoyland West Masterplan Plots 4,5 and 6
PM Peak Hour

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3560

Figure Number:
Figure 19

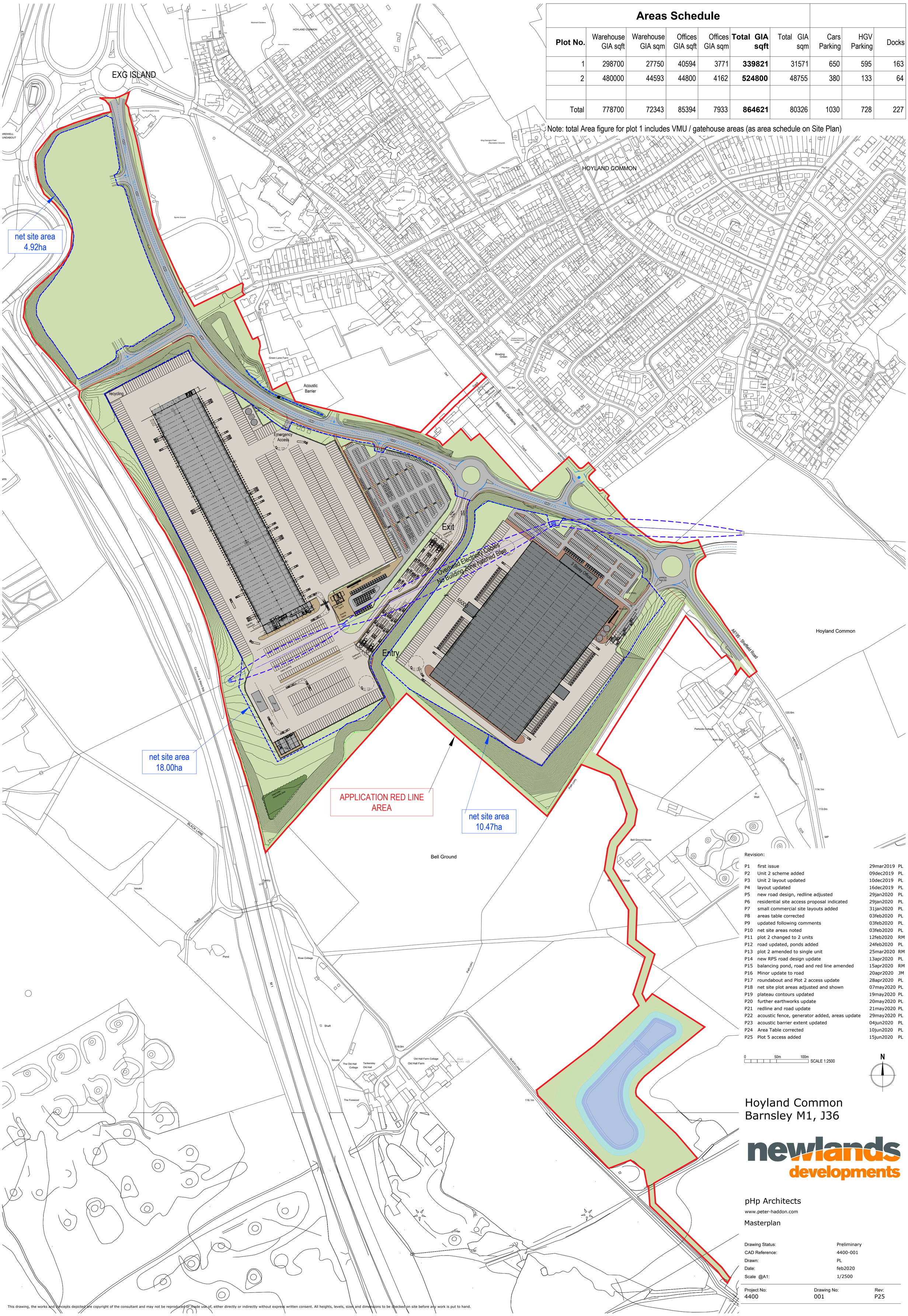
# Appendix A

Development Proposals

## Areas Schedule

| Plot No. | Warehouse GIA sqft | Warehouse GIA sqm | Offices GIA sqft | Offices GIA sqm | **Total GIA sqft** | Total GIA sqm | Cars Parking | HGV Parking | Docks |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 298700 | 27750 | 40594 | 3771 | **339821** | 31571 | 650 | 595 | 163 |
| 2 | 480000 | 44593 | 44800 | 4162 | **524800** | 48755 | 380 | 133 | 64 |
| | | | | | | | | | |
| Total | 778700 | 72343 | 85394 | 7933 | **864621** | 80326 | 1030 | 728 | 227 |

Note: total Area figure for plot 1 includes VMU / gatehouse areas (as area schedule on Site Plan)




Revision:

| | | | |
|---|---|---|---|
| P1 | first issue | 29mar2019 | PL |
| P2 | Unit 2 scheme added | 09dec2019 | PL |
| P3 | Unit 2 layout updated | 10dec2019 | PL |
| P4 | layout updated | 16dec2019 | PL |
| P5 | new road design, redline adjusted | 29jan2020 | PL |
| P6 | residential site access proposal indicated | 29jan2020 | PL |
| P7 | small commercial site layouts added | 31jan2020 | PL |
| P8 | areas table corrected | 03feb2020 | PL |
