



Land to the West of Smithy Bridge Road, Rochdale
Transport Assessment

Client: Taylor Wimpey

i-Transport Ref: VACE/JO/dc/ITM11353-010 R

Date: 09 September 2022

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Contents

Executive Summary		i
SECTION 1	Introduction	1
SECTION 2	Development Proposals	7
SECTION 3	Existing Highway Conditions	19
SECTION 4	Existing Sustainable Transport Provision and Accessibility of the Site	36
SECTION 5	Traffic Impact Methodology	50
SECTION 6	Traffic Impact Assessment	60
SECTION 7	Summary and Conclusions	72

Figures

FIGURE 2.1	Site Location Plan
FIGURE 2.2	Extract of Masterplan
FIGURE 2.3	Location and Indicative Route of Residential Relief Road
FIGURE 2.4	Cycle Infrastructure Plan
FIGURE 3.1	Surrounding Highway Network
FIGURE 4.1	Key Facilities Plan
FIGURE 4.2	Bus Stop and Routes Plan

Drawings

ITM11353-SK-026A	Site Access from Smithy Bridge Road
ITM11353-SK-031	Connection onto Brooklyn Avenue

Appendices

APPENDIX A.	Masterplan
APPENDIX B.	Traffic Survey Data
APPENDIX C.	Traffic Flow Diagrams
APPENDIX D.	Baseline Junction Capacity Assessment Outputs
APPENDIX E.	Personal Injury Accident Data
APPENDIX F.	Rochdale Cycle Map
APPENDIX G.	Bus Timetable Information
APPENDIX H.	Greater Manchester Rail Map
APPENDIX I.	TRICS Outputs

APPENDIX J.	TEMPro Journey Purpose and Census Journey to Work Distribution Data
APPENDIX K.	Walk, Cycle, Bus and Rail Trip Distribution and Generation
APPENDIX L.	Future Year Junction Capacity Assessment Outputs
APPENDIX M.	TfGM Initial Residential Relief Road Modelling Note
APPENDIX N.	Level Crossing Survey Data

Executive Summary

Development Proposals

Taylor Wimpey is proposing a residential development of 199 dwellings on land to the west of Smithy Bridge Road, some 4km to the east of Rochdale town centre. The site is currently designated as Protected Open Land in Rochdale Council's Unitary Development Plan (2006), indicating that it may be needed for development beyond the UDP period (2016) and has also been identified as a draft housing allocation within the publication draft Places for Everyone Plan for Greater Manchester document,

The site is bounded to the east by Smithy Bridge Road, existing residential dwellings located off the A58 Halifax Road to the north, a recently constructed residential development off Tarnside Close to the west and the River Roch to the south. Vehicular access to the site will be via a new simple T-junction with Smithy Bridge Road at the eastern end of the site. The proposed access will also include footway provision on either side and a separate dedicated cycleway along the southern side of the carriageway, tying into the existing provision along Smithy Bridge Road. An additional pedestrian / cycle connection will be provided via Brooklyn Avenue to the north of the site, providing access towards the A58.

Taylor Wimpey submitted a previous application for a similar scale of residential development on the site (planning application ref: 19/00881/FUL), with access via Smithy Bridge Road. This application is currently awaiting decision and will be withdrawn following the submission and validation of this application. The revised development proposals have been designed to address detailed comments received from the Council and other stakeholders in response to the initial application.

From a transport perspective, a key difference in the revised application relates to the delivery of the first section of a proposed Residential Relief Road through the site. Rochdale Council has proposed a Residential Relief Road which extends from Smithy Bridge Road to Albert Royds Street, offering relief to the A58 Halifax Road corridor to the north. The Relief Road forms part of a wider package of mitigation measures required to support the comprehensive development proposed through the Places for Everyone – a long-term plan for new homes, jobs and sustainable growth being promoted by the Greater Manchester Combined Authority on behalf of nine Greater Manchester Districts (including Rochdale).

Taylor Wimpey will deliver a length of c.640 metres of Relief Road through the site – from Smithy Bridge Road up to the western boundary of the site, representing circa one-third of the total length of proposed Relief Road. Rochdale Council will deliver the remainder of the Relief Road.

The Relief Road is intended to form part of the wider Greater Manchester Bee Network of active mode routes and as such will incorporate footway / cycleway provision along the full length of the route, including the section that passes through the site., tying into the existing pedestrian and cycle provision along Smithy Bridge Road.

The development proposals will offer a range of dwelling sizes and types and are arranged in three distinct character areas, each lying to the north of the Relief Road and served via secondary access roads which run northwards from the Relief Road. The three character areas are separated by north-south linear green spaces which connect into the open space that lies along the southern edge of the development, adjacent to the River Roch. Existing public rights of way across the site will be retained, diverted where necessary, and enhanced to provide high quality connections east-west and north-south through the development, connecting into the wider community.

Accessibility of the Site

The development will benefit from a wide range of local services and facilities within Smithy Bridge and Smallbridge and also within Littleborough, Rochdale and beyond. These facilities include primary and secondary schools, a range of retail options, leisure opportunities and extensive employment facilities. Many of these facilities will be accessible on foot or by cycle and also by public transport from the site.

The development proposals will enhance and complement existing pedestrian and cycle facilities through and within the vicinity of the site, providing facilities for existing and new residents to undertake short journeys on foot or by cycle.

The development site is well located to take advantage of existing bus services along Smithy Bridge Road and A58 Halifax Road, with bus stops on each route located within a comfortable walking distance of the site. These bus services provide regular access to Rochdale, Littleborough and other local destinations.

The proposed development is also very well located in relation to Smithy Bridge railway station, which is c.700m from the site, offering frequent and direct connections to Rochdale, Manchester and Leeds. The bus and rail services within the vicinity of the site provide a realistic choice for residents to access employment, education, retail and leisure opportunities by sustainable modes.

A Travel Plan accompanies the application and has been produced to encourage the use of sustainable transport amongst new residents and reduce the number of single-occupancy vehicle trips associated with the development.

Development Impact

The residential proposals will generate fewer than 100 two-way vehicle trips during weekday peak hours, all of which will access the surrounding highway network via the proposed new access onto Smithy Bridge Road. These will include trips associated with a wide variety of journey purposes and to a wide range of destinations. The capacity of the proposed site access has been demonstrated to be sufficient to accommodate the forecast traffic levels associated with the development.

In the short term, prior to the completion of the Relief Road, the development traffic flows will be split to the north and south of the proposed site access along Smithy Bridge Road, with c.70 trips travelling to / from the north and c.30 trips heading to / from the south.

The capacity of the existing junctions within the vicinity of the site have been assessed to determine the impact of the development-generated traffic in the short-term, prior to the completion of the Relief Road.

