

**High Street, Great Houghton
Proposed Residential Development
Transport Assessment**

July 2021

Prepared on behalf of
Harron Homes Limited

Quality Management

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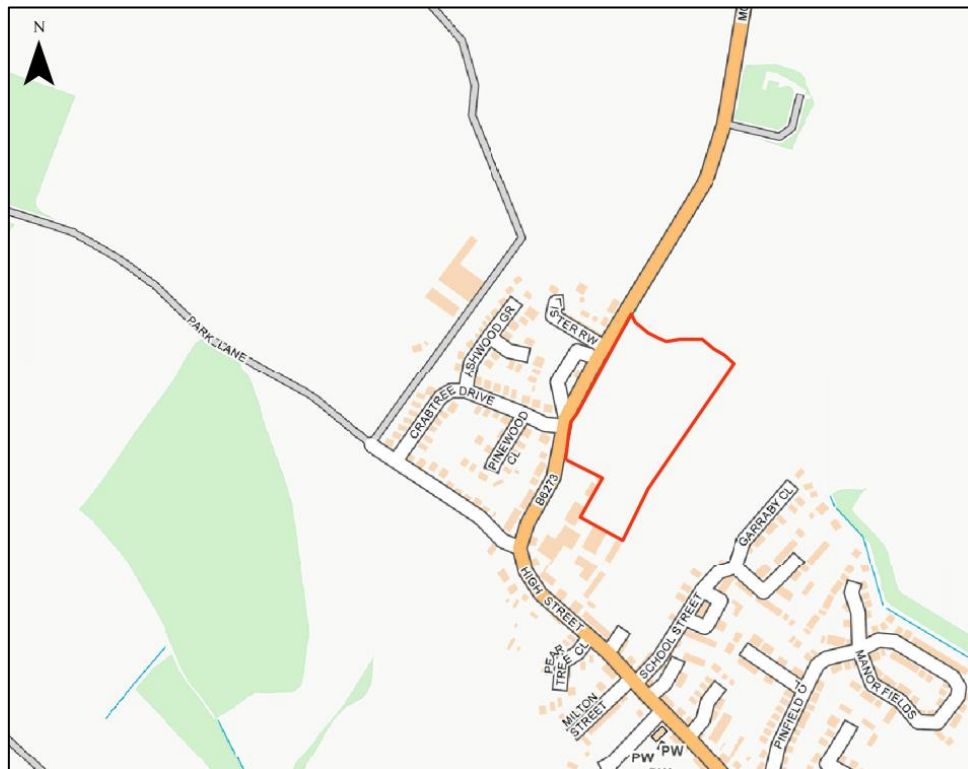
1. Introduction

1.1 INTRODUCTION

1.1.1 Optima Highways and Transportation Consultancy Limited (Optima) has been appointed by Harron Homes Limited to prepare a Transport Assessment (TA) that considers the highways and transportation matters associated with a planning application for residential development. The Site is located to the east of B6273 High Street in Great Houghton.

1.1.2 The Site in relation to the local highway network is shown in Figure 1 with an extract provided in Image 1.1.

Image 1.1 Site Location



1.2 SCHEME PROPOSAL AND SCOPE OF REPORT

1.2.1 The scheme proposals comprise some 86 dwellings on the Site to the east of High Street in Great Houghton. The proposals are discussed in more detail in Section 4.

1.2.2 This TA has been prepared in accordance with the Department for Communities and Local Government (DCLG) 'National Planning Practice Guidance' published in 2014 which supersedes the Department for Transport (DfT) and DCLG's 'Guidance on Transport Assessment' (GTA) document. Cognisance has also been taken of the National Planning Policy Framework (NPPF), as well as the BMBC Local Plan.

1.2.3 Paragraph 109 of NPPF, February 2019 states 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."



1.2.4 This report sets out the transport impacts relating to the development proposals and considers the sustainability and accessibility of the Site, reviewing the provision and quality of facilities and connections to and from the surrounding areas. The document structure is as follows:

- Section 2 - contains an overview of local and national Transport Policy relevant to the Site;
- Section 3 - describes the Site, its surroundings and existing transport conditions including access by all modes of transport;
- Section 4 - sets out the development proposals including means of access;
- Section 5 - considers the accessibility of the Site and the opportunities to influence travel behaviour;
- Section 6 - contains details of likely trip generation and distribution;
- Section 7 – describes the build-up of traffic flow information for the base and design years and provides a commentary of the junction assessments that have been undertaken to determine the impact of the development; and
- Section 8 - provides a summary and conclusion to the TA.



2. Planning Policy Context

2.1 INTRODUCTION

2.1.1 This section of the TA sets out planning policy context against which the proposed development is to be considered insofar as it relates to transportation and highway matters. It sets out the relevant statements of planning policy within the statutory development plan and the National Planning Policy Framework (NPPF) that relate to the scheme. The Government also publishes National Planning Practice Guidance (NPPG) to explain how NPPF policy should be implemented.

2.1.2 S38(6) of the Planning and Compulsory Purchase Act 2004 states that *“If regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise.”* Therefore, the development plan is the starting point for the determination of planning applications.

2.1.3 The proposed development lies within the administrative boundary of Barnsley Metropolitan Borough Council (BMBC). BMBC is a Unitary Authority and consequently has responsibility for highways and transportation matters within its administrative boundary. Barnsley’s Local Plan is the statutory development plan.

2.2 LOCAL POLICY

Barnsley Local Plan

2.2.1 Following public consultation and examination by an Independent Planning Inspector, Barnsley’s Local Plan was adopted by Full Council on 3rd January 2019.

2.2.2 The Local Plan identifies Great Houghton as being a ‘Village’ and notes that villages vary in size from larger villages to small hamlets but are generally categorised by a more limited range of services and public transport compared with Urban Barnsley and the Principal Towns.

2.2.3 The Site is a housing allocation; HS90 - Land off High Street, Great Houghton. The Local Plan allocation considers that the Site has an indicative capacity of 67 dwellings.

2.2.4 The policy description has no specific requirements in relation to highways and transport.

2.2.5 Policy T3 ‘New Development and Sustainable Travel’ sets out the expectations of new development in relation to these matters. This policy sets out that new development should be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists. Parking is to be provided to at least the minimum levels for cycles, motorbikes, scooters, mopeds and disabled people as set out in the relevant Supplementary Planning Document and Transport Assessments / Statements and Travel Plans are to be provided.

2.2.6 The Local Plan sets out detailed requirements for both Transport Assessments and Travel Plans and notes that Active Traffic Management and Integrated Demand Management types of intervention are preferable to capacity improvements.

2.2.7 Policy T4 ‘New Development and Transport Safety’ is specifically concerned with development being *“expected to be designed and built to provide all transport users within and surrounding the development with safe, secure and convenient access and movement.”*



Supplementary Planning Documents and Planning Advice Notes

2.2.8 Following the adoption of the Barnsley Local Plan, BMBC has also adopted several Supplementary Planning Documents (SPD) and Planning Advice Notes (PAN) of which the following, all adopted in November 2019, are concerned with highway and transport-related topics:

2.2.9 Sustainable Travel SPD – seeks contributions for sustainable and active travel. This SPD also sets out the number of electric vehicle charging points to be provided by developments as a minimum;

2.2.10 Section 278 Agreements SPD – sets out the process of Section 278 agreements which relate to works within the highway;

2.2.11 Parking SPD – gives guidance on parking standards; and

2.2.12 Section 38 Agreements PAN – sets out the process of Section 38 agreements which relate to adoption of highway.

Sheffield City Region Transport Strategy (2011-2026)

2.2.13 The Sheffield City Region Transport Strategy (2011-2026) (SCRTS) is part of the Third Local Transport Plan for South Yorkshire, which includes the districts of Barnsley, Doncaster, Rotherham and Sheffield. It is complemented by an implementation plan which explains how the strategic priorities identified in the SCRTS will be delivered. Due to its strong economic links to West Yorkshire, Barnsley also forms part of the Leeds City Region and is therefore also covered by the Leeds City Region Transport Strategy although as one of the four South Yorkshire districts, Barnsley's transport priorities are fully addressed in the SCRTS.