| P9 | updated following comments | 03feb2020 | PL |
| P10 | net site areas noted | 03feb2020 | PL |
| P11 | plot 2 changed to 2 units | 12feb2020 | RM |
| P12 | road updated, ponds added | 24feb2020 | PL |
| P13 | plot 2 amended to single unit | 25mar2020 | RM |
| P14 | new RPS road design update | 13apr2020 | PL |
| P15 | balancing pond, road and red line amended | 15apr2020 | RM |
| P16 | Minor update to road | 20apr2020 | JM |
| P17 | roundabout and Plot 2 access update | 28apr2020 | PL |
| P18 | net site plot areas adjusted and shown | 07may2020 | PL |
| P19 | plateau contours updated | 19may2020 | PL |
| P20 | further earthworks update | 20may2020 | PL |
| P21 | redline and road update | 21may2020 | PL |
| P22 | acoustic fence, generator added, areas update | 29may2020 | PL |
| P23 | acoustic barrier extent updated | 04jun2020 | PL |
| P24 | Area Table corrected | 10jun2020 | PL |
| P25 | Plot 5 access added | 15jun2020 | PL |

0 50m 100m SCALE 1:2500

N

# Hoyland Common
# Barnsley M1, J36

newlands developments

pHp Architects

www.peter-haddon.com

Masterplan

| | |
|---|---|
| Drawing Status: | Preliminary |
| CAD Reference: | 4400-001 |
| Drawn: | PL |
| Date: | feb2020 |
| Scale @A1: | 1/2500 |

