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Proposed Residential Development, Former William Freeman Works, Mapplewell

Transport Assessment

January 2018

PROPOSED RESIDENTIAL DEVELOPMENT
FORMER WILLIAM FREEMAN WORKS
MAPPLEWELL
BARNSELY

NETHERTON BUILDING AND CONSTRUCTION LTD

TRANSPORT ASSESSMENT

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1.0 INTRODUCTION

- 1.1 This Transport Assessment (TA) forms part of an outline planning application by Netherton Building and Construction Ltd seeking outline planning permission for the development of the Former William Freeman Works site in Mapplewell. The proposal includes for up to 85 dwellings with associated open space, drainage features and vehicular, pedestrian and a cycle accesses.
- 1.2 The site is located some 6.5 kilometres to the north west of Barnsley. The former works has been demolished and the site is currently unoccupied brownfield site
- 1.3 Prior to preparing this TA, a scoping note was issued to Barnsley Metropolitan Borough Council (BMBC) in order to agree the contents of this report. The response received from AECOM on behalf of BMBC can be seen at **Appendix BGH1**. This report has been written to be broadly in-line with the comments received as part of the scoping report submitted to the council.
- 1.4 This TA should be read alongside the Framework Travel Plan that also accompanies the planning application.
- 1.5 This report has been prepared with consideration to the accessibility of the proposed development for non-car uses in-line the objectives of the National Planning Policy Framework to promote sustainable transport.
- 1.6 It also considers the residual traffic impact of the proposed development upon the operation of the highway network in the vicinity of the site, together with an assessment of its adequacy.
- 1.7 Following this introductory section, this assessment is split into the following sections:
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| Section 2 | sets out the relevant related planning policies and guidance. |
| Section 3 | provides a description of the setting of the site and the highway network in the vicinity of the proposed development. This section also considers the current use and road safety characteristics of the surrounding highway network. |
| Section 4 | describes the development proposed and means of access. |
| Section 5 | describes the accessibility of the site in terms of sustainable modes of transport. |

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| Section 6 | sets out the trips by all modes likely to be generated by the proposed development. |
| Section 7 | provides details of the impact of the trips generated by the proposed development on the local and strategic transport network. |
| Section 8 | presents the summary and conclusions. |

2.0 NATIONAL AND LOCAL PLANNING POLICY AND GUIDANCE

National Planning Policy Framework, March 2012

- 2.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how they are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development, which the document indicates should be seen as a 'golden thread' running through the decision making process (NPPF para 14).
- 2.2 Within the overarching roles that the planning system ought to play, the NPPF indicates that there are a set of core land use planning principles which should underpin the decision making process (NPPF para 17). Specifically in relation to transport these principles include:
- Actively managing patterns of growth to make the fullest possible use of public transport, walking and cycling, in addition to focussing significant development in locations which are or can be made sustainable.
- 2.3 The NPPF indicates that all developments that generate significant amounts of movement should be supported by a Transport Assessment and the decision making process should take account of whether:
- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
 - Safe and suitable access to the site can be achieved for all people; and
 - Improvements can be undertaken within the transport network that, cost effectively, limit the significant impacts of the development, which should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe (NPPF para 32).
- 2.4 The guidance states that the decision making process should ensure that developments which generate significant movements are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised (NPPF para 34).
- 2.5 It is recommended that development should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to, inter alia:

- Give priority to pedestrian/cycle movements and have access to high quality public transport facilities;
- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones; and
- Consider the needs of people with disabilities by all modes of transport (NPPF para 35).

2.6 The NPPF indicates that a key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan (NPPF para 36). The planning application for this site is accompanied by a Framework Travel Plan, therefore meets this requirement.

2.7 The guidance states that planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities (NPPF para 37).

2.8 It is advised that where practical, particularly within large scale developments, key facilities such as primary schools and local shops should be located within walking distance of most properties (NPPF para 38), the contents of this report demonstrate that the site meets this requirement.

Manual for Streets (MfS1)

2.9 Guidance for the design of residential roads is set out in the Department for Transport/Communities and Local Government publication 'Manual for Streets' (MfS1). The focus of this document is on 'lightly trafficked' residential streets, but it also states that many of its principles are applicable elsewhere (e.g. high streets and lightly-trafficked lanes in rural areas). The document sets out that:

"It is therefore strongly recommended that local authorities review their standards and guidance to embrace the principles of MfS."

2.10 The aims of the document are to bring about a transformation in the quality of streets and represent a fundamental culture change in the way streets are designed and adopted. MfS provides guidance in order that streets can be designed to:

- Help to build and strengthen the communities they serve;
- Meet the needs of all users, by embodying the principles of inclusive design;
- Form part of a well-connected network;

- Be attractive and have their own distinctive identity;
- Be cost-effective to construct and maintain; and
- Be safe.

2.11 Manual for Streets advocates inclusive design and its principles, which are to:

- Place people at the heart of the design process;
- Acknowledge diversity and difference;
- Offer choice where a single solution cannot accommodate all users;
- Provide for flexibility in use; and
- Provide buildings and environments that are convenient and enjoyable to use for everyone.

2.12 Manual for Streets defines a 'street' as a highway that has important public realm functions beyond the movement of traffic. Streets have a sense of place, are distinctive in appearance and are lined with/provide direct access to buildings and public spaces. Most highways in built-up areas can, therefore, be considered streets. The Manual does not define an upper limit in terms of traffic flow to define a 'street', as that was considered to be too prescriptive, but as a general guide it suggests a threshold of around 10,000 vehicles per day or 1,000 vehicles per hour at peak times.