2.2.14 The SCRTS has four goals for the transport system which are underpinned by a set of 26 policies:

2.2.15 To support the economic growth of the SCR;

2.2.16 To enhance social inclusion and health;

2.2.17 To reduce emissions from vehicles; and

2.2.18 To make transport increasingly safe and secure.

2.2.19 The SCRTS also sets out the desired outcomes of the strategy following the same themes identified in the four goals. A development according with Policies T3 and T4 of the Barnsley Local Plan will play its part in contributing to the desired outcomes of the SCRTS across all four themes.

2.3 SOUTH YORKSHIRE RESIDENTIAL DESIGN GUIDE (2011)

2.3.1 The South Yorkshire Residential Design Guide (SYRDG) was published in January 2011 and is for residential developers and their design professional, consultants and agents in formulating designs and making applications for planning permission for residential development in South Yorkshire. It is used by the four South Yorkshire local authorities, including BMBC, to support their assessment of proposals and it incorporates both their planning and highway responsibilities.

2.3.2 The Residential Design Guide covers all aspects of design for residential development including provision for cyclists, pedestrians and users of public transport as well as street / junction design and parking provision.

2.3.3 At Section N1.2 the SYRDG covers Accessibility and tables walking distances for residential areas in different types of settlement to local services, the nearest bus/tram stop and primary health/education. In the context of the table at Section N1.2, it is considered that Great Houghton is



a rural settlement and therefore the residential area should be a bus ride to local services, a 10 minute walk to a bus/tram stop depending on destination and a 40 minute journey to primary health/education.

2.4 NATIONAL POLICY

National Planning Policy Framework

2.4.1 The National Planning Policy Framework was originally published in March 2012 and this has now been replaced by the February 2019 version. Paragraph 1 of NPPF states that *“The National Planning Policy Framework sets out the Government’s planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.”*

2.4.2 Section 9 of NPPF (paras. 102 to 111) is concerned with ‘Promoting sustainable development’. Para. 102 states that:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport can be addressed;*
- b) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- c) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- d) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.”*

2.4.3 Para. 103 notes that the planning system should actively manage patterns of growth in support of these objectives and 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. The NPPF recognises that opportunities to maximise transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-taking.

2.4.4 Paras. 108 to 111 are concerned with ‘Considering development proposals’. Para. 108 states that:

“In assessing sites that may be allocated for development on plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users; and*
- c) 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.”*

2.4.5 Para. 109 concludes 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.”*



2.4.6 At para. 110, NPPF provides details of what is expected from development proposals in terms of transport provision stating that:

“Within this context, applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating 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;*
- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- c) 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;*
- d) allow for efficient delivery of good, and access by service and emergency vehicles; and*
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.”*

2.4.7 Finally, in this section of the NPPF it is stated that “All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”

National Planning Practice Guidance

2.4.8 On 6th March 2014 the Department for Communities and Local Government launched its planning practice guidance web-based resource. The Ministry of Housing, Communities & Local Government continues to update this resource and will continue to do so, where necessary, to reflect changes to NPPF. Transportation and highways matters are addressed under the heading of ‘Travel Plans, Transport Assessments and Statements’, 6th March 2014 and ‘Design: process and tools’, 1st October 2019.

Travel Plans, Transport Assessments and Statements

2.4.9 The NPPG explains that Travel Plans (TP) and Transport Assessments (TA) are ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development and that they are required for developments which generate significant amounts of traffic movements (Paragraph: 002 Reference ID: 42-002-20140306).

2.4.10 It goes on to advise that a TA may propose mitigation measures where these are necessary to avoid unacceptable or “severe” impacts. Travel Plans are identified as playing an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development (Paragraph: 004 Reference ID: 42-005-21040306).

2.4.11 The guidance goes on to state (Paragraph: 006 Reference ID: 42-006-20140306) that TAs and TPs 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.

2.4.12 With regard to TPs, the guidance advises that these should identify the specific required outcomes, targets and measures, and set out clear future monitoring and management arrangements all of which should be proportionate. TPs should also consider what additional measures may be required to offset unacceptable impacts if targets are not met.

2.4.13 It is necessary for TPs to set out explicit outcomes rather than just identify processes to be followed. A TP should also address all journeys resulting from a proposed development by anyone who may need to visit or stay, and it should seek to fit in with wider strategies for transport in the area (Paragraph: 011 Reference ID: 42-011-20140306).

2.4.14 An important part of the overall strategy for the proposed development is the implementation, maintenance and monitoring of a Residential Travel Plan. The Residential Travel Plan in conjunction with the Transport Assessment are geared towards encouraging sustainable travel.

Design: process and tools

2.4.15 In Paragraph: 001 Reference ID: 29-001-2019001, the NPPG refers to the 'National design guide' (NDG). The NDG contains a section on 'Movement – Accessible and easy to move around' and within this section it is noted that *"Successful development depends upon a movement network that makes connections to destinations, places and communities, both within the site and beyond its boundaries."*

2.4.16 The NDG covers matters of:

- A connected network of routes for all modes of transport;
- Active travel; and
- Well-considered parking, servicing and utilities infrastructure for all users.

2.4.17 The design of the proposed development very much responds to the NDG in that it aims to address the needs of people and to encourage all users of the development to use sustainable modes for travel both within and to and from the development.



3. Existing Site Conditions

3.1 INTRODUCTION

3.1.1 This section describes the location of the Site and considers the existing conditions of the surrounding highway network for a range of transport modes.

3.1.2 The section also includes a review of recent personal injury collision data and describes the existing local facilities in the vicinity of the Site.

3.2 EXISTING SITE

3.2.1 The Site is generally rectangular in shape, has an overall area of approximately 3.56 hectares, and is currently undeveloped agricultural land.

3.2.2 The Site is bound to the west by B6273 High Street, to the north by an existing hedgerow beyond which is further agricultural land, to the east by a hedge line beyond which is another agricultural field and to the south by farm buildings belonging to Manor Farm.

3.2.3 The Site is located to the north west of the village which takes a generally linear form to both sides of B6273 High Street. Great Houghton and the Site is some 8.5km to the east of Barnsley Town Centre and some 15km to the west of Doncaster Town Centre.

3.2.4 The location of the Site in relation to the wider surroundings is shown in Figure 2.

3.3 EXISTING LOCAL HIGHWAY NETWORK

3.3.1 B6273 High Street which abuts the western frontage is a lit, adopted highway with a typical carriageway width of some 5.5m and is flanked by a footway to the west and a grass verge to the east, along the Site frontage.

3.3.2 In the vicinity of the Site frontage, High Street is subject to a 30mph speed limit. At the northern boundary of the Site, High Street becomes Moor Lane and, just to the north, the speed limit for traffic in a northbound direction changes to 60mph, the National Speed Limit for a single carriageway road. On the southbound approach, there are 'Dragon's Teeth' road markings to denote the change in speed limit from 60mph to 30mph.

3.3.3 B6273 Moor Lane runs in a generally northerly direction into Southmoor Road and meets A628 at a four-arm roundabout just to the south of Hemsworth. To the west of the roundabout, A628 is a key route into the centre of Barnsley which lies to the south west. To the east of the roundabout, A628 continues to another four-arm roundabout with B6422 Hemsworth Road and continues again to a three arm roundabout with A6201.

3.3.4 At this three-arm roundabout, A6201 as Sprockhovel Way and Wrangbrook Lane continues in a generally easterly direction to Barnsdale Bar on the A1. A628 continues in a generally northerly direction through Ackworth and into Pontefract.

3.3.5 In the centre of Great Houghton, B6411 Thurnscoe Lane leaves B6273 at a priority T junction leading in a generally easterly direction through the neighbouring village of Thurnscoe to join the A635 Doncaster Road at Hickleton. A635 is a key route between Barnsley to the west and Doncaster to the east and also connects to Junction 37 on A1(M) Doncaster Bypass, this interchange is known as Marr Roundabout.

