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Dearne Valley Parkway, Barnsley
Proposed Industrial Estate

Transport Assessment

March 2022

PROPOSED INDUSTRIAL ESTATE
DEARNE VALLEY PARKWAY
BIRDWELL
BARNSLEY

GREGORY PROPERTY GROUP

TRANSPORT ASSESSMENT

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1.0 INTRODUCTION

1.1 This Transport Assessment (TA) has been prepared by Bryan G Hall (BGH) and forms part of the planning application submission package by Gregory Property Group (GPG). The application seeks permission for an industrial estate on land served from the A6195 Dearne Valley Parkway, Birdwell, Barnsley, South Yorkshire. The proposed Industrial Estate will include three standalone industrial units with a combined total floor area of 13,494m^2 and 166 total car parking spaces.

1.2 The site is located to the south east of Birdwell, Barnsley, and is bound by the A6195 Dearne Valley Parkway to the north, by undeveloped scrubland to the east, by a strip of woodland directly to the south (on the other side of which are further industrial units) and to the west by a recently constructed roundabout (from Sheffield Road) which serves a mix of other land uses and from which access to the site is proposed. A plan showing the location of the site in the context of the highway network is attached at **Appendix BGH1.**

1.3 The site is currently undeveloped but is allocated for employment use within the Adopted (January 2019) Barnsley Council (the Council) Local Plan as Site ES14. The site also forms part of the wider Hoyland North Masterplan which was produced in December 2019. Further details of these matters are set out in Chapter 2.0 of this TA.

1.4 A single point of vehicular access to the site is proposed and will be provided from the existing Sheffield Road roundabout to the west of the site. The roundabout provides four points of connection with the wider highway network. The northern arm links with a further roundabout with the A6195 Dearne Valley Parkway (known locally as Rockingham Roundabout), the western arm provides direct access to roadside amenities (drive-thru coffee, petrol filling station (PFS) etc), the southern arm provides local access to the settlement of Hoyland (via the A6135 Sheffield Road) and the eastern arm, currently in the form of a stub, will be extended to provide access to the proposed industrial estate development.

1.5 This TA has been prepared in the context of the sites adopted allocation and the Masterplan for the area. The principle of development on the site has already been demonstrated through the Local Plan process with the supporting highway infrastructure constructed and open to traffic.

1.6 This TA will further demonstrate that the development proposals accord with relevant national and local transport planning policy and that the land use proposals will not result in a significant residual traffic impact upon the operation

of the local highway network. This TA also demonstrates that the site is well located to promote and encourage sustainable travel by active forms of transport.

1.7 This TA is accompanied by a Framework Travel Plan (FTP) which has been prepared to support the proposals and should be read alongside this TA. The FTP discusses the sustainable travel options available for the site in greater detail, promotes a strategy for future users to travel sustainably and sets out appropriate targets.

1.8 The development site lies some 750 metres (as the crow flies) to the north of Junction 36 of the M1. The M1 is the responsibility of Highways England (HE) as custodians of the Country's Strategic Road Network (SRN). Due to the nature of the development, it is expected to attract trips to and from the SRN, however given the sites allocation and its rigorous testing in evidence base to the Local Plan (detailed later within this TA) the impact on the SRN has already been considered by HE and deemed acceptable.

1.9 The remainder of this TA is structured as set out in Table 1.1 below:-

Table 1.1: Transport Assessment Report Structure

Section	Title	Description
2.0	Relevant planning and transport policy	This section will set out the local and national policy relevant to the application site.
3.0	The application site and the existing highway network	This section will describe the existing site, the local highway network and its function.
4.0	Sustainable transport	This section will describe the existing situation in the vicinity of the site with regards to the opportunities for employees and visitors to travel on foot, by cycling and public transport.
5.0	The development proposals	This section describes the proposed development, including the vehicular and pedestrian access strategy.
6.0	Development trip generation trip distribution	This section presents appropriate trip generation rates for the development and assesses the distribution of development related traffic on to the highway network.
7.0	Traffic impact on the local highway network	The impact of the traffic generated by the development on the local transport network is presented in this section.
8.0	Summary & conclusions	This section presents the conclusions drawn from the analysis contained within the Transport Assessment.

1.10 This TA, in combination with the accompanying FTP, will demonstrate that the development proposals are acceptable, and that planning consent could not be reasonably withheld on highways or transportation grounds.

2.0 RELEVANT PLANNING AND TRANSPORT POLICY

National Policy

National Planning Policy Framework

2.1 The National Planning Policy Framework (NPPF) was published on 27th March 2012 with the latest update on 19th February 2019. The NPPF sets out the government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development.

2.2 In relation to transport, the NPPF states at paragraph 103 that:-

> *'…significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health'.*

2.3 It is noted in the NPPF that:-

> *'…opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making'.*

2.4 Within the NPPF at paragraph 108 it is noted 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, given 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'.*

2.5 The NPPF indicates at paragraph 110 that applications for development should:-

- *'…give priority first to pedestrian/cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to*

facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations'.*

2.6 Paragraph 109 of the NPPF indicates that 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

2.7 On the 6th March 2014, the Government released updated planning guidance in the form of the Planning Practice Guidance (PPG) suite of documents. The PPG is updated, as new thinking and policy objectives emerge and provides practical guidance on a number of relevant planning topics. The aim of the PPG (in conjunction with the NPPF) is to help simplify the planning system in England and replace a number of historic guidance notes.

2.8 The updated PPG covers the topic of Transport in two sections, the first being 'Transport evidence bases in plan making and decision taking' (March 2015) with the second being 'Travel plans, transport assessments and statements' (March 2014). The relevant guidance in relation to the preparation of this TA is summarised below.

2.9 Paragraph 2 of the latter Transport PPG indicates that:-

> *"…Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements".*

2.10 Specifically, in relation to Transport Assessments and Travel Plans, paragraph 6 states that:-

> *'…Travel Plans, Transport Assessments and Statements can positively contribute to:-*
>
> - *encouraging sustainable travel;*
> - *lessening traffic generation and its detrimental impacts;*
> - *reducing carbon emissions and climate impacts;*
> - *creating accessible, connected, inclusive communities;*
> - *improving health outcomes and quality of life;*
> - *improving road safety; and*
> - *reducing the need for new development to increase existing road capacity or provide new roads.*
>
> *They support national planning policy which sets out that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.'*

Local Policy

Barnsley Local Plan 2019-2033

2.11 Barnsley's Local Plan was adopted in January 2019. With respect to the development proposals the Plan objective is :-

> *'…to create more and better jobs to improve earnings and increase opportunities for local residents…'*

2.12 The proposed site is allocated for employment use within the Councils Adopted Local Plan, site reference ES14. With refence to the allocation, the specific considerations of the site should be as follows:-

> *'…Site ES14 Rockingham 8.9 ha*
>
> *The development will be subject to the production of a Masterplan Framework covering a number of sites including housing site references: HS64; HS66; HS56 and employment site references: ES14 and ES17. The development will be expected to: Provide appropriate access to employment site ES17 and housing site HS64; Consider the impact on residential amenity and include appropriate mitigation where necessary; and Consider the potential impact on the nearby Shortwood and Hay Green*

Local Wildlife Sites and include appropriate mitigation where necessary; and Retain the hedgerow along the north edge."

2.13 As noted within the Introduction, the site forms part of the Hoyland North Masterplan Framework. This is explored further at paragraph 2.23 of this TA. With respect to the reference of facilitating access to ES17 and HS64, clarification on this matter is detailed later within this Chapter.

2.14 Barnsley Council, working with city region partners and other stakeholders, has prepared a Transport Strategy for Barnsley. The strategy seeks to facilitate:-

- Economic growth and strategic connections;
- Inclusion, accessibility and a better quality of life;
- High quality natural environment, local air quality and climate change; and
- Safety, security and health.

2.15 There are a number of Local Plan policies which are applicable to this TA. These are summarised as follows.

2.16 Policy I1 Infrastructure and Planning Obligations Development, states that development proposals:-

'…must be supported by appropriate physical, social, economic and communications infrastructure, including provision for broadband. Development must contribute as necessary to meet all on and off site infrastructure requirements to enable development to take place satisfactorily. Where the necessary provision is not made directly by the developer, contributions will be secured through planning obligations. Where appropriate, pooled contributions will be used to facilitate delivery of the necessary infrastructure'.

2.17 Policy T3 New Development and Sustainable Travel, 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 including where*

appropriate having regard for cross boundary local authority liaison; and

- *Provide a travel plan statement or a travel plan in accordance with guidance set out in the National Planning Policy Framework including where appropriate having regard for cross boundary local authority liaison. Travel plans will be secured through a planning obligation or a planning condition. Where levels of accessibility through public transport, cycling and walking are unacceptable, we will expect developers to take action or make financial contributions in accordance with policy I1. If it is not possible or appropriate for the minimum amount of parking for cycles, motorbikes, scooters and mopeds to be met on site, the developer must provide, or contribute towards, off-site parking, or improve or provide other forms of travel'.*

2.18 Policy T4 New development and Transport Safety, states that:-

'…New development will be expected to be designed and built to provide all transport users within and surrounding the development with safe, secure and convenient access and movement. If a development is not suitably served by the existing highway, or would create or add to problems of safety or the efficiency of the highway or any adjoining rail infrastructure for users, we will expect developers to take mitigating action or to make a financial contribution to make sure the necessary improvements go ahead. Any contributions will be secured through a planning obligation or planning condition'.

2.19 Policy T5 Reducing the Impact of Road Travel requires that developments:-

'…will reduce the impact of road travel by:-

Developing and implementing robust, evidence based air quality action plans to improve air quality;

Working with our sub regional partners, fleet and freight operators to improve the efficiency of vehicles and goods delivery, and reduce exhaust emissions; and

Implementing measures to ensure the current road system is used efficiently'.

Barnsley Transport Strategy 2014 – 2033

2.20 Barnsley's Transport Strategy was developed to improve transport links and public transport offered in the area.

2.21 The four key transport priorities, which the Local Plan supports, are:-

1. *Promote Economic Growth and Strategic Connections;*
2. *Promote Inclusion, Accessibility, and Better Quality of Life;*
3. *Promote High Quality Natural Environment, Local Air Quality and Climate Change; and*
4. *Promote Safety, Security and Health.*

2.22 The report sets out that by 2033 Barnsley will have:-

- *Enhanced connectivity to the international airports and ports serving the city regions;*
- *Improved connections between Barnsley, the city regions and other economic centres especially Leeds, Manchester and London;*
- *A transport system that will meet the needs of businesses to access markets and their supply chains;*
- *Well connected employment, recreation, social and housing locations;*
- *Connections to High Speed rail and the regional transport hubs;*
- *Targeted improvements that enable our road network to perform in the most effective way.*

Hoyland North Masterplan Framework

2.23 The development site is allocated as ES14 (Eastern Parcel) within Barnsley Local Plan and forms part of the wider Hoyland North Masterplan Framework. The Hoyland North Masterplan Framework comprises the following allocations:-

- HS64/HS66/HS56 – These sites are owned by the Fitzwilliam Wentworth Estate with Hoyland Development Limited advancing them for residential development through a land promotion agreement;
- ES17 – Harworth Group own the site and are actively promoting the allocation for employment uses;
- <u>ES14 (Eastern parcel) – Owned by Barnsley council who are in the process of disposing of the site (BGH emphasis);</u>
- ES14 (Central Parcel) – Owned by Ernest V Waddington Limited who are promoting the site for a range of employment uses;
- ES14 (Western Parcel) – Owned by Hartwood Estates Ltd who are promoting the site for a range of employment uses;

- Mr Reckless – Owns a small parcel of land within site allocation ES14 to the south of the eastern parcel owned by Barnsley council. There is no development proposed within this parcel of the Masterplan Framework area.

2.24 A diagram showing the allocations associated with Hoyland North Masterplan Framework (and their relationship to each other) is attached at **Appendix BGH2.**

2.25 The Hoyland North Masterplan Framework states:-

'…Hoyland North comprises the collection of housing and employment sites allocated in the council's Local Plan which was adopted on 3 January 2019. When the Local Plan was being examined, it was agreed that for some larger sites it was necessary to prepare Masterplan Frameworks with the key purposes being as follows:

- *To demonstrate that in principle each allocation is capable of being developed without significant issues;*
- *To enable comprehensive, efficient and timely delivery of development including essential infrastructure requirements;*
- *To make sure high-quality design is achieved'.*

2.26 The Hoyland North Masterplan Framework was informed by various technical supporting documents. Fore Consulting provided a Transport and Access Appraisal Report which details the various land uses and trip rates associated with the allocated sites within the Hoyland North Masterplan area, including the proposed Industrial Estate on site ES14 which is the subject of this TA.

2.27 With respect to the matter raised at paragraph 2.14 and access to allocation sites ES17 and HS64 the project team responsible for the Hoyland North Masterplan Framework produced three masterplans for consideration at public consultation. Each masterplan included all allocated sites in the area and how access would be achieved. The project team concluded that:

"The advantages and disadvantages of each link road option has been assessed and reviewed through discussions with key stakeholders. Public consultation feedback suggested that Options A and B were equally preferable... The consensus reached by the project team is to progress Option B as the preferred highway layout for the purposes of advancing the Masterplan Framework. This option is considered the most suitable based on the benefits that would be achieved, in particular the retention of the existing wildlife corridor to the west of ES17"

2.28 The Option B masterplan arrangement is attached at **Appendix BGH3.** The masterplan shows that access to allocations ES17 and HS64 will be achieved via a new link road which will connect Shortwood Roundabout in the north to Holyand Road in the south. It is therefore not necessary for access to ES17 and HS64 to be provided through ES14.

Relevant Planning Applications

2.29 An outline application (ref: 2019/1573) for 102,193m^2 of employment land uses on allocated sites ES15 and ES17 (land to the north and south of Dearne Valley Parkway) known as The Rockingham Phase 2 and 3 development was approved in August 2020 subject to legal agreements.

2.30 The TA submitted in support of the planning application was prepared by Consultants 'Mosodi Limited' and considers the impacts, in full, of the Hoyland North Masterplan Framework including the impact of the proposed Industrial Estate on site ES14 which is the subject of this TA.

2.31 As referred to within the Introduction, the principle of employment development on the site and the impact on the local SRN has already been established and accepted. The Mosodi assessment assumed employment development of 700m^2 of B1 use and 14,400m^2 of B2 use. This is in comparison to the proposed development by GPG for three standalone industrial units (traditional B2 / B8 use class) with a combined total floor area of 13,494m^2.

2.32 Evidence included within the Hoyland North Masterplan Framework, the Transport and Access Appraisal Report by Fore Consulting and information submitted as part of the Rockingham Phase 2 and 3 application is referred to as part of this TA.

3.0 THE APPLICATON SITE AND THE LOCAL HIGHWAY NETWORK

The Application Site

3.1 The site is located approximately 2.0 kilometres to the south east of Birdwell, Barnsley and is bound by the A6195 Dearne Valley Parkway to the north, by undeveloped scrubland to the east, by a strip of woodland directly to the south (on the other side of which are further industrial units) and to the west by a recently constructed roundabout (from Sheffield Road) which serves a mix of other land uses and from which access to the site is proposed.

The Local Highway Network

3.2 The site is currently undeveloped but benefits from an existing connection to the local road network via the adjacent four-arm Sheffield Road roundabout. Sheffield Road roundabout immediately fronts the site to the west and whilst the site access is currently an unused stub arm, the principle of access from this location for future development has clearly been established. To the west of the Sheffield Road roundabout is access into a small development comprising a Starbucks Drive-Thru Coffee shop and PFS. Sheffield Road continues north and south of the roundabout. To the north is a short link of single carriageway, two-way road, approximately 40 metres in length which leads to Rockingham Roundabout with the A6195 Dearne Valley Parkway.

3.3 Rockingham Roundabout is also a four-arm roundabout, with the A6195 Dearne Valley Parkway forming the north-eastern and south-western arms with the access road of Kestrel Way to the north. Kestrel Way is a cul-de-sac which currently provides access to two separate development parcels to the north-east and to the south-west. To the south-west, Kestrel Way serves a further PFS, a Costa Coffee drive-thru and a Taco Bell drive-thru fast-food restaurant and to the north, it serves a mix of uses comprising employment and food / drink units.

3.4 From Rockingham Roundabout, the classified A6195 Dearne Valley Park Way, runs in a general north-south direction for approximately 380 metres from the Rockingham roundabout in the north to the Birdwell Roundabout in the south. Along this length, A6195 Dearne Valley Parkway is dualled in both directions with traffic separated by a central reserve with a safety barrier.

3.5 From the Rockingham Roundabout, the A6195 Dearne Valley Parkway continues north-east for a distance of a kilometre before meeting with a three-arm roundabout, known locally as Shortwood Roundabout.

3.6 The north western arm of Shortwood Roundabout serves the Shortwood Business Park located to the north of the A6195 Dearne Valley Parkway. The north eastern arm of the roundabout which continues as Dearne Valley Parkway provides local access beyond to a number of industrial estates and residential areas.

3.7 Returning to Birdwell Roundabout, to the south-west of Rockingham Roundabout. This roundabout was converted from a conventional roundabout to a signalised roundabout as part of the Dearne Valley regeneration which was completed in September 2017. The A6195 Dearne Valley Parkway forms the northern arm as described previously.

3.8 The A61 Sheffield Road forms the western arm of the roundabout and is a single carriageway, two-way road. The A61 Sheffield Road continues north from Birdwell roundabout, distributing traffic towards Birdwell and Barnsley.

3.9 The A61 also forms the southern arm of Birdwell Roundabout which connects to the SRN at J36 of the M1 as well as settlements to the west, such as Tankersley, Burncross and ultimately Sheffield. From Birdwell Roundabout, the A61 continues as a dual carriageway for a short distance before meeting with Barnsley Roundabout (the grade-separated Junction 36 of the M1).

3.10 The Eastern arm of Birdwell Roundabout is the A6195, which leads to the four arm A6135 Roundabout, approximately 50 metres to the east. Sheffield Road forms the northern arm of this roundabout and leads back towards the proposed site as well as Rockingham Roundabout.

3.11 The Sheffield Road Roundabout, Rockingham Roundabout, Birdwell Roundabout and the A6135 Roundabout form a gyratory of inter-connecting roundabouts, with multiple roundabout arms currently stub arms but with the aim of serving future development. This scheme was delivered to address existing issues and provide capacity for future development related traffic. There are pedestrian crossings and footways on all approaches to the roundabouts and street lighting throughout. As part of the scheme all footways have been installed as 3.0 metre shared use pedestrian/cycle surfaces, meaning that cycle access is off carriageway throughout this part of the network, with the exception of Dearne Valley Parkway between Birdwell Roundabout and Rockingham Roundabout. A drawing of the constructed improvement scheme is attached at **Appendix BGH4.**

Personal Injury Collisions (PICs)

3.12 Details of the personal injury collision record for the local highway network (as described above) have been obtained from the open source CrashMap database (www.crashmap.co.uk) which contains details of all PICs occurring on the highway

network. CrashMap is based on STATS19 records submitted by local police forces which is then reported on by the Department for Transport (DfT), as such the records obtained from CrashMap are considered appropriate for use within this TA.

3.13 PIC records on CrashMap have been reviewed for those PIC's shown within the study area attached at **Appendix BGH5**, and the CrashMap data can be seen at **Appendix BGH6**. Records have been reviewed since 2017 as this is the year the reconfiguration of the local highway network completed, to 2019. It should be noted that some of the PIC's detailed below may have occurred before the reconfigured highway network had finished construction in 2017. The PIC records are summarised in Table 3.1.

Table 3.1: Summary of Personal Injury Collisions

	Severity of Collision		
	Slight	**Serious**	**Fatal**
Rockingham Roundabout	0	2	0
A6195 Dearne Valley Parkway (between Rockingham Roundabout and Birdwell Roundabout)	1	0	0
Birdwell Roundabout	4	1	0
A61 Sheffield Road (west of Birdwell Roundabout)	0	0	0
A6135 Roundabout	2	0	0
A6135 Sheffield Road (between Rockingham Roundabout and A6135 Roundabout)	0	0	0
A6135 Sheffield Road (east of A6135 Roundabout)	0	0	0
Totals	**7**	**3**	**0**

3.14 No (zero) PIC's occurred on A6135 Sheffield Road between Rockingham Roundabout and the A6135 roundabout, this includes in the immediate vicinity of the site access junction. This demonstrates that the existing site access junction and A6135 Sheffield Road are operating safely at present.

3.15 With regards to the remainder of the highway network in the study area and based on the level of information available through the CrashMap, the severity of accidents, and the average accident rate per annum, there is no indication that the local highway network in the vicinity of the application site is operating in an unsafe manner.

4.0 SUSTAINABLE TRANSPORT

4.1 National and local transport policies seek to reduce the need to travel and to promote the use of alternative modes to the private car. The development proposal is consistent with these objectives and includes provision of a FTP to encourage the use of public transport, walking and cycling.