2.13 The design and layout of the site will be in keeping with the principles of Manual for Streets.

Manual for Streets 2 (MfS2)

2.14 The Chartered Institution of Highways and Transportation (CIHT) publication 'Manual for Streets 2: Wider Application of the Principles' (MfS2) was published in September 2010 and forms a companion guide to "Manual for Streets" (MfS1). MfS2 fills the perceived gap in design guidance between MfS1 and Design Manual for Roads and Bridges (DMRB) and has been endorsed by the Department for Transport (DfT).

2.15 The "Status and Application" section of MfS2 advises that:

"DMRB is the design standard for Trunk Roads and Motorways in England, Scotland, Wales and Northern Ireland. The strict application of DMRB to non-trunk routes is rarely appropriate for highway design in built up areas, regardless of traffic volume."

2.16 MfS2 paragraph 1.3.3 states that:

“Where designers do refer to DMRB for detailed technical guidance on specific aspects, for example on strategic inter-urban non-trunk roads, it is recommended that they bear in mind the key principles of MfS, and apply DMRB in a way that respects local context. It is further recommended that DMRB or other standards and guidance is only used where the guidance contained in MfS is not sufficient or where particular evidence leads a designer to conclude that MfS is not applicable.”

2.17 MfS2 paragraph 1.3.4 goes on to state:

“The application of MfS advice to all 30mph speed limits as a starting point is in keeping with MfS1.”

2.18 The design and layout of the site will be in keeping with the principles of Manual for Streets 2.

Planning Practice Guidance

2.19 The Department for Transport web-based resource Planning Practice Guidance (March 2015) contains the chapter “Travel plans, transport assessments and statements in decision-taking.” With reference to the NPPF statement that ‘all developments that generate significant amounts of transport movement should be supported by a Transport Statement or Transport Assessment’, the guidance advises that local planning authorities must make a judgement as to whether a development proposal would generate significant amounts of movement on a case by case basis.

2.20 In paragraph 13 the guidance stipulates that in order to determine whether a Transport Assessment or Statement will be needed for a proposed development, local planning authorities should take into account the following considerations:

- The Transport Assessment and Statement policies (if any) of the Local Plan;
- The scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Transport Assessment or Statement);
- Existing intensity of transport use and the availability of public transport;
- Proximity to nearby environmental designations or sensitive areas ;

- Impact on other priorities/strategies (such as promoting walking and cycling);
- The cumulative impacts of multiple developments within a particular area; and
- Whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).

2.21 The content of this report addresses the requirements of the Planning Practice Guidance.

South Yorkshire Local Transport Plan

2.22 Barnsley is covered by the third South Yorkshire's Local Transport Plan (SYLTP3) covering the period 2011-2026. The Plan objectives, set out with reference to the national shared priorities for transport agreed by the Department for Transport and the Local Government Association, are for the transport system to support the economic growth of the Sheffield City Region (SCR), enhance social inclusion and health, and reduce emissions from vehicles and to make transport increasingly safe and secure.

2.23 The issues to be tackled by SYLTP3 are delivering accessibility, tackling congestion, providing safer roads, better air quality and effective asset management. The SYLTP3 recognises that Travel Plans have a part to play in dealing with three of these five issues and the Framework Travel Plan that accompanies this TA will address these requirements.

Barnsley Local Development Framework – Core Strategy

2.24 The Barnsley Core Strategy, adopted in September 2011 as part of the Council's Local Development Framework, sets out the key elements of the planning framework for Barnsley and surrounding areas, and the approach to its long term physical development up to the year 2026.

2.25 Outlined in the Core Strategy are various strategic objectives, the relevant ones being to:

- Improve access, movement and connectivity with sustainable travel through reducing the reliance on the private car and improving public transport links between settlements;
- Make efficient use of land and infrastructure through delivering planned growth and making the best use of existing and proposed infrastructure;

- Ensure all new development is sustainably designed and built to the highest standards.

Barnsley UDP and Emerging Barnsley Development Plan

- 2.26 The Barnsley Unitary Development Plan (UDP) was adopted in December 2000, covering the period 1986-2001. Those remaining Saved Policies in the UDP are therefore well out of date adopted some 16 years ago and only covering a plan-period up to 2001. The site is allocated in the UDP as an 'Employment Policy Area' (BA5) and as an 'Employment Proposal' (BA4) and within the Urban Barnsley sub-area of the Borough.
- 2.27 The site remains within Urban Barnsley sub-area of the Borough in the Barnsley Local Plan Publication Draft. The estimated timescale for the adoption of Barnsley's Local Plan is Spring 2018. The application site is proposed to be allocated for residential use under site reference AC3 "Former William Freeman Site, Wakefield Road".

3.0 THE OPERATION OF THE EXISTING TRANSPORT NETWORK

The Application Site

- 3.1 The site is located to the east of the A61 Wakefield Road as shown on the location plan attached at **Appendix BGH2**. It is currently an area of derelict land, which used to be the site of the Former William Freeman Works.
- 3.2 The site has direct frontage onto A61 Wakefield Road, from which vehicular access to the site is to be taken. The site is bounded by the remainder of the former William Freeman Works site to the south, agricultural land to the east, residential properties to the north and Wakefield Road to the west.

The Local Highway Network

- 3.3 The A61 Wakefield Road adjacent the site is a two-way road which runs in a broadly south to north direction past the site. Wakefield Road has footways to both sides of the carriageway, has an approximate width of 8m and is street lit. Adjacent to the existing site entrance there is a 40mph speed limit. Approximately 50m to the south, there is a change in speed limit to 30mph as the road approaches the Bar Lane junction.
- 3.4 From the site to the north, the A61 continues north towards Wakefield. Approximately 600m to the north, Paddock Road forms a priority junction with Wakefield Road. Paddock Road provides access to the residential area of Staincross to the west of Wakefield Road as well as providing access further west towards the M1 motorway. Paddock Road is street lit, with footways on both sides of the carriageway and is subject to a 30mph speed limit.
- 3.5 Further north from the junction with Paddock Road, Wakefield Road meets Lee Lane and Shaw Lane (B6428) at a staggered junction. There is a ghost island right turn facility for northbound traffic turning right into Lee lane and a ghost island right turn facility for southbound traffic turning right into Shaw Lane. There is a distance of approximately 40m between the two junctions with Wakefield Road.
- 3.6 Lee Lane provides access to the east towards Royston. Lee Lane is street lit and is subject to national speed limit restriction (60mph) for a single carriageway road. Shaw Lane provides access to the west of Wakefield Road towards Staincross and further west towards to M1 motorway. Shaw Lane is street lit and subject to a 30mph speed limit restriction. From this junction, the A61 continues north towards Wakefield.