The impacts of the proposals on the junctions along the A58 Halifax Road to the north of the site have been shown to be acceptable, with the junctions shown to operate within their capacity. Impacts on Smithy Bridge Road, including the level crossing, and on the junction of Smithy Bridge Road with Wildhouse Lane have also been shown to be acceptable.

The existing Smithy Bridge Road / A58 Halifax Road is a busy signalised junction during the peak hours, with queuing occurring on the Smithy Bridge Road and A58 approaches. In the short term, prior to the completion of the Residential Relief Road, the development results in an increase in traffic volumes at the junction of c.3% during the peak hours. The detailed junction capacity assessment undertaken demonstrates that the addition of the development traffic results in a maximum increase in queuing at the junction of 12 vehicles (from 35 to 47 vehicles) on the Smithy Bridge approach in the AM peak hour and an increase of 8 vehicles (from 43 to 51 vehicles) on the A58 Halifax Road (eastbound) approach in the PM peak hour.

The proposed access strategy put forward for the site focuses traffic movements into and out of the site via Smithy Bridge Road, which results in an increased level of traffic passing through the A58 / Smithy Bridge Road junction. Notwithstanding this, the level of increase in queuing at the junction is not considered significant and certainly not severe within the context of the National Planning Policy Framework (NPPF). Once the Relief Road has been implemented in full, any development-generated trips heading towards Rochdale will be able to bypass the junction and the section of the A58 Halifax

Road up to the A664 / Albert Royds Street and therefore having a negligible impact on the A58 / Smithy Bridge Road traffic signal junction

This Transport Assessment demonstrates that the 'residential relief road' is not required to facilitate the proposed development at Smithy Bridge Road. However, it is acknowledged that the development will add traffic to the A58 corridor and therefore the delivery of the eastern section residential relief road shows the commitment from Taylor Wimpey to assist Rochdale Council in realising their aspirations for a residential relief road in the area..

Conclusions

Overall it is concluded that the proposed residential development will be sustainably located with good access to key services and facilities by a range of travel modes, will offer safe and satisfactory access for all, and that the development impacts will not be severe. The proposed development therefore accords with current local and national policy guidance.

SECTION 1 Introduction

1.1 Introduction

- 1.1.1 i-Transport LLP has been commissioned by Taylor Wimpey to provide transport advice to support a full planning application for a residential development on land to the west of Smithy Bridge Road, Smithy Bridge, Rochdale.
- 1.1.2 A previous application for residential development on the site was submitted by Taylor Wimpey, as detailed further below and referenced throughout this report. The previous proposals for the site are similar the latest application proposals for the site in terms of development quantum and access proposals. The key difference between the two applications is the delivery of a section of a proposed Residential Relief Road as part of the latest application, as described below.
- 1.1.3 A masterplan has been prepared for the site which identifies that 199 residential dwellings, together with associated landscaping, open space, play provision and wider active mode connections can be accommodated within the site. The masterplan also incorporates the delivery of the eastern section of Rochdale Council's proposed residential relief road which will connect Smithy Bridge Road with Albert Royds Street to the west, relieving traffic along the A58 corridor. The Relief Road will form the proposed access arrangements from the site onto Smithy Bridge Road
- 1.1.4 This Transport Assessment (TA) has been prepared in accordance with current local and national guidance. This TA considers the accessibility of the site by a range of travel modes with reference to Rochdale Metropolitan Borough Council's (RMBC's) accessibility standards, demonstrating that future dwellings on the site will be accessible to a range of key services and facilities. The TA also demonstrates the proposed access arrangements will deliver safe and suitable access to and from the site, accommodating the forecast traffic levels associated with the development.
- 1.1.5 This TA also shows that the development-generated traffic can be accommodated within the adjacent highway network and will not give rise to impacts which would be deemed severe.
- 1.1.6 A separate Framework Travel Plan document (i-Transport Reference: ITM11353-011 R) has been produced for this application to assist in the encouragement of sustainable transport modes and patterns for future residents of the site.

1.2 Planning History

- 1.2.1 A previous application (planning application ref: 19/00881/FUL) was submitted by Taylor Wimpey for the site in 2019 for a similar scale of residential development, comprising some 200 dwellings, served via a single point of access off Smithy Bridge Road.
- 1.2.2 The previous application presented details of the evolution of the access strategy for the site. Initial proposals for the site had included the provision of two points of access via Smithy Bridge Road to the east and Brooklyn Avenue to the north. One of the main benefits of providing two points of access was that it provided a choice of route for traffic heading west and south from the site and as a consequence reduced the level of development-generated traffic passing through and thus the impact upon the A58 / Smithy Bridge Road signalised junction. The original masterplan proposals for the site therefore incorporated two access points and this was the scheme presented at the public consultation event held in May 2019.
- 1.2.3 However, following comments received from local residents and extensive liaison with RMBC, the Council outlined their preference for the site to be served via a single access onto Smithy Bridge Road. This proposed single access arrangement was therefore incorporated within the previously submitted application and, as detailed in Section 2 of this report, remains the access strategy for this latest application. RMBC acknowledges that this would result in a higher level of development traffic passing through the A58 / Smithy Bridge Road junction.
- 1.2.4 A series of post-application discussions has been held with RMBC and Transport for Greater Manchester (TfGM) regarding the previous application. Various aspects of the assessment were agreed with the Council including trip generation, distribution, connections to the wider surrounding area, site access arrangements and the impacts of the proposals on the junctions on the A58 Halifax Road to the north of the site. Extensive discussions were undertaken with RMBC and TfGM regarding the modelling of the A58 Halifax Road / Smithy Bridge Road signal-controlled junction, and these are reflected within the modelling conducted for the current application as presented later in this report.
- 1.2.5 The proposals associated with this previous application are currently awaiting decision and will be withdrawn following the submission and validation of this application.

1.3 Scope of the Transport Assessment

- 1.3.1 As many of the proposals for this latest application are consistent with the previous application (planning application ref: 19/00881/FUL), a range of assessment parameters agreed with the Council during scoping and post-application discussions associated with the previous application are still relevant for this latest application.
- 1.3.2 A Transport Assessment scoping note was submitted to RMBC in February 2018 which outlined details of the proposed residential trip generation rates, assumptions regarding trip distribution and the background traffic growth factors to be adopted in the assessment. Details of the proposed assessment study area – i.e. those junctions at which detailed assessments would be undertaken - were also set out within the scope. Confirmation was also sought from the Council regarding details of nearby committed developments to be included in the analysis.
- 1.3.3 Many of the original assessment parameters were agreed with the Council as part of the discussions regarding the previous application and therefore these have been applied within this Transport Assessment for consistency.
- 1.3.4 Furthermore, the modelling of the A58 Halifax Road / Smithy Bridge Road signal-controlled junction has been the subject of extensive post-application discussions with RMBC and TfGM. Further details are set out in Sections 3 and 6 of this report and the modelling undertaken in this application / report is consistent with the post-application discussions held with regard to the previous application.
- 1.3.5 Further pre-application meetings have been held with RMBC's highway officers in February and March 2022 to discuss the scope of the updated application for the latest proposals. It was agreed during these discussions that no detailed assessment of the effects of the proposed residential relief road would be required to support this residential application as the Relief Road will be subject to a separate assessment and application process in due course. This report therefore presents an overview of the benefits of the residential relief road within the context of the proposed residential development.
- 1.3.6 This TA has therefore been produced on the basis of the parameters set out within the previously agreed scope associated with the earlier application and the subsequent pre-application discussions held with the Council in respect of this current application, in 2021 and 2022.