Pedestrian Accessibility

4.2 With regard to pedestrian provision at new developments, guidance is set out within the CIHT document 'Planning for Walking' (March 2015) which describes how approximately 80% of all journeys, shorter than 1 mile (1.6 kilometres), are made wholly on foot. If destinations are within a convenient walking distance, people are more likely to walk if it is safe, comfortable, and the surrounding environment is attractive. Walking is also regarded as an essential part of public transport travel, as bus stops are usually accessed on foot.

4.2 Further guidance is also detailed within the earlier CIHT Publication "Guidelines for Providing for Journeys on Foot" (2000) which sets out the suggested acceptable walking distances for pedestrians without any mobility impairment. The recommended desirable, acceptable and preferred maximum walking distances for commuting/school and other journeys, such as retail/shopping, are shown in Table 4.1.

Table 4.1: Recommended Walking Distances

	Trip Purpose	
	Commuting/School	**Other Journeys (Retail/Shopping)**
Desirable	500 metres	400 metres
Acceptable	1,000 metres	800 metres
Preferred Maximum	2,000 metres	1,200 metres

4.3 The site is within a reasonable walking distance of several residential areas, principally to the north-west of the site at Birdwell and to the east towards Hoyland. These areas are both circa 1.0 kilometres walking distance from the site which equates to a 15-minute walk time.

4.4 There are existing footways on A6195 Dearne Valley Parkway which link with the Rockingham roundabout and the site access to the west. Crossing points are provided across the A6195 carriageway to the south via a series of Toucan crossings. Uncontrolled crossing points are provided across the Kestrel Way arm of the Rockingham roundabout to ensure accessibility for pedestrians wishing to walk to / from the A6195 to the north-east. It is considered that the site is well located to promote trips by foot.

Cycle Accessibility

4.5 The CIHT publication "Planning for Cycling" (October 2014) states that cycling is one of the most sustainable forms of transport, and it has great potential for increases in use. The report states that the majority of cycling trips are for short distances, with 80% being less than 5 miles (8 kilometres).

4.6 The areas of Hoyland, Brampton, Chapeltown, Wombwell and a large part of Barnsley are within 8.0 kilometres of the application site. This represents a significant residential catchment and the development site is therefore located within cycling distance of a very large population. However, more importantly, it is readily accessible to local residents and businesses.

4.7 There are shared footways in the vicinity of the site and National Cycle Network (NCN) Route 67 is located approximately 1.0 kilometres to the south of the site. This route runs from Long Whatton near Loughborough to join National Route 71 near Northallerton in North Yorkshire. NCN Route 62 is also located approximately 3.1 kilometres to the north of the site and runs locally between Worsbrough and Wombwell.

Public Transport Accessibility

Bus

4.8 With regard to public transport provision at new developments, the CIHT publication "Buses in Urban Developments" (January 2018) refers to a maximum walking distance to bus stops of 400 metres, which has been applied for many years. The CIHT document "Planning for Walking" (March 2015) also states that 400 metres has traditionally been regarded as a cut-off point for walking to bus stops.

4.9 There are currently no operating bus routes along A6195 Dearne Valley Parkway in the vicinity of the development site. There are various bus routes along the A61/A6135 corridor, operating frequent services between Sheffield and Barnsley, as well as smaller towns such as Birdwell, Hoyland, Tankersley and Worsbrough.

4.10 The nearest bus stops to the development are located on the A6135 Sheffield Road, to the east of the A6135 Roundabout, circa 400 metres walking distance from the

access into the development on Sheffield Road. These stops can be accessed from the site by using the footways on Sheffield Road and using the existing pedestrian crossing facilities. Whilst this is at the recommended 400 metre walking distance, it is considered an acceptable distance given the provision of high frequency and quality services.

4.11 Details of the services which are available at these stops are shown in Table 4.2 below, with an extract from the South Yorkshire Transport services map attached at **Appendix BGH7**. It should be noted that this timetable is based on pre Covid-19 services.

Table 4.2: Summary of Existing Bus Services

Route Number	Route Description	Frequency		
		Monday - Saturday	Evening	Sunday
2/X2	Barnsley-Chapeltown-Sheffield-Royal Hallamshire Hospital	30 mins (X2)	60 mins (2)	60 mins (2)
66	Barnsley-Hoyland-Elsecar	15 mins	60 mins	30 mins
67/67A/67C	Barnsley-Hoyland-Wombwell	30 mins	30 mins	30 mins
X17 (A61 Sheffield Road stop only)	Barnsley-Sheffield-Matlock	60 mins	60 mins	60 mins

Rail

4.12 The nearest railway station to the site is Elsecar railway station, located circa 3.5 kilometres to the east of the site. Whilst the railway station is not immediately accessible for pedestrians, it is accessible via a direct link from bus services 66, 67, 67A and 67C. This provides opportunity for combined bus / rail journeys to and from the site for those travelling from further afield.

4.13 Elsecar railway station has circa 4 services per hour, providing links to local areas within Yorkshire including Huddersfield, Sheffield, Barnsley, Wakefield and Leeds. It should be noted that this timetable is based on pre Covid-19 services.

Summary

4.14 In summary, it is considered that the development is well located to promote trips by walking and cycling to and from the local residential areas. The development is

also well located to promote trips by public transport, utilising the existing bus stops on A6135 Sheffield Road. Elsecar railway station is also located within a short bus journey of the development for those travelling from further afield.

5.0 THE DEVELOPMENT PROPOSALS

5.1 The proposed development by GPG seeks permission for an industrial estate on land served from the A6195 Dearne Valley Parkway, Birdwell, Barnsley, South Yorkshire.

5.2 The proposed Industrial Estate will include three standalone industrial units with a combined total floor area of 13,494m² and 166 car parking spaces. The units are likely to be a mix of warehouse / distribution and traditional industrial with a small ancillary element of office space. Plans showing the proposed site layout are attached at **Appendix BGH8**. The respective floor areas for each unit are as follows:-

Table 5.1: Proposed Unit Size and Car Parking

Unit	GFA of unit (m²)	Car Parking
Unit 1	3,507.1	46
Unit 2	5,992.3	67
Unit 3	3,994.8	53
Total	**13,494**	**166**

5.3 Vehicular access to the site will be provided from the existing Sheffield Road Roundabout from the stub arm which leads directly into the site. A vehicle tracking assessment has been undertaken in the design programme AutoCAD at this junction , along with the proposed internal arrangements and these are attached at **Appendix BGH9**. The swept path analysis demonstrates that a 16.5m HGV (max length legal vehicle) is able to enter the site and manoeuvre efficiently without compromising the safety of other road users or pedestrians.

5.4 Car parking will be provided for each of the proposed units in accordance with the above table. With refence to the Councils Local Plan Supplementary Planning Document (SPD) entitled 'Parking', adopted in November 2019, the parking standards for B2 / B8 land uses outside of the Barnsley Urban area are summarised in Table 5.2 overleaf.

Table 5.2: Car Parking Standards

Unit	GFA of unit (m^2)	B2 1 space per 30-50m^2	B8 1 space per *	Number of Spaces Proposed
Unit 1	3,507.1	68 spaces	29 spaces	46 spaces
Unit 2	5,992.3	117 spaces	45 spaces	67 spaces
Unit 3	3,994.8	78 spaces	32 spaces	53 spaces
Total	**13,494**	263 spaces	94 spaces	**166 spaces**

** B8. 1 space per 60 up to 300m^2 then 1 space per 100 up to 1,000m2 then 1 space per 150m2 thereafter).*

5.5 Table 5.2 indicates that the suggested parking provision at the proposed development could range between a higher value for B2 use (across the development) of 263 parking spaces or a lower level of 94 spaces (across the development) for B8 use. Given the likely mix of occupiers at the site, the proposed allocation of 166 spaces (1 space per 81m^2) is considered appropriate.

5.6 The proposed provision will also account for periods of shift change over and will limit employees parking off-site on the adjacent industrial estate access road.

5.7 The proposed level of car parking will also help to promote access by alternative modes of transport, especially when the sustainable location of the development and the FTP are taken into consideration.

5.8 Accessible parking will also be provided at each of the proposed units in accordance with the required Parking SPD.

5.9 8 Electric Vehicle Charging Points (EVCP) will be provided as part of the development proposals, additional EV infrastructure (Ducting) will be in place to allow future installation of EVCP if demand dictates.

5.10 With regard to cycle parking, 10 covered cycle spaces per unit will be provided. This level of cycle parking is considered appropriate and in broad alignment with the Parking SPD (subject to confirmation of staff numbers) with 1 space per 40 permanent employees suggested for Storage and Distribution development and 1 space per 1,000m^2 for visitors. The cycle parking spaces usage will be kept under review and should future demand make it necessary, additional cycle parking spaces will be provided.

6.0 DEVELOPMENT TRIP GENERATION AND DISTRIBUTION

6.1 The site is currently undeveloped but is allocated for employment use within the Council's Adopted (January 2019) Local Plan as Site ES14. The site also forms part of the wider Hoyland North Masterplan which was produced in December 2019.

6.2 As set out within the earlier Chapters of this TA, the impact of an employment allocation on the site has been previously demonstrated and accepted by the Council (with respect to the local highway network) and HE (with respect to the SRN).

6.3 The site has previously been assumed to accommodate employment development of 700m^2 of B1 use and 14,400m^2 of B2 use. This is in comparison to the proposed development by GPG for three standalone industrial units (traditional B2 / B8 use class) with a combined total floor area of 13,494m^2.

6.4 Despite the fact that the proposed developed is likely to result in fewer trips on the highway network than previously envisaged, an assessment of the predicted trip generation and distribution of the proposed development traffic has been undertaken. This is detailed, with reference to previous supporting assessments for the site and the Local Plan as below.

Trip Generation

6.5 Vehicle trip rates for the proposed employment development have been derived from the Mosodi TA which was submitted in support of the approved Rockingham Phase 2 and 3 development. The Mosodi report considered the impact of all sites allocated in the Hoyland North Masterplan (including site ES14).

6.6 In order to derive trip rates and trip generation, Mosodi utilised the trip rates derived by Fore Consulting as part of the Transport and Access Appraisal Report produced to inform the Hoyland Masterplan Framework.

6.7 Table 6.1 and 6.2 overleaf detail the floor areas, trip rates and resulting trip generation as utilised by Mosodi within the approved Rockingham Phase 2 and 3 development TA and in specific reference to the development quantum assumed at the time for Allocation ES14:-

Table 6.1: Trip Rates from Mosodi TA for ES14

Land Use	Trip Rate (per 100m²)					
	Morning Peak Hour			Evening Peak Hour		
	Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
B1 (700m²)	1.164	0.126	1.290	0.099	1.075	1.174
B2 (14,400m²)	0.211	0.059	0.270	0.067	0.194	0.261

Table 6.2: Trip Generation from Mosodi TA for ES14

Land Use (B1 – 700m² and B2 - 14,400sqm)	Trip Generation ES14					
	Morning Peak Hour			Evening Peak Hour		
	Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
B1 (700m²)	8	1	9	1	8	9
B2 (14400m²)	30	8	38	10	28	38
Total Traffic Generation	38	9	47	11	35	47

6.8 Allocation ES14 was previously assumed to generate traffic in the order of 47 two-way vehicle trips on the highway network during both the morning and evening peak hour peaks. This level of traffic has been accepted at Local Plan stage and as part of the approved Rockingham Phase 2 and 3 proposals.

6.9 With respect to the proposed quantum of development as dealt with by this TA associated with the GPG proposals, approval is sought for some 13,494m² of Industrial land use (B2 / B8 including ancillary offices).

6.10 Given the broadly similar land uses, but the lower quantum of development for which planning approval is sought (a difference of some 906m²) it is reasonable to state that the proposals will be less traffic intensive than previously accepted. This is demonstrated by Table 6.3 overleaf.

Table 6.3: Proposed Trip Generation (GPG proposals)

Land Use B2 (13,494m²)	Trip Generation (proposed development on ES14)					
	Morning Peak Hour			Evening Peak Hour		
	Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
Trip Rate B2	0.211	0.059	0.270	0.067	0.194	0.261
Traffic Generation	28	8	36	9	26	35

6.11 Using the previously agreed trip rates included in the Rockingham Phase 2 and 3 application the proposed development is expected to generate 36 two-way trips in the morning peak and 35 in the evening peak. This is 11 fewer trips in the morning peak and 12 fewer trips in the evening peak than was considered in previous assessments.

6.12 Despite this, further information in support of this argument, is detailed in the following Chapter.

7.0 TRAFFIC IMPACT ON THE LOCAL HIGHWAY NETWORK

7.1 As set out within this report and in Section 6 of the Mosodi TA, submitted in support of the Rockingham Phase 2 and 3 development, a larger quantum of employment development on allocation ES14 was previously considered. The TA concluded that all allocated sites within the full Hoyland North Masterplan Framework can be accommodated on the existing highway network in a future year scenario of 2029.

7.2 The Environmental Statement (Volume 1) produced by Cushman and Wakefield and submitted in support of the Rockingham Phase 2 and 3 development included details of the link flows associated with the full Hoyland North Masterplan Framework.

7.3 The image below, taken from Table 6.6 of the Environmental Statement, demonstrates that the predicted trips associated with the full Hoyland North Masterplan Framework do not result in a significant increase in traffic across both the local and strategic highway network.

Junction Ref	Highway Link	AM Peak Hour				PM Peak Hour			
		2029 Baseline	Dev	2029 + Dev	% Change	2029 Baseline	Dev	2029 + Dev	% Change
1	M1S	1903	33	1936	1.70%	2096	31	2127	1.48%
2	A61 (west of M1)	2383	45	2428	1.85%	2238	43	2281	1.92%
3	M1 N	2321	40	2361	1.69%	2119	38	2157	1.79%
4	A61 Sheffield Road	1692	18	1710	1.05%	1959	17	1976	0.87%
5	A61 Link East of M1 J36	3830	117	3947	2.96%	3929	113	4042	2.88%
6	A6135 S of B6096	908	27	935	2.89%	983	18	1001	1.83%
7	Tankersley Lane	509	0	509	0.00%	602	0	602	0.00%
8	B6096	997	0	997	0.00%	1123	0	1123	0.00%
9	A6135 N of B6096	1211	19	1230	1.54%	1341	18	1359	1.34%
10	A6195 S of Kestrel Way	2231	135	2366	5.71%	2516	130	2646	5.17%
11	Sheffield Road	343	19	362	5.25%	197	18	215	9.14%
12	A6195 W of Phase 3	2445	154	2599	5.93%	2599	149	2748	5.73%
13	A6195 E of Phase 3	2445	146	2591	5.63%	2599	142	2741	5.46%
14	Proposed Access Road								
15	A6195 E of Phase 2	2379	63	2442	2.58%	2499	61	2560	2.44%

Table 6.6: 2029 Increases in Peak Hour Traffic Volumes Resulting from the development

7.4 The Environmental Statement goes on to conclude that:-

'…The 2029 design scenario includes all committed development and also the wider Hoyland North Masterplan area (see Figure 2.2 p7). Therefore the 2029 design scenario represents the cumulative impact assessment as agreed with the highway authorities when scoping the TA. It was agreed that a

development scenario without this traffic included would not be necessary. If the committed and allocated traffic was removed it would be required to be replaced by background traffic growth i.e. replacing one with the other'.

7.5 Based on this conclusion and given that the proposed development generates less traffic than that previously considered, it is not considered necessary for further assessment of the off-site highway network to be undertaken as part of this TA.

Site Access

7.6 For completeness, this TA does consider the operation of the Sheffield Road site access roundabout in detail.

7.7 As detailed previously the proposed access is constructed. The proposed development does not seek to alter its form and as such further presentation of construction details etc for the roundabout are not required as part of this TA.

Trip Distribution

7.8 The TA submitted in support of the Rockingham Phase 2 and 3 development utilised the trip distribution from the Transport and Access Appraisal Report which was written by Fore Consulting to inform the Hoyland North Masterplan Framework. Fore Consulting used information from the Journey to Work (JTW) dataset (from the 2011 Census) to derive appropriate assignment patterns for traffic. This approach was also adopted by Mosodi to assess the impact of all allocations within the Hoyland North Masterplan Framework. The distribution is therefore deemed fit for purpose and the full network distribution can be seen at **Appendix BGH10**.

7.9 The trips generated by allocation ES14 as calculated in the Mosodi Limited TA based on 700m^2 of B1 land use and 14,400m^2 of B2 land use have been distributed across the highway network using the trip distribution at **Appendix BGH10**, the distribution of these trips can be seen at **Appendix BGH11**.

7.10 Similarly, the trips generated by the proposed development of 13,494m^2 of B2 Industrial land use (including ancillary offices) have also been distributed across the highway network using the same distribution, the distribution of the proposed development trips can be seen at **Appendix BGH12**.

7.11 It has already been demonstrated that the trips generated by the proposed development on allocation ES14 are less than those considered acceptable in the Mosodi Report for the Rockingham Phase 2 and 3 application. The distributions at **Appendix BGH11** and **Appendix BGH12** further demonstrate that the impact on the wider road network will be lower than that which has already been approved. It is therefore not considered necessary to model junctions on the wider road network.

Assessment of the Site Access Roundabout

7.12 In order to demonstrate the suitability of the proposed access, two separate capacity assessments have been undertaken using two datasets.

7.13 The first assessment considers the assumed number of trips associated with the allocation sites associated with the Hoyland North Masterplan Framework. This includes a higher quantum of development for the development site, allocation ES14 (700m^2 B1 land use and 14,000m^2 B2 land use). These traffic flows are attached at **Appendix BGH13** and the results of the assessment are summarised in Table 7.1. This is referred to as the 'Base' scenario.

7.14 The second assessment is based on the proposed allocations associated with the Hoyland North Masterplan Framework with the trips generated by allocation site ES14 reduced to reflect the revised floor area of 13,494m^2 of B2 Industrial land use. These traffic flows are attached at **Appendix BGH14** and the results of the assessment are summarised in Table 7.2. This is referred to as the 'Predicted' scenario.

7.15 The full modelling outputs for both scenarios are attached at **Appendix BGH15**.

Table 7.1: 2029 Base – Site Access Roundabout

Arm	2029 Base			
	Morning Peak Hour		Evening Peak Hour	
	RFC	Queue	RFC	Queue
Site Access	0.01	0	0.03	0
Sheffield Road South	0.08	0	0.07	0
Starbucks	0.02	0	0.01	0
Sheffield Road North	0.23	0	0.19	0

7.16 Table 7.1 demonstrates that the site access roundabout operates well below capacity in the 'Base' scenario and can accommodate background traffic growth as well as the assumed number of trips associated with the allocation sites associated with the Hoyland North Masterplan Framework. This analysis supports the previous decision to allocate the site and approve it as part of the Rockingham Phase 2 and 3 application.

Table 7.2: 2029 Predicted – Site Access Roundabout

Arm	2029 Predicted			
	Morning Peak Hour		Evening Peak Hour	
	RFC	Queue	RFC	Queue
Site Access	0.01	0	0.02	0
Sheffield Road South	0.08	0	0.07	0
Starbucks	0.02	0	0.01	0
Sheffield Road North	0.23	0	0.19	0

7.17 The 2029 'Predicted' assessment summarised in Table 7.2 similarly demonstrates, that the site access roundabout operates marginally better than in the 'Base' assessment (evening peak hour period) due to the lower quantum of trips generated by the proposed development compared to the ES14 BMBC allocation trips from the Hoyland North Masterplan Framework.

7.18 The modelling exercise undertaken above demonstrates that the proposed site access is suitable to accommodate the proposed Industrial Estate. Given that the traffic flows associated with the proposed development are lower than those assumed in the Hoyland North Masterplan Framework and used in the Rockingham Phase 2 and 3 application this assessment is considered robust.

8.0 SUMMARY AND CONCLUSIONS

8.1 This Transport Assessment has been prepared by Bryan G Hall and forms part of the planning application submission package by Gregory Property Group. The application seeks permission for an industrial estate on land served from the A6195 Dearne Valley Parkway, Birdwell, Barnsley, South Yorkshire. The proposed Industrial Estate will include three standalone industrial units with a combined total floor area of 13,494m^2 and 166 total car parking spaces.

8.2 The site is located to the south east of Birdwell, Barnsley, and is bound by the A6195 Dearne Valley Parkway to the north, by undeveloped scrubland to the east, by a strip of woodland directly to the south (on the other side of which are further industrial units) and to the west by a recently constructed roundabout (from Sheffield Road) which serves a mix of other land uses and from which access to the site is proposed.

8.3 Vehicular access to the site will be provided from the existing Sheffield Road Roundabout and the stub arm which leads directly into the site.

8.4 The site is currently undeveloped but is allocated for employment use within the Adopted (January 2019) Barnsley Council Local Plan as Site ES14. The site also forms part of the wider Hoyland North Masterplan which was produced in December 2019.