- 3.7 To the south of the site, Wakefield Road has a speed limit of 30mph. Approximately 200m south of the site, Wakefield Road meet Bar Lane at a three-way traffic signal junction. Wakefield Road southbound has a single lane approach to the junction with space in the centre of the junction for right turning vehicles to give-way to oncoming traffic. Wakefield Road northbound has a left turn lane which provides free flow left turn movements to Bar Lane, with traffic having to give-way to right turning traffic from Wakefield Road southbound.
- 3.8 There is a staggered signalised pedestrian crossing across the Bar Lane arm of the junction to facilitate safe pedestrian egress through the junction. Bar Lane is a single carriageway road with single lane entry to the junction. It is subject to a 30mph speed limit, has footways on both sides and is street lit. Bar Lane provides access to the west of Wakefield Road towards the New Lodge, Staincross and Mapplewell residential areas.
- 3.9 From this junction, the A61 Wakefield Road continues south towards Barnsley providing direct frontage access to residential properties and access to residential access roads. There are ghost island right turn facilities for right turn movements from Wakefield Road into residential access roads.
- 3.10 Approximately 550m to the south of the Bar Lane traffic signal junction, Wakefield Road meets Laithes Lane at a three way traffic signal junction. Laithes Lane provides access towards a number of residential properties in Athersley, as well as retail and employment destinations.
- 3.11 The A61 Wakefield Road southbound approach to the junction has a two-lane approach to the junction, with two lanes for straight ahead traffic and the left lane providing left turn movements to Laithes Lane. The A61 Wakefield Road northbound approach to the junction also has two lanes, with the right turn lane being for right turning traffic to Laithes Lane only. Laithes Lane has a two lane approach to the junction, with a lane for right turn traffic and a lane for left turn traffic.
- 3.12 There are staggered, signalised pedestrian crossings on all arms of the junction to provide for safe and accessible pedestrian movement through the junction. As part of this junction there is a bus lane on the A61 Wakefield Road northbound. This facility allows for free flow bus movements south to north through the junction in order for buses and cycles to avoid the traffic signals. Upon re-entry to the main carriageway, buses give way to traffic heading north on Wakefield Road. For buses which need to turn right to Laithes Lane, there is a separate entry lane to the junction for buses from the bus lane, allowing for a bus only phase during each phase of the signal operation.

- 3.13 Wakefield Road continues south from this junction, providing frontage access to residential properties and access to residential access roads. After approximately 450m, Wakefield Road meets A633 Rotherham Road at three arm mini roundabout junction. All approach arms to the junction have a single lane entry and exit. On the A633 approach to the junction, there is a free flow left turn facility for vehicles turning left from A633 to Wakefield Road, avoiding the mini-roundabout junction.

Personal Injury Collisions

- 3.14 The record of personal injury accidents that have occurred within the study area during the period from 1st January 2012 to 31st December 2016 has been obtained from Barnsley Metropolitan Borough Council. This is the latest data available from the Council. The study area includes the five junctions within the scope of the TA as well as all the road links between the junctions.
- 3.15 The data shows that during the five year period there have been a total of 53 personal injury accidents, 44 of which were classified as slight and 9 classified as serious. A plot showing the accident locations and the accident report are attached at **Appendix BGH3**, and the records can be summarised as follows. The personal injury accidents that have occurred on the highway network have been grouped based on location.
- 3.16 There have been a total of 6 personal injury accidents at the junction of Wakefield Road/Lee Lane/Shaw Lane. All of these incidents involved vehicles only. Four of these incidents were attributed to drivers failing to look properly or misjudging the path or speed of another vehicle, one was attributed to a poor manoeuvre and one was attributed to a rear end shunt.
- 3.17 There has been one personal injury accident within the study period adjacent the site frontage on Wakefield Road. This involved a rear end shunt collision on the approach to the Bar Lane signalised junction. At the Bar Lane signal junction there have been a total of five personal injury collisions. Three of these collisions involved vehicles only and were caused by vehicles failing to look properly or misjudging the path of oncoming traffic. The two further collisions involved pedestrians walking out into the carriageway and being struck by a vehicle travelling through the junction.
- 3.18 There has been a number of personal injury collisions over the last five years at the Wakefield Road/Laithes Lane junction. Four of the incidents at this junction involved rear end shunts. Six further collisions at this junction involved vehicles failing to look properly or misjudging the path of a vehicle or pedestrian. Two of

these collisions involved pedestrians being struck when crossing the carriageway, with two further collisions involving pedestrians being struck when they ran out into the carriageway, with no fault being placed on the driver.