3.3.6 To the south of Great Houghton, B6273 continues as Rotherham Road to connect with A6195 Dearne Towns Link Road just to the east of Darfield at Rotherham Road Roundabout. The Dearne Towns Link Road is a dual carriageway road that connects the Dearne towns of Darfield, Wombwell,



Brampton, Hemingfield and Hoyland with Junction 36 of the M1 Motorway. A6195 also intersects with A635 at Cathill Roundabout which is some 450m south of Rotherham Road Roundabout.

3.4 EXISTING PEDESTRIAN AND CYCLE FACILITIES

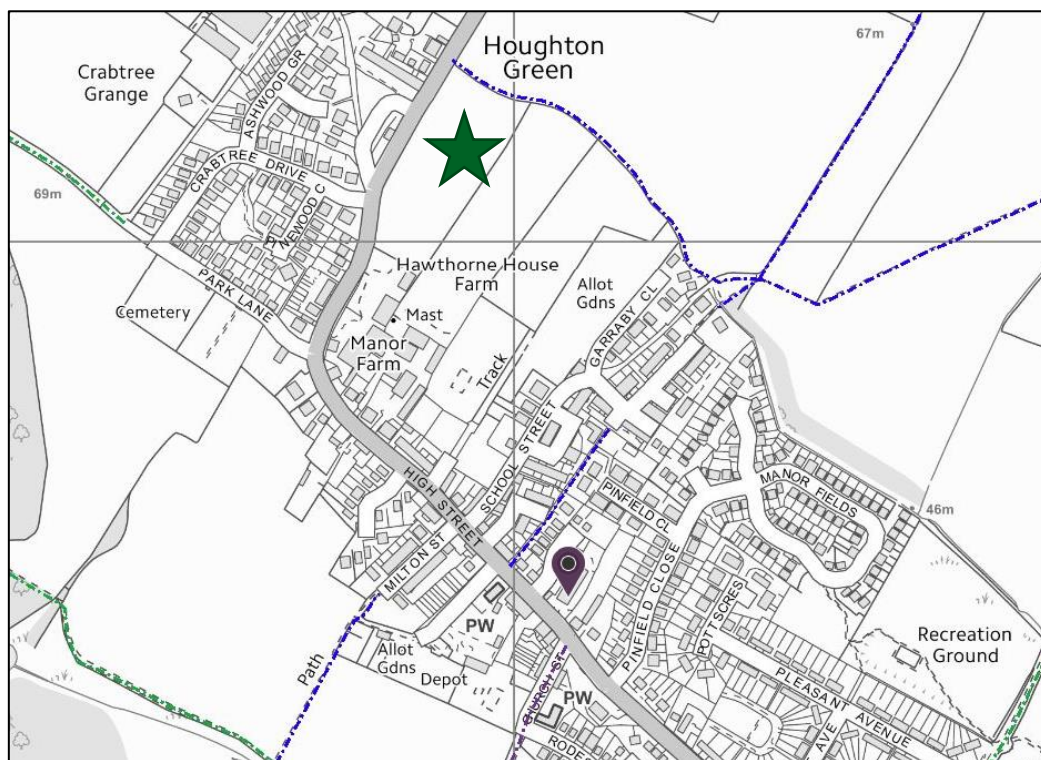
Pedestrian Infrastructure

3.4.1 There is a footway on High Street on the opposite side to the Site frontage and at the southern end of the frontage there is a footway to both sides. The footway on the eastern side is separated from the edge of carriageway by a grassed verge. There is continuous footway provision into the village to the south.

3.4.2 There are no Public Rights of Way within the Site and Footpath Number 4 follows the northern boundary running into Footpath Numbers 2 and 3 to the west of the Site. Footpath Number 5 which is a Bridleway leads in a north westerly direction off the end of Park Lane on the opposite side of High Street.

3.4.3 An extract from Barnsley's Public Rights of Way map is shown in Image 2.1 with Footpaths shown in blue, Bridleways in green and Restricted Byways in purple.

Image 3.1 Public Rights of Way in the vicinity of the Site



Source: www.barnsley.gov.uk/barnsley-maps/public-rights-of-way/

Cycle Infrastructure

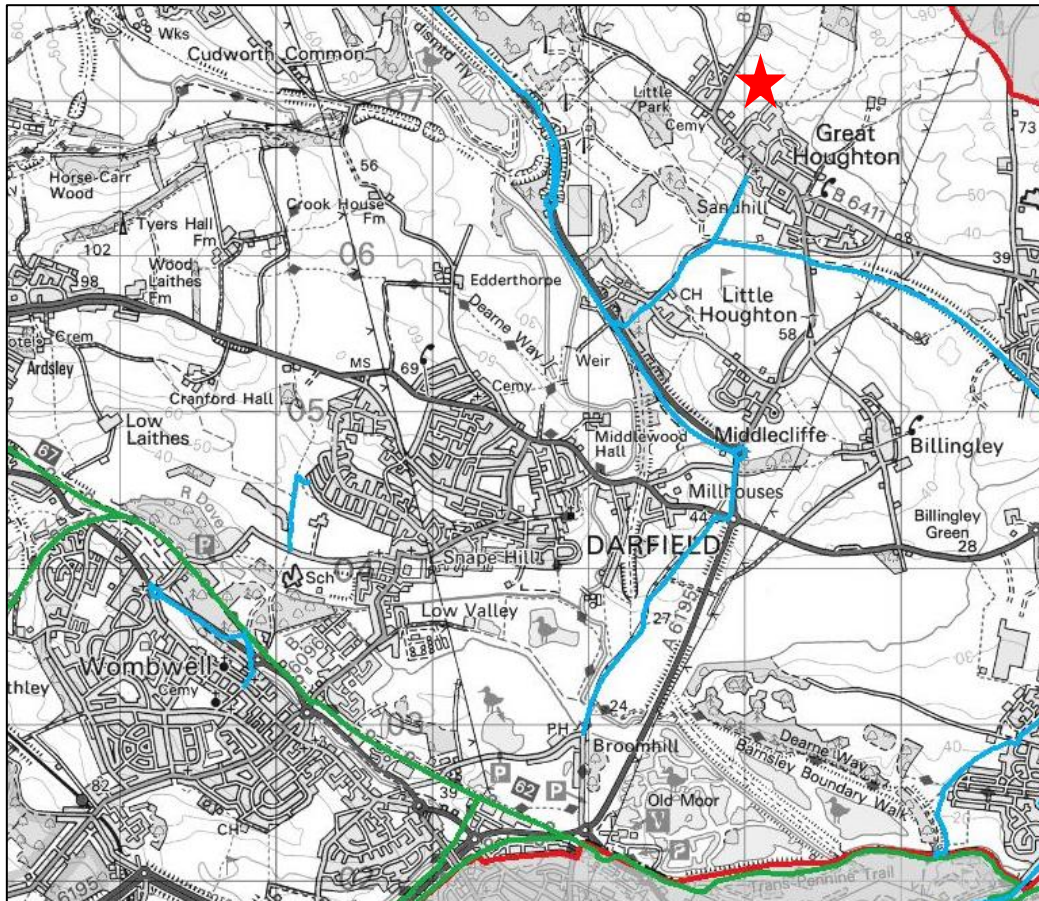
3.4.4 The Restricted Byway that leads to the south from Church Street to the south of the village is designated as Cycle Route Number 3i – Great Houghton to Park Springs Road (A6195). This leads to a network of cycle routes in the Barnsley District including National Cycle Route 67 which is the Transpennine Trail.



3.4.5 The coast-to-coast section of the trail runs between Southport and Hornsea and locally can be utilised to access Barnsley and Doncaster, and within a wider, regional context can be utilised to access Sheffield, Leeds, Chesterfield and Hull.

3.4.6 An extract from Barnsley's Cycle Network map is shown in Image 3.2 with existing routes shown in blue and traffic-free national routes shown in green.

Image 3.2 Barnsley Cycle Network



Source: www.barnsley.gov.uk/barnsley-maps/national-cycle-network/

3.5 EXISTING DATA

Junction Turning Counts

3.5.1 Fully classified turning count surveys have been carried out for several junctions on the local highway network. The surveys are scheduled in Table 3.1.