| Project No: | Drawing No: | Rev: |
|---|---|---|
| 4400 | 001 | P25 |

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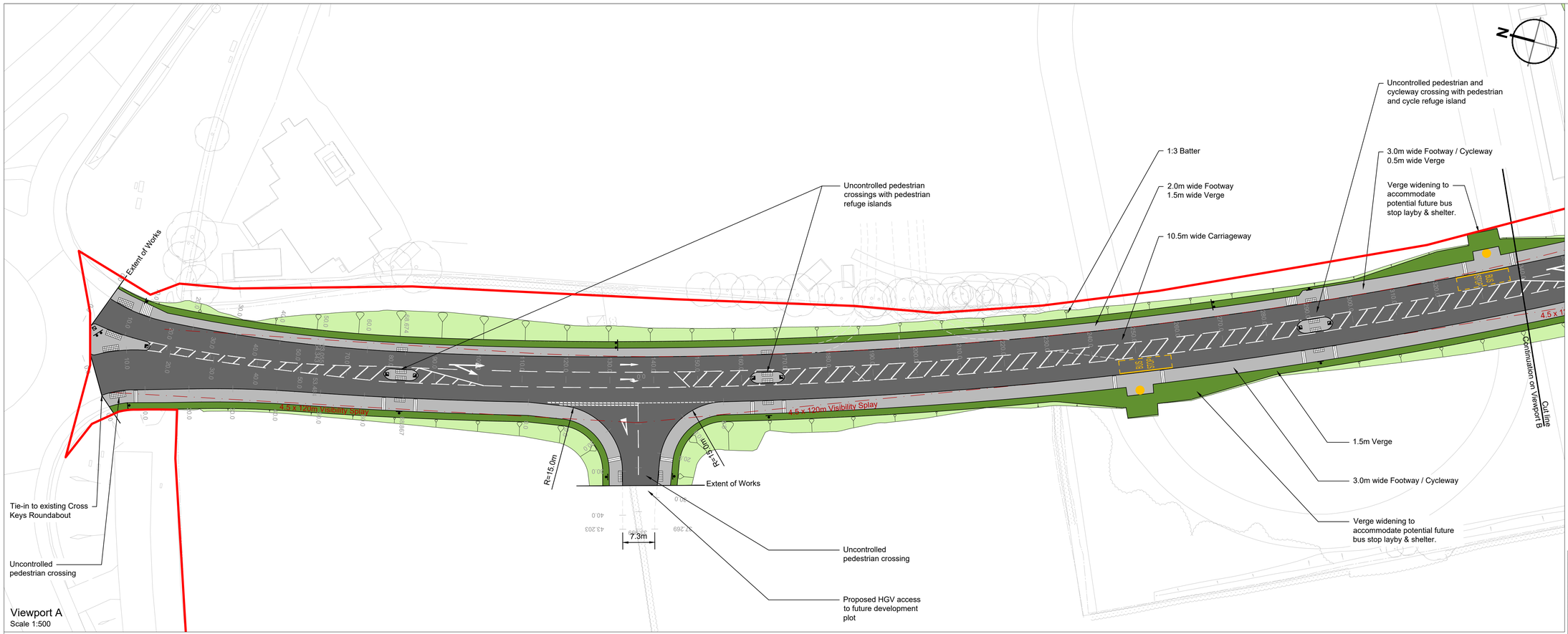
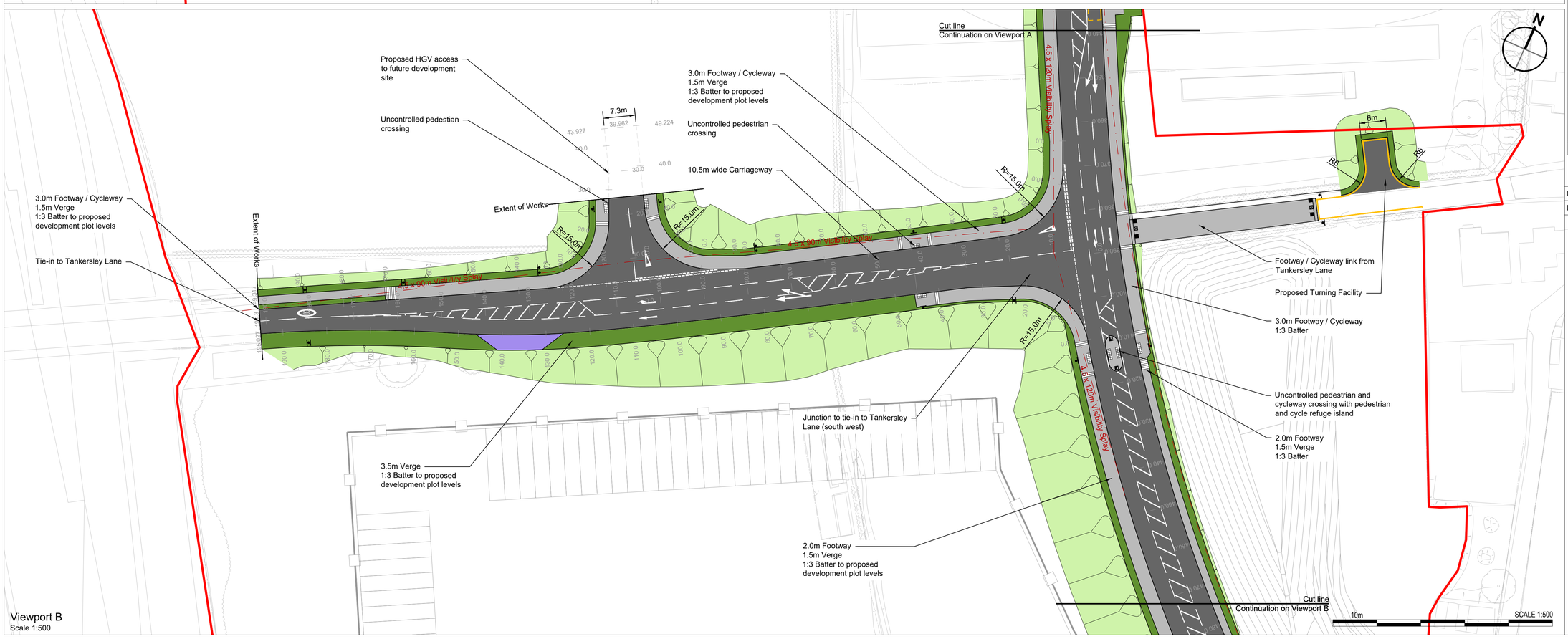
# Appendix B