- 3.19 There have been seven personal injury collision at the mini-roundabout junction of Rotherham Road and Wakefield Road. Of these collisions, two were recorded as rear end shunt collisions. Four further collision at this junction were attributed to drivers failing to look properly or misjudging the path of other vehicles at the junction. The final collision was caused by a driver being dazzled by the sun and colliding with another vehicle.
- 3.20 There have been 16 personal injury collisions along Wakefield Road on the links between the junctions being assessed as part of this TA. Two of these were attributed to rear end shunt collisions into the back of vehicles waiting to turn right into minor residential access roads. Three further collisions involved vehicles undertaking poor turns/manoeuvre and colliding with oncoming traffic.
- 3.21 The main cause of collisions along the rest of Wakefield Road was drivers failing to look properly or misjudging the path/speed of another vehicle. This was attributed to nine collisions along Wakefield, 3 involving vehicles only, 2 involving cyclists and 4 involving pedestrians. There have been two further collisions involving pedestrians, however these involved the pedestrian entering the carriageway in front of oncoming traffic and the vehicle not having enough time to stop before colliding with the pedestrian.
- 3.22 From the review of the accident data for the latest five year period, it is clear that there are no highway safety issues associated with the road network in the vicinity of the site. Despite the number of collisions, 53 (approximately 10 per year), this is over a large section of road (over 3 kilometres) and includes a number of junctions. Therefore it is deemed that the highway network is operating without any significant issues of road safety or common causality of accidents.

Existing Highway Network Operation

- 3.23 Fully classified traffic turning movement count and queue length data has been collected at key junctions on the local highway network surrounding the site. The data has been collected at 15 minute time intervals during the morning peak (07:00 to 10:00), evening peak (15:00-19:00) and on a Saturday (08:00-18:00) on Friday 10th and Saturday 11th November 2017 at the following junctions:
- A61 Wakefield Road/A633 Rotherham Road mini-roundabout junction;
 - A61 Wakefield Road/Laithes Road three-way traffic signal junction;

- A61 Wakefield Road/Bar Lane three-way traffic signal junction;
- A61 Wakefield Road/Paddock Road priority junction and;
- A61 Wakefield Road/Lee Lane/Shaw Lane offset crossroads junction.

NB – The Saturday peak was included as it is understood that a planning application for a Lidl store will be submitted for the adjacent site and has been included in this TA as a sensitivity test.

3.24 The survey results are attached at **Appendix BGH4** and show the peak usage of the network occurred between 07:45-08:45 in the morning, 16:45-17:45 in the evening and between 11:45-12:45 on the Saturday. Diagrams showing the flows on the network during these peak periods are attached at **Appendix BGH5**. It should be noted that the figures shown on these diagrams are total vehicles flows and total HGV/PSV flows.

Operational Assessment against 2017 Existing Flows

3.25 The existing peak hour operational characteristics of the existing junctions within the scope of the TA have been assessed using the Junctions 8, Junctions 9 and Linsig V3 junction modelling software, as appropriate. Full outputs are attached at **Appendix BGH6** and the results for each junction are presented and summarised in the following tables and accompanying text. For existing roundabout and priority junctions, an RFC of 0.85 is generally considered to represent the practical capacity of a junction. For a signalised junction, a degree of saturation of 90% is generally considered to represent the practical capacity of the junction.

Table 3.1 – Wakefield Road – Lee Lane – Shaw Lane 2017 Existing

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane Left Turn	1.03	8	0.99	4	0.96	5
Shaw Lane Right Turn	1.05	15	0.98	11	0.99	11
Wakefield Road (NB) Right Turn to Lee Lane	0.17	0	0.44	1	0.22	0
Lee Lane Left Turn	1.14	7	0.33	0	0.31	0
Lee Lane Right Turn	1.14	30	0.84	4	0.78	3

Wakefield Road (SB) Right Turn to Shaw Lane	0.19	0	0.22	0	0.17	0
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- 3.26 The results show that the junction is currently operating above capacity with queuing on both the minor arms (Shaw Lane and Lee Lane). It is understood that as part of a committed residential development that there is a junction improvement scheme for the junction which would result in the widening of the two minor arms. This layout will be modelled in the future year assessments as part of this TA. It has therefore been assumed that this would provide benefit to the operation of the junction.

Table 3.2 – Wakefield Road – Paddock Road 2017 Existing

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road Left Turn	0.09	0	0.49	1	0.03	0
Paddock Road Right Turn	0.48	1	0.83	4	0.50	1
Right Turn to Paddock Road	0.01	0	0.05	0	0.02	0

- 3.27 The results show that the junction is currently operating within practical capacity with minimal queuing on the Paddock Road approach to the junction.

Table 3.3 – Wakefield Road – Bar Lane 2017 Existing

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road Southbound	49.6%	8	58.6%	11	49.1%	8
Wakefield Road Northbound	87.9%	24	83.5%	20	78.3%	17
Bar Lane	88.6%	16	82.1%	12	79.2%	12

- 3.28 The results show that the junction is currently operating within practical capacity with queuing that would be expected at a traffic signal controlled junction.

Table 3.4 – Wakefield Road – Laithes Lane 2017 Existing

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road South	71.4%	17	87.2%	26	78.9%	20
Wakefield Road North	88.0%	25	87.4%	24	79.6%	18
Laithes Lane	87.1%	16	87.6%	17	79.2%	13

- 3.29 The results show that the junction is currently operating within capacity with queuing that would be expected at a traffic signal controlled junction.

Table 3.5 – Wakefield Road – Rotherham Road Mini-Roundabout 2017 Existing

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 North	0.50	1	0.47	1	0.52	1
A633 Rotherham Road	0.76	3	0.56	1	0.62	2
A61 South	0.49	1	0.73	3	0.64	2

- 3.30 The results show that the junction is currently operating within practical capacity with minimal queuing on the approaches to the junction.

Table 3.6 – Give-way from Rotherham Road to Wakefield Road Mini-Roundabout
2017 Existing

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Give-way Left Turn	0.24	0	0.09	0	0.12	0

- 3.31 The results show that the approach is currently operating within practical capacity with minimal queuing.

Traffic Growth

- 3.32 In accordance with normal practice, the proposed development will be assessed for a future year, five years after the date of registration of the application. The 2017 existing flows have been growthed, using Temprow adjusted National Growth Model (NTM) factors of 1.0954, 1.0917 and 1.0938 for the morning, evening and Saturday daytime peaks respectively, to produce the 2023 growthed flows, as shown on the diagrams included at **Appendix BGH7**.