Table 3.1 Fully Classified Junction Turning Count Surveys

Ref	Location	Date Undertaken	Survey Periods
1	B6273 High Street / B6411 Thurnscoe Lane	Thursday 10 th June 2021	07:00-10:00 and 15:00-19:00
2	Rotherham Road Roundabout (B6273/A6195)	Thursday 10 th June 2021	07:00-10:00 and 15:00-19:00
3	Cathill Roundabout (A6195/A635)	Thursday 10 th June 2021	07:00-10:00 and 15:00-19:00



Automatic Traffic Survey (ATC)

3.5.2 An Automatic Traffic Survey (ATC) was undertaken on B6273 High Street in the vicinity of the proposed access into the Site over a period of 7 days between Wednesday 9th June and Tuesday 15th June 2021. The results of the ATC have informed the design of the access into the proposed development.

Personal Injury Collision Data

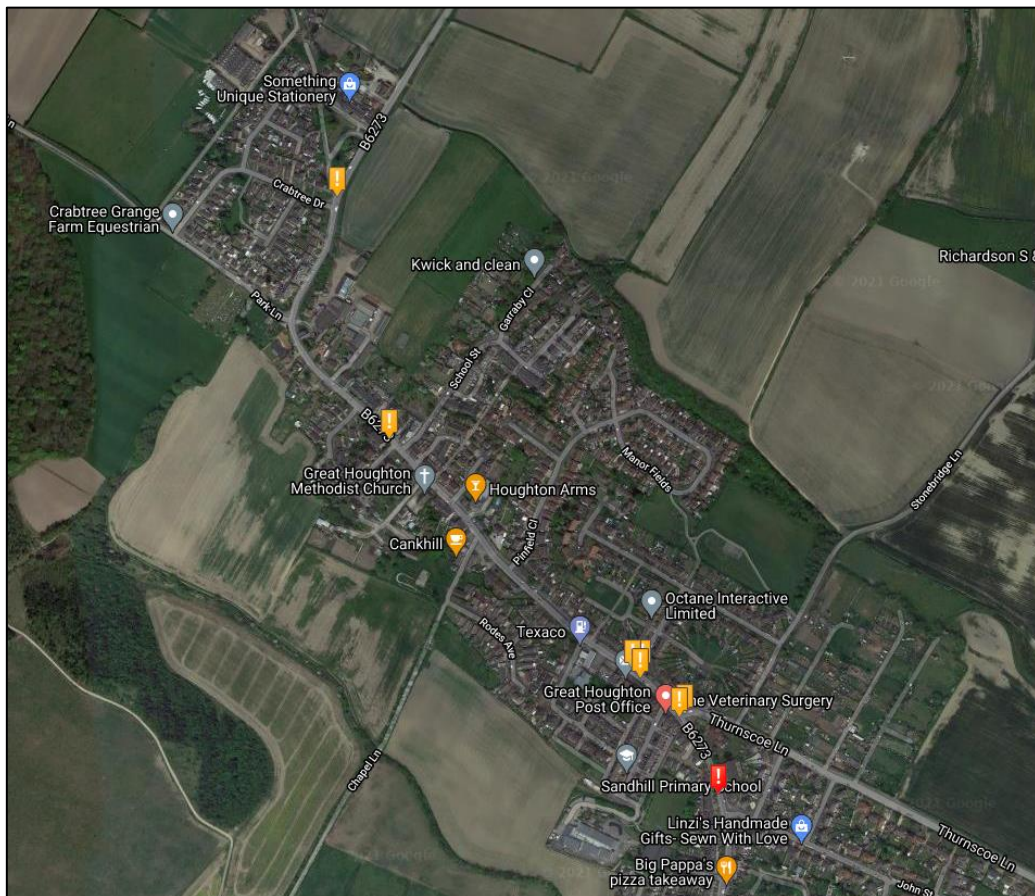
3.5.3 BMBC has been approached with regard to the supply of Personal Injury Collision (PIC) and, to date, no response has been received. Therefore, in the meantime, a high level assessment has been carried out with the aid of the Crashmap.co.uk website.

3.5.4 The study area includes B6273 High Street in the vicinity of the Site frontage and to the south east to the junction with B6411 Thurnscoe Lane and also Rotherham Road Roundabout (B6273/A6195) and Cathill Roundabout (A6195/A635).

3.5.5 Crashmap uses validated Department for Transport data for collisions where a Personal Injury Collision (PIC) has occurred (where Police attended or were subsequently informed). Data outlined below is from the most recently available five year period covering 2016 to 2020.

3.5.6 Extracts from the mapping on Crashmap.co.uk is provided in Images 3.3 and 3.4 with PICs classified as slight shown in orange and those classified as serious shown in red.

Image 3.3 PIC Locations – B6273 High Street



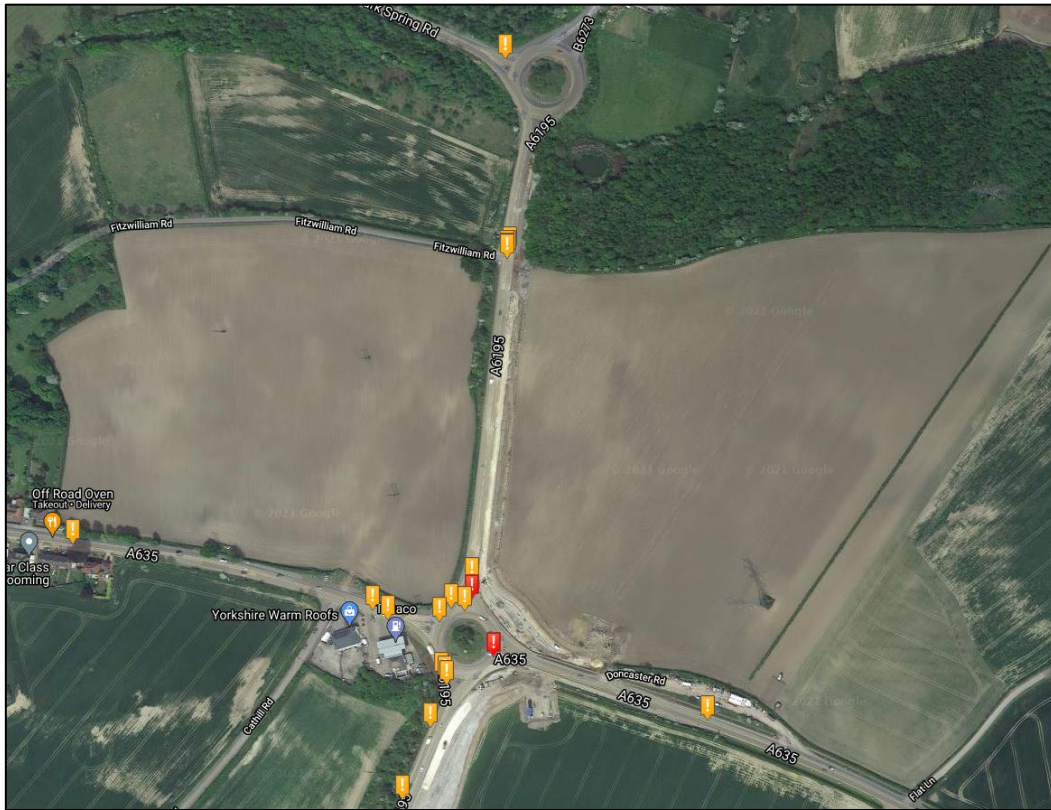
Source: www.crashmap.co.uk



3.5.7 It is possible to filter the results based on casualty type and it has been ascertained that the PIC that resulted in serious injury and occurred just to the south of the junction of B6273 Rotherham Road / B6411 Thurnscoe Lane involved a child cyclist. This is the only PIC involving either a cyclist or resulting in a child casualty.

3.5.8 There appears to have been two PICs, both classified as slight in severity, at or near the junction of B6273 Rotherham Road / B6411 Thurnscoe Lane.