8.5 Analysis of Personal Injury Collisions (PIC's) which have occurred during the study period has not identified any existing road safety issues and it is concluded that the highway network in the vicinity of the site is operating safely at present.

8.6 It is considered that the development is well located to promote trips by walking and cycling to and from the local residential areas. The development is also well located to promote trips by public transport, utilising the existing bus stops on A6135 Sheffield Road. Elsecar railway station is also located within a reasonable distance of the development for those travelling from further afield.

8.7 The impact of an employment allocation on the site has been previously demonstrated and accepted by the Council (with respect to the local highway network) and HE (with respect to the SRN).

8.8 The site was previously assumed to accommodate employment development of 700m^2 of B1 use and 14,400m^2 of B2 use. This is in comparison to the proposed

development by Gregory Property Group for three standalone industrial units (traditional B2 / B8 use class) with a combined total floor area of 13,494m^2.

8.9 The proposed development is expected to generate 36 two-way trips in the morning peak and 35 in the evening peak. This is 11 fewer trips in the morning peak and 12 fewer trips in the evening peak than was considered in previous assessments. Therefore, the impact on the wider road network will be lower than that which has already been considered acceptable. It is therefore not considered necessary to model junctions on the wider road network.

8.10 The modelling exercise undertaken at the site access roundabout demonstrates that the proposed site access is suitable to accommodate the proposed Industrial Estate. Given that the traffic flows associated with the proposed development are lower than those assumed in the Hoyland North Masterplan Framework and used in the Rockingham Phase 2 and 3 application this assessment is considered robust.

8.11 It is concluded therefore that there are no justifiable highways or transportation reasons which would prevent the proposed development from being granted planning consent.

APPENDIX BGH 1

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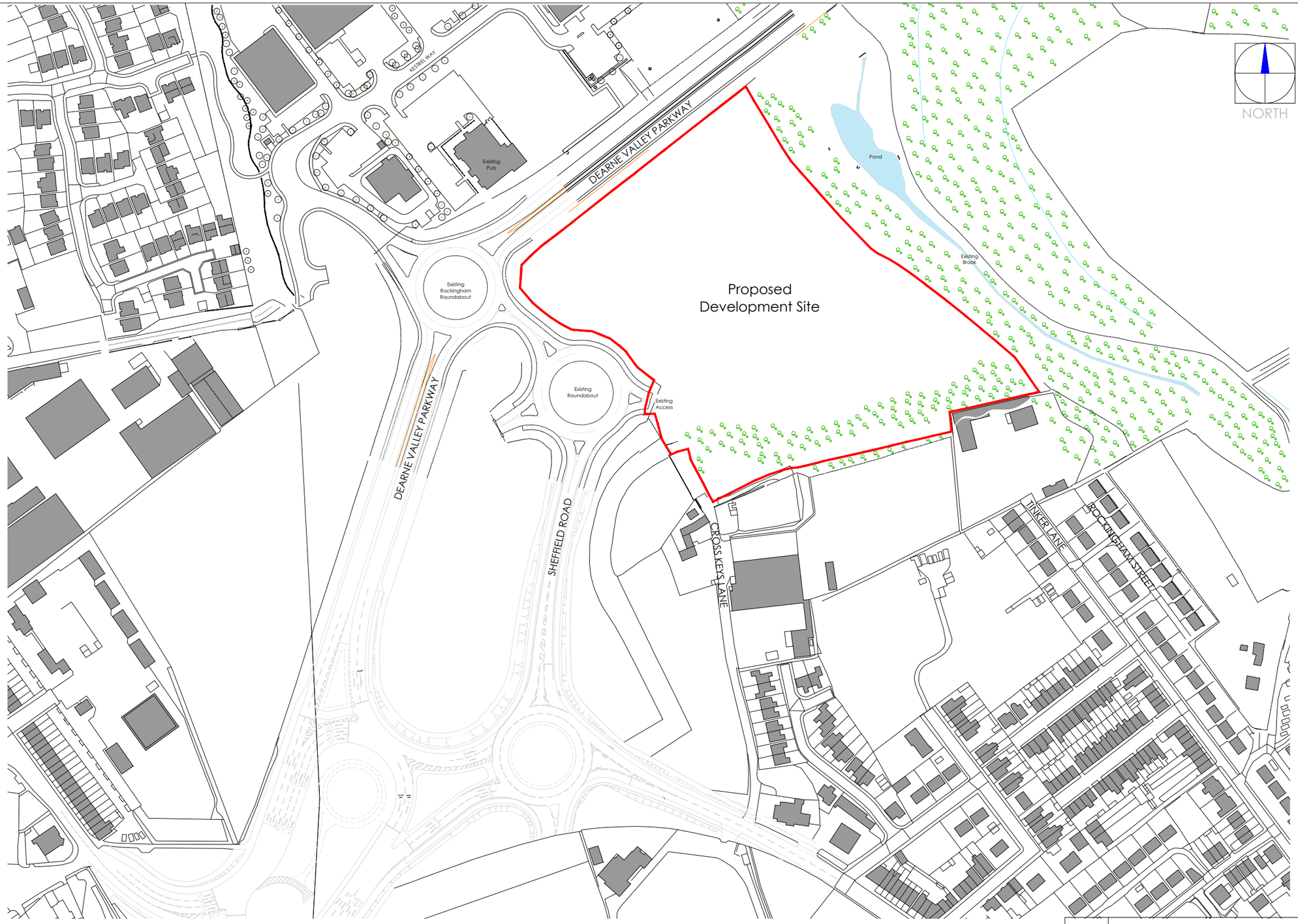

Note:
Information is based on OS map and received information and is subject to full topographical and building survey.
Assumed site boundary and site constraints subject to confirmation.
All Legal easements and extent of existing underground services locations are subject to confirmation.

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SCALE 1:2500

Rev	Date	Description	Rev By	Chk'd By

Project Title	PROPOSED INDUSTRIAL DEVELOPMENT Dearne Valley Parkway Barnsley				
Client	Gregory Properties				
Status	FOR PLANNING				
Scale	1:2500		Drawing Size	A3	
Date	02.2021	Drawn By	NBB	Checked	PSM

Drawing Title	LOCATION PLAN
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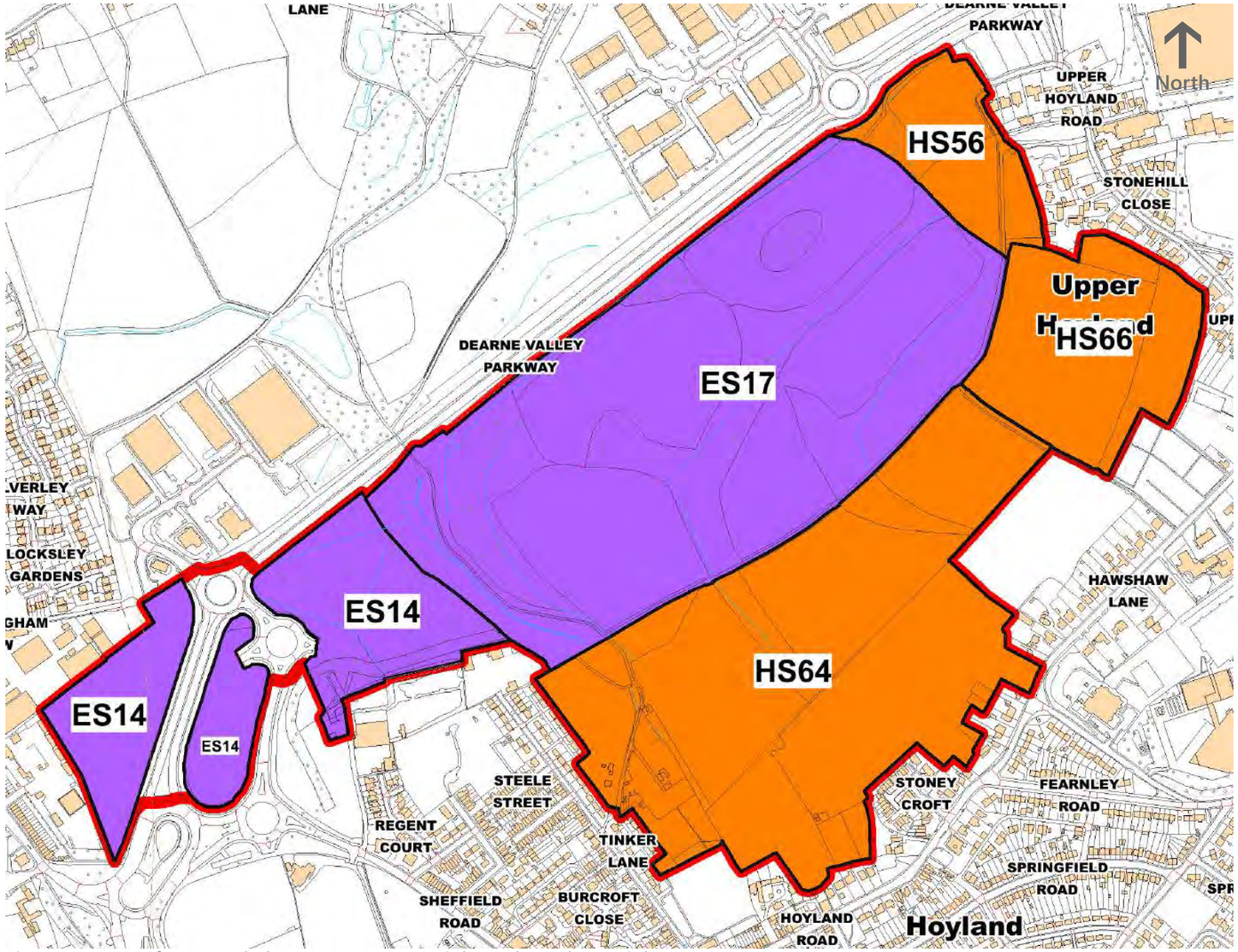
APPENDIX BGH 2



KEY

- Hoyland North Masterplan Framework
- Local Plan housing allocation
- Local Plan employment land allocation

Figure 8: Extract from Local Plan (© Crown Copyright and Database Rights (2019). 100022264)

APPENDIX BGH 3

KEY

- Site boundary
- Residential parcels
  - Low density
  - Medium density
  - High density
- Employment parcels
- Link road / primary road
- Traffic calming features
- Shared surface street
- Private drive
- Public open space
- Pedestrian / cycle route
- Retained, enhanced and proposed trees / vegetation
- Proposed trees
- Retained pond & watercourse
- Indicative SuDS ponds
- Potential SuDS pond
- Opportunity for landmark building

*Design subject to levels

Figure 14: Masterplan Framework

APPENDIX BGH 4

Appendix 3

M1 Junction 36 – A6195 Dearne Valley Economic Growth Corridor (Phase 1 Hoyland)

Background

As referenced in the Cabinet report (CAB) Reference 26.8.2015/12, the first priority for the delivery of the Strategic Growth Clusters was the progression of the M1 J36 Phase 1 outline business case for Hoyland and Goldthorpe..

In June 2014 Sheffield City Region approved the SCRIF outline business case for the M1 Junction 36 Dearne Valley Economic Growth Corridor, which included both Hoyland and Goldthorpe.

Major investment along the M1 J36 A6195 Dearne Valley economic growth corridor is critical to resolving not only current road infrastructure and congestion issues but more importantly will build the capacity required to unlock significant employment land, opening up the regeneration and growth of the whole Dearne corridor (Goldthorpe and Hoyland), required to achieve local and city region growth aspirations.

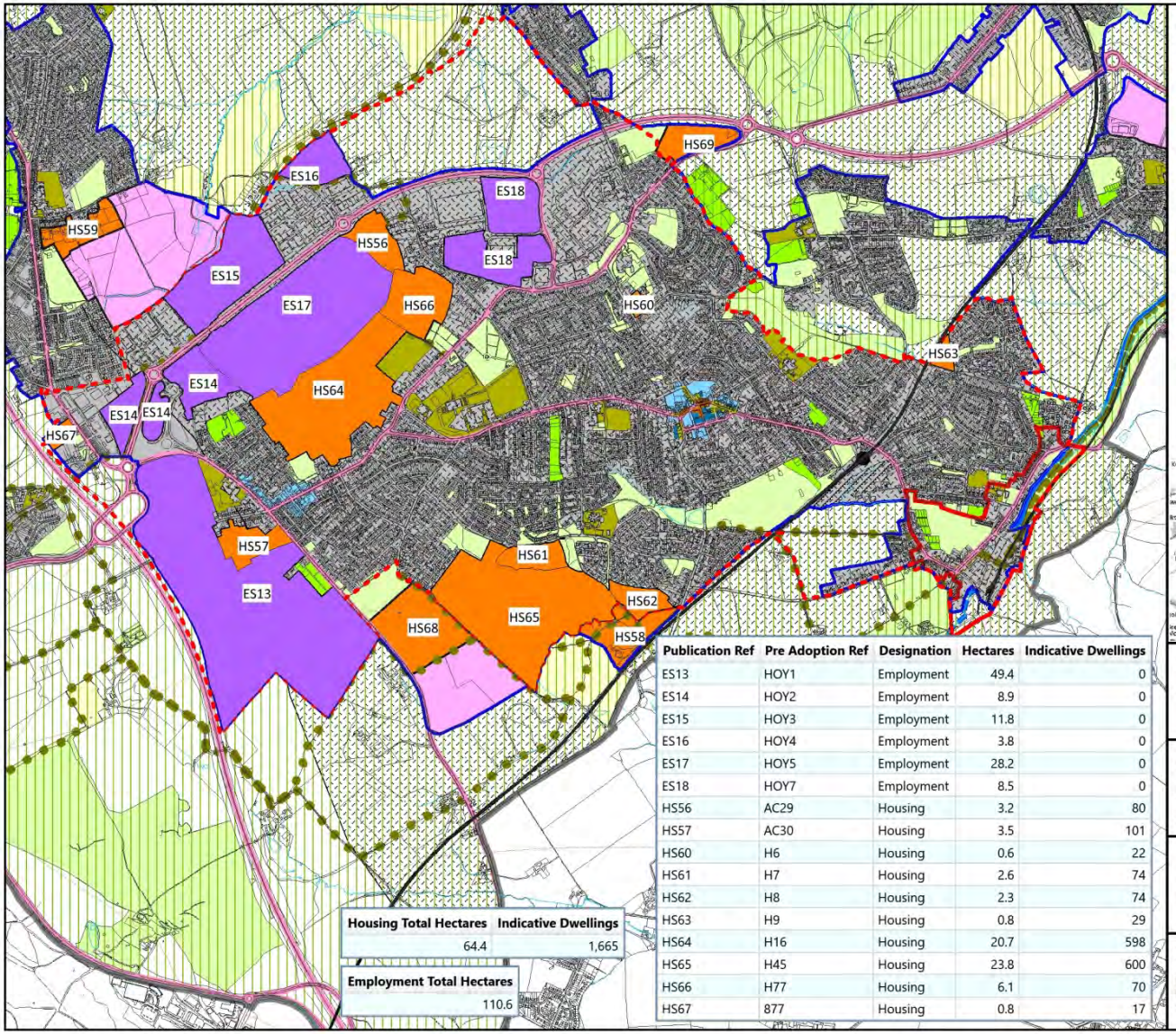
It was acknowledged that delivery of the works at the Hoyland end of the A6195 corridor was critical, and due to the timescales involved in bringing forward the proposed employment land at Goldthorpe it was agreed with SCR that full business cases to secure the SCRIF resources would be submitted separately as Phase 1 Hoyland and Phase 2 Goldthorpe.

Current Situation:

The full business case for the M1 Junction 36 – A6195 Dearne Valley Economic Growth Corridor (Phase 1 Hoyland) was approved by the SCR Combined Authority in 2015, and the funding agreement for £15.708m was executed on 23rd March 2016.

This secured the necessary SCRIF investment for the overall road improvements, which could not be provided by a single developer or a first end user, plus gap funding for onsite infrastructure of the new development sites proposed through the Consultation Draft Local Plan. The Local Plan, subsequently adopted by full council on 3rd January 2019 CAB 12.12.2018/8 allocates 297ha of land for employment purposes, including 110ha at Junction 36 Hoyland, which can be developed upto 2033 to assist with the delivery of the overall Local Plan employment target of 28,840 jobs including around 16,920 net additional jobs.

A map highlighting the Local Plan allocations in the vicinity of the M1 Junction 36 Hoyland is attached to this report



Publication Ref	Pre Adoption Ref	Designation	Hectares	Indicative Dwellings
ES13	HOY1	Employment	49.4	0
ES14	HOY2	Employment	8.9	0
ES15	HOY3	Employment	11.8	0
ES16	HOY4	Employment	3.8	0
ES17	HOY5	Employment	28.2	0
ES18	HOY7	Employment	8.5	0
HS56	AC29	Housing	3.2	80
HS57	AC30	Housing	3.5	101
HS60	H6	Housing	0.6	22
HS61	H7	Housing	2.6	74
HS62	H8	Housing	2.3	74
HS63	H9	Housing	0.8	29
HS64	H16	Housing	20.7	598
HS65	H45	Housing	23.8	600
HS66	H77	Housing	6.1	70
HS67	877	Housing	0.8	17

Housing Total Hectares	Indicative Dwellings
64.4	1,665

Employment Total Hectares
110.6

Clusters Map Key
Adopted Local Plan 2019

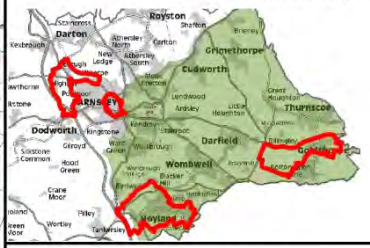
BMBC Priority Clusters

Adopted Housing Allocations

Adopted Employment Land Allocations

See supplementary key for all other Local Plan allocations

Nature Improvement Area in relation to Priority Clusters



Project: SCR Priority Clusters Barnsley

Drawing: Hoyland

Drawn by: ES

Drwg No: 001

Date: 09/01/2019

Scale 1: 17,000

NORTH

BARNSLEY Metropolitan Borough Council

PLACE

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The SCRIF Funding Agreement for £15.708m provides support for delivery of four work packages .

Work package 1: The purpose of work package 1, allocated £9.6m SCRIF is to complete a series of major infrastructure works around M1 Junction 36 to reduce existing congestion, mitigate environmental issues and facilitate the employment and indirectly the housing growth aspirations at Hoyland.

The delivery of the highway infrastructure around the vicinity of the A61 Birdwell Roundabout , as part of work package 1 was completed in September 2017. (see photograph below)

Work packages 2,3 & 4 :The purpose of work packages 2,3 & 4 (£6.04m in total) is to provide gap funding for onsite viability works for the proposed employment sites ES13 (former site reference HOY1), ES15 (former site reference HOY3) and ES17 (former site reference HOY5), as identified in the adopted Local Plan map above which identifies the current and proposed employment site references which are referred to in this report) to assist with the delivery of the overall Local Plan employment target of 28,840 jobs including around 16,920 net additional jobs.

To mitigate any risk to the council of potential grant funding clawback from Sheffield City Region due to none delivery, back to back Development Agreements are in place with Harworth Estates, Hoyland Land Developments / CRM Land & Developments Ltd, and a promotion agreement is in place with The Wentworth Charity with a Development Agreement annexed that will be passed on to their preferred developer once appointed (Currently in negotiation with a preferred partner).

The determination of the actual works required, and phasing of delivery is subject to an ongoing masterplanning exercise, and once it has been determined whether there is a variation in the elements of works that require SCRIF grant funding this will be submitted to Sheffield City Region for approval via a formal change request.