Committed Development

- 3.33 Information on committed developments that should be taken into account in the assessment was requested from Barnsley Metropolitan District Council. The list of committed developments that should be considered as part of our assessment can be found in the scoping report attached at **Appendix BGH1**. The sites that have been assessed as part of the 2023 Base scenario are listed below:

- 2015/1015 – approved reserved matters application for up to 325 residential dwellings on land west of Wakefield Lane (North Gawber);
- 2016/0337 – approved reserved matters application for 46 residential dwellings on land west of Wakefield Road opposite the proposed site; and
- 2016/1490 – full consent for 164 residential dwellings on land north of Lee Lane.

- 3.34 A search has been undertaken of the Barnsley Planning Portal for the planning permissions. The three planning permissions listed below have been found, as well as the transport related documents, including traffic flow diagrams.
- 3.35 The number of dwellings for which these sites have planning permission has been considered as committed development, given that this is a realistic number of dwellings which could be constructed before 2023. The predicted traffic generation of the two sites has been taken from the relevant TA for the site.
- 3.36 The predicted traffic generation of the committed development sites can be seen on the flow diagrams attached at **Appendix BGH8**. These flows have been added to the 2023 growthed flows at **Appendix BGH7** to produce the 2023 Base flows attached at **Appendix BGH9**.

Operational Assessment against 2023 Base Flows

- 3.37 The 2023 base scenario peak hour operational characteristics of all the junctions within the scope of the TA have been assessed using Junctions 8, Junctions 9 and Linsig V3 where appropriate. Full outputs are attached at **Appendix BGH10** and the results of each junction are presented and summarised in the following tables and accompanying text.
- 3.38 As part of the Committed Development at Lee Lane, Royston there is a committed highway improvement scheme for the junction of Wakefield Road/Lee Lane/Shaw Lane. This improvement scheme involves widening the approach arms of Shaw Lane and Lee Lane in order to provide two lanes for a short section on approach to the junction. Given that this is a committed scheme, it is assumed that this will be in place in 2023 when it is estimated that the Lee Lane development will be fully built out. Therefore in the 2023 Base and 2023 Predicted Scenarios the committed development scheme will be modelled.

Table 3.7 – Wakefield Road – Lee Lane – Shaw Lane 2023 Base

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane Left Turn	0.37	1	0.12	0	0.26	0
Shaw Lane Right Turn	1.32	41	1.27	42	1.17	34
Wakefield Road (NB) Right Turn to Lee Lane	0.22	0	0.62	2	0.33	0
Lee Lane Left Turn	0.26	0	0.23	0	0.28	0
Lee Lane Right Turn	1.62	115	1.26	33	1.09	20
Wakefield Road (SB) Right Turn to Shaw Lane	0.26	0	0.26	0	0.20	0

- 3.39 The results show that the junction is predicted to operate above capacity with the improvement scheme and additional traffic from background growth and committed development. There is queuing on both the minor arms (Shaw Lane and Lee Lane).

Table 3.8 – Wakefield Road – Paddock Road 2023 Base

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road Left Turn	0.12	0	1.03	7	0.04	0
Paddock Road Right Turn	0.59	1	1.03	15	0.55	1
Right Turn to Paddock Road	0.01	0	0.06	0	0.02	0

- 3.40 The results show that the junction is predicted to operate slightly above capacity with the additional traffic from background growth and committed development

in the PM peak. The AM peak and Saturday peak operate well within practical capacity with minimal queuing on the Paddock Road approach to the junction.

Table 3.9 – Wakefield Road – Bar Lane 2023 Base

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road Southbound	59.4%	11	67.4%	14	57.2%	11
Wakefield Road Northbound	100.0%	44	96.1%	34	90.6%	26
Bar Lane	101.5%	30	93.9%	18	90.8%	16

- 3.41 The results show that the junction is predicted to operate close to capacity with the additional traffic from background growth and committed development in the morning peak and within capacity in the two other peak periods.

Table 3.10 – Wakefield Road – Laithes Lane 2023 Base

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road South	78.3%	21	99.3%	49	89.8%	29
Wakefield Road North	99.6%	48	97.8%	40	89.3%	26
Laithes Lane	99.6%	27	98.2%	27	89.0%	17

- 3.42 The results show that the junction is predicted to operate within capacity with the additional traffic from background growth and committed development in the each of the peak periods.

Table 3.11 – Wakefield Road – Rotherham Road 2023 Base

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 North	0.59	1	0.54	1	0.59	1
A633 Rotherham Road	0.94	10	0.65	2	0.74	3
A61 South	0.57	1	0.89	7	0.78	4

- 3.43 The results show that the junction is predicted to operate within capacity with the additional traffic from background growth and committed development in the each of the peak periods.

Table 3.12 – Give-way from Rotherham Road to Wakefield Road 2023 Base

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Give-way Left Turn	0.28	0	0.11	0	0.13	0

- 3.44 The results show that the approach is predicted to operate within capacity with the additional traffic from background growth and committed development in the each of the peak periods.

4.0 PROPOSED DEVELOPMENT

- 4.1 The development proposals are for up to 85 dwellings. Access to the development will be provided via a new priority right turn ghost island 'T' junction with A61 Wakefield Road. There will be no frontage access taken from Wakefield Road to any properties. A copy of the proposed site layout plan is attached at **Appendix BGH11**.

Vehicle Access

- 4.2 Access to the proposed development site will be provided via a new priority junction from Wakefield Road, with a ghost island right turn facility. This is due to the speed limit along Wakefield Road being 40 mph and giving right turning traffic a 'safe' area to wait when turning right, rather than being due to capacity reasons.