1.4 Policy Context

Rochdale Core Strategy

1.4.1 The Rochdale Core Strategy was formally adopted on 19th October 2016 and forms part of the Local Plan, which provides the strategic planning framework for the Council's future development needs up to 2028.

1.4.2 The Core Strategy policies replace a large number of policies in the Unitary Development Plan (UDP). The Core Strategy outlines that improving accessibility and delivering sustainable transport is key to the Council's vision. The relevant aspects of three policies from the Core Strategy within the context of the proposals are summarised below.

1.4.3 Policy T1 – Delivering Sustainable Transport:

“We will work with relevant agencies to secure strategic, boroughwide and local transport improvements that support our overall spatial strategy....We will do this by:

- 1 Improving inter and sub-regional links to neighbouring centres including Manchester City Centre and strategic destinations;***
- 2 Improving access to public transport network and interchange / hub facilities;***
- 3 Providing access for all to development focus areas and town centres; and***
- 4 Reducing the need to travel and make best use of the existing transport infrastructure”.***

1.4.4 Policy T2 – Improving Accessibility:

“We will improve accessibility by locating development where good access to public transport is available or can be provided, backed by measures to reduce the need for travel and effective provision for cyclists, pedestrians and people with impaired mobility. Development will be appropriately located to minimise the need to travel by and the number and length of car trip made to access local amenities...

... e) We will ensure that development allocations and submitted proposals are as far as possible accessible for all (including people with impaired mobility), applying the accessibility criteria set out in Appendix 4”

1.4.5 Policy SD1 – Delivering Sustainable Development:

“When considering development proposals the Council will take positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework”.

1.4.6 The development proposals are consistent with the objectives of the above Policies T1, T2 and SD1 as the residential proposals are accessibly located with good access to existing bus services along the A58 and to Smithy Bridge Railway Station, which both provide access to Rochdale town centre and in the case of the railway station to Manchester city centre, with both destinations offering onward interchange opportunities. The site is also well located to take advantage of a range of existing local services within the vicinity of the site. The accessibility standards referenced above have been used in the appraisal of the accessibility of the site in Section 4 of this report.

1.4.7 A Travel Plan accompanies this planning application and includes measures to encourage residents to travel by sustainable modes and reduce the need to travel, or to link trips in order to reduce the overall number of journeys made, particularly by single-occupancy vehicles.

Places for Everyone

1.4.8 The Greater Manchester Combined Authority (GMCA) has prepared the Places for Everyone Plan for nine of the Greater Manchester districts - including Rochdale - to outline a long-term plan for jobs, new homes and sustainable growth.

1.4.9 The plan identifies locations for potential development across the nine Greater Manchester districts. Within Rochdale, the application site has been identified as land suitable for residential development under Policy JP Allocation 24 – Roch Valley.

1.4.10 The associated allocation policies include the following, with regard to transport:

- Delivery of around 200 homes to be accessed primarily from Smithy Bridge Road.
- Maintain and enhance pedestrian and cycle routes through the valley to promote active travel and provide access to public transport notably Smithy Bridge railway station and the buses along the A58.
- The site should be designed to deliver the eastern section of the proposed residential relief road between Smithy Bridge Road and Albert Royds Street, incorporating attractive, high quality pedestrian and cycle routes.

1.4.11 This current application is in line with the policies set out for the draft allocation within Places for Everyone, in terms of the proposed number of dwellings, access arrangements, improvements in sustainable travel and the provision of the initial section of the residential relief road, which are all detailed in Section 2.

1.5 Report Structure

1.5.1 The structure of the report after this Introductory section is as follows:

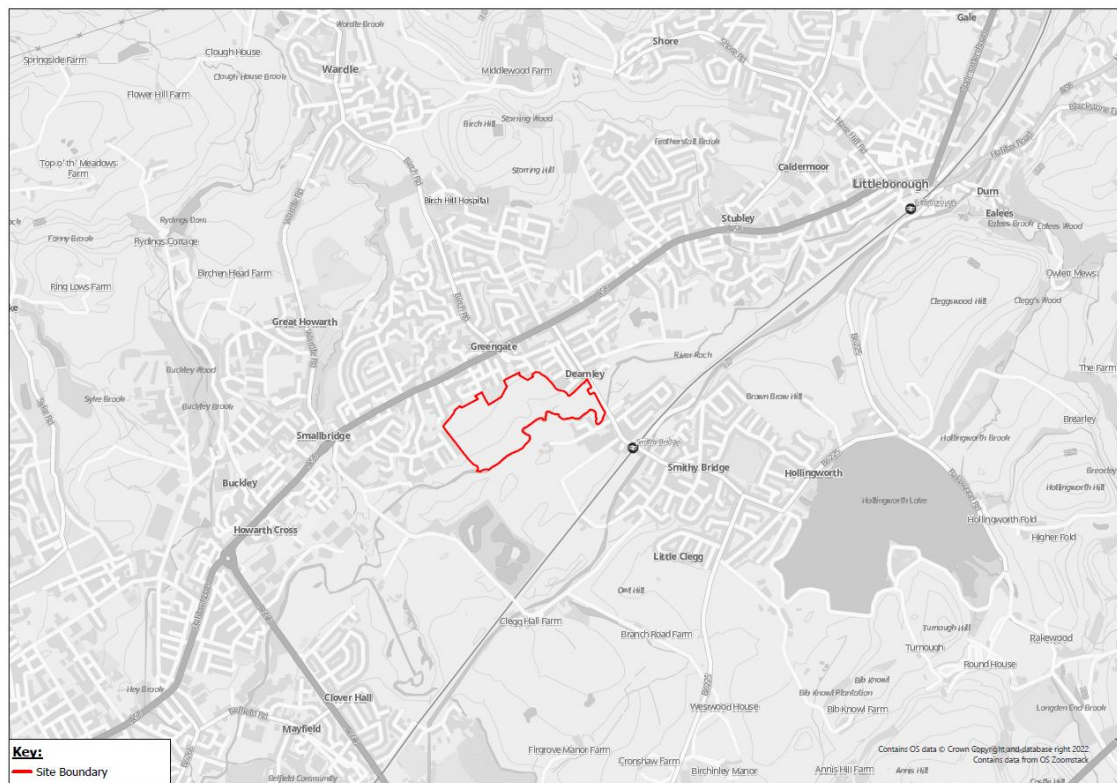
- Section 2 describes the site location and development proposals including the proposed development quanta, access arrangements, details of the initial section of the residential relief road and the parking provision for the site.
- Section 3 examines the existing highway conditions within the vicinity of the site including a description of the surrounding highway network, existing traffic flows, baseline junction assessments and recent personal injury accident data.
- Section 4 outlines the sustainable transport provision within the vicinity of the site including walking, cycling and public transport networks and reviews the accessibility of the site by sustainable modes and its proximity to key facilities and services with reference to Rochdale Council's accessibility standards.
- Section 5 provides details of the travel movements expected to be generated by the proposed residential development and sets out how the forecast traffic levels are likely to be distributed across the highway network.
- Section 6 examines the traffic impact of the development. This section includes junction capacity assessments at the site access and key junctions on the surrounding highway network, to determine the impacts of the proposals on the adjacent highway network. This section provides an overview of the benefits of the residential relief road.
- Section 7 draws together a summary of the report and presents the report's conclusions.