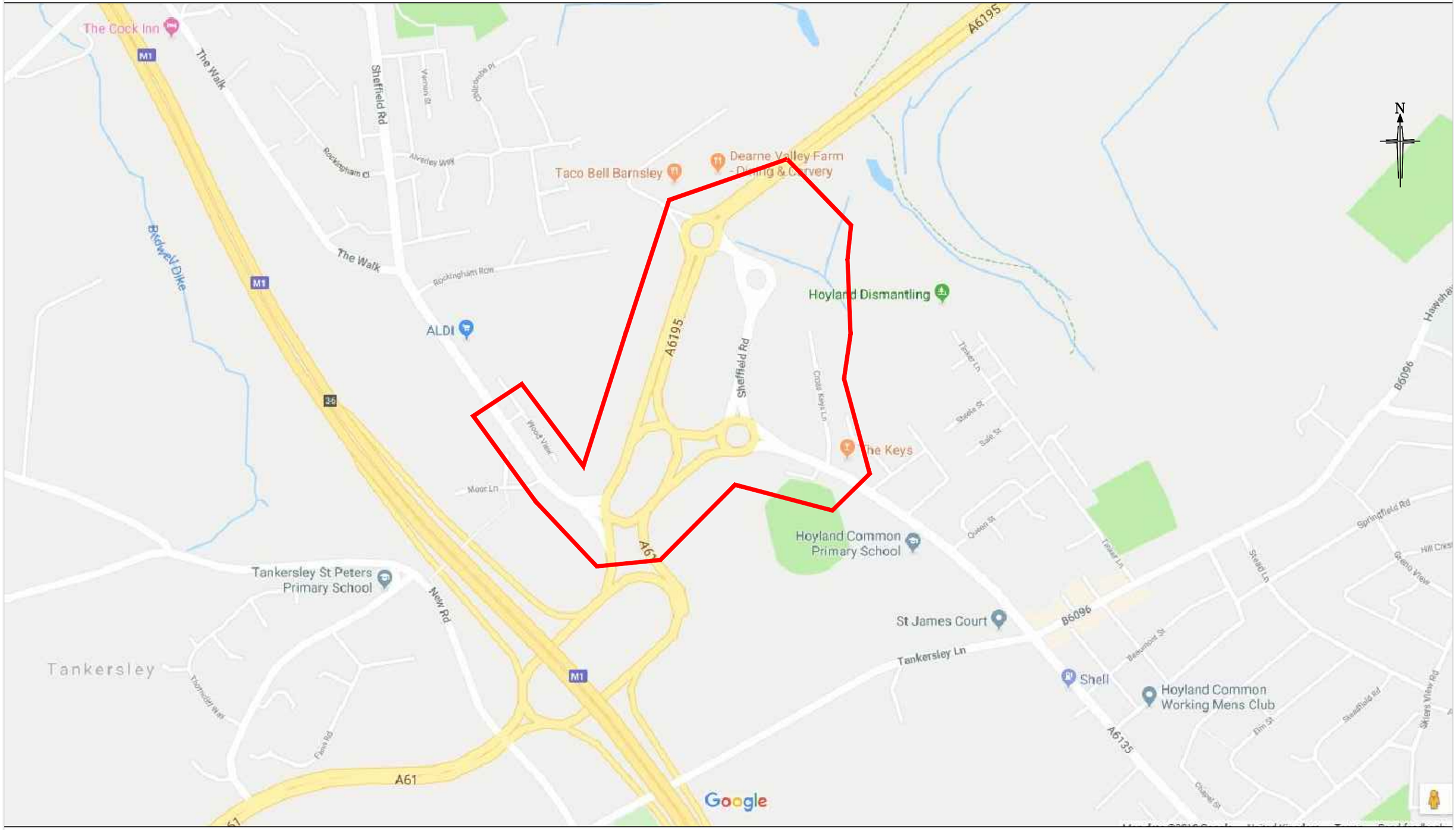
Next Steps

Regular keep in touch meetings and technical meetings are now taking place with Harworth Estates, Hoyland Land Developments and Wentworth Estates, looking at detailed design options and the completion of the Masterplanning exercises will inform the timetable for delivery of the SCRIF funded site viability work and subsequent delivery of the SCR Funding Agreement Outputs and Outcomes.

The determination of the actual works required, and phasing of delivery is subject to the ongoing masterplanning exercise, and once it has been determined whether there is a variation in the elements of works that require SCRIF grant funding this will be submitted to Sheffield City Region for approval via a formal change request to ensure all external grant funding secured is retained, whilst ensuring that the overall aims and objectives of the scheme are achieved.

The developers are being provided with the appropriate support to ensure that now the Local Plan has been adopted, the masterplanning exercise and subsequent planning applications can be progressed in a timely manner to ensure that delivery can be achieved once planning permission has been granted in line with SCR funding timescales.

APPENDIX BGH 5



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Title: ACCIDENT DATA REQUEST LOCATION PLAN

Status: PLANNING

Scale: NTS | Drawn: DG | Chkd: AB | Appvd: -

Rev:	Date:	Amendment:	DRN	CHK	APR

Client: -

Project: DEARNE VALLEY PARKWAY

Drawing No: 20/262/LOC/001

Revision: -

APPENDIX BGH 6

crashmap.co.uk

CrashMap Data: Great Britain 1999 - 2019 (verified)

Home | CrashMap Pro | FAQ | Contact us | Log

Map | Satellite

Hide

Location: S70 5SU

Years

3 of 21 years selected

Check all | Uncheck all

- [x] 2019
- [x] 2018
- [x] 2017
- [ ] 2016
- [ ] 2015

Casualty Types:

All Casualty Types

Vehicles Involved:

All Vehicle Types

Search

Incident Severity

Slight | Serious | Fatal

17 results found

Open Government Licence

Rockingham Travel
Ebony Mews
DJK Floats and Tackle
Green Spirit Hydroponics
RTN Clayton Vallely Limited
The Academy Theatre
ALDI
Cafe 334
Aetherius Society
Tankersley St Peters Primary School
DUNKIN' Rockingham Takeaway
Taco Bell Takeaway
Kay Group Rockingham (BP)
Greggs Takeaway
Costa Coffee Takeaway • Delivery
Starbucks Coffee Takeaway
Hoyland Dismantling
The Rockingham Centre
The Keys
JET
L S Valeting
The Hare & Hounds Takeaway
Hoyland Common Primary School
Jacinta
Co-op Food
The Star Hotel
King George V Playing Field
Forge Seg
Rockingham Roundabout
Birdwell Roundabout
Sheffield Rd
The Walk
Rockingham Row
Wood View
Moor Ln
Tank Top Bridge
Cross Keys Ln
Regent St
Queens Cres
Tinker Ln
Rockingham St
Steele St
Sale St
Tranmoor Ct
Burcroft Cl
Deane
A61
A6195
A6135
M1

APPENDIX BGH 7

BBP Barnsley Bus Partnership

BARNSLEY Bus Map

From 25 January 2020

Travel South Yorkshire

travelsouthyorkshire.com/bbp

BBP Barnsley Bus Partnership

Making bus travel in Barnsley easier.

The organisations responsible for bus travel in Barnsley are working together to improve your services.

We are the Barnsley Bus Partnership.

The result is a simpler, more coordinated service. You can now travel around the town much more easily, with tickets you can use on any bus in the Barnsley area. Bus passengers are already seeing a big difference and there's much more still to come.

How will you benefit?

- An easier to understand and simpler bus network
- Coordinated timetables
- Great value ticket range for travel on any bus in Barnsley
- More frequent services on a number of routes

Who is in the Barnsley Bus Partnership?

- Barnsley Metropolitan Borough Council
- Stagecoach Yorkshire
- South Yorkshire Passenger Transport Executive
- Watersons Coaches
- Globe Coaches

Travel South Yorkshire travelsouthyorkshire.com/bbp

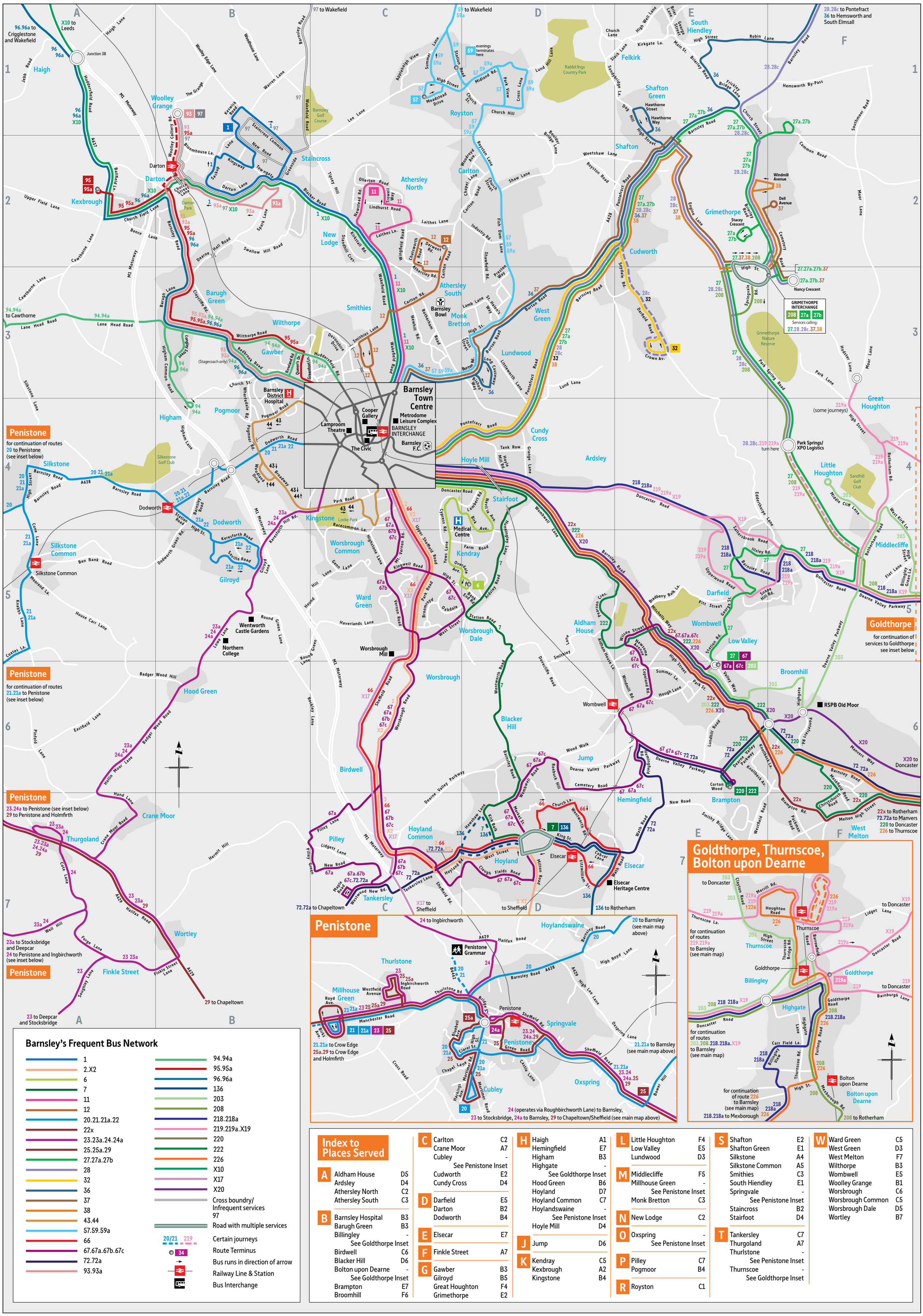
FREQUENCY GUIDE

Service	Operator	Route	FREQUENCY (MINUTES) Monday-Friday daytime	Saturday daytime	Sunday daytime	Evening daily
1	Stagecoach	Barnsley – Mapplewell – Staincross	15	15	30	30/60
2/X2	Stagecoach	Barnsley – Birdwell – Chapeltown – North General Hospital – Sheffield - Royal Hallamshire Hospital	30 (X2)	30 (X2)	60 (2)	60 (2)
6	Stagecoach	Barnsley – Kendray – Worsbrough Bank End	15	15	30	60
7	Stagecoach	Barnsley – Blacker Hill – Hoyland	60	60	No service	No service
11	Stagecoach	Barnsley – Athersley North	15	15	30	30/60
12	Stagecoach	Barnsley – Honeywell – Athersley South	15	15	30	60
20	Stagecoach	Barnsley – Penistone – Cubley	60	60	No service (see 21a)	No service (see 21a)
21	Stagecoach	Barnsley – Penistone – Millhouse Green (Crow Edge)	60	60	No service (see 21a)	No service (see 21a)
21a	Stagecoach	Barnsley – Gilroyd – Cubley – Penistone – Millhouse Green (Crow Edge)	No service (see 20, 21, 22)	No service (see 20, 21, 22)	60	120
22	Stagecoach	Barnsley – Gilroyd	30	30	No service (see 21a)	No service (see 21a)
			Combined 15 min frequency Mon-Sat daytime between Barnsley – Dodworth			
23	Stagecoach	Millhouse Green - Penistone - Thurgoland - Stocksbridge	120	120	No service	No service
23a	Stagecoach	Barnsley – Thurgoland – Stocksbridge	2 journeys	2 journeys	No service	No service
24	Stagecoach	Barnsley – Thurgoland – Green Moor - Penistone – Ingbirchworth	120	120	see service 24a**	see service 24a**
24a	TM Travel	Barnsley – Thurgoland – Penistone	see service 24	see service 24	120	120
25	South Pennine Community Transport	Cubley – Oxspring – Penistone – Thurlstone – Millhouse Green	60 (mornings only)	No service	No service	No service
25a	South Pennine Community Transport	Holmfirth - Hade Edge - Dunford Bridge - Crow Edge - Millhouse Green - Thurlstone - Penistone	1 journey	No service	No service	No service
29	TM Travel	Sheffield - Chapeltown - Thurgoland - Penistone - Holmfirth	4 journeys	4 journeys	5 journeys	2 journeys
257	South Pennine Community Transport	Stocksbridge – Holmfirth	Wednesday only	No service	No service	No service
222	Stagecoach	Barnsley – Aldham House – Wombwell – Cortonwood	30	30	60	60
22x	Stagecoach	Barnsley – Wath upon Dearne – Rotherham	15	20	60	60
226	Stagecoach	Barnsley – Wath upon Dearne – Thurnscoe	30	30	60	60
27	Stagecoach	Barnsley – Grimethorpe – Darfield – Wombwell	30	30	60	60
27a	Stagecoach	Barnsley – Grimethorpe Interchange	see 27b	see 27b	60	60
27b	Stagecoach	Barnsley – Grimethorpe Interchange	60	60	No service	No service
28	Stagecoach	Barnsley – Grimethorpe – Pontefract	60	60	No service	No service
28c	Stagecoach	Barnsley - Cudworth Crown Avenue - Grimthorpe - Pontefract	No service (see 28/32)	No service (see 28/32)	60	60
32	Stagecoach	Barnsley – Cudworth Crown Avenue	15	15	see 28c	see 28c
			Combined frequencies of: Barnsley – Lundwood/Cudworth every 7/8 mins Mon-Sat daytime Barnsley – Cudworth Crown Avenue every 15 mins Mon-Sat daytime Barnsley - Grimethorpe every 15 mins Mon-Sat daytime			
36	Waterson Coaches	Barnsley – Shafton –South Hiendley –Hemsworth –South Elmsall	60/90	4 journeys	No service	No service
37	Waterson Coaches	Barnsley - Shafton - Grimethorpe	60	No service	No service	No service
38	Waterson Coaches	Barnsley - Shafton - Grimethorpe	60	60	No service	No service
43	Stagecoach	Barnsley – Pogmoor – Kingstone – Barnsley	30	30	60	60
44	Stagecoach	Barnsley – Pogmoor – Kingstone – Barnsley	30	30	No service (see 43)	No service (see 43)

FREQUENCY GUIDE

Service	Operator	Route	FREQUENCY (MINUTES) Monday-Friday daytime	Saturday daytime	Sunday daytime	Evening daily
57	Stagecoach	Barnsley – Royston	30	30	No service (see 59)	No service (see 59)
59/59a	Stagecoach	Barnsley – Royston –Wakefield	30	30	60 (30 Barnsley - Royston)	60 (Barnsley - Royston)
			Combined 15 mins frequency Mon-Sat Barnsley – Royston			
66	Stagecoach	Barnsley – Hoyland – Elsecar	15	15	30	60
67	Stagecoach	Barnsley - Pilley - Tankersley - Hoyland - Cortonwood - Wombwell	60	60	No service (see 67c)	120
67a	Stagecoach	Barnsley – Pilley – Hoyland – Cortonwood – Wombwell	60	60	120	120
67b	Stagecoach	Barnsley Ward Green – Birdwell – Tankersley	Limited service	Limited service	Limited service	Limited service
67c	Stagecoach	Barnsley Worsbrough Dale – Tankersley – Hoyland – Cortonwood – Wombwell	Limited service	Limited service	120	No service
			Every 30 mins combined			
72/72a	Stagecoach	Chapeltown – Hoyland – Manvers	60	60	No service	No service
94/94a	Globe Coaches/ Stagecoach	Barnsley - Higham - Cawthorne	60	60	120	120
93	Stagecoach	Barnsley – Darton – Woolley Grange	2 buses per hour	60	60	60 (not Sunday eves)
93a	Stagecoach	Barnsley – Mapplewell	60	60	No service	No service
95	Stagecoach	Barnsley – Kexborough	20	30	60	60 (not Sunday eves)
95a	Stagecoach	Barnsley – Kexborough – Darton	No service (see 93, 95)	Few Buses	No service (see 93, 95)	60 Sunday eve late eve Mon-Sat
			Combined daytime frequency Barnsley - Hospital - Darton 10 mins Mon - Fri / 15 mins Sarturday			
96	Globe Coaches	Barnsley – Kexborough – Wakefield	60	60	No service	No service
96a	Globe Coaches	Wakefield – Kexborough – Higham – Barnsley	1 journey	No service	No service	No service
97	Globe Coaches	Darton – Wakefield	3 journeys	No service	No service	No service
136	First/ Stagecoach	Hoyland - Wentworth - Thorpe Hesley - Rotherham	60	60	90	2 journeys
201	Powells Bus	Chapeltown – Wentworth Industrial Park – Fox Valley – Stocksbridge	60	60	No service	No service
203	Waterson Coaches	Wombwell - Thurnscoe - Clayton - Doncaster	5 journeys	5 journeys	No service	No service
208	Stagecoach	Rotherham – Swinton – Mexborough – Goldthorpe – Grimethorpe	3 journeys	3 journeys	3 journeys	3 journeys
218	Stagecoach	Barnsley – Mexborough – Swinton - Kilnhurst – Rawmarsh - Rotherham	60	60	60 Rotherham to Mexborough	60 Rotherham to Mexborough
218a	Stagecoach	Barnsley – Mexborough – Swinton - Kilnhurst – Rawmarsh - Rotherham	60	60	No service	No service
219	Stagecoach	Barnsley – Thurnscoe – Goldthorpe - Doncaster	60	60	60	60
219a	Stagecoach	Barnsley – Thurnscoe – Goldthorpe	60	60	No service (see 219)	No service (see 219)
220	Stagecoach	Cortonwood – Wath upon Dearne – Mexborough – Doncaster	30	30	60	60
X10	Stagecoach	Barnsley - Mapplewell - Darton - Kexbrough - Leeds	60	60	60	60
X17	Stagecoach	Barnsley - Birdwell - Meadowhall - Sheffield - Chesterfield - Matlock	60	60	60	60
X19	Stagecoach	Barnsley - Goldthorpe - Doncaster	30	30	60	2 journeys
X20	Stagecoach	Barnsley – Mexborough – Doncaster	60	60	No service	60 early eve Not Sunday eve

* No evening service
** Runs part route only


Barnsley Town Centre
Metrodome Leisure Complex
BARNSLEY INTERCHANGE
Barnsley F.C.
Cooper Gallery
Lamproom Theatre
The Civic
Barnsley District Hospital
Barnsley Bowl
Wentworth Castle Gardens
Northern College
Worsbrough Mill
Medical Centre
Elsecar Heritage Centre
Penistone Grammar
Park Springs/ XPO Logistics
RSPB Old Moor
Nancy Crescent
GRIMETHORPE INTERCHANGE
208 27a 27b
Services calling: 27.28.28c.37.38
Haigh
Woolley Grange
Darton
Kexbrough
Staincross
Athersley North
Carlton
Royston
Rabbit Ings Country Park
South Hiendley
Felkirk
Shafton Green
Shafton
Grimethorpe
Cudworth
New Lodge
Athersley South
Barugh Green
Smithies
Wilthorpe
Gawber
Monk Bretton
West Green
Lundwood
Higham
Pogmoor
Cundy Cross
Ardsley
Great Houghton
Little Houghton
Silkstone
Hoyle Mill
Stairfoot
Dodworth
Kingstone
Kendray
Silkstone Common
Gilroyd
Worsbrough Common
Ward Green
Worsbrough Dale
Aldham House
Darfield
Wombwell
Low Valley
Middlecliffe
Goldthorpe
Broomhill
Hood Green
Worsbrough
Wombwell
Blacker Hill
Birdwell
Jump
Hemingfield
Brampton
West Melton
Crane Moor
Hoyland Common
Hoyland
Elsecar
Thurgoland
Pilley
Tankersley
Wortley
Finkle Street
Thurlstone
Hoylandswaine
Millhouse Green
Penistone
Springvale
Oxspring
Cubley
Penistone
for continuation of routes 20 to Penistone (see inset below)
Penistone
for continuation of routes 21.21a to Penistone (see inset below)
Penistone
23.24a to Penistone (see inset below)
29 to Penistone and Holmfirth
23a to Stocksbridge and Deepcar
24 to Penistone and Ingbirchworth (see inset below)
23 to Deepcar and Stocksbridge
29 to Chapeltown
Goldthorpe
for continuation of services to Goldthorpe see inset below
Goldthorpe, Thurnscoe, Bolton upon Dearne
Barnsley's Frequent Bus Network
1
2.X2
6
7
11
12
20.21.21a.22
22x
23.23a.24.24a
25.25a.29
27.27a.27b
28
32
36
37
38
43.44
57.59.59a
66
67.67a.67b.67c
72.72a
93.93a
94.94a
95.95a
96.96a
136
203
208
218.218a
219.219a.X19
220
222
226
X10
X17
X20
Cross boundry/ Infrequent services
97
Road with multiple services
20/21 219
Certain journeys
34
Route Terminus
Bus runs in direction of arrow
Railway Line & Station
Bus Interchange
Index to Places Served
A Aldham House D5
Ardsley D4
Athersley North C2
Athersley South C3
B Barnsley Hospital B3
Barugh Green B3
Billingley -
See Goldthorpe Inset
Birdwell C6
Blacker Hill D6
Bolton upon Dearne -
See Goldthorpe Inset
Brampton E7
Broomhill F6
C Carlton C2
Crane Moor A7
Cubley -
See Penistone Inset
Cudworth E2
Cundy Cross D4
D Darfield E5
Darton B2
Dodworth B4
E Elsecar E7
F Finkle Street A7
G Gawber B3
Gilroyd B5
Great Houghton F4
Grimethorpe E2
H Haigh A1
Hemingfield E7
Higham B3
Highgate -
See Goldthorpe Inset
Hood Green B6
Hoyland D7
Hoyland Common C7
Hoylandswaine -
See Penistone Inset
Hoyle Mill D4
J Jump D6
K Kendray C5
Kexbrough A2
Kingstone B4
L Little Houghton F4
Low Valley E5
Lundwood D3
M Middlecliffe F5
Millhouse Green -
See Penistone Inset
Monk Bretton C3
N New Lodge C2
O Oxspring -
See Penistone Inset
P Pilley C7
Pogmoor B4
R Royston C1
S Shafton E2
Shafton Green E1
Silkstone A4
Silkstone Common A5
Smithies C3
South Hiendley E1
Springvale -
See Penistone Inset
Staincross B2
Stairfoot D4
T Tankersley C7
Thurgoland A7
Thurlstone -
See Penistone Inset
Thurnscoe -
See Goldthorpe Inset
W Ward Green C5
West Green D3
West Melton F7
Wilthorpe B3
Wombwell E5
Woolley Grange B1
Worsbrough C6
Worsbrough Common C5
Worsbrough Dale D5
Wortley B7

BBP Barnsley Bus Partnership

BConnect tickets can be used all day, on any bus in Barnsley*. That means more travel options and better value for money.