Image 3.4 PIC Locations – A6195/B6273 and Cathill Roundabout Junctions



Source: www.crashmap.co.uk

3.5.9 The Crashmap.co.uk mapping indicates that there has been one PIC at Rotherham Road Roundabout and five PICs at or near the junction A6195 Rotherham Road / Fitzwilliam Road, one of which involved a cyclist. All these PICs have been classified as slight in severity.

3.5.10 There has been a cluster of PICs at or close to Cathill Roundabout; two of which have been classified as serious in severity and a remaining ten as slight in severity. One of the serious incidents involved a cyclist and this appears to have occurred on the circulatory carriageway. Four of the slight incidents resulted in a child casualty.

3.5.11 None of the collisions in this part of the study area resulted in a pedestrian casualty.

3.5.12 There has clearly been a cluster of PICs at two of the junctions in the study area; A6195 Rotherham Road / Fitzwilliam Road and Cathill Roundabout. However, these have been spread over a five year period and have not resulted in multiple incidents involving vulnerable road users.

3.5.13 Based on the information currently available there is no evidence to suggest that there is a particular road safety issue or that the traffic that will be generated by the proposed development will exacerbate the current situation.

3.6 EXISTING PUBLIC TRANSPORT SERVICES/FACILITIES

Bus

3.6.1 The nearest bus stop is opposite the Site frontage within a bus turnaround area. This stop (High Street/Crabtree Drive) which has a pole and timetable information is used by several services as summarised in Table 3.1.

3.6.2 There is also a pair of bus stops on High Street to the south some 500m from the centre of the Site, both of which have shelters and are used by the same services as the nearer stop.

Table 3.2 Bus Services at High Street/Crabtree Drive Stop

Service	Route	Days of Operation	Approx. Frequency	Operating Hours
219	Doncaster Town Centre to Barnsley Interchange	Monday - Friday	1 per hour	07:34-23:00
		Saturday	Up to 1 per hour	08:17-23:01
		Sunday	1 per hour	09:06-23:01
219	Barnsley Town Centre to Doncaster Interchange	Monday - Friday	Up to 1 per hour	07:18-23:24
		Saturday	Up to 1 per hour	06:29-23:24
		Sunday	1 per hour	09:17-23:24
219a	Goldthorpe to Barnsley Interchange	Monday - Friday	Up to 1 per hour	06:40-17:52
		Saturday	1 per hour	07:06-17:47
		Sunday	No service	-
219a	Barnsley Town Centre to Goldthorpe	Monday - Friday	1 per hour	06:44-18:03
		Saturday	1 per hour	08:56-17:56
		Sunday	No service	-

Rail

3.6.3 The nearest railway station to the Site is at Thurnscoe and situated some 3.75km away to the east. Thurnscoe Station is operated by Northern and is on the Leeds to Sheffield and Doncaster route (Wakefield Line). There is an hourly service in both directions Monday to Saturday and also on Sunday over a shorter time period.

3.6.4 Thurnscoe Station has a car park with 60 spaces and is free of charge. There is also storage for 8 bicycles which has a shelter and is covered by CCTV.



4. Development Proposals

4.1 DEVELOPMENT PROPOSALS

4.1.1 The proposed development is shown on Harron Homes Proposed Site Layout, drawing number 563-PL-01 Rev C, a copy of which contained in Appendix A. The proposals can be summarised as follows:

- 86 residential units – a mix of 23 three bed, 61 four bed and 2 five bed properties;
- Vehicular access from High Street; and
- Associated Parking, Landscaping and Infrastructure Works.

4.2 VEHICULAR ACCESS

4.2.1 The main vehicular access into the Site will be via a simple priority junction on to High Street. A small number of dwellings will be served from private drives directly off High Street, one private drive to either side of the main access. The layout of the proposed access is indicated on the Harron Homes Proposed Site Layout.

4.2.2 The drawing demonstrates that visibility splays of 2.4m x 43m can be achieved in both directions at the proposed site access junction on to High Street, which is in accordance with the requirements of both the South Yorkshire Residential Design Guide (SYRDG) and Manual for Streets (MfS) for the plated speed limit along the Site frontage (30mph).

4.3 INTERNAL LAYOUT AND SERVICING

4.3.1 Within the development there will be network of residential streets with the main spine street having a footway to both sides. Parts of the development are served from a shared surface streets and some properties will be served from shared private drives.

4.3.2 Appropriate turning facilities are provided to allow the development to be serviced by the refuse collection vehicle and delivery vehicles.

4.4 PARKING PROVISION

4.4.1 BMBC has produced a Supplementary Planning Document (SPD) on 'Parking' which was adopted in November 2019 to support its emerging Local Plan. Table 1 of the Parking SPD sets out parking standards for broad categories of development and for C3 Dwelling Houses Borough wide (excluding Barnsley Urban) the maximum number of spaces allowed are 1 space for dwellings with 1 or 2 bedrooms and 2 spaces for dwellings with 3 or more bedrooms.

4.4.2 Table 1 of the Parking SPD also requires 1 visitor space per 4 dwellings subject to layout with flexibility for visitor parking being considered on a site by site basis.

4.4.3 The Parking SPD refers to the Sustainable Travel SPD in relation to the requirement for electric vehicle charging points (EVCPs) and the requirement for residential development is 1 charging point per dwelling with dedicated parking or 1 charging point per 10 spaces where parking is unallocated.

4.4.4 The SPD also refers to the South Yorkshire Residential Design Guide (SYRDG) for advice on the design of residential car parking and garages and states that developments will be expected to meet the standards for parking design set out in the SYRDG considering cycle, motorcycle and car parking as an integral part of the design of residential development.



4.4.5 Parking at the proposed development is in line with BMBC's standards and is provided as a mix of off-road parking spaces, driveways and garages. Visitor parking is provided on-street and this can be accommodated whilst allowing satisfactory servicing of the development by the standard refuse vehicle.



5. Site Accessibility and Measures to Influence Travel Behaviour

5.1 ACCESSIBILITY ON FOOT

5.1.1 The measures proposed which will positively influence trips on foot by residents and visitors include:

- Boundary connections with the existing highway network on the western frontage on to High Street;
- Internal links and pedestrian routes to create the shortest possible distances to the boundary connections; and
- Travel Plan initiatives for residents.

5.1.2 The residential design guide 'Manual for Streets' (MfS) advises that *"walkable neighbourhoods are typically characterised by having a range of facilities within ten minutes (up to about 800m) walking distance of residential areas..."* (ref para 4.4.1). However, this is not regarded as an upper limit in MfS and reference is also made to walking offering *"the greatest potential to replace short car trips, particularly those under 2km"*. The acceptability of walking trips up to 2km (an approximate 25 minutes' walk time) is also supported in the Chartered Institution of Highways and Transportation (CIHT) document 'Providing for Journeys on Foot', 2000.

5.1.3 The Department for Education (DfE) statutory guidance document, 'Home to School Travel and Transport', July 2014, defines an even greater maximum walking distance to schools of 2 miles (3.2km) and 3 miles (4.8km) for children under and over 8 years, respectively.