SECTION 2 Development Proposals

2.1 Site Location

- 2.1.1** As outlined in the Introduction, the site is located to the west of Smithy Bridge Road and to the south of the A58 Halifax Road in Smithy Bridge, Rochdale. The site is located approximately 4km to the east of Rochdale town centre.
- 2.1.2** The application site extends to 14.2 hectares. Smithy Bridge Road forms the eastern boundary of the site, existing residential dwellings located off the A58 Halifax Road form the northern boundary, a recently constructed residential development of 50 dwellings off Tarnside Close forms the western boundary and the River Roch forms the southern boundary of the site.
- 2.1.3** The location of the site is shown within the context of the surrounding highway in **Figure 2.1**.

Figure 2.1: Site Location



2.2 Development Proposals

Introduction

- 2.2.1 The proposed development will provide 199 residential dwellings, with a mix of 2, 3, 4 and 5-bedroom houses, together with associated car parking, landscaping and open space provision. A masterplan of the proposed development layout has been produced by Pegasus Group and a copy is provided within **Appendix A**, with an extract provided below in **Figure 2.2**.
- 2.2.2 The proposed dwellings will include a mix of detached and semi-detached houses, with garages and driveways provided to minimise on-street parking. This is consistent with neighbouring residential dwellings on Brooklyn Avenue, South View Road and Wuerdle Farm Way and with the recently constructed residential development to the west of the site.

Figure 2.2: Extract of Masterplan



Internal Layout

- 2.2.3 The proposed residential development is split into three complementary residential character areas across the site, each located to the north of and served via their own access points off the residential relief road.

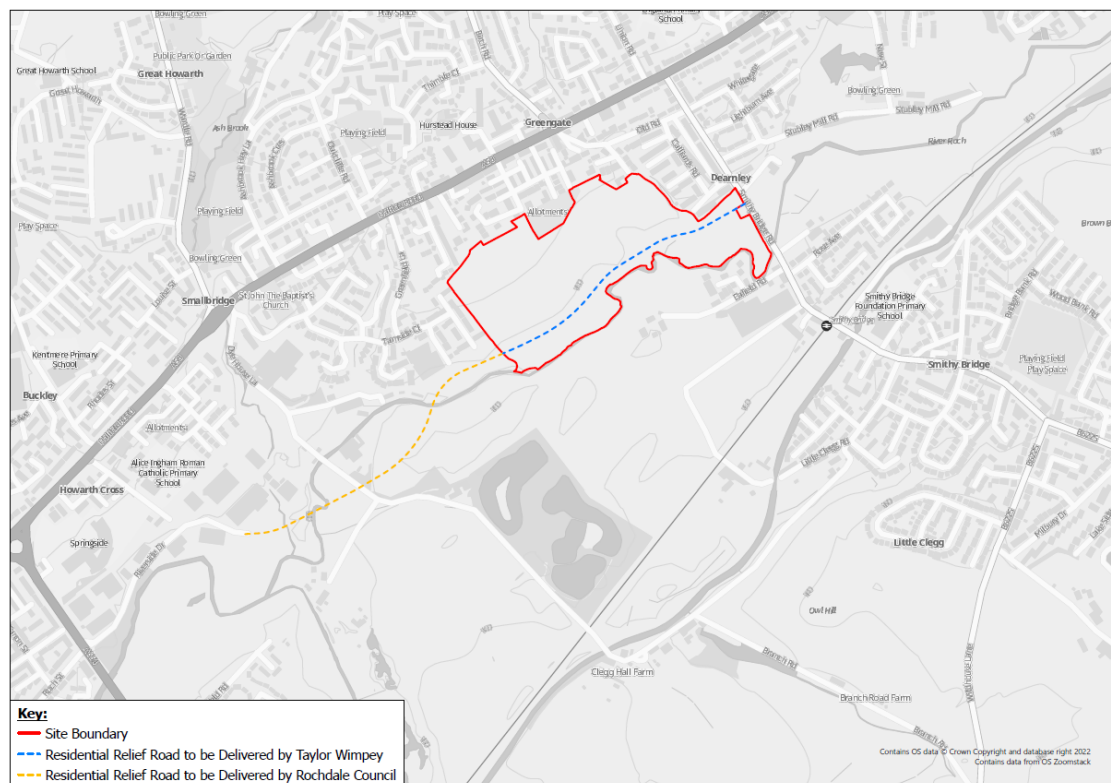
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- 2.2.4 The character areas are separated by two areas of green open space, located either side of the central character area, and running north-south. These open spaces provide separation between the character areas, provide views through the site from Holland Street and Brooklyn Drive, and provide green connections through the site linking into the large area of open space to the south of the relief road. Connections through the open space areas are provided between the character areas across the site and connecting into the pedestrian and cycle links along the relief road. The eastern open space area will also incorporate a LEAP for the use of existing and future residents.
- 2.2.5 The eastern of the three residential character areas wraps around the adjacent Wuerdle Farm and borders the existing properties on Wuerdle Close, South View Road and Wuerdle Farm Way. The area is split into two smaller parcels with separate accesses provided to each from the residential relief road.
- 2.2.6 The central residential character area lies to the south of the existing allotments, which are to be retained as part of the proposals, and the western character area lies to the south-west of Holland Street and adjacent to the recently constructed residential development off Tarnside Close. A single point of access will be provided to each of these parcels from the residential relief road.
- 2.2.7 The internal roads within each development parcel have been designed to achieve a 20mph speed limit. The internal road layout for each of the development parcels will be via a series of culs-de-sac with each providing access to between 40 – 100 dwellings.
- 2.2.8 The development will include frontage access to properties along each of the internal roads and private drives. To assist in keeping vehicular speeds low, speed restraint measures have been incorporated into the design of the site. These measures include raised humps, raised junction tables, chicanes and the formalisation of internal priority junctions and have been discussed with Rochdale's highway officers as part of pre-application discussions. This internal road design complements the existing 20mph speed limit and associated speed restraint measures on surrounding routes including Stott Street, William Street and Holland Street to the north of the site.
- 2.2.9 No direct frontage access will be provided onto the residential relief road and the properties which face southward over the River Roch will be accessed from private drives, which will run parallel to the residential relief road.