One ticket, any bus

BConnect

1, 7 and 28 Day

The easy way to get around Barnsley*

For latest prices visit: **travelsouthyorkshire.com/bbp** or ask your driver. Other tickets are available.

*Terms and conditions apply.

Where can you buy BConnect tickets?

BConnect 1 and 7 Day tickets can be bought on most buses in Barnsley.

7 and 28 Day tickets are also available online at sytravelmaster.com and from ticket machines located in most Travel South Yorkshire interchanges with the exception of Adwick, Dinnington and Mexborough.

Please note, your ticket will be issued to a Smartcard, which costs £1. It's then yours to load further tickets to, so please keep it and reuse it. If anything changes, we'll keep you up to date.

You can also buy tickets for individual operators as well as single fares.

Travel South Yorkshire travelsouthyorkshire.com/bbp

BBP Barnsley Bus Partnership

For more information visit
travelsouthyorkshire.com/bbp

Or plan your travel using the online Journey Planner at
travelsouthyorkshire.com

Follow us on Twitter for disruption information

@TSYalerts

Call Traveline on
01709 515151

Travel South Yorkshire, supported by the Barnsley Bus Partnership, is working hard to ensure all public transport is fully accessible to all.

All information is correct as of 25 January 2020

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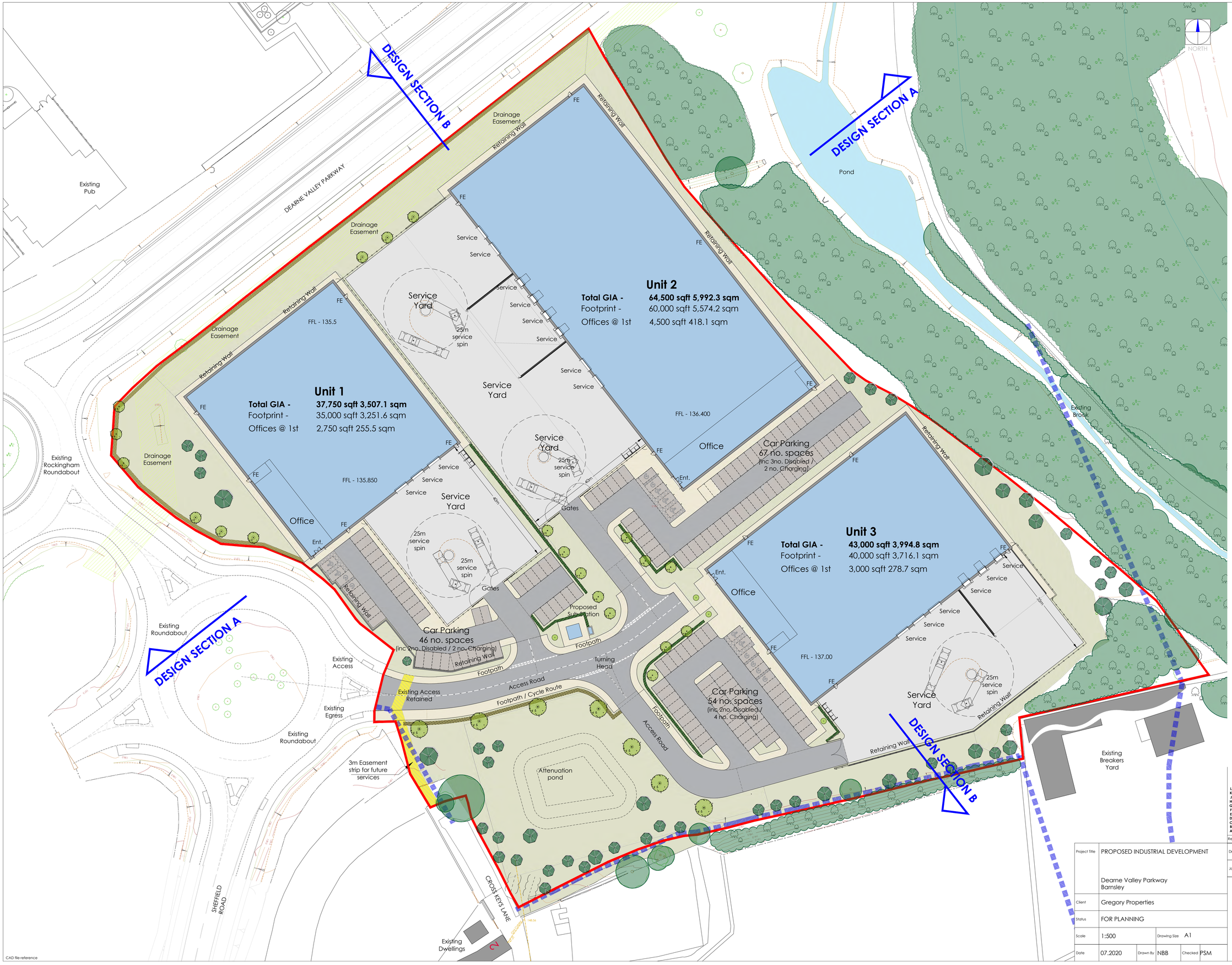

Note:
Information is based on OS map and received information and is subject to full topographical and building survey.
Assumed site boundary and site constraints subject to confirmation.
All Legal easements and extent of existing underground services locations are subject to confirmation.

Rev	Date	Description	Rev By	Chk'd By
L	25.03.21	Units office content amended	NBB	PSM
K	19.03.21	Cut and fill & Landscape Updated	NBB	PSM
J	12.03.21	Cut and fill Updated	NBB	PSM
H	04.03.21	Sub Station Added	NBB	PSM
G	25.02.21	Updated for planning submission	NBB	PSM
F	19.02.21	Updated inline with discussions	NBB	PSM
E	20.01.21	Redline adjusted & public footpaths added	NBB	PSM
D	16.11.20	Updated	NBB	PSM
C	02.11.20	Updated	NBB	PSM
B	20.10.20	Added side Road	AL	PSM
A	21.07.20	Updated	NBB	PSM

Project Title	PROPOSED INDUSTRIAL DEVELOPMENT Dearne Valley Parkway Barnsley
Client	Gregory Properties
Status	FOR PLANNING
Scale	1:500
Drawing Size	A1
Date	07.2020
Drawn By	NBB
Checked	PSM
Drawing Title	PROPOSED SITE PLAN
Job-Dwg No	15315 - (P)111
Rev	L

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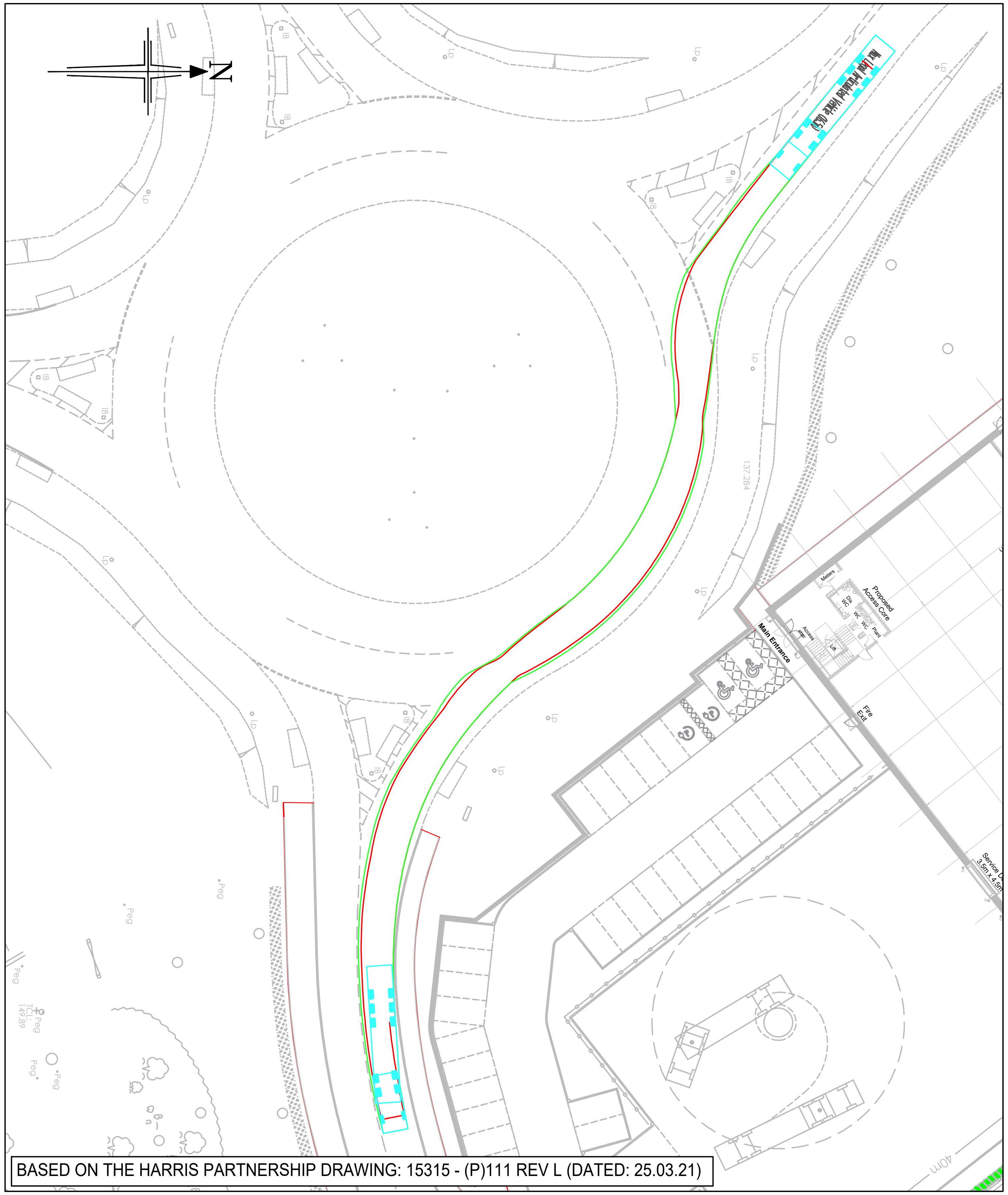

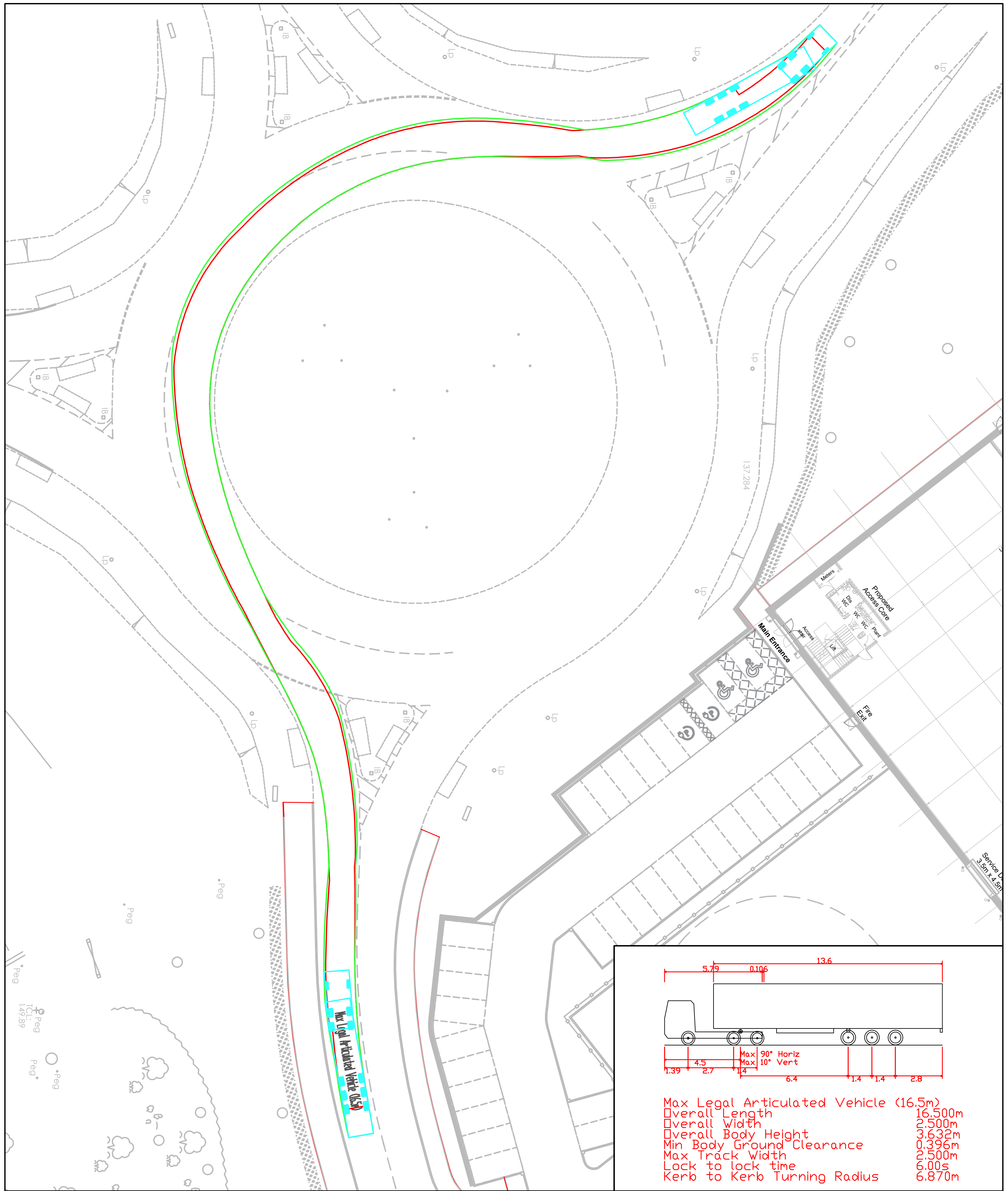

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Rev:	Date:	Amendment:	DRN	CHK	APR
A	29.03.21	Site layout updated as per email 25.03.2021	DG	AB	-