Link Road Drawings




Viewport A
Scale 1:500




Viewport B
Scale 1:500

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Notes

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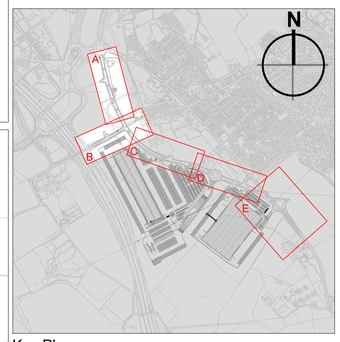
3. This drawing should be read in conjunction with all other relevant drawings and specifications.
4. Masterplan taken from PHP drawing 4400-001 Rev P25, received 15/06/2020.
5. All works to be carried out in accordance with the Specification for Highway Works, the South Yorkshire Residential Design Guide and the requirements of Barnsley Metropolitan Borough Council.
6. Refer to drawing HOYLA-RPS-SI-XX-DR-CR-011 for setting out information.
7. All information shown on this drawing is subject to Technical Approval from BMBC.

Key

- Planning Boundary
- Proposed Flexible Carriageway Construction
- Proposed Flexible Footway Construction
- Proposed Grassed Verge Construction
- Proposed Structural Landscaping.
- Proposed Reinforced Grass Maintenance Access
- Proposed Visibility Splays - 4.5m x 120m (bellmouths), 120m forward visibility to CD 109.
- Proposed Bus Stop
- Proposed Road Sign
- Proposed Flexible Bollard
- Proposed Fixed Bollard.
- Proposed Removable Bollard.
- 400mm x 400mm 'blister' tactile paving, buff in colour at uncontrolled crossing
- 400mm x 400mm 'ladder' tactile paving, buff in colour




Key Plan
Not to Scale

| Rev | Description | By | Ckd | Date |
|---|---|---|---|---|
| P02 | 'Ladder' tactile paving added, Tankersley Lane revised. | LAM | ANT | 21.08.20 |
| P01 | First Issue | AB | LAM | 14.07.20 |

MAKING COMPLEX EASY

Sherwood House, Sherwood Avenue,
Newark, Nottinghamshire, NG24 1QQ
T:01636 605 700 E: rpsnewark@rpsgroup.com