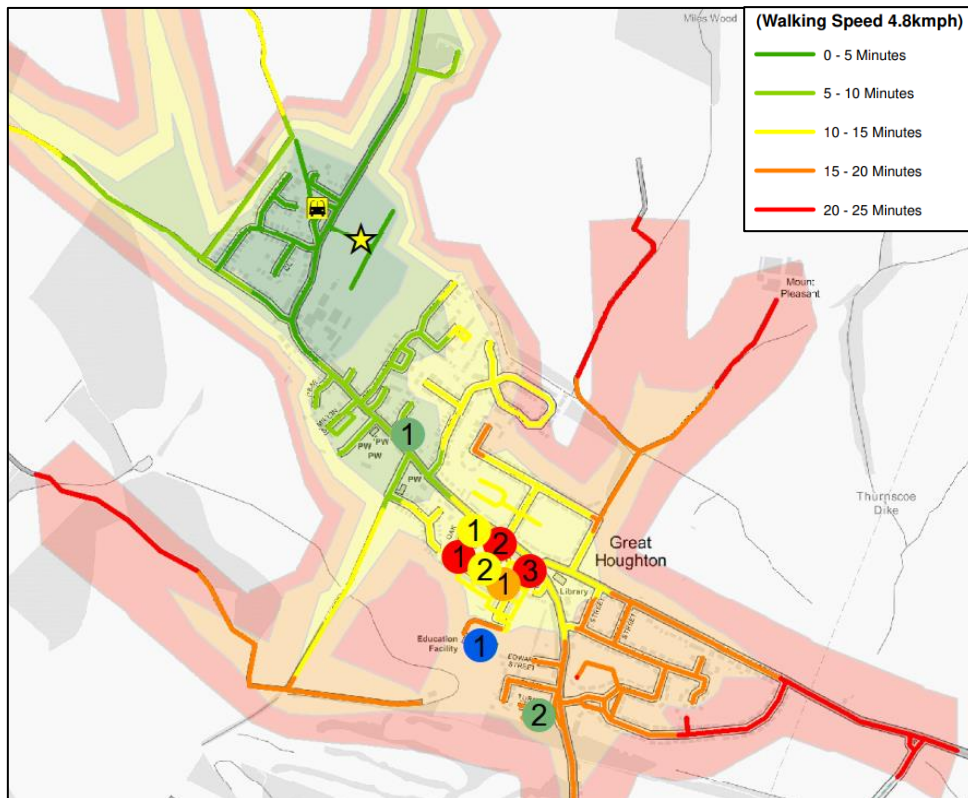
5.1.4 Using GIS Network Analysis software, typical walk times (up to 25 minutes which equates to a distance of 2km) from the centre of the Site are shown on Figure 4 with an extract provided in Image 5.1 below. This figure and the extract in Image 5.1 demonstrate that the Site is within an easy walking distance of the following:

- Sandhill Primary School off Dearne Street (within a 15-20 minute walk);
- The Co-op and Post Office on High Street (within a 10-15 minute walk);
- Great Houghton Medical Centre on Oak Haven Avenue and Pharmacy on High Street (within a 10-15 minute walk); and
- The Houghton Arms on High Street (within a 5-10 minute walk).

5.1.5 There are other facilities within Great Houghton including a café, two takeaway outlets and another public house. The nearest bus stop is within a five minute walk.



Image 5.1 Extract from Pedestrian Accessibility Plan



5.1.6 It is concluded that the proposed residential development will be provided with good accessibility on foot to a range of services and facilities in accordance with nationally recognised MfS, CIHT and DfE guidance.

5.2 ACCESSIBILITY BY CYCLE

5.2.1 The measures proposed to positively influence trips on foot will also assist in influencing trips by cycle.

5.2.2 An acceptable and comfortable distance for general cycling trips is considered to be up to 5 kilometres as referred to in DfT's Local Transport Note 2/08. However, the same guidance also refers to commuting cycle trips of up to 8km. Whilst, in terms of design guidance for cycle facilities, this LTN has now been superseded by LTN 1/20, there is no reason to suggest that the accepted cycle distances have changed.

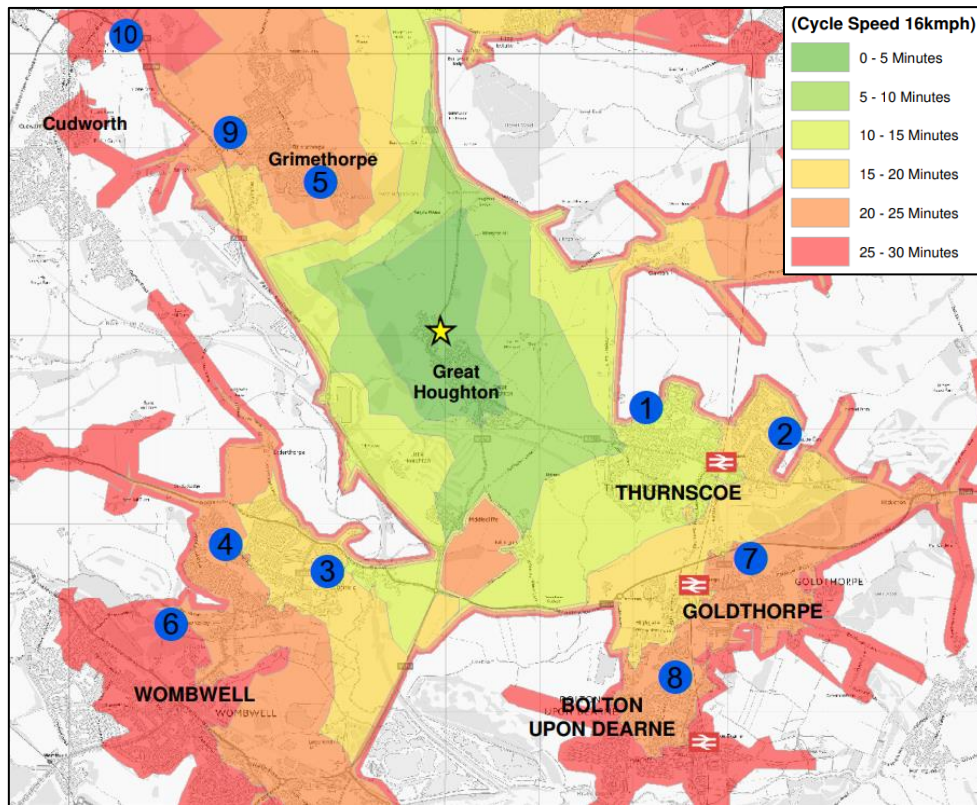
5.2.3 From the Site, an 8km catchment area encompasses Grimethorpe, Thurnscoe, Goldthorpe and parts of Wombwell and Wath Upon Dearne which opens up a wider variety of employment opportunities for residents. Langthwaite Business Park in South Kirkby and Goldthorpe Industrial Estate are accessible by cycle.

5.2.4 Thurnscoe Railway Station is a 10-15 minute cycle ride from the Site.

5.2.5 Using GIS Network Analyst software typical cycle times (up to 30 minutes which broadly equates to a distance of 8km) from the Site are shown in Figure 4 and an extract is provided in Image 5.2.



Image 5.2 Extract from Cycle Accessibility Plan



5.2.6 It is concluded that the proposed residential development will be provided with good accessibility by cycle to a wide range of local services, facilities and employment opportunities, many of which are within a short cycling distance.

5.3 ACCESSIBILITY BY PUBLIC TRANSPORT

Bus

5.3.1 The nearest bus stop to the Site is a short walk across to the western side of High Street and into the bus terminus area to the rear. An hourly service between Barnsley and Doncaster Town Centres uses this stop and buses to and from Goldthorpe are also available. The services interchange with rail at Barnsley and Doncaster and also at Thurnscoe.

5.3.2 The journey time between the Site and Doncaster Town Centre is typically 55 minutes and between the Site and Barnsley Town Centre it is 30 minutes.

Rail

5.3.3 Thurnscoe Railway Station provides connection to several key destinations within the local region including Leeds (45 minute journey time) and Sheffield (40 minute journey time). From Leeds it is possible to interchange on to trains to Manchester, Birmingham, Newcastle and London. From Sheffield similar interchange opportunities are available.

5.3.4 The railway station can be accessed by:

- Cycle – within a 10-15 minute journey time; and
- By car – typical 5 minute journey time (plus any walking time between car park and platforms)



5.3.5 It is therefore concluded that the Site will be provided with reasonable accessibility by public transport to principal local and regional destinations which offer a vast range of services, facilities and employment opportunities.

5.4 RESIDENTIAL TRAVEL PLAN

5.4.1 A Residential Travel Plan has been prepared to accompany this Transport Assessment. This demonstrates the connectivity between the Site and surrounding amenities, highlighting the opportunities for future residents to access these by means other than the car. It also sets out the ways in which the applicant will facilitate and encourage trips by sustainable modes of travel, by implementing a series of measures including (but not limited to):

- The appointment of a Travel Plan Coordinator to ensure the Travel Plan is delivered to full effect;
- A travel information guide that will be displayed in the sales office to sell the accessibility of the development to potential future residents, this guide will also be provided to all new occupiers;
- The potential for personalised journey planning; and
- Ongoing communication with residents regarding local travel options via an annual newsletter.