Title: SWEPT PATH OF MAX LEGAL HGV USING EXISTING SITE ACCESS JUNCTION

Client: GREGORY PROPERTY GROUP

Status: FOR INFORMATION

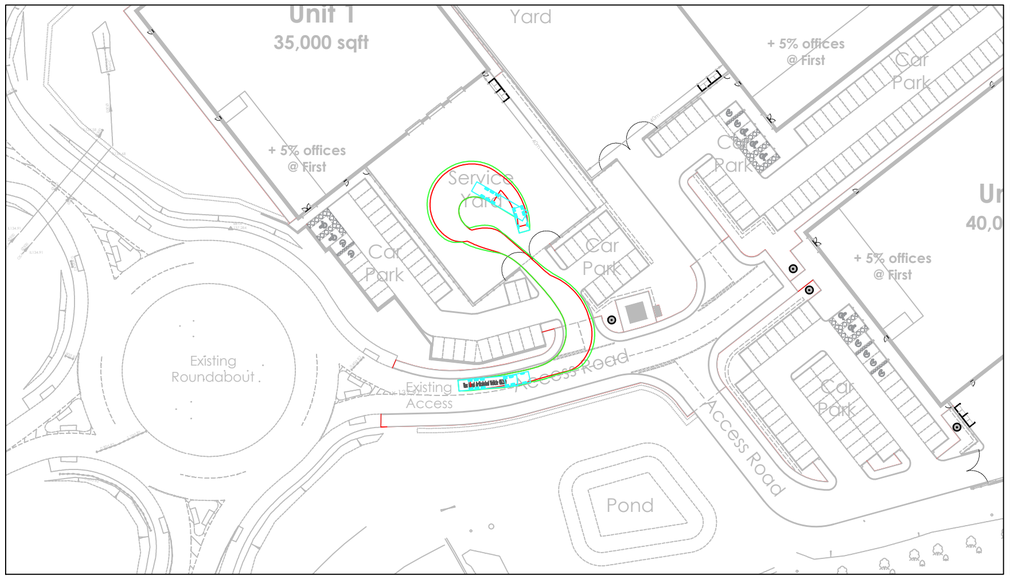
Project: DEARNE VALLEY PARKWAY

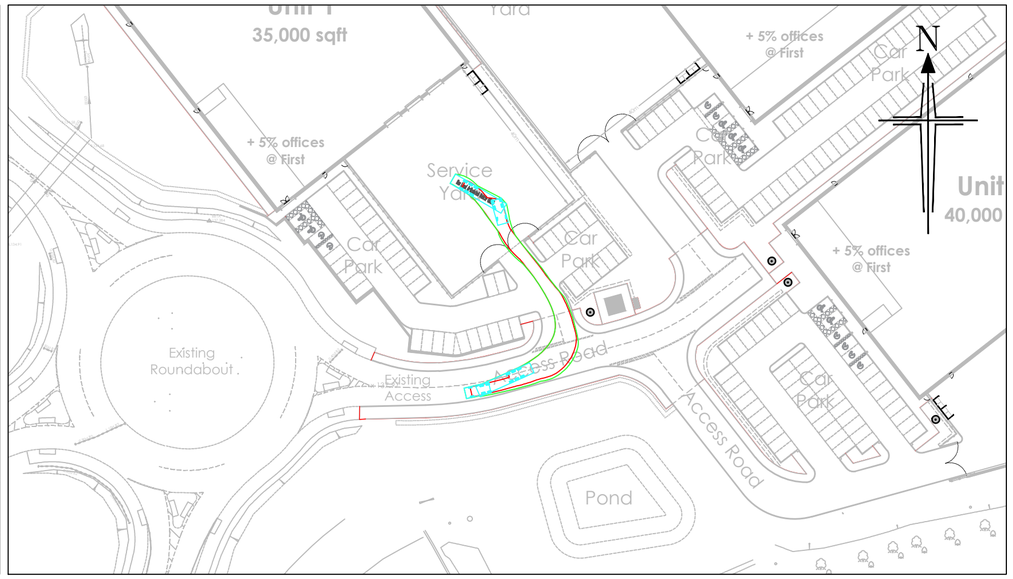
Scale: 1:500
Size: A3 - 420 x 297

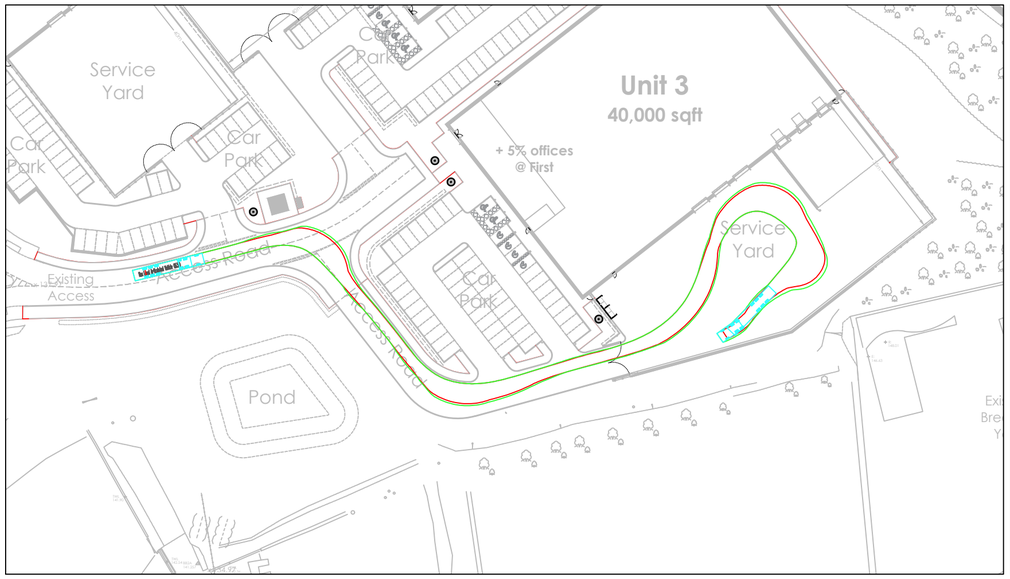
Drawn: DM
Chkd: AB
Appvd: AC

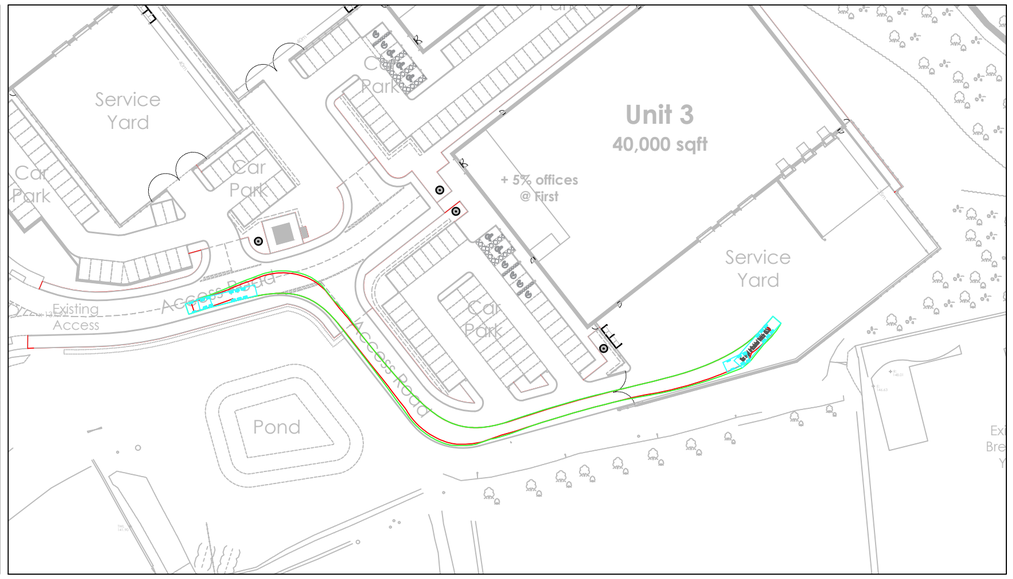
Drawing No: 20/262/TR/001
Job No: 20-262

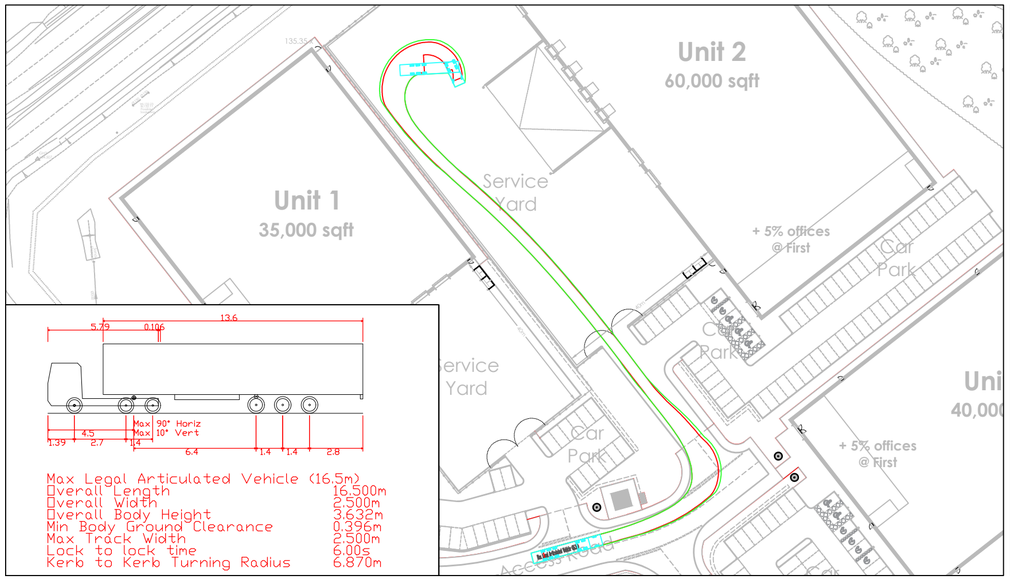
Revision: A
Date: 03.03.2021

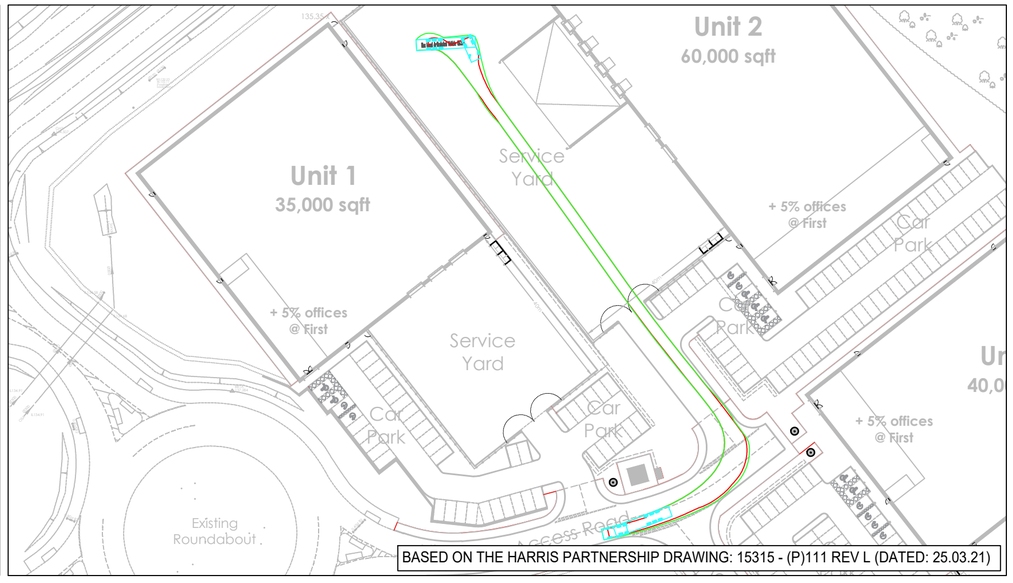












BASED ON THE HARRIS PARTNERSHIP DRAWING: 15315 - (P)111 REV L (DATED: 25.03.21)

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Rev:	Date:	Amendment:	DRN	CHK	APR
A	29.03.21	Site layout updated as per email 25.03.2021	DG	AB	-

BRYAN G HALL

CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

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E transportleeds@bryanghall.co.uk

Client: GREGORY PROPERTY GROUP

Status: FOR INFORMATION

Scale: 1:1000
Size: A2 - 594 x 420
Drawn: DM
Chkd: AB
Appvd: AC

Project: DEARNE VALLEY PARKWAY

Title: SWEPT PATH OF MAX LEGAL HGV ACCESSING PLOTS

Drawing No: 20/262/TR/002
Job No: 20-262
Revision: A
Date: 03.03.2021

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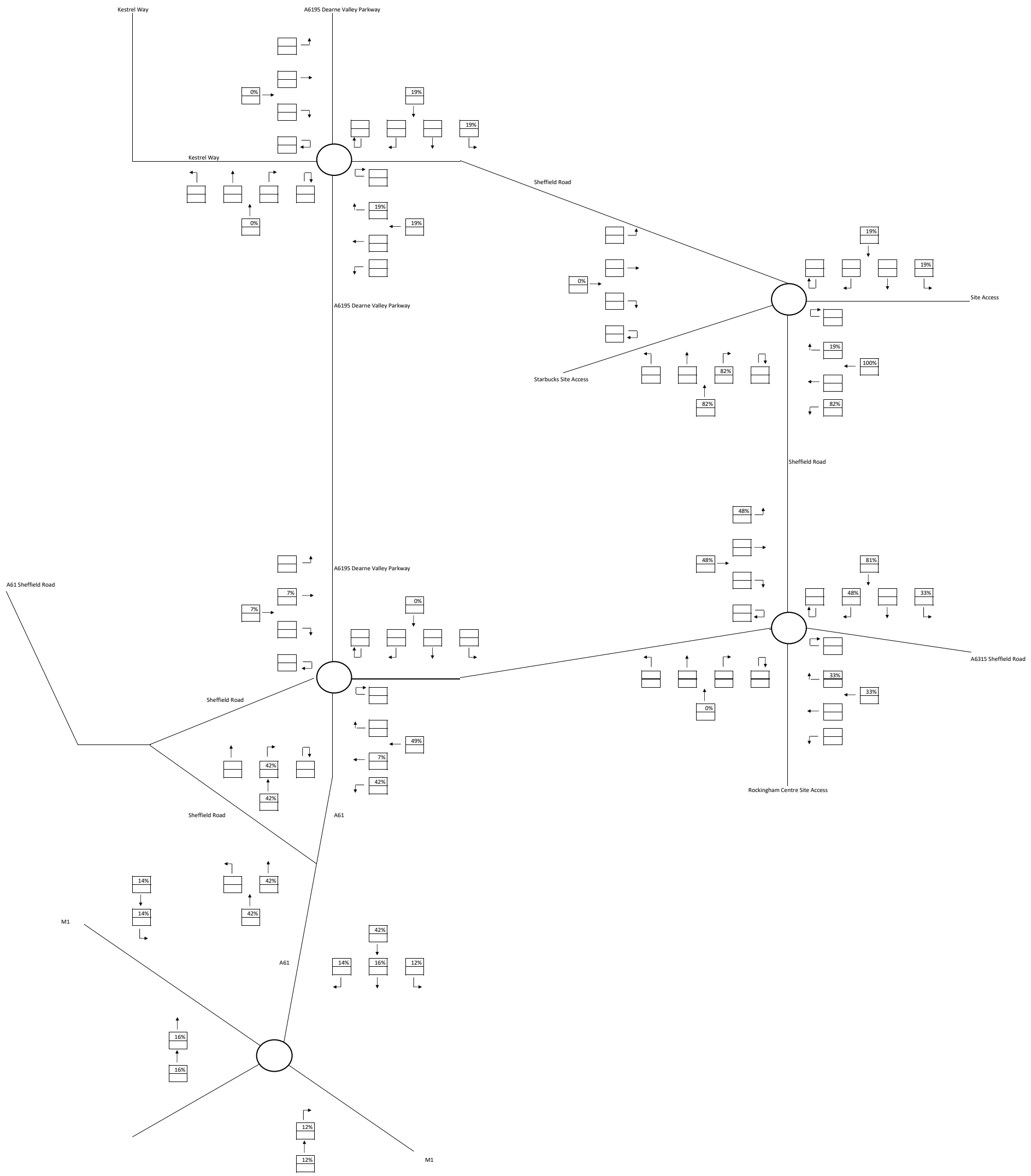
APPENDIX BGH 10

TRIP DISTRIBUTION
DEARNE VALLEY PARKWAY



KEY

Total Vehicles
Total HGVs and Buses

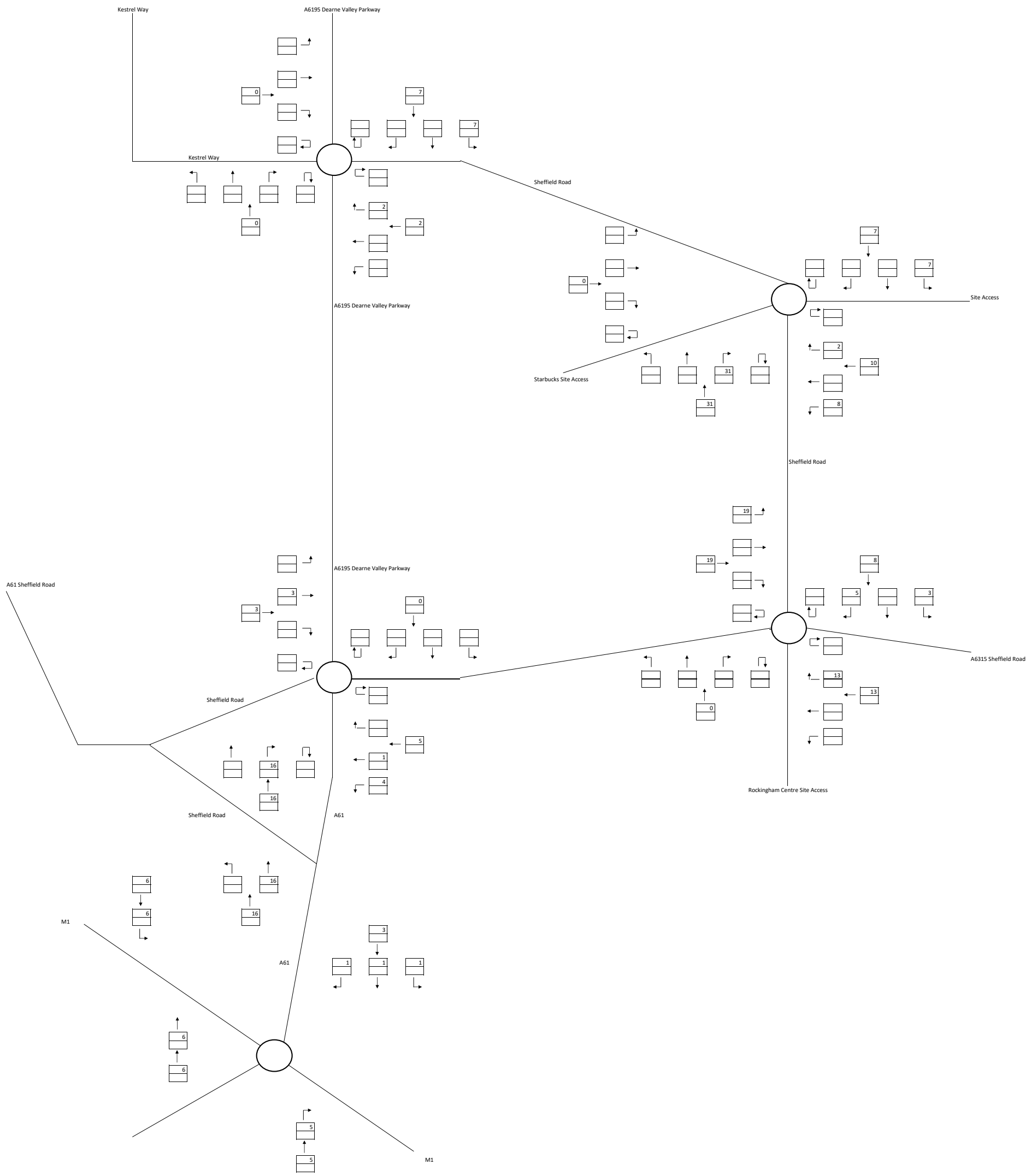
BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

Taken from Figure 32 (page 61) of Mosodi TA (ref: 18005) dated: December 2019

APPENDIX BGH 11

DEVELOPMENT TRIPS - MOSODI TA
DEARNE VALLEY PARKWAY
AM PEAK



KEY

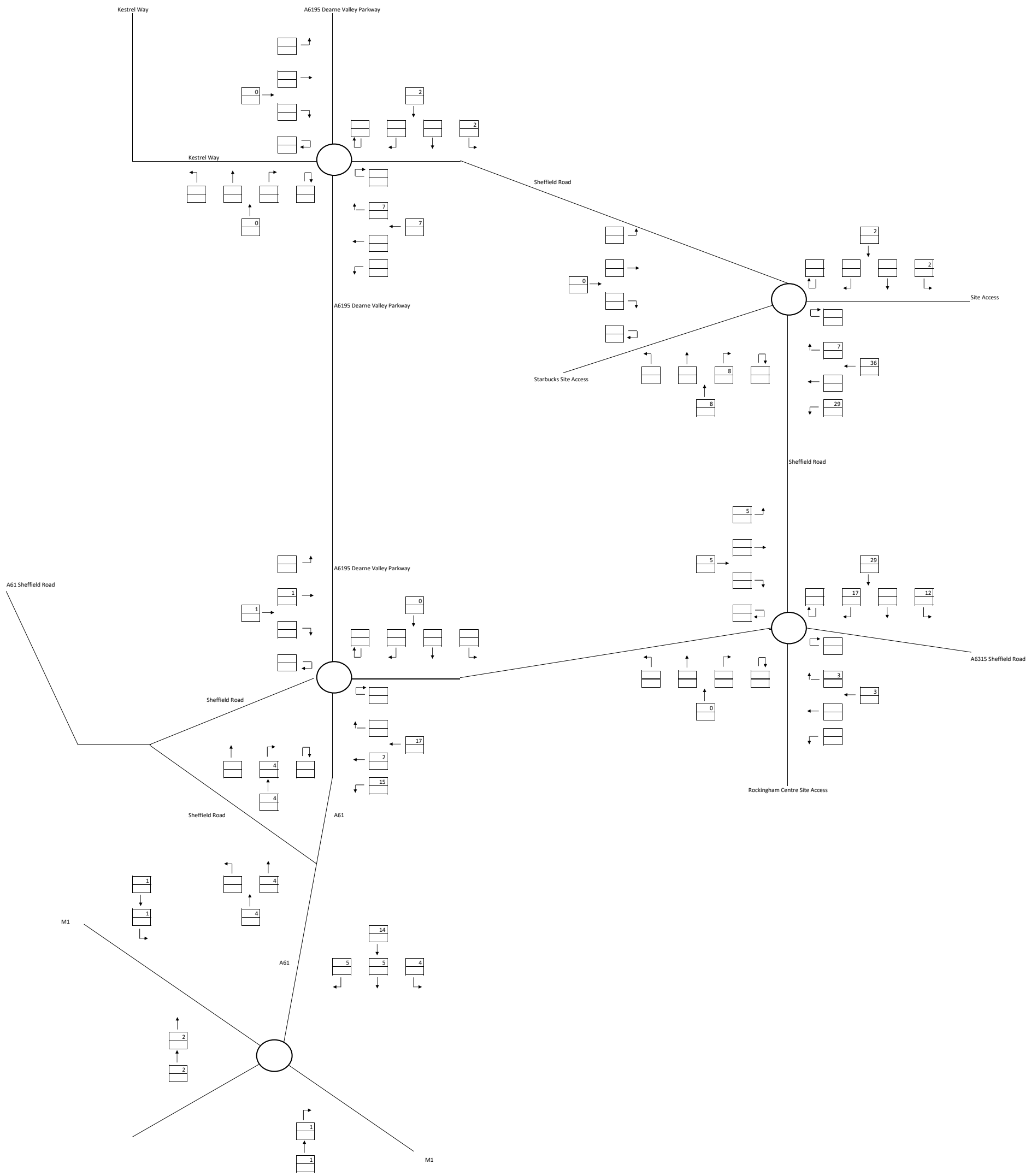
Total Vehicles
Total HGVs and Buses

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

Taken from Figure 43 (page 72) of Mosodi TA (ref: 18005) dated: December 2019

DEVELOPMENT TRIPS - MOSODI TA
DEARNE VALLEY PARKWAY
PM PEAK



KEY

Total Vehicles
Total HGVs and Buses

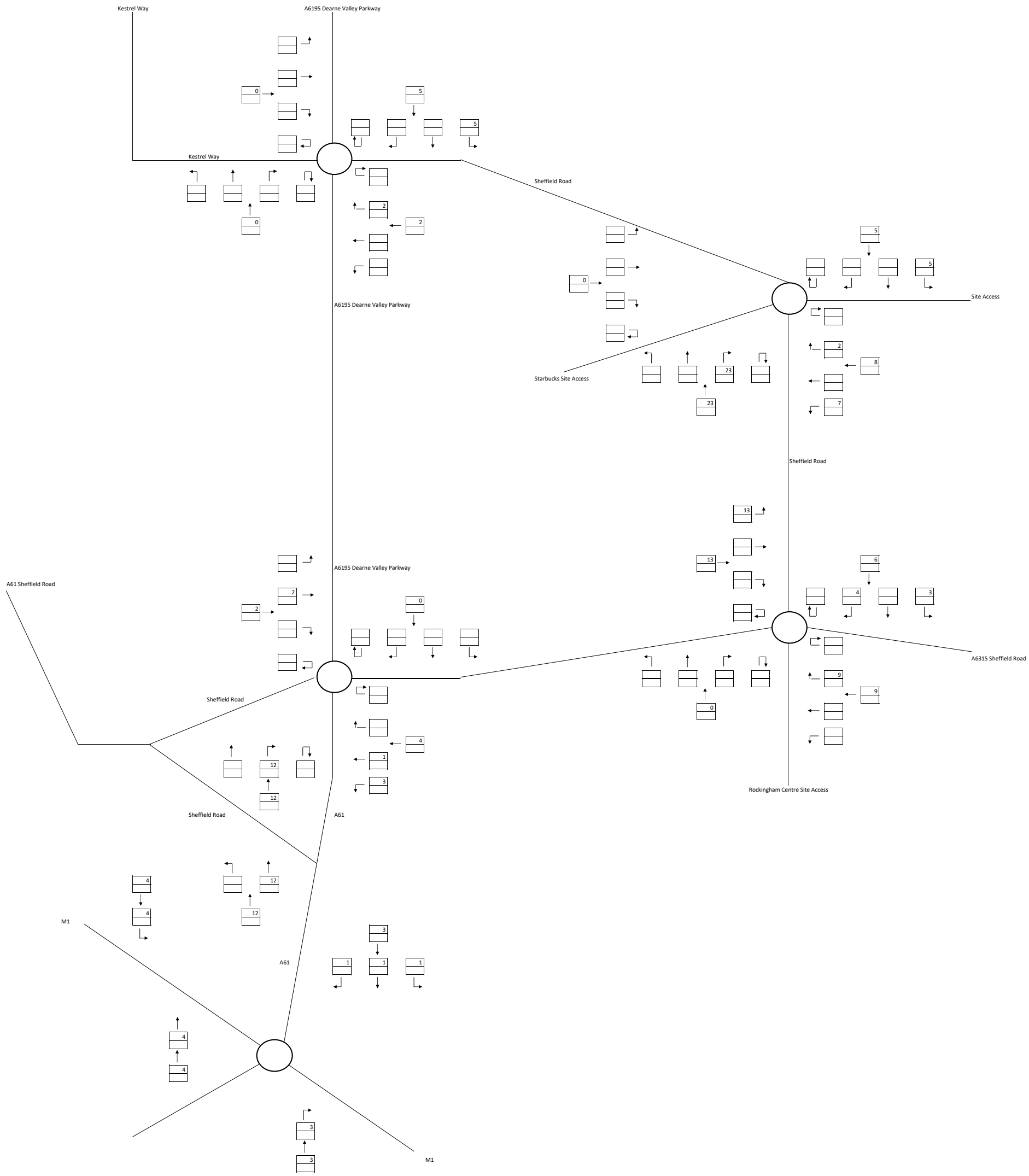
BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