- 4.3 The attached site access drawing at **Appendix BGH12** shows the visibility splays of 2.4m x 120m for a 40mph road, which is in accordance with DMRB, can be achieved at the site access junction. As part of the site access junction it is proposed to provide a Ghost Island Right Turn facility into the site designed in accordance with DMRB for a 40mph road. Whilst not essential to the scheme, and, subject to discussions with BMBC it may be possible to relocate the position of the change of speed limit that is currently to the south of the site access to a point to the north of the site access.

Car Parking

- 4.4 Car parking at the proposed development for residents and visitors will be provided in line with "Barnsley Local Development Framework – Supplementary Document – Parking". The proposed development is situated outside the 'Barnsley Urban' area, for which there are specific maximum parking guidelines. The guidelines set out the following required level of parking in new residential developments:

- 1 space for dwellings with 1 or 2 bedrooms; and
- 2 spaces for dwellings with 3 or more bedrooms.

- 4.5 Parking will be provided in accordance with these requirements.

5.0 SUSTAINABLE TRANSPORT ACCESSIBILITY

5.1 The site will have one point of vehicular access, a priority junction with ghost island right turn facility from Wakefield Road which will allow for all mode access to the development. Further pedestrian/cycle links from the development will be provided onto Wakefield Road to the south of the vehicular access to the site.

5.2 National and local transport policies seek to reduce the need to travel and to promote the use of alternative sustainable modes of travel to the private car. Therefore the existing provision within the vicinity of the site has been reviewed and summarised below.

Pedestrian Accessibility

5.3 The Chartered Institution of Highways and Transportation (CIHT) publication “Planning for Walking” (March 2015) states that after driving, walking is the most common form of travel in Britain accounting for 22% of all journeys in 2012. Approximately 80% of journeys shorter than 1 mile (1.6 kilometres) are made wholly on foot. Walking is also regarded as an essential part of public transport travel, as bus stops are usually accessed on foot.

5.4 The earlier CIHT Publication “Guidelines for Providing for Journeys on Foot” (2000) suggests ‘acceptable’ walking distances for pedestrians without mobility impairment – for commuting/school journeys up to 500 metres is considered the desirable distance, up to 1,000 metres is an acceptable distance and 2,000 metres is the preferred maximum, whilst for other journeys the distances are 400 metres, 800 metres and 1,200 metres respectively.

5.5 Manual for Streets identifies that walkable neighbourhoods are typically characterised by having a range of facilities which are within ten minutes (up to around 800 metres) walking distance but that this is not an upper limit and walking offers the greatest potential to replace short car trips, particularly those under 2.0 kilometres.

5.6 At present there is a footway on both sides of Wakefield Road providing access to the north and south of the development. Footways are provided on the majority of roads and streets on the local highway network, with crossing facilities provided at most junctions.

5.7 The walking accessibility plan included at **Appendix BGH13** indicates that Athersley and Mapplewell are accessible within a two kilometre walking distance.

- 5.8 Athersley North Primary School is accessible within 1,000m of the proposed development site and is accessed via Wakefield Road, Newstead Road and Lindhurst Road. The site is also adjacent to the site of a proposed Lidl store, further increasing the availability of local facilities for residents.

Cycling

- 5.9 Cycling has clear potential to substitute for short car trips, particularly those up to 5km and to form part of a longer journey by public transport. The plan at **Appendix BGH14** shows the 5.0 kilometre and 8.0 kilometre cycling catchment and it can be seen that areas including Barnsley and its suburbs, as well as the whole of Mapplewell and its amenities are within cycling distance of the site, providing employment opportunities for residents.
- 5.10 Darton train station is approximately 3.6km cycling distance from the site and Barnsley train station is approximately 4.4km cycling distance from the site and therefore both are within the 5 kilometre cycling catchment area.
- 5.11 There are existing on and off road cycle routes to the south east of the site providing facilities through the Wakefield Road/Laithes Lane traffic signal junction. There are further off road routes in close proximity, to the north and east of the site for recreational use, including the West Yorkshire Cycle Route and National Cycle Network Route Number 67 (Derby to York).

Public Transport

- 5.12 With regard to public transport provision at new developments, the CIHT publication “Guidelines for Public Transport in Developments” states:
- “The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m.”*
- 5.13 The CIHT document “Planning for Walking” (March 2015) reinforces this and states that 400 metres has traditionally been regarded as a cut off point for walking to bus stops.
- 5.14 The nearest bus stops to the site are located on both sides of Bar Lane to the south west of the site. The majority of the site is within 400 metres walking distance of these stops via Wakefield Road and Bar Lane. There are further bus stops located on Wakefield Road, south of the junction with Bar Lane, however these stops are served by the same bus services but are further to walk to.
- 5.15 The bus stop on Bar Lane is served by the number 1 and X10 bus services. The number 1 bus service provides a 10 minute service frequency between Staincross

and Barnsley Monday to Saturday and a 30 minute service frequency on Sundays. The X10 bus service provides an hourly bus service between Barnsley and Leeds City Centre. The public transport accessibility plans attached at **Appendix BGH15** shows the locations which can be reached within a 60 minute public transport journey of the site. These include destinations such as Barnsley, Wakefield, Penistone and the outskirts of Rotherham.

- 5.16 The CIHT guidelines identify that there is a significant difference between rail and bus served developments in that people have been found to be willing to walk about twice as far to an office from a station as from a bus stop; up to at least 800m for rail, compared to about 400m for bus. It is assumed that this applies equally to residential development and the use by residents of rail services for travelling to work or for leisure purposes.
- 5.17 The nearest railway station to the development site is Darton Railway Station which is located on Station Road, some 3.6km walking distance from the site.

6.0 TRAFFIC IMPACT ON THE LOCAL HIGHWAY NETWORK

- 6.1 The following section provides details of the predicted trip generation and distribution of the proposed development.