Client
newlands developments

Project
Hoyland

Title
Link Road
General Arrangement
(Sheet 1 of 3)

| RPS Project Number | Scale @ A1 | Date Created |
|---|---|---|
| NK020040 | 1:500 | 08.07.2020 |
| **Task Team Manager** | **Information Author** | **Task Information Manager** |
| SG | AB | LAM |

Status
S2 (Suitable for Information)

Document Number
HOYLA-RPS-SI-XX-DR-CR-001

Revision
P02

Project Code - Originator - Zone - Level - Type - Role - Drawing Number

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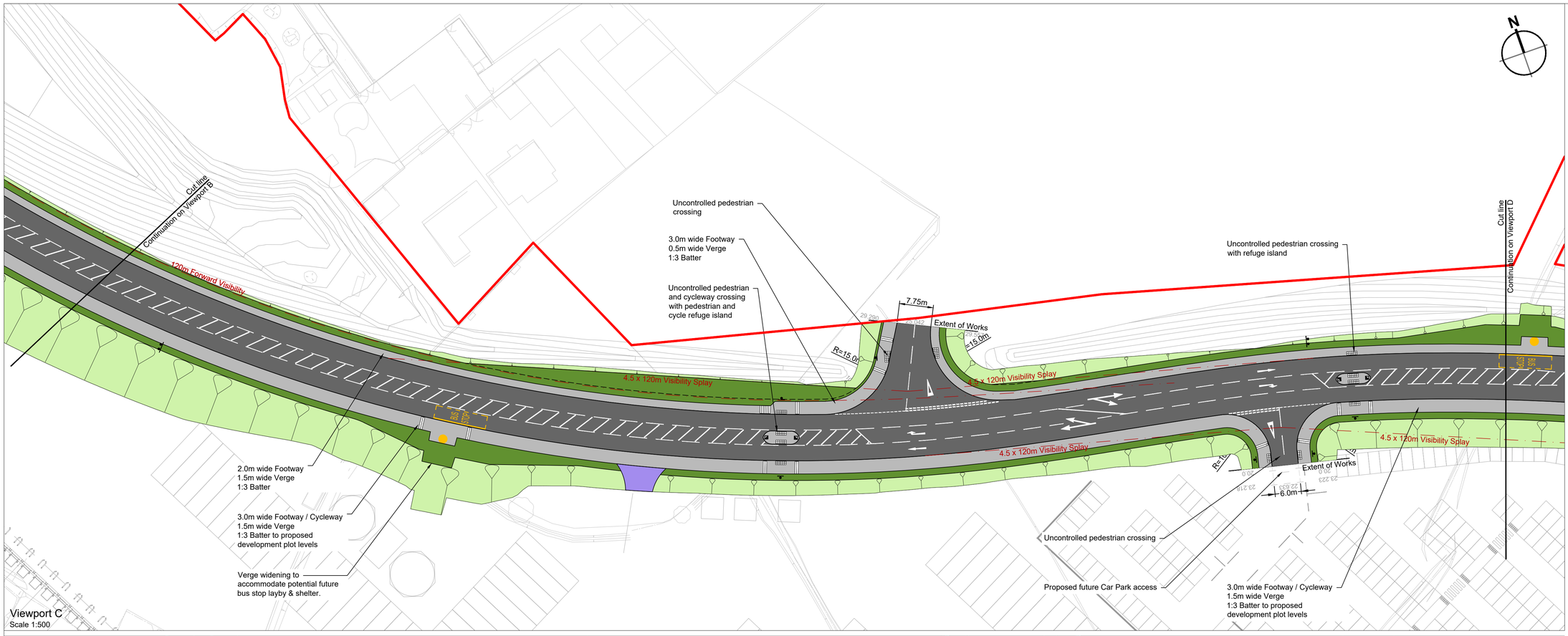