Taken from Figure 44 (page 73) of Mosodi TA (ref: 18005) dated: December 2019

APPENDIX BGH 12

DEVELOPMENT TRIPS
DEARNE VALLEY PARKWAY
AM PEAK



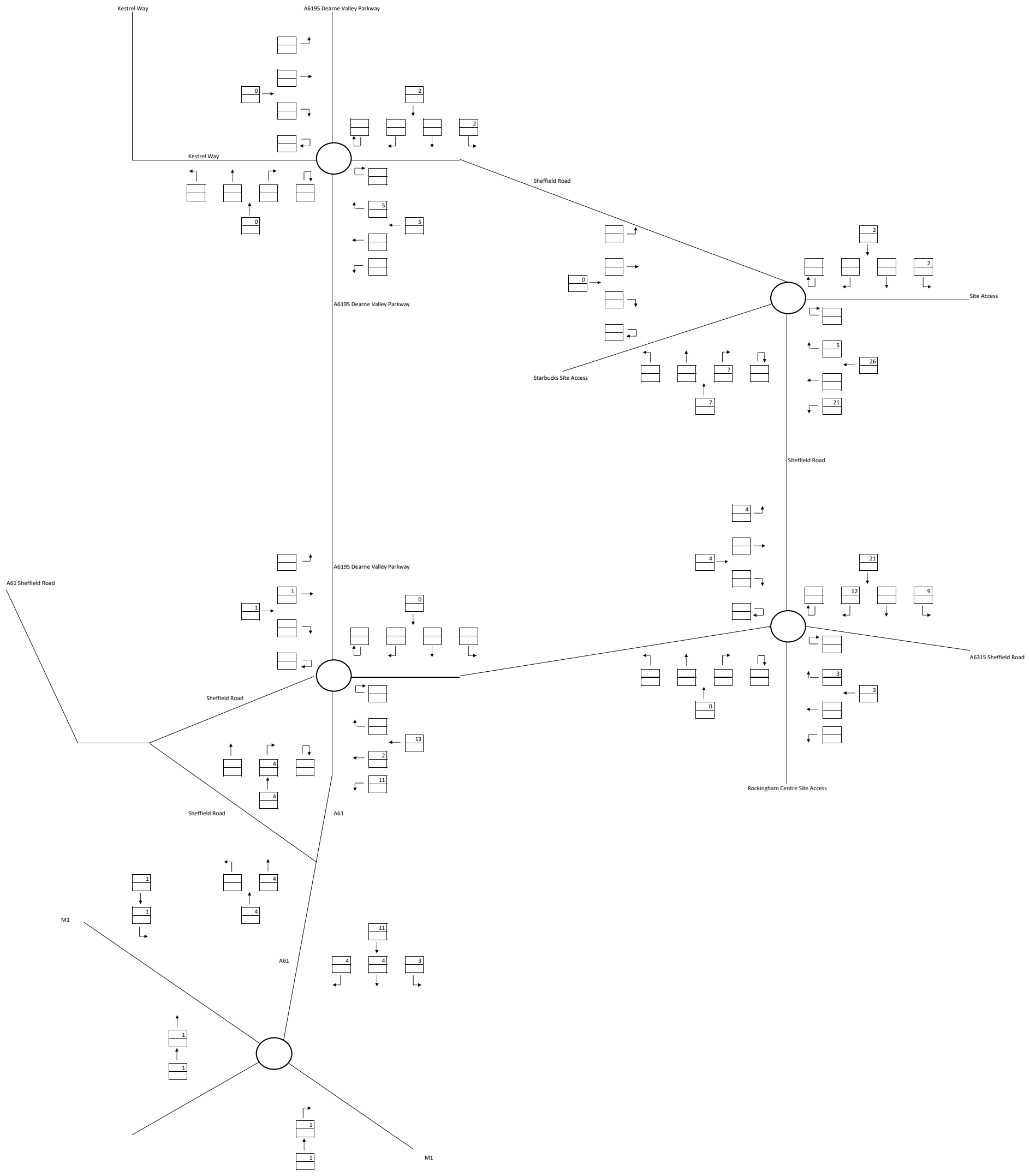
KEY

Total Vehicles
Total HGVs and Buses

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

DEVELOPMENT TRIPS
DEARNE VALLEY PARKWAY
PM PEAK



KEY

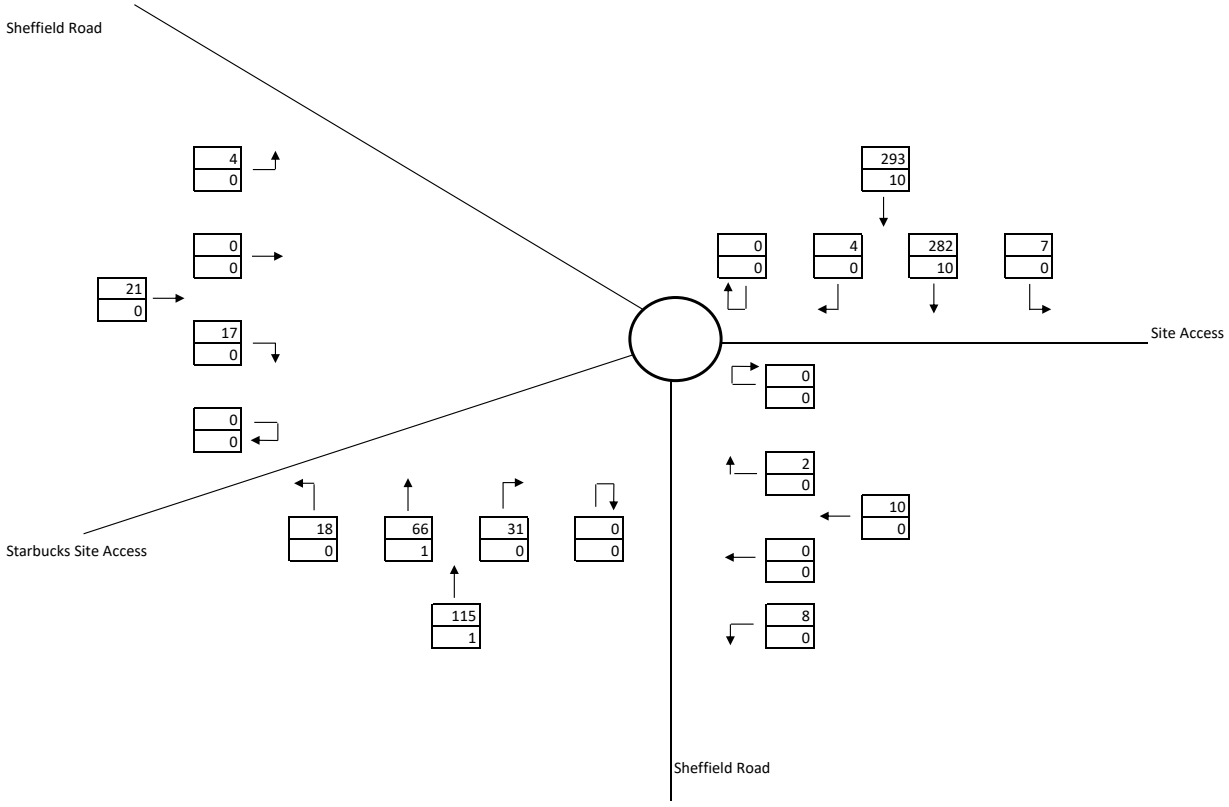
Total Vehicles
Total HGVs and Buses

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

APPENDIX BGH 13

2029 BASE FLOWS
DEARNE VALLEY PARKWAY
7:15am - 8:15am
AM PEAK



KEY

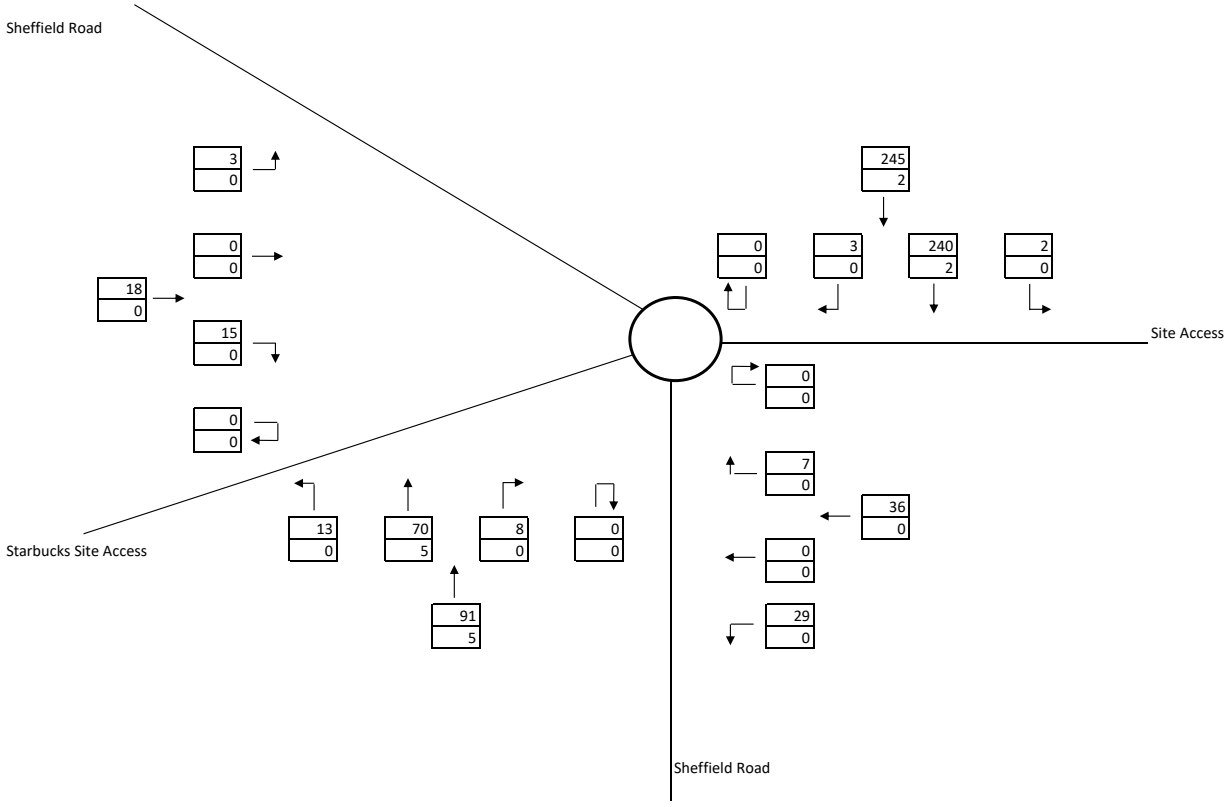
	Total Vehicles
	Total HGVs and Buses

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

Taken from Figure 63 (page 96) of Mosodi TA (ref: 18005) dated: December 2019

2029 BASE FLOWS
DEARNE VALLEY PARKWAY
4:30pm - 5:30pm
PM PEAK



KEY

	Total Vehicles
	Total HGVs and Buses

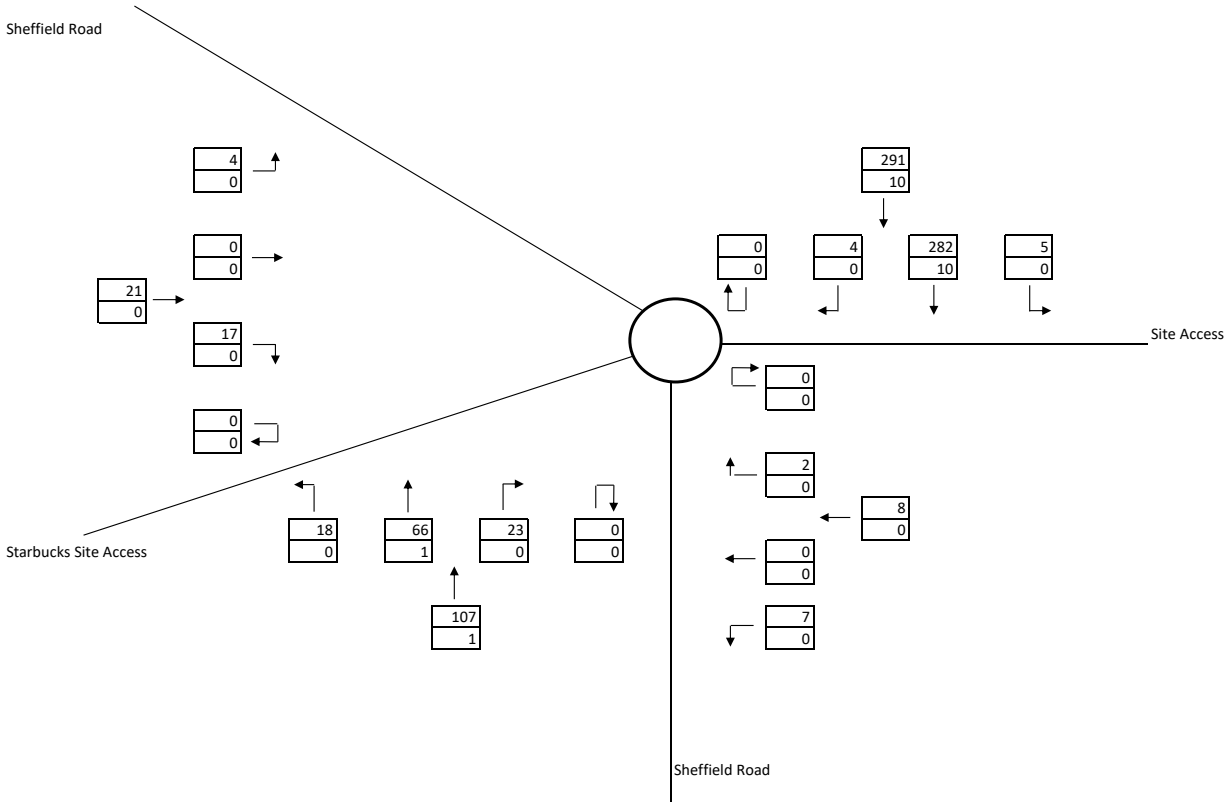
BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

Taken from Figure 64 (page 97) of Mosodi TA (ref: 18005) dated: December 2019

APPENDIX BGH 14

2029 PREDICTED FLOWS
DEARNE VALLEY PARKWAY
7:15am - 8:15am
AM PEAK



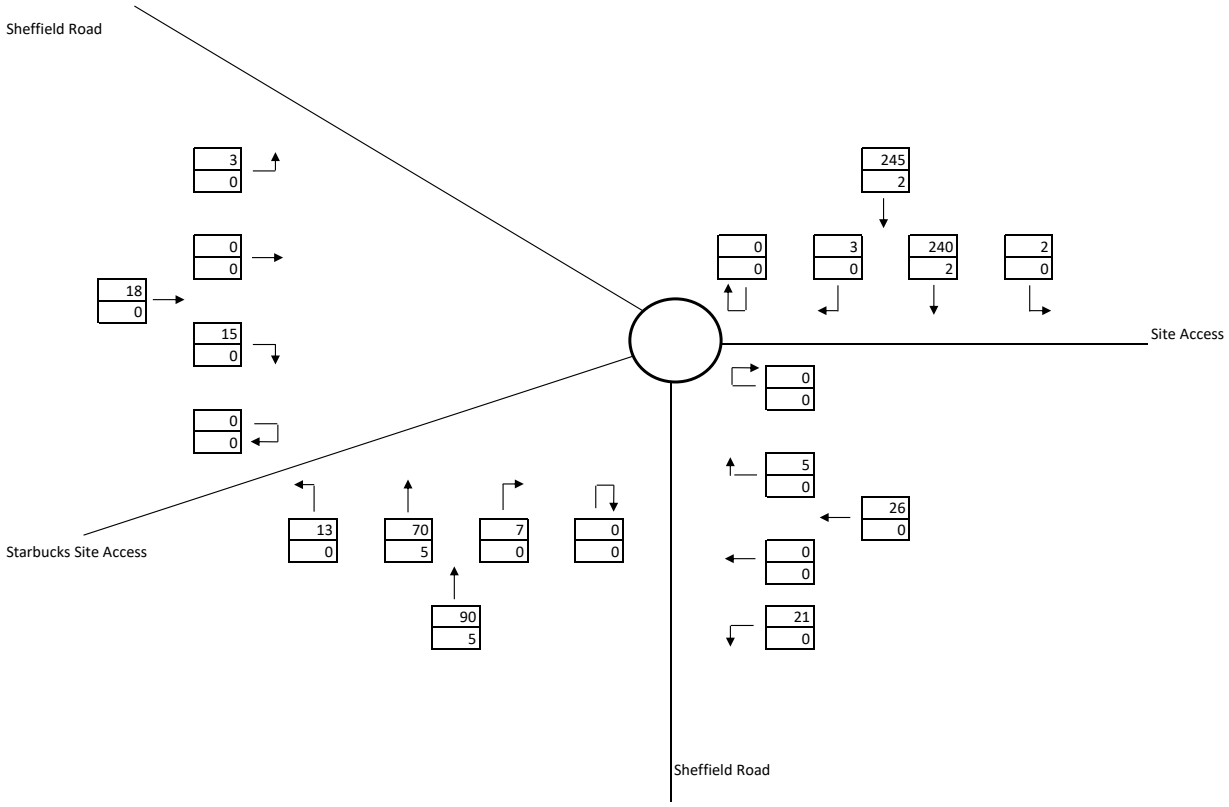
KEY

	Total Vehicles
	Total HGVs and Buses

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

2029 PREDICTED FLOWS
DEARNE VALLEY PARKWAY
4:30pm - 5:30pm
PM PEAK



KEY

	Total Vehicles
	Total HGVs and Buses

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Client:	Gregory Property Group
Project:	Dearne Valley Parkway
Job Number:	20-262
Prepared by:	Daniel McLean
Checked by:	Adam Bradley