5.4.2 The Travel Plan also includes targets, which reflect the trip generation within this Transport Assessment; monitoring will be undertaken on an annual basis, following first occupation and the results of this process reported to BMBC.

5.5 SUMMARY

5.5.1 In summary it is concluded that the proposed residential development will be provided with generally good accessibility for pedestrians, cyclists and by public transport to a wide range of local services, facilities and employment facilities. This will be reinforced by the implementation, management and monitoring of a Residential Travel Plan at the development.

5.5.2 As such the Site is in a sustainable location and is compliant with NPPF which requires that *“appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location”* and *“safe and suitable access to the site can be achieved for all users”* (para 108) and states that *“applications for development should give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus and other public transport services, and appropriate facilities that encourage public transport use”* (para 110).



6. Trip Generation and Distribution

6.1 VEHICULAR TRIP GENERATION

6.1.1 In order to obtain a suitable vehicular trip rate for the proposed development, the TRICS 7.8.1 on-line database has been interrogated using the following parameters:

- Land use: 03 – Residential, Category: A Houses Privately Owned;
- Calculation options: Vehicular trip rates selected;
- Regions: Greater London and Irish sites excluded;
- Number of dwellings: 4 to 250 units selected, actual range – 8 to 207 units;
- Date range: 01/01/13 to 20/10/20;
- Survey days: Monday – Friday; and
- Location type: Suburban Area and Neighbourhood Area.

6.1.2 The full TRICS output is contained at Appendix B with the 85th percentile weekday AM and PM peak hour trip rates and resultant generated traffic for 86 dwellings shown tabulated below in Table 6.1. 85th percentile trip rates have been assumed to ensure a robust assessment of the likely impact of the proposed development on the local highway network.

Table 6.1 85th Percentile Trip Rates and Resultant Traffic Generation

Time Period	Vehicular Trip Rates (per dwelling)			Traffic Generation (86 Dwellings)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak 08:00-09:00	0.157	0.588	0.745	13	51	64
PM Peak 17:00-18:00	0.304	0.348	0.652	26	30	56

6.2 TRIP DISTRIBUTION AND ASSIGNMENT

6.2.1 Having established the weekday AM and PM peak hour vehicular trip generation for the proposed development, as shown in Table 6.1, a distribution exercise has been completed to predict the assignment of these trips on to the local highway network.

6.2.2 The Site is in the Barnsley 020 Super Output Area – Middle Layer (MSOA) for the purposes of the 2011 Census data. This latest Census dataset (WU03EW – Location of usual residence and place of work by method of travel to work (MSOA level)) has been interrogated to obtain places of work by MSOA for residents of Barnsley 020 MSOA.

6.2.3 Once the destinations for the trips have been ascertained, an assessment has been made based on journey time of the likely routes that will be taken and, from this, the trips have been assigned to the local highway network. The spreadsheet at Appendix C provides details of the trip distribution exercise and Figure 104 shows the route assignment on percentage terms and this is summarised in Table 6.2.

Table 6.2 Percentage Route Assignment

Route	Percentage Assignment
From Site Access Point	
B6273 High Street (N)	16%
B6273 High Street (S)	84%



Route	Percentage Assignment
On Wider Highway Network	
B6411 Thurnscoe Lane	8%
A6195 Park Spring Road	5%
A635 (E)	3%
A6195 (S)	34%
A635 Doncaster Road	34%

6.2.4 The weekday AM and PM peak hour traffic flows from the proposed development are then shown in Figures 105 and 106 respectively.



7. Traffic Flows and Junction Capacity Assessment

7.1 TRAFFIC FLOWS

Existing Traffic Flows

7.1.1 The June 2021 traffic surveys identified the following existing weekday peak hour periods:

- Weekday AM Peak Hour: 07:30 – 08:30; and
- Weekday PM Peak Hour: 15:00 – 16:00.

7.1.2 The traffic count flows for these periods at the junctions within the study area are shown in Figures 100 and 101 respectively.

Base Traffic Flows

7.1.3 Traffic growth is predicted based on a combination of proposed future development, car ownership and changing attitudes in the way people use and have access to their vehicles. To reflect the likely growth in existing traffic at the full Opening Year for the proposed development, TEMPro growth factors have been obtained to be applied to the 2021 existing peak hour flows.

7.1.4 A Design Year of 2025 has been assumed to represent the full Opening Year of the proposed development based on a construction period of some 2-3 years (35 dwellings per annum), starting in 2022.

7.1.5 Traffic growth rates, between 2021 and 2025, have been obtained from the TEMPro v7.2c for the Barnsley 020 Super Output Area - Mid Layer. The resulting values for the AM and PM peak hour growth between 2021 and 2025 are as follows with the TEMPro output provided at Appendix C:

- AM Peak TEMPro Traffic Growth Rate 2021-2025: 1.0360; and
- PM Peak TEMPro Traffic Growth Rate 2021-2025: 1.0364.

7.1.6 The traffic growth rates have been applied to the 2021 AM and PM existing peak hour traffic flows to obtain 2025 Base AM and PM peak hour traffic flows and these are shown in Figures 102 and 103 respectively.

Design Traffic Flows

7.1.7 Adding the proposed development trips shown in Figures 104 and 105 for the AM and PM peak hours respectively to the 2025 Base Traffic Flows provides the 2025 Design Traffic Flows which are shown in Figures 107 and 108 for the AM and PM peak hours respectively.

7.2 JUNCTION CAPACITY ASSESSMENT

7.2.1 This sub-section of the Transport Assessment sets out the results of the individual junction capacity assessments that have been undertaken to determine the impact of the development proposals on key junctions on the local highway network.

7.2.2 This section also contains the capacity assessment of the development access junction to demonstrate that the form of junction that is proposed is adequate and appropriate to serve the quantum of development proposed.

7.2.3 The output for all junction capacity assessment is contained at Appendix D with the results summarised in the tables below.



B6273 High Street / B6411 Thurnscoe Lane

7.2.4 This priority junction has been modelled using the PICADY 9 Priority Intersection module in the TRL software, Junctions 9. Three and four-arm unsignalised give-way intersections are modelled using well-established TRL/Kimber capacity relationships, which take into account key geometries such as road widths, visibility and the space available for traffic making an offside turn. This empirical framework intrinsically links priority junction geometry to driver behaviour and in turn to predicted capacities, queues and delays.

7.2.5 The existing layout of the junction is shown in Figure 5 and the junction has initially been modelled for the 2021 existing weekday AM and PM peak hours. The results of the modelling are summarised in Table 7.1.

Table 7.1 B6273 High Street / B6411 Thurnscoe Lane – 2021 Existing PICADY Results

Movement	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.25	9.93	0.3	0.43	13.99	0.8
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.04	5.31	0.1	0.06	5.03	0.1

7.2.6 A Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction or arm is operating within spare capacity. An RFC value between 0.85 and 1.00 indicates that there may be occasions during the period modelled when queues will develop, and delays will occur. An RFC value greater than 1.00 indicates that the junction or arm is operating beyond its theoretical capacity.

7.2.7 The junction has then been modelled for the AM and PM 2025 Base and Design scenarios and the results are summarised in Tables 7.2 and 7.3.

Table 7.2 B6273 High Street / B6411 Thurnscoe Lane – 2025 Base PICADY Results

Movement	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.26	10.23	0.4	0.45	14.76	0.8
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.04	5.29	0.1	0.06	5.01	0.1

Table 7.3 B6273 High Street / B6411 Thurnscoe Lane – 2025 Design PICADY Results

Movement	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Stream B-AC (Thurnscoe Lane – High Street/Rotherham Road)	0.27	10.66	0.4	0.47	15.57	0.9
Stream C-AB (Rotherham Road – High Street/ Thurnscoe Lane)	0.04	5.15	0.1	0.07	4.96	0.1

7.2.8 The results in Table 7.1 demonstrate that the junction currently operates with significant spare capacity and minimal queues and delay. Even with the addition of general traffic growth to a



Design Year of 2025, which represents the full Opening Year for the proposed development, and the traffic predicted to be generated by the development, the junction will continue to operate with significant spare capacity with RFC values well below 0.85, minimal queuing and delay.