- 2.2.10 To the south of the dwellings and residential relief road, the land falls away towards the River Roch along the southern boundary of the site, with open space provided between the new relief road and the River. An area of water / drainage attenuation will be located to the south of the relief road at the western end of the site and two retained wet areas will be located within this large area of open space towards the east of the site.

Residential Relief Road

- 2.2.11 As set out above, the eastern section of RMBC's proposed residential relief road will be delivered within the site as part of the application proposals. The residential relief road will provide an east/west route through the site connecting with Smithy Bridge Road via a new priority-controlled T-junction at the eastern frontage of the site.
- 2.2.12 The residential relief road is being promoted as part of the Places for Everyone plan – the plan for nine of the Greater Manchester districts, including Rochdale, which proposes new jobs, homes and sustainable development across the boroughs.
- 2.2.13 The proposed residential relief road is designed to relieve traffic along the A58 Halifax Road corridor and will extend from Smithy Bridge Road to Albert Royds Street. The Taylor Wimpey site – proposed for allocation under the Roch Valley policy – will be required to deliver the eastern section of the relief road, which includes the section running through the site, representing approximately one third of the total route length.
- 2.2.14 The transport evidence required to support the Places for Everyone Plan identifies the proposed relief road as 'supporting' as opposed to 'necessary' mitigation in terms of its relationship to the proposed housing on the Roch Valley / Taylor Wimpey site, indicating that the completion of the route is not a requirement of the development.
- 2.2.15 Further details of the access proposals are set out in Section 2.3 below and the impacts of the relief road are considered later in this report. The residential relief road will continue to the west of the site and ultimately connect onto Albert Royds Street and provide an alternative route to the A58, and will also facilitate the provision of a second access to the site.
- 2.2.16 The residential relief road will consist of a 7.3-metre carriageway with 2-metre footways provided to the north and south of the carriageway and a 3-metre bi-directional cycleway located to the south of the carriageway. It is anticipated that a consistent cross-section will be provided for the subsequent sections of the relief road to the west, beyond the site. The route of the proposed residential relief road is shown in Figure 2.3.

Figure 2.3: Location and Indicative Route of the Residential Relief Road



- 2.2.17** The residential relief road will run to the south of the proposed development area and access to the three character areas / parcels which form the development (as detailed above) will be taken directly from the residential relief road via four separate priority T-junctions. It has been confirmed with RMBC that no additional emergency vehicle access points are required for the development parcels.
- 2.2.18** Taylor Wimpey will construct the first section of the residential relief road from Smithy Bridge Road to a point to the west of the western-most secondary access, providing a suitable turning head for vehicles until such time as the route is constructed beyond the site. The land between the constructed residential relief road and the western boundary of the site will be safeguarded to enable the delivery of the remainder of the new route in due course.
- 2.2.19** Three pedestrian and cycle crossings will be provided across the residential relief road, at key desire lines connecting the development areas to the footway and cycleway provision to the south of the residential relief road. Two of the crossings will be located within the vicinity of the public open spaces which will lie between the three development parcels and will take the form of raised crossings. The third and most eastern of the crossings will take the form of a simple uncontrolled pedestrian crossing, located to the east of the secondary accesses and tying into the existing / diverted public right of way in this area.

2.3 Site Access Arrangements

Introduction

- 2.3.1 Vehicular access to the site is proposed via a new simple priority-controlled T-junction with Smithy Bridge Road in the north-eastern corner of the site frontage. The proposed access road will form the eastern section of the proposed residential relief road passing through the site as outlined above.
- 2.3.2 The vehicular access proposals within this application are consistent with the previous application and show a single point of vehicular access onto Smithy Bridge Road to the east of the site, with an additional pedestrian and cycle access included to the north, connecting into Brooklyn Avenue.
- 2.3.3 This section sets out the details of the proposed access arrangements via Smithy Bridge Road.

Proposed Smithy Bridge Road Access

- 2.3.4 The proposed development will be served via a single T-junction access onto Smithy Bridge Road, to the east of the site, which will form the residential relief road through the site. As described above, each of the development parcels will be served off the residential relief road via secondary routes. The proposed access will meet Smithy Bridge Road to the south of its junctions with South View Road and Stubley Mill Road.
- 2.3.5 Drawing ITM11353-SK-026 Rev A, contained in the Drawings section at the end of this report, illustrates the proposed site access arrangements. The residential relief road carriageway is proposed to be 7.3m wide, with a 2m footway provided on both sides of the carriageway, connecting with the existing provision along Smithy Bridge Road and with a 3m bi-directional cycleway along the southern side. It is expected that the same level of provision will continue along the residential relief road as further sections are progressed to the west.
- 2.3.6 The proposed access is located opposite the existing southbound bus stop on Smithy Bridge Road. It is therefore proposed to relocate the bus stop c.35m to the north of its current position, between the junctions of Stubley Hill Road and South View Road, as shown on Drawing ITM11353-SK-026 Rev A.