Viewport C
Scale 1:500

Viewport D
Scale 1:500

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4. Masterplan taken from PHP drawing 4400-001 Rev P25, received 15/06/2020.
5. All works to be carried out in accordance with the Specification for Highway Works, the South Yorkshire Residential Design Guide and the requirements of Barnsley Metropolitan Borough Council.
6. Refer to drawing HOYLA-RPS-SI-XX-DR-CR-012 for setting out information.
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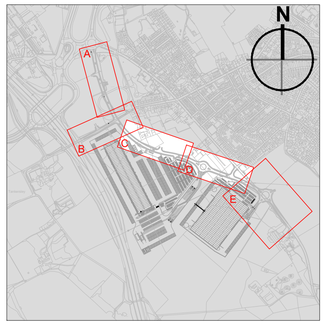
Key

- Planning Boundary
- Proposed Flexible Carriageway Construction
- Proposed Flexible Footway Construction
- Proposed Grassed Verge Construction
- Proposed Structural Landscaping.
- Proposed Reinforced Grass Maintenance Access
- Proposed Visibility Splays - 4.5m x 120m (bellmouths), 120m forward visibility to CD 109.
- Proposed Bus Stop
- Proposed Road Sign
- Proposed Flexible Bollard
- Proposed Fixed Bollard.
- Proposed Removable Bollard.
- 400mm x 400mm 'blister' tactile paving, buff in colour at uncontrolled crossing
- 400mm x 400mm 'ladder' tactile paving, buff in colour




Key Plan
Not to Scale

| Rev | Description | By | Ckd | Date |
|---|---|---|---|---|
| P02 | 'Ladder' tactile paving added. | LAM | ANT | 21.08.20 |
| P01 | First Issue | AB | LAM | 14.07.20 |

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Client
newlands developments

Project
Hoyland

Title
Link Road
General Arrangement
(Sheet 2 of 3)

| RPS Project Number | Scale @ A1 | Date Created |
|---|---|---|
| NK020040 | 1:500 | 08.07.2020 |
| **Task Team Manager** | **Information Author** | **Task Information Manager** |
| SG | AB | LAM |

Status
S2 (Suitable for Information)

Document Number
HOYLA-RPS-SI-XX-DR-CR-002

Revision
P02

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Viewport E
Scale 1:500

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4. Masterplan taken from PHP drawing 4400-001 Rev P25, received 15/06/2020.
5. All works to be carried out in accordance with the Specification for Highway Works, the South Yorkshire Residential Design Guide and the requirements of Barnsley Metropolitan Borough Council.
6. Refer to drawing HOYLA-RPS-SI-XX-DR-CR-013 for setting out information.
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Key

- Planning Boundary
- Proposed Flexible Carriageway Construction
- Proposed Flexible Footway Construction
- Proposed Grassed Verge Construction
- Proposed Structural Landscaping.
- Proposed Reinforced Grass Maintenance Access
- Proposed Visibility Splays - 4.5m x 120m (bellmouths), 120m forward visibility to CD 109.
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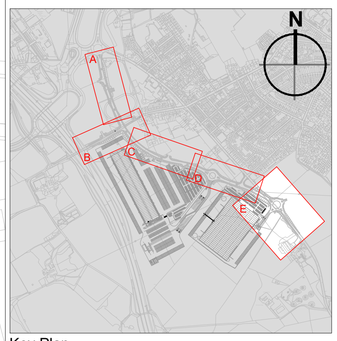


Key Plan
Not to Scale

| Rev | Description | By | Ckd | Date |
|---|---|---|---|---|
| P02 | 'Ladder' tactile paving added. | LAM | ANT | 21.08.20 |
| P01 | First Issue | AB | LAM | 14.07.20 |

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Client
newlands developments

Project
Hoyland

Title
Link Road
General Arrangement
(Sheet 3 of 3)

| RPS Project Number | Scale @ A1 | Date Created |
|---|---|---|
| NK020040 | 1:500 | 08.07.2020 |
| **Task Team Manager** | **Information Author** | **Task Information Manager** |
| SG | AB | LAM |

Status
S2 (Suitable for Information)

| Document Number | Revision |
|---|---|
| HOYLA-RPS-SI-XX-DR-CR-003 | P02 |

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