Trip Generation

- 6.2 The TRICS database has been used to derive vehicle trip rates for the site using the 'Residential – Houses Privately Owned' land use classification. The resulting trip rates and traffic generation are shown in Table 6.1 below and the full TRICS output is included at **Appendix BGH16**.

Table 6.1 Trip Rates and Generation

Land Use (Up to 85 dwellings)	Trip Rate					
	Morning Peak Hour			Evening Peak Hour		
	Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
Trip Rate	0.156	0.384	0.54	0.355	0.175	0.53
Traffic Generation	13	33	46	30	15	45

Trip Distribution and Assignment

- 6.3 In order to establish the likely distribution profile of traffic generated by the proposed development, the trip distribution has been determined based on 2011 Census Journey to Work Data for the middle super output area of Barnsley 004. The assignment is summarised at **Appendix BGH17**.
- 6.4 The traffic generated by the proposed development is shown on the diagrams at **Appendix BGH18**. The development flows have been added to the 2023 Base flows at **Appendix BGH9**, to produce the 2023 predicted flows shown on the diagrams at **Appendix BGH19**.

7.0 THE IMPACT OF DEVELOPMENT GENERATED TRIPS

7.1 The 2023 predicted peak hour operational characteristics of the junctions within the scope of the TA have been assessed using Junctions 8, Junctions 9 and Linsig V3 where appropriate. Full outputs are attached at **Appendix BGH20** and the results for each junction are presented and summarised in the following tables and accompanying text.

Table 7.1 – Wakefield Road – Lee Lane – Shaw Lane 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane Left Turn	0.37	1	0.12	0	0.26	0
Shaw Lane Right Turn	1.33	42	1.28	43	1.18	35
Wakefield Road (NB) Right Turn to Lee Lane	0.22	0	0.62	2	0.34	1
Lee Lane Left Turn	0.27	0	0.23	0	0.28	0
Lee Lane Right Turn	1.64	117	1.28	35	1.10	21
Wakefield Road (SB) Right Turn to Shaw Lane	0.26	0	0.26	0	0.20	0

7.2 The results show that the junction is predicted to continue to operate above capacity with the development related traffic, however, there are only very minimal increase in queue length in the order of 2 PCUs on any given approach. Given this it is considered that the development does not have a significant impact on the operation of the junction.

Table 7.2 – Wakefield Road – Paddock Road 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road Left Turn	0.12	0	1.05	7	0.04	0
Paddock Road Right Turn	0.60	1	1.05	17	0.56	0
Right Turn to Paddock Road	0.01	0	0.06	0	0.02	0

- 7.3 The results show that the junction is predicted to continue to operate above capacity with the development related traffic in the PM and within capacity in both the AM and Saturday peaks. In the PM peak there is a minimal increase in queue length of 2 PCUs on the Paddock Road approach. Given this it is considered that the development does not have a significant impact on the operation of the junction.

Table 7.3 – Wakefield Road – Bar Lane 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road Southbound	61.6%	12	68.3%	14	59.4%	11
Wakefield Road Northbound	100.6%	46	97.4%	38	91.3%	27
Bar Lane	101.8%	31	94.8%	19	91.2%	17

- 7.4 The results show that the junction is predicted to continue to operate close to capacity with the development related traffic. There are only very minimal increase in queue length on any given approach. Given this it is considered that the development does not have a significant impact on the operation of the junction.

Table 7.4 – Wakefield Road – Laithes Lane 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road South	78.8%	22	99.9%	52	89.8%	28
Wakefield Road North	101.0%	56	97.1%	28	90.0%	29
Laithes Lane	99.9%	27	99.9%	29	90.5%	17

- 7.5 The results show that the junction is predicted to continue to operate within capacity with the development related traffic, however, there are some increases in queue length on each any approach.

Table 7.5 – Wakefield Road – Rotherham Road 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 North	0.60	2	0.54	1	0.59	1
A633 Rotherham Road	0.96	11	0.66	2	0.75	3
A61 South	0.58	1	0.90	8	0.79	4

- 7.6 The results show that the junction is predicted to continue to operate within capacity with the development related traffic. There are only very minimal increase in queue length in the order of 1 PCU on any given approach. Given this it is considered that the development does not have a significant impact on the operation of the junction.

Table 7.6 – Give-way from Rotherham Road to Wakefield Road 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Give-way Left Turn	0.28	0	0.11	0	0.14	0

7.7 The results show that the approach is predicted to continue to operate within capacity with the development related traffic.

7.8 In addition to the junctions on the local highway network, the operation of the proposed site access arrangements has also been assessed using Junctions 8. The results of the 2023 predicted operational assessment can be seen in Table 7.7. The results show that the proposed site access arrangement is predicted to operate within capacity during all three peak hour scenarios.

Table 7.7 – Proposed Site Access onto Wakefield Road 2023 Predicted

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Site Access	0.10	0	0.05	0	0.09	0
Wakefield Road NB Right Turn to site	0.02	0	0.04	0	0.02	0

Sensitivity Testing

7.9 It is understood that a planning application for a Lidl store will be submitted for the adjacent site and therefore a sensitivity test including the predicted flows from the Lidl development has been included.

7.10 The predicted traffic generation of the Lidl site for the three peak periods being assessed has been supplied by the EJSAssociates Consulting Engineers, the Highway Consultancy undertaking the Transport Assessment for the Lidl store. The predicted trip generation of the Lidl site can be found on the flow diagrams attached at **Appendix BGH21**.

- 7.11 The predicted Lidl development traffic at **Appendix BGH21** has been added to the 2023 predicted traffic flows at **Appendix BGH19** to form the 2023 Predicted with Lidl network flows which can be found at **Appendix BGH22**.
- 7.12 The peak hour operational characteristics of the junctions within the scope of the TA have been assessed against the 2023 predicted with Lidl network flows using Junctions 8, Junctions 9 and Linsig V3 where appropriate. Full outputs are attached at **Appendix BGH23** and the results for each junction are presented and summarised in the following tables and accompanying text.