- 2.3.7 An Automatic Traffic Count (ATC) survey was undertaken in March 2022 to determine current vehicle speeds along Smithy Bridge Road, to inform the visibility requirements for the proposed access junction.
- 2.3.8 The resultant 85th percentile northbound and southbound vehicle speeds are set out below.
- Northbound – 85th percentile speed = 33.9 mph
 - Southbound – 85th percentile speed = 36.3 mph
- 2.3.9 The northbound speeds are broadly consistent with the existing 30mph speed limit. The southbound speeds currently exceed the speed limit and this is potentially attributable to the downhill gradient and the existing open aspect of this section of the road.
- 2.3.10 However, it is expected that the introduction of the proposed site access on Smithy Bridge Road will help to extend the built-up nature of this section of Smithy Bridge Road and the associated additional pedestrian, cycle and bus infrastructure and general increase in vehicular and pedestrian / cycle activity into and out of the site will assist in reducing vehicle speeds along this section of Smithy Bridge Road. The presence of the proposed puffin crossing will also result in vehicles stopping at the crossing when the pedestrian demand is called, again helping to keep vehicle speeds low.
- 2.3.11 Notwithstanding the fact that the speeds currently exceed the 30mph speed limit, the actual vehicle speeds are such that the visibility requirements for the site access can be based upon those set out in the Manual for Streets (MfS). The proposed access has been designed to achieve the visibility requirements based upon the current vehicle speeds observed on Smithy Bridge Road, despite the anticipation of lower speeds once the access and associated measures have been introduced. On the basis of the MfS criteria and the above existing vehicle speeds, the following visibility splays are required and will be provided at the proposed access:
- Visibility to the South / Right = 2.4m x 55.1m visibility splay (based on northbound speeds)
 - Visibility to the North / Left = 2.4m x 56.6m visibility splay (based on southbound speeds)
- 2.3.12 In both cases, the splays have been measured to the nearside kerb along Smithy Bridge Road. Drawing ITM11353-SK-026 Rev A shows the resultant visibility splays can be achieved at the

access. The existing stone wall along the site frontage to the north of the access will need to be taken down and repositioned behind the visibility splay.

- 2.3.13 Drawing ITM11353-SK-026 Rev A included within the Drawings section at the end of this report illustrates the proposed access via Smithy Bridge Road and the continuation of the residential relief road into the site. The capacity of the proposed access is set out within Section 6 below.

Pedestrian And Cycle Access

- 2.3.14 The location and design of the site will promote walking and cycling by providing networks of safe and direct connections to the surrounding areas. Dedicated footway and cycle connections are proposed onto Smithy Bridge Road and Brooklyn Avenue which, as detailed in Section 4, provide access to a number of key facilities, including Smithy Bridge railway station to the south and existing bus stops adjacent to the site and on the A58 Halifax Road, enhancing the active travel provision through the site and increasing the permeability within the development and the existing surrounding area.

Pedestrian Access

- 2.3.15 Three pedestrian access points will be provided across the site, via the new access onto the Smithy Bridge Road at the eastern end of the site, via a new connection onto Brooklyn Avenue (**Image 2.1**) to the north of the site and via the existing public right of way (ProW) to the west of the site. Drawing ITM11353-SK-031, included in the Drawings section at the end of this report illustrates the connection from the site to Brooklyn Avenue.
- 2.3.16 The three character areas will provide an extensive network of footways across the site, which will be linked with footway connections across the public open spaces, providing east/west movements across the site. Pedestrian routes will also be provided in north/south direction through the areas of public open space provided between each of the development parcels, with the eastern route providing a connection onto Brooklyn Avenue and towards the bus stops on the A58 Halifax Road.
- 2.3.17 2m footways will also be provided on either side of the residential relief road providing an improved route towards Smithy Bridge Railway Station and ultimately to the west towards Rochdale once the residential relief road is completed. A further three pedestrian crossings will be provided across the residential relief road linking the footway to the south of the residential relief road to the footways provided across the development.

2.3.18 A puffin crossing is proposed c.50m to the south of the vehicular site access junction onto Smithy Bridge Road, providing a safe crossing point for pedestrians wishing to access bus stops, the railway station and other facilities to the south and east of Smithy Bridge Road. As a result of the provision of the puffin crossing, the existing northbound bus stop on Smithy Bridge Road will also need to be relocated – an indicative location is shown on Drawing ITM11353-SK-026 Rev A, contained in the Drawings section at the end of this report.

2.3.19 The current ProW which runs c.40m to the south of the proposed site access junction will be retained as part of the site access arrangements to provide an alternative route onto Smithy Bridge Road, as shown in **Image 2.2** below. This route will take the form of a mown path, to complement the more formal pedestrian provision running along each side of the relief road.



2.3.20 As this ProW continues northwards into the site, it will cross the residential relief road at the most easterly of the three crossing points and follow the existing route around the edge of the development, connecting into Wuerdle Farm Way.

2.3.21 The existing ProW which runs from Wuerdle Farm Way along the northern edge of the development and south-west across the site will be subject to a ProW diversion order and will be incorporated into proposed routes within the site. The new route will run along the proposed footpath between Wuerdle Farm Way and Brooklyn Avenue, along the shared footway/cycleway through the eastern public open space and crossing to the footway on the southern side of the residential relief road, from where the route will connect into the existing provision to the west of the site.

2.3.22 The route of the ProWs through the site are shown in the masterplan in **Appendix A**.

Cycle Access

2.3.23 As noted above, a 3m bi-directional segregated cycleway will be provided to the south of the proposed residential relief road in a west/east direction, connecting into the proposed access at Smithy Bridge Road and providing a route to Rochdale town centre to the west once the remainder of the route is complete. This cycleway will also form part of the future Beeway network across Rochdale and Greater Manchester.

2.3.24 A 3m wide shared footway/cycleway will also be provided to the north onto Brooklyn Avenue through the public open space between the central and eastern development parcels, as shown in Drawing ITM11353-SK-031 contained at the end of the report. A cycle crossing is also proposed between the shared footway/cycleway to the north and the dedicated cycleway along the residential relief road – the crossing will be raised to highlight its presence and to slow vehicles and provide a more desirable route for cyclists. The proposed cycle connections through the site will improve links for proposed residents to locations to the west of the site and to Rochdale town centre, and also provide an alternative route to Smithy Bridge railway station, avoiding the A58 Halifax Road, for existing residents to the north and west of the site.

2.3.25 The Greater Manchester Cycling Design Guidance and Standards outlines that a segregated cycleway should be 3m in width (for a bi-directional route) and a shared footway/cycleway should also be 3m in width. Therefore the proposals within the site adhere to the recommended design guidance.

2.3.26 The proposed segregated cycleway along the residential relief road will connect into the proposed access road c.20m prior to Smithy Bridge Road to allow cyclists to enter the carriageway to perform all turning movements at the proposed access junction. The existing southbound on-road cycle lane will be retained within the new access arrangements and the proposed access junction will allow connection onto this cycle lane at the junction. Drawing ITM11353-SK-026 Rev A presented later in this report illustrates the proposed cycle facilities within the site access.

2.3.27 The proposed cycle provision will complement the existing provision in the vicinity of the site and as outlined above will also complement the future wider Beeway network proposals which indicatively outline an east/west route through the site. The proposed route will provide a connection onto the existing cycle lane along Smithy Bridge Road and onwards towards

National Route 66 which follows the Rochdale Canal to Rochdale/Manchester to the south and Leeds to the north.

- 2.3.28 Connection will also be available to the 'Three Bridges' cycle route to the north of the site access, providing a link to Littleborough and Birch Road. **Images 2.3** and **2.4** below illustrate the existing cycle routes in the vicinity of the site.