APPENDIX BGH 15

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.5.523 [19102,19/06/2015]
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Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Sheffield Road Roundabout.arc8
Path: Y:\2020\20-251 to 20-275\20-262 Dearne Valley Parkway\Technical\Junction Model
Report generation date: 09/03/2021 15:07:24

» (Default Analysis Set) - 2029 Base, AM
» (Default Analysis Set) - 2029 Base, PM
» (Default Analysis Set) - 2029 Predicted, AM
» (Default Analysis Set) - 2029 Predicted, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2029 Base							
Site Access	0.01	2.86	0.01	A	0.03	2.86	0.03	A
Sheffield Road South	0.09	2.61	0.08	A	0.08	2.57	0.07	A
Starbucks	0.02	2.53	0.02	A	0.01	2.51	0.01	A
Sheffield Road North	0.31	3.31	0.23	A	0.23	3.10	0.19	A
	A1 - 2029 Predicted							
Site Access	0.01	2.86	0.01	A	0.02	2.83	0.02	A
Sheffield Road South	0.09	2.59	0.08	A	0.07	2.57	0.07	A
Starbucks	0.02	2.52	0.02	A	0.01	2.51	0.01	A
Sheffield Road North	0.30	3.29	0.23	A	0.23	3.10	0.19	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2029 Base, AM " model duration: 07:00 - 08:30
"D2 - 2029 Base, PM" model duration: 16:15 - 17:45
"D3 - 2029 Predicted, AM" model duration: 07:00 - 08:30
"D4 - 2029 Predicted, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.5.523 at 09/03/2021 15:07:23

File summary

Title	Sheffield Road Roundabout
Location	Barnsley
Site Number	
Date	04/03/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	20-262
Enumerator	D McLean
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2029 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, AM	2029 Base	AM		ONE HOUR	07:00	08:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Sheffield Road Roundabout	Roundabout	1,2,3,4			3.08	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
Sheffield Road South	2	Sheffield Road South	
Starbucks	3	Starbucks	
Sheffield Road North	4	Sheffield Road North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
Sheffield Road South	0.00	99999.00
Starbucks	0.00	99999.00
Sheffield Road North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.90	4.80	23.40	19.40	60.00	25.00	
Sheffield Road South	4.00	6.10	5.50	19.10	60.00	27.00	
Starbucks	4.70	4.90	0.50	27.40	60.00	23.00	
Sheffield Road North	4.60	5.20	1.00	16.70	60.00	29.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.517	1447.076
Sheffield Road South		(calculated)	(calculated)	0.526	1510.533
Starbucks		(calculated)	(calculated)	0.533	1505.074
Sheffield Road North		(calculated)	(calculated)	0.512	1447.043

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	10.00	100.000
Sheffield Road South	ONE HOUR	✓	116.00	100.000
Starbucks	ONE HOUR	✓	21.00	100.000
Sheffield Road North	ONE HOUR	✓	303.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.000	8.000	0.000	2.000
	Sheffield Road South	31.000	0.000	18.000	67.000
	Starbucks	0.000	17.000	0.000	4.000
	Sheffield Road North	7.000	292.000	4.000	0.000

Turning Proportions (PCU) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.00	0.80	0.00	0.20
	Sheffield Road South	0.27	0.00	0.16	0.58
	Starbucks	0.00	0.81	0.00	0.19
	Sheffield Road North	0.02	0.96	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	1.000	1.000	1.000	1.000
	Sheffield Road South	1.000	1.000	1.000	1.000
	Starbucks	1.000	1.000	1.000	1.000
	Sheffield Road North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.0	0.0	0.0	0.0
	Sheffield Road South	0.0	0.0	0.0	0.0
	Starbucks	0.0	0.0	0.0	0.0
	Sheffield Road North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.01	2.86	0.01	A
Sheffield Road South	0.08	2.61	0.09	A
Starbucks	0.02	2.53	0.02	A
Sheffield Road North	0.23	3.31	0.31	A

Main Results for each time segment

Main results: (07:00-07:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	7.53	7.51	234.87	0.00	1325.56	0.006	0.01	2.730	A
Sheffield Road South	87.33	87.09	4.50	0.00	1508.16	0.058	0.06	2.533	A
Starbucks	15.81	15.77	75.07	0.00	1465.05	0.011	0.01	2.483	A
Sheffield Road North	228.11	227.36	36.04	0.00	1428.61	0.160	0.19	2.995	A

Main results: (07:15-07:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	8.99	8.98	281.19	0.00	1301.59	0.007	0.01	2.784	A
Sheffield Road South	104.28	104.23	5.39	0.00	1507.70	0.069	0.07	2.564	A
Starbucks	18.88	18.87	89.85	0.00	1457.17	0.013	0.01	2.502	A
Sheffield Road North	272.39	272.21	43.13	0.00	1424.98	0.191	0.24	3.122	A

Main results: (07:30-07:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	11.01	11.00	344.33	0.00	1268.92	0.009	0.01	2.861	A
Sheffield Road South	127.72	127.65	6.60	0.00	1507.06	0.085	0.09	2.609	A
Starbucks	23.12	23.11	110.04	0.00	1446.41	0.016	0.02	2.528	A
Sheffield Road North	333.61	333.33	52.82	0.00	1420.02	0.235	0.31	3.312	A

Main results: (07:45-08:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	11.01	11.01	344.62	0.00	1268.77	0.009	0.01	2.861	A
Sheffield Road South	127.72	127.72	6.61	0.00	1507.06	0.085	0.09	2.609	A
Starbucks	23.12	23.12	110.10	0.00	1446.38	0.016	0.02	2.528	A
Sheffield Road North	333.61	333.61	52.85	0.00	1420.01	0.235	0.31	3.312	A

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	8.99	9.00	281.66	0.00	1301.35	0.007	0.01	2.787	A
Sheffield Road South	104.28	104.35	5.40	0.00	1507.69	0.069	0.07	2.566	A
Starbucks	18.88	18.89	89.96	0.00	1457.12	0.013	0.01	2.504	A
Sheffield Road North	272.39	272.67	43.18	0.00	1424.95	0.191	0.24	3.126	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	7.53	7.53	235.83	0.00	1325.06	0.006	0.01	2.731	A
Sheffield Road South	87.33	87.38	4.52	0.00	1508.15	0.058	0.06	2.535	A
Starbucks	15.81	15.82	75.33	0.00	1464.91	0.011	0.01	2.483	A
Sheffield Road North	228.11	228.30	36.16	0.00	1428.54	0.160	0.19	3.001	A

(Default Analysis Set) - 2029 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, PM	2029 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Sheffield Road Roundabout	Roundabout	1,2,3,4			2.92	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
Sheffield Road South	2	Sheffield Road South	
Starbucks	3	Starbucks	
Sheffield Road North	4	Sheffield Road North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
Sheffield Road South	0.00	99999.00
Starbucks	0.00	99999.00
Sheffield Road North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.90	4.80	23.40	19.40	60.00	25.00	
Sheffield Road South	4.00	6.10	5.50	19.10	60.00	27.00	
Starbucks	4.70	4.90	0.50	27.40	60.00	23.00	
Sheffield Road North	4.60	5.20	1.00	16.70	60.00	29.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.517	1447.076
Sheffield Road South		(calculated)	(calculated)	0.526	1510.533
Starbucks		(calculated)	(calculated)	0.533	1505.074
Sheffield Road North		(calculated)	(calculated)	0.512	1447.043

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	36.00	100.000
Sheffield Road South	ONE HOUR	✓	96.00	100.000
Starbucks	ONE HOUR	✓	18.00	100.000
Sheffield Road North	ONE HOUR	✓	247.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.000	29.000	0.000	7.000
	Sheffield Road South	8.000	0.000	13.000	75.000
	Starbucks	0.000	15.000	0.000	3.000
	Sheffield Road North	2.000	242.000	3.000	0.000

Turning Proportions (PCU) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.00	0.81	0.00	0.19
	Sheffield Road South	0.08	0.00	0.14	0.78
	Starbucks	0.00	0.83	0.00	0.17
	Sheffield Road North	0.01	0.98	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	1.000	1.000	1.000	1.000
	Sheffield Road South	1.000	1.000	1.000	1.000
	Starbucks	1.000	1.000	1.000	1.000
	Sheffield Road North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.0	0.0	0.0	0.0
	Sheffield Road South	0.0	0.0	0.0	0.0
	Starbucks	0.0	0.0	0.0	0.0
	Sheffield Road North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.03	2.86	0.03	A
Sheffield Road South	0.07	2.57	0.08	A
Starbucks	0.01	2.51	0.01	A
Sheffield Road North	0.19	3.10	0.23	A

Main Results for each time segment

Main results: (16:15-16:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	27.10	27.02	195.12	0.00	1346.12	0.020	0.02	2.728	A
Sheffield Road South	72.27	72.07	7.51	0.00	1506.58	0.048	0.05	2.509	A
Starbucks	13.55	13.51	67.57	0.00	1469.05	0.009	0.01	2.472	A
Sheffield Road North	185.95	185.36	17.27	0.00	1438.21	0.129	0.15	2.871	A

Main results: (16:30-16:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	32.36	32.35	233.59	0.00	1326.22	0.024	0.02	2.781	A
Sheffield Road South	86.30	86.26	8.98	0.00	1505.80	0.057	0.06	2.535	A
Starbucks	16.18	16.17	80.87	0.00	1461.96	0.011	0.01	2.489	A
Sheffield Road North	222.05	221.91	20.67	0.00	1436.47	0.155	0.18	2.963	A

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	39.64	39.61	286.05	0.00	1299.07	0.031	0.03	2.857	A
Sheffield Road South	105.70	105.64	11.00	0.00	1504.74	0.070	0.08	2.572	A
Starbucks	19.82	19.81	99.04	0.00	1452.28	0.014	0.01	2.512	A
Sheffield Road North	271.95	271.75	25.31	0.00	1434.09	0.190	0.23	3.097	A

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	39.64	39.64	286.26	0.00	1298.97	0.031	0.03	2.858	A
Sheffield Road South	105.70	105.70	11.01	0.00	1504.74	0.070	0.08	2.572	A
Starbucks	19.82	19.82	99.09	0.00	1452.25	0.014	0.01	2.512	A
Sheffield Road North	271.95	271.95	25.32	0.00	1434.09	0.190	0.23	3.097	A

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	32.36	32.39	233.94	0.00	1326.04	0.024	0.03	2.782	A
Sheffield Road South	86.30	86.36	9.00	0.00	1505.80	0.057	0.06	2.537	A
Starbucks	16.18	16.19	80.96	0.00	1461.91	0.011	0.01	2.491	A
Sheffield Road North	222.05	222.25	20.69	0.00	1436.46	0.155	0.18	2.964	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	27.10	27.12	195.88	0.00	1345.73	0.020	0.02	2.731	A
Sheffield Road South	72.27	72.32	7.53	0.00	1506.57	0.048	0.05	2.509	A
Starbucks	13.55	13.56	67.80	0.00	1468.93	0.009	0.01	2.475	A
Sheffield Road North	185.95	186.09	17.33	0.00	1438.18	0.129	0.15	2.877	A

(Default Analysis Set) - 2029 Predicted, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Predicted, AM	2029 Predicted	AM		ONE HOUR	07:00	08:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Sheffield Road Roundabout	Roundabout	1,2,3,4			3.07	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
Sheffield Road South	2	Sheffield Road South	
Starbucks	3	Starbucks	
Sheffield Road North	4	Sheffield Road North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
Sheffield Road South	0.00	99999.00
Starbucks	0.00	99999.00
Sheffield Road North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.90	4.80	23.40	19.40	60.00	25.00	
Sheffield Road South	4.00	6.10	5.50	19.10	60.00	27.00	
Starbucks	4.70	4.90	0.50	27.40	60.00	23.00	
Sheffield Road North	4.60	5.20	1.00	16.70	60.00	29.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.517	1447.076
Sheffield Road South		(calculated)	(calculated)	0.526	1510.533
Starbucks		(calculated)	(calculated)	0.533	1505.074
Sheffield Road North		(calculated)	(calculated)	0.512	1447.043

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	9.00	100.000
Sheffield Road South	ONE HOUR	✓	108.00	100.000
Starbucks	ONE HOUR	✓	21.00	100.000
Sheffield Road North	ONE HOUR	✓	301.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.000	7.000	0.000	2.000
	Sheffield Road South	23.000	0.000	18.000	67.000
	Starbucks	0.000	17.000	0.000	4.000
	Sheffield Road North	5.000	292.000	4.000	0.000

Turning Proportions (PCU) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.00	0.78	0.00	0.22
	Sheffield Road South	0.21	0.00	0.17	0.62
	Starbucks	0.00	0.81	0.00	0.19
	Sheffield Road North	0.02	0.97	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	1.000	1.000	1.000	1.000
	Sheffield Road South	1.000	1.000	1.000	1.000
	Starbucks	1.000	1.000	1.000	1.000
	Sheffield Road North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.0	0.0	0.0	0.0
	Sheffield Road South	0.0	0.0	0.0	0.0
	Starbucks	0.0	0.0	0.0	0.0
	Sheffield Road North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.01	2.86	0.01	A
Sheffield Road South	0.08	2.59	0.09	A
Starbucks	0.02	2.52	0.02	A
Sheffield Road North	0.23	3.29	0.30	A

Main Results for each time segment

Main results: (07:00-07:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	6.78	6.76	234.87	0.00	1325.56	0.005	0.01	2.729	A
Sheffield Road South	81.31	81.08	4.50	0.00	1508.16	0.054	0.06	2.522	A
Starbucks	15.81	15.77	69.07	0.00	1468.25	0.011	0.01	2.478	A
Sheffield Road North	226.61	225.86	30.03	0.00	1431.68	0.158	0.19	2.984	A

Main results: (07:15-07:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	8.09	8.09	281.19	0.00	1301.59	0.006	0.01	2.782	A
Sheffield Road South	97.09	97.04	5.39	0.00	1507.70	0.064	0.07	2.551	A
Starbucks	18.88	18.87	82.67	0.00	1461.00	0.013	0.01	2.495	A
Sheffield Road North	270.59	270.41	35.94	0.00	1428.66	0.189	0.23	3.107	A

Main results: (07:30-07:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	9.91	9.90	344.34	0.00	1268.92	0.008	0.01	2.858	A
Sheffield Road South	118.91	118.84	6.60	0.00	1507.06	0.079	0.09	2.592	A
Starbucks	23.12	23.11	101.24	0.00	1451.10	0.016	0.02	2.520	A
Sheffield Road North	331.41	331.13	44.02	0.00	1424.52	0.233	0.30	3.292	A

Main results: (07:45-08:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	9.91	9.91	344.62	0.00	1268.77	0.008	0.01	2.859	A
Sheffield Road South	118.91	118.91	6.61	0.00	1507.06	0.079	0.09	2.592	A
Starbucks	23.12	23.12	101.29	0.00	1451.07	0.016	0.02	2.520	A
Sheffield Road North	331.41	331.40	44.04	0.00	1424.51	0.233	0.30	3.292	A

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	8.09	8.10	281.66	0.00	1301.35	0.006	0.01	2.785	A
Sheffield Road South	97.09	97.16	5.40	0.00	1507.69	0.064	0.07	2.551	A
Starbucks	18.88	18.89	82.76	0.00	1460.95	0.013	0.01	2.495	A
Sheffield Road North	270.59	270.86	35.98	0.00	1428.63	0.189	0.23	3.111	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	6.78	6.78	235.83	0.00	1325.06	0.005	0.01	2.730	A
Sheffield Road South	81.31	81.36	4.52	0.00	1508.15	0.054	0.06	2.524	A
Starbucks	15.81	15.82	69.30	0.00	1468.13	0.011	0.01	2.478	A
Sheffield Road North	226.61	226.79	30.13	0.00	1431.63	0.158	0.19	2.987	A

(Default Analysis Set) - 2029 Predicted, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Predicted, PM	2029 Predicted	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Sheffield Road Roundabout	Roundabout	1,2,3,4			2.92	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Arm	Name	Description
Site Access	1	Site Access	
Sheffield Road South	2	Sheffield Road South	
Starbucks	3	Starbucks	
Sheffield Road North	4	Sheffield Road North	

Capacity Options

Name	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Site Access	0.00	99999.00
Sheffield Road South	0.00	99999.00
Starbucks	0.00	99999.00
Sheffield Road North	0.00	99999.00

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Site Access	3.90	4.80	23.40	19.40	60.00	25.00	
Sheffield Road South	4.00	6.10	5.50	19.10	60.00	27.00	
Starbucks	4.70	4.90	0.50	27.40	60.00	23.00	
Sheffield Road North	4.60	5.20	1.00	16.70	60.00	29.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Site Access		(calculated)	(calculated)	0.517	1447.076
Sheffield Road South		(calculated)	(calculated)	0.526	1510.533
Starbucks		(calculated)	(calculated)	0.533	1505.074
Sheffield Road North		(calculated)	(calculated)	0.512	1447.043

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Site Access	ONE HOUR	✓	26.00	100.000
Sheffield Road South	ONE HOUR	✓	95.00	100.000
Starbucks	ONE HOUR	✓	18.00	100.000
Sheffield Road North	ONE HOUR	✓	247.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.000	21.000	0.000	5.000
	Sheffield Road South	7.000	0.000	13.000	75.000
	Starbucks	0.000	15.000	0.000	3.000
	Sheffield Road North	2.000	242.000	3.000	0.000

Turning Proportions (PCU) - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.00	0.81	0.00	0.19
	Sheffield Road South	0.07	0.00	0.14	0.79
	Starbucks	0.00	0.83	0.00	0.17
	Sheffield Road North	0.01	0.98	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	1.000	1.000	1.000	1.000
	Sheffield Road South	1.000	1.000	1.000	1.000
	Starbucks	1.000	1.000	1.000	1.000
	Sheffield Road North	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Sheffield Road Roundabout (for whole period)

		To			
		Site Access	Sheffield Road South	Starbucks	Sheffield Road North
From	Site Access	0.0	0.0	0.0	0.0
	Sheffield Road South	0.0	0.0	0.0	0.0
	Starbucks	0.0	0.0	0.0	0.0
	Sheffield Road North	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Site Access	0.02	2.83	0.02	A
Sheffield Road South	0.07	2.57	0.07	A
Starbucks	0.01	2.51	0.01	A
Sheffield Road North	0.19	3.10	0.23	A

Main Results for each time segment

Main results: (16:15-16:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	19.57	19.52	195.12	0.00	1346.12	0.015	0.01	2.713	A
Sheffield Road South	71.52	71.32	6.00	0.00	1507.37	0.047	0.05	2.506	A
Starbucks	13.55	13.51	65.32	0.00	1470.25	0.009	0.01	2.470	A
Sheffield Road North	185.95	185.36	16.52	0.00	1438.59	0.129	0.15	2.871	A

Main results: (16:30-16:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	23.37	23.36	233.59	0.00	1326.22	0.018	0.02	2.762	A
Sheffield Road South	85.40	85.36	7.19	0.00	1506.75	0.057	0.06	2.532	A
Starbucks	16.18	16.17	78.17	0.00	1463.40	0.011	0.01	2.487	A
Sheffield Road North	222.05	221.91	19.77	0.00	1436.93	0.155	0.18	2.962	A

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	28.63	28.61	286.05	0.00	1299.07	0.022	0.02	2.833	A
Sheffield Road South	104.60	104.54	8.80	0.00	1505.90	0.069	0.07	2.568	A
Starbucks	19.82	19.81	95.74	0.00	1454.04	0.014	0.01	2.509	A
Sheffield Road North	271.95	271.75	24.21	0.00	1434.66	0.190	0.23	3.095	A

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	28.63	28.63	286.26	0.00	1298.97	0.022	0.02	2.833	A
Sheffield Road South	104.60	104.60	8.81	0.00	1505.90	0.069	0.07	2.568	A
Starbucks	19.82	19.82	95.79	0.00	1454.01	0.014	0.01	2.509	A
Sheffield Road North	271.95	271.95	24.22	0.00	1434.65	0.190	0.23	3.095	A

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	23.37	23.39	233.94	0.00	1326.04	0.018	0.02	2.765	A
Sheffield Road South	85.40	85.46	7.20	0.00	1506.74	0.057	0.06	2.534	A
Starbucks	16.18	16.19	78.26	0.00	1463.35	0.011	0.01	2.487	A
Sheffield Road North	222.05	222.25	19.79	0.00	1436.92	0.155	0.18	2.963	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Site Access	19.57	19.59	195.88	0.00	1345.73	0.015	0.01	2.716	A
Sheffield Road South	71.52	71.56	6.03	0.00	1507.36	0.047	0.05	2.506	A
Starbucks	13.55	13.56	65.54	0.00	1470.14	0.009	0.01	2.471	A
Sheffield Road North	185.95	186.09	16.57	0.00	1438.56	0.129	0.15	2.876	A

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