7.2.9 No mitigation is therefore required at the existing B6273 High Street / B6411 Thurnscoe Lane priority junction.

Rotherham Road Roundabout (B6273/A6195)

7.2.10 The roundabout has been modelled using the ARCADY 9 Roundabout module of the TRL software, Junctions 9. Roundabouts are modelled using the well-established TRL/Kimber capacity relationships which take into account key roundabout geometries such as entry width, approach width, flare length, conflict angle, inscribed circle diameter and entry radius. The empirical framework intrinsically links roundabout geometry to driver behaviour and in turn to predict capacities, queues and delays.

7.2.11 The existing layout of the junction is shown in Figure 6 and the junction has initially been modelled for the 2021 existing weekday AM and PM peak hours. The results of the modelling are summarised in Table 7.4.

Table 7.4 Rotherham Road Roundabout – 2021 Existing ARCADY Results

Approach Arm	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.49	4.03	1.0	0.60	5.12	1.5
Arm 2 – A6195 Park Spring Road	0.36	3.84	0.6	0.53	5.46	1.1
Arm 3 – B6273 Rotherham Road	0.48	6.09	0.9	0.59	8.37	1.4

7.2.12 The roundabout has then been modelled for the AM and PM 2025 Base and Design peak hour scenarios and the results are summarised in Tables 7.5 and 7.6.

Table 7.5 Rotherham Road Roundabout – 2025 Base ARCADY Results

Approach Arm	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.51	4.18	1.0	0.62	5.41	1.6
Arm 2 – A6195 Park Spring Road	0.38	3.95	0.6	0.55	5.79	1.2
Arm 3 – B6273 Rotherham Road	0.50	6.40	1.0	0.62	9.08	1.6

Table 7.6 Rotherham Road Roundabout – 2025 Design ARCADY Results

Approach Arm	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 Rotherham Road	0.52	4.24	1.1	0.63	5.60	1.7
Arm 2 – A6195 Park Spring Road	0.38	3.98	0.6	0.55	5.90	1.2
Arm 3 – B6273 Rotherham Road	0.54	6.93	1.2	0.64	9.69	1.8

7.2.13 The results in Table 7.4 demonstrate that the roundabout currently operates with spare capacity and minimal queues and delay. Even with the addition of general traffic growth to a Design Year of 2025, which represents the full Opening Year for the proposed development, and the traffic



predicted to be generated by the development, the roundabout will continue to operate with spare capacity with RFC values well below 0.85, minimal queuing and delay.

7.2.14 No mitigation is therefore required at the existing Rotherham Road Roundabout.

Cathill Roundabout (A6195/A635)

7.2.15 This roundabout has also been modelled using the ARCADY 9 Roundabout module of the TRL software, Junctions 9.

7.2.16 The existing layout of the junction is shown in Figure 7 and the junction has initially been modelled for the 2021 existing weekday AM and PM peak hours. The results of the modelling are summarised in Table 7.7.

Table 7.7 Cathill Roundabout – 2021 Existing ARCADY Results

Approach Arm	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.70	8.78	2.3	0.84	17.22	5.0
Arm 2 – A635 West	0.85	16.76	5.1	1.01	78.52	29.5
Arm 3 – A6195 North	0.41	3.42	0.7	0.39	3.41	0.6
Arm 4 – A635 East	0.37	2.36	0.6	0.46	2.78	0.9

7.2.17 The assessment has shown that the roundabout is currently operating slightly over capacity in the PM peak period with queuing and delays particularly on A635 (W) Barnsley Road where the RFC value is 1.01.

7.2.18 The roundabout has then been modelled for the AM and PM 2025 Base and Design peak hour scenarios and the results are summarised in Tables 7.8 and 7.9.

Table 7.8 Cathill Roundabout – 2025 Base ARCADY Results

Approach Arm	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.74	9.98	2.7	0.88	23.20	6.9
Arm 2 – A635 West	0.88	21.73	6.8	1.06	123.76	51.6
Arm 3 – A6195 North	0.43	3.58	0.7	0.41	3.50	0.7
Arm 4 – A635 East	0.38	2.46	0.6	0.48	2.91	0.9

Table 7.9 Cathill Roundabout – 2025 Design ARCADY Results

Approach Arm	AM Peak (07:30-08:30)			PM Peak (15:00-16:00)		
	RFC	Delay (s)	Queue (PCU)	RFC	Delay (s)	Queue (PCU)
Arm 1 – A6195 South	0.74	10.39	2.9	0.90	25.61	7.7
Arm 2 – A635 West	0.89	22.73	7.2	1.07	135.45	57.3
Arm 3 – A6195 North	0.45	3.73	0.8	0.42	3.56	0.7
Arm 4 – A635 East	0.39	2.50	0.7	0.49	2.94	0.9

7.2.19 The results in Table 7.8 demonstrate that the operation of the roundabout in the PM peak hour will be slightly worsened with the addition of general background traffic growth up to the Design Year of 2025. In the PM peak hour, the development adds only some 21 additional vehicles



as a worse case to the A6195 (S) Rotherham Road arm which is not shown to be over-capacity. This level of traffic generation would usually be considered as immaterial (less than 30 vehicles per hour) with no requirement to carry out a detailed assessment of the junction.

7.2.20 As the slight over-capacity issues at the junction are already existing and are not significantly exacerbated by the traffic likely to be generated by the modest development proposals, no mitigation is proposed at the existing Cathill Roundabout.



8. Summary and Conclusions

8.1 SUMMARY

8.1.1 This Transport Assessment has been prepared by Optima Highways and Transportation Ltd to consider the highways and transportation matters associated with a proposed residential development on land to the east of High Street in Great Houghton.

8.1.2 The TA has been prepared to accompany a full planning application for the construction of up to 86 dwellings including access, landscaping and parking provision.

8.1.3 The main vehicular access into the proposed development will be via a priority junction on B6273 High Street. Pedestrians and cyclists will be able to access the development at the same point.

8.1.4 This report has provided a commentary on the Site and its existing conditions. It has demonstrated that the Site is accessible by foot, cycle and public transport to numerous local facilities and employment opportunities. In accordance with the NPPF, this provides future residents with the choice to travel via alternatives modes of transport and minimise trips made by the private car. Furthermore, the additional use of these facilities by the residents at proposed development e.g. public transport and the local commerce, will assist in supporting and sustaining them.

8.1.5 A high level assessment of the available personal injury collision data has been undertaken for the study area. Based on the information currently available there is no evidence to suggest that there is a particular road safety issue or that the traffic that will be generated by the proposed development will exacerbate the current situation.

8.1.6 Junction capacity assessments have been undertaken across the local highway network using industry standard software for a development Design Year of 2025. The capacity assessments have demonstrated that most of the junctions in the study area are operating well within capacity in the Base and Design scenarios and as such the impact of the development will be accommodated.

8.1.7 Cathill Roundabout has been shown to be just over-capacity in the PM peak hour because of general traffic growth alone. The amount of additional traffic resulting from the proposed development is not considered to be material at this junction as it will be imperceptible over and above the usual daily fluctuations in peak hour traffic flows.

8.2 CONCLUSIONS

8.2.1 This Transport Assessment has demonstrated that safe and suitable access to the proposed development can be achieved for all users and that there will be no unacceptable impacts from the development on the transport network or on highway safety.

8.2.2 It is therefore concluded that there are no reasons on highways or transport grounds why the development proposals should not be granted planning permission.



Figures



Appendices



Appendix A Harron Homes Proposed Site Layout



Appendix B TRICS Data



Appendix C Traffic Distribution



Appendix D TEMPro Output



Appendix E Junctions 9 Output