- 2.3.29 The cycle provision within the site will also improve facilities for existing residents of surrounding areas by providing an east/west connection towards Rochdale from Smithy Bridge Road, avoiding sections of the A58 Halifax Road. Cycle routes through the site also improve access from the west to Smithy Bridge railway station. **Figure 2.4** illustrates the existing and proposed cycle facilities within the vicinity of the site.

2.4 Parking Provision

- 2.4.1 Rochdale Council's Core Strategy outlines the car parking standards for residential dwellings. The Core Strategy outlines that for 2+ bedroom houses outside the town centre the requirement

is for two car parking spaces per dwelling (not including a garage). Therefore, the number of parking spaces required on site is 398 spaces.

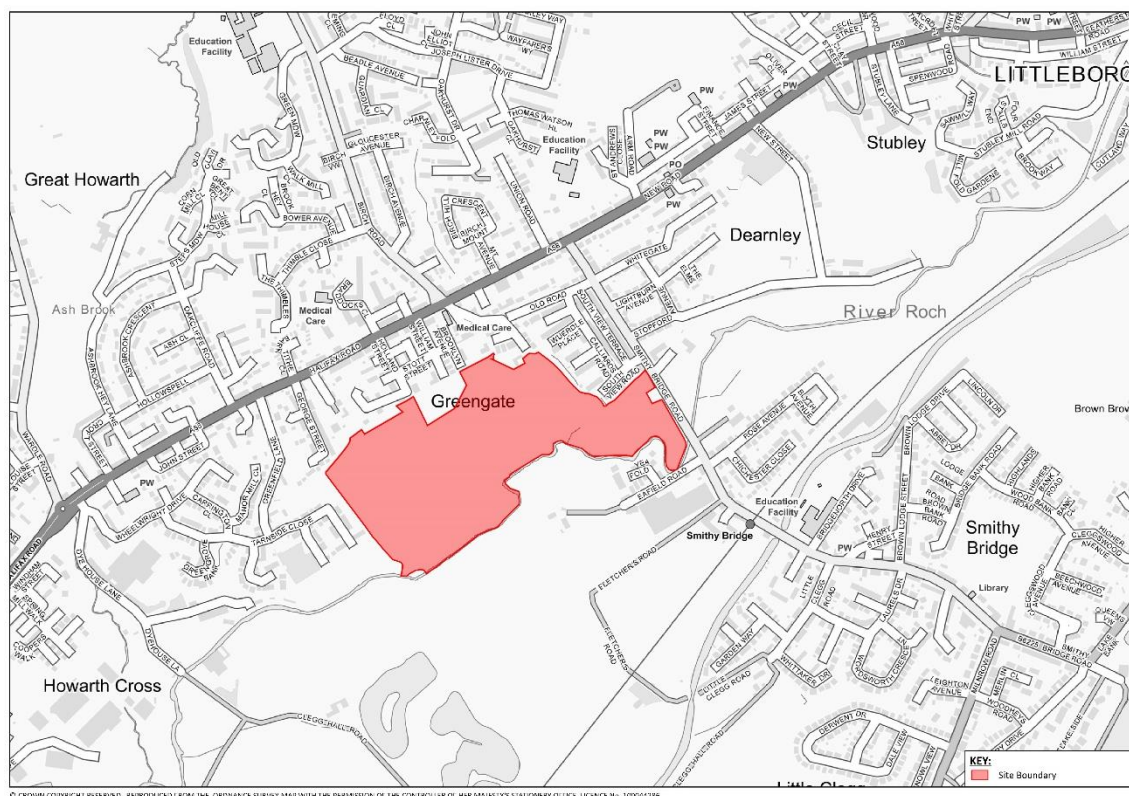
- 2.4.2 The masterplan illustrates that all plots sites will provide two parking spaces per dwelling which is in line with Rochdale Council's parking standards. In line with building regulations electric vehicle charging will be provided for each dwelling.

SECTION 3 Existing Highway Conditions

3.1 Surrounding Highway Network

- 3.1.1** As detailed in Section 2, vehicular access to the site will be provided from Smithy Bridge Road. This section describes the surrounding highway network including details of road widths, speed limits and pedestrian/cycling facilities, the existing traffic conditions in the local area, existing junction operations and a review of the latest 5-year accident data within the vicinity of the site.
- 3.1.2** The proposed development site is bounded to the east by Smithy Bridge Road, to the north by dwellings off Brooklyn Avenue / Holland Street and to the west by the recent residential development off Tarnside Close. The A58 Halifax Road lies beyond the existing dwellings to the north of the site and provides a connection to Rochdale town centre to the west and Littleborough to the east. The River Roch lies to the south of the site.
- 3.1.3** The road network within the vicinity of the site is illustrated in **Figure 3.1** below.

Figure 3.1: Surrounding Highway Network



Smithy Bridge Road

- 3.1.4** Smithy Bridge Road is a lit, 30mph single carriageway road, which connects the A58 Halifax Road in the north, with Lake Bank in the south. The road runs through Smithy Bridge providing direct access to residential properties and access to a number of local services including a primary school and local shops and other key facilities. Smithy Bridge Road also serves Smithy Bridge railway station to the south-east of the site.
- 3.1.5** In the vicinity of the proposed site access onto Smithy Bridge Road, the existing carriageway width measures approximately 9m, allowing for a designated cycle lane on the southbound carriageway which runs from the southbound bus stop on Smithy Bridge Road, to its junction with Rose Avenue to the south. Footways are present on both sides of the carriageway to the north and south of the proposed access, providing access to the bus stops along Smithy Bridge Road and to Smithy Bridge railway station. **Images 3.1** and **3.2** illustrate the current composition of Smithy Bridge Road in the vicinity of the proposed site access.

Image 3.1: Smithy Bridge Road (looking south)



Image 3.2: Smithy Bridge Road (looking north)



- 3.1.6** Smithy Bridge Road meets the A58 Halifax Road to the north of the site at a signalised, four-arm staggered junction. To the south, Smithy Bridge Road meets Milnrow Road / Wildhouse Lane at a mini-roundabout, which provides onward connections to Milnrow and the M62 at Junction 21.

Brooklyn Avenue

- 3.1.7 Brooklyn Avenue is a residential street running northwards from the site boundary to meet the A58 at its northern end. The road is bisected by Stott Street – to the south of Stott Street Brooklyn Avenue has a formalised street arrangement measuring c.5.5 metres in width with a 2 metre footway on the western side of the carriageway and direct access to the existing residential properties. Access to the existing allotments which border the northern boundary of the site is taken via a private access which runs from the southern end of Brooklyn Avenue.
- 3.1.8 From its southern end, Brooklyn Avenue bends westwards to form Stott Street, with the northern section of Brooklyn Avenue giving way to traffic on Stott Street / Brooklyn Avenue. The northern section of Brooklyn Avenue has a more informal layout with no clearly defined separation between carriageway and footway, other than a narrow strip along the western side bordering the existing dwellings. On-street parking is observed on both sides of this section of Brooklyn Avenue.
- 3.1.9 At its northern end Brooklyn Avenue joins the A58 Halifax Road, however access by vehicular traffic is physically restricted. Pedestrian access between Brooklyn Avenue and the A58 is possible, albeit there is guard railing along the A58 boundary, directing pedestrians onto the footway along the southern boundary of the A58.
- 3.1.10 Brooklyn Avenue along with Stott Street, William Street and Holland Street all form a 20mph zone, which is enforced by raised tables and road humps.

Holland Street

- 3.1.11 Holland Street also runs northwards from the site towards the A58 Halifax Road, to the west of Brooklyn Avenue, and serves a number of residential dwellings to the south of the A58. It is intersected in two locations, by Frances Street towards the northern section of the road and Stott Street towards the south, essentially splitting the carriageway into three sections.
- 3.1.12 Holland Street has terraced properties fronting onto it for only some of its length, resulting in a limited amount of on-street parking. Holland Street has a wider carriageway (c.7m) than the adjacent William Street.

William Street

- 3.1.13 William Street is a residential road with a carriageway c.6m in width and footways both sides. William Street has a number of terraced properties fronting both sides and provides a

connection between the A58 Halifax Road to the north and Stott Street to the south. On-street parking is commonplace on both sides of the carriageway, reducing the available road width.

A58 Halifax Road

- 3.1.14 The A58 Halifax Road runs between Rochdale town centre to the west – with Bury and Bolton beyond – and Littleborough and Halifax to the east, and onwards towards Leeds. Within the vicinity of the site, the A58 Halifax Road is a busy single carriageway, with two lanes in each direction.
- 3.1.15 The road provides frontage access to a number of dwellings and other commercial premises and parking / loading are restricted along much of the length of the A58 near the site. There are a number of bus stops on both sides of the road, and footways along both sides of the carriageway. There are signal-controlled junctions where the A58 meets Birch Road and at Smithy Bridge Road / Union Road and a signalised pedestrian crossing on the A58 just east of its junction with Holland Street.

3.2 Existing Traffic Flows and Conditions

- 3.2.1 Traffic surveys were undertaken in June 2019 and February 2020 to inform the traffic assessment of the development proposals. The full details of these surveys are outlined below with the raw traffic data included at **Appendix B**.
- 3.2.2 Manual Classified Count (MCC) surveys were conducted on 11th June 2019 and 4th February 2020 during the hours of 07:00-10:00 and 15:00-19:00 at the following locations, as agreed with Rochdale Council during the pre-application scoping discussions. The survey specification, including the queue surveys conducted at A58 Halifax Road / Smithy Bridge Road and the survey dates were also agreed with TfGM.
- A58 Halifax Road/Smithy Bridge Road/Union Road – February 2020;
 - A58 Halifax Road/William Street – June 2019;
 - A58 Halifax Rd/Holland Street/Braddocks Close – June 2019; and
 - Smithy Bride Road / Milnrow Road – June 2019.
- 3.2.3 The above traffic surveys were conducted prior to the Covid-19 pandemic. During pre-application discussions, RMBC noted anecdotally that traffic levels since the pandemic have almost returned to pre-pandemic levels during the morning peak period, but it is considered

that traffic levels during the evening peak period are lower, albeit with peak levels experienced over a longer period from the end of the school day until early evening.

- 3.2.4 It was agreed that a full suite of updated traffic surveys would not be required for the Transport Assessment, and the 2019/2020 base traffic flows would provide an appropriate basis for the assessment. However, it was agreed that a limited survey of traffic flows on A58 and Smithy Bridge Road would confirm RMBC's observations of post-Covid traffic levels and would confirm that the 2019/2020 traffic surveys would provide an appropriate basis for the assessment.
- 3.2.5 Automatic Traffic Counters (ATC) were therefore placed on Smithy Bridge Road, in the vicinity of the location of the proposed site access and on A58 Halifax Road, to the west and east of Smithy Bridge Road. The ATC surveys were undertaken for a continuous 7-day period, from the 2nd March 2022 to 8th March 2022. The Smithy Bridge Road survey collected both volumetric and speed data, to inform the design of the proposed site access (as outlined above).
- 3.2.6 The results of the 2022 ATCs were compared to the data collected in the February 2020 surveys, to establish any differences in the pre and post-Covid pandemic traffic levels on the network.
- 3.2.7 The total 2022 traffic flows on the approach to the A58 / Smithy Bridge Road junction (excluding the minor flows on Union Road) were 2,089 vehicles in the AM peak hour and 1,736 vehicles in the PM peak hour.
- 3.2.8 The data from 2020 showed that in the AM peak hour the corresponding traffic flows on the A58 and Smithy Bridge approaches were 2,058 vehicles and in the PM peak hour – 2,221 vehicles.
- 3.2.9 A comparison of the two datasets therefore shows that the traffic levels have remained consistent during the morning peak hour, with a small increase of c.2%, but with a significant reduction of c.22% during the evening peak hour, but with the peak period extending over a longer period, as noted by RMBC in the pre-application discussions. The corresponding ATC data is contained within **Appendix B**.
- 3.2.10 It is therefore concluded that the use of the 2019 / 2020 detailed turning count and queue survey data will provide a robust basis upon which to determine the impacts of the proposed development.
- 3.2.11 The peak hours identified from the 2019 surveys were 07:30-08:30 in the AM period, and 16:30-17:30 in the PM period and the corresponding peak hours derived from the 2020 survey at the A58 / Smithy Bridge Road signal junction were 07:45-08:45 in the AM period and 16:45-17:45 in

the PM period. The resultant '2019/2020 Base' peak hour turning flows are shown in the traffic flow diagrams included at **Appendix C**.

3.3 Baseline Capacity Assessments

- 3.3.1 As identified in the Introduction, the impacts of the development-proposals have been assessed across a study area agreed with RMBC during pre-application scoping discussions. The extent of this study area includes the four off-site junctions outlined in Section 3.2 above, and the adjacent links.
- 3.3.2 Junction capacity assessment models have been set up for each of the off-site junctions, based upon the 2019 and 2020 baseline traffic flows, to provide an accurate reflection of the baseline traffic conditions on the surrounding network.
- 3.3.3 The priority-controlled junctions at A58 Halifax Road with William Street and Holland Street and the mini-roundabout at Smithy Bridge Road / Milnrow Road have been modelled using the Junctions9 software, whilst the signalised A