Table 7.8 – Wakefield Road – Lee Lane – Shaw Lane 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Shaw Lane Left Turn	0.37	1	0.13	0	0.26	0
Shaw Lane Right Turn	1.34	43	1.33	48	1.21	39
Wakefield Road (NB) Right Turn to Lee Lane	0.22	0	0.64	2	0.35	1
Lee Lane Left Turn	0.27	0	0.24	0	0.29	0
Lee Lane Right Turn	1.65	119	1.35	40	1.13	24
Wakefield Road (SB) Right Turn to Shaw Lane	0.27	0	0.27	0	0.20	0

- 7.13 The results show that the junction is predicted to continue to operate above capacity with the addition of the Lidl development related traffic. There are only small increases in queue length, with a maximum increase of 7 PCUs (to a queue of 33 PCUs) on the Lee Lane approach.

Table 7.9 – Wakefield Road – Paddock Road 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Paddock Road Left Turn	0.13	0	1.12	9	0.04	0
Paddock Road Right Turn	0.62	2	1.11	24	0.61	1
Right Turn to Paddock Road	0.01	0	0.06	0	0.02	0

- 7.14 The results show that the junction is predicted to continue to operate above capacity in the PM peak with the addition of the Lidl development related traffic. There is an increase in queue length of 9 PCUs (to a queue of 15 PCUs) on the Paddock Road approach.

Table 7.10 – Wakefield Road – Bar Lane 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road Southbound	62.4%	12	72.6%	16	63.9%	12
Wakefield Road Northbound	101.6%	52	99.8%	46	94.8%	32
Bar Lane	102.4%	32	100.7%	26	93.2%	18

- 7.15 The results show that the junction is predicted to continue to operate within capacity with the addition of the Lidl development related traffic. There are only small increases in queue length, with a maximum increase of 12 PCUs (to a queue of 34 PCUs) on the Wakefield Road northbound approach in the PM peak.

Table 7.11 – Wakefield Road – Laithes Lane 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Wakefield Road South	79.8%	22	103.2%	75	92.5%	31
Wakefield Road North	101.5%	59	100.3%	51	92.9%	33
Laithes Lane	100.1%	28	102.5%	34	91.6%	17

- 7.16 The results show that the junction is predicted to operate at capacity with the addition of the Lidl development related traffic. There are increases in queue length, with a maximum increase of 26 PCUs (to a queue of 49 PCUs) on the Wakefield Road south approach in the PM peak.

Table 7.12 – Wakefield Road – Rotherham Road 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
A61 North	0.60	2	0.57	1	0.61	2
A633 Rotherham Road	0.97	12	0.69	2	0.78	3
A61 South	0.58	1	0.94	12	0.82	4

- 7.17 The results show that the junction is predicted to continue to operate within capacity with the addition of the Lidl development related traffic. There are only small increases in queue length, with a maximum increase of 5 PCUs (to a queue of 7 PCUs) on the A61 south approach in the PM peak.

Table 7.13 – Give-way from Rotherham Road to Wakefield Road 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Give-way Left Turn	0.28	0	0.11	0	0.14	0

- 7.18 The results show that the approach is predicted to continue to operate within capacity with the Lidl development related traffic.

Table 7.14 – Proposed Site Access onto Wakefield Road 2023 Predicted with Lidl

	Friday AM Peak		Friday PM Peak		Saturday Peak	
	DoS	Queue (PCU)	DoS	Queue (PCU)	DoS	Queue (PCU)
Site Access	0.10	0	0.05	0	0.10	0
Wakefield Road NB Right Turn to site	0.02	0	0.04	0	0.02	0

- 7.19 The results show that the proposed site access arrangement is predicted to operate within capacity during all three peak hour scenarios with the addition of the Lidl development related trips.

8.0 SUMMARY AND CONCLUSIONS

- 8.1 This Transport Assessment forms part of an outline planning application by Netherton Building and Construction Ltd who are seeking outline planning permission for the redevelopment of the Former William Freeman Works site in Mapplewell for the construction of up to 85 dwellings with associated open space, drainage features and vehicular, pedestrian and a cycle access.
- 8.2 The site has direct frontage onto A61 Wakefield Road, which is where vehicular access to the site is to be taken from. The site is bounded by the remainder of the former William Freeman Works site to the south, agricultural land to the east, residential properties to the north and Wakefield Road to the west.
- 8.3 Access to the development will be provided via a new priority 'T' junction with ghost island right turn from Wakefield Road. There will be no frontage access taken from Wakefield Road to any properties.
- 8.4 The record of personal injury accidents occurring on the local highway network has been retrieved from the appropriate bodies. The data has been assessed and it is concluded that the local highway network in the vicinity of the proposed development is operating safely.
- 8.5 The site is considered to be accessible by sustainable modes of transport such as walking, cycling and public transport.
- 8.6 Operational assessments have been undertaken to demonstrate the 2023 predicted peak hour operational characteristics of the junctions in the vicinity of the site. The analysis demonstrates that the proposals will not result in material harm to the safe and free flow operation of any of the junctions assessed, with marginal increases in queuing.
- 8.7 It is understood that a planning application for a Lidl store will be submitted for the adjacent site and therefore a sensitivity test including the predicted flows from the Lidl development has been included. The analysis demonstrates that the Lidl proposals would increase queues at a number of junctions.
- 8.8 In summary, this Transport Assessment has shown that the proposed development site will be accessible by all modes of transport, consistent with both national and local transport planning policies. It has also demonstrated that the development related trips would not have a significant impact on the

operation of the local highway network. It is therefore considered that there are no transport reasons why planning approval should be withheld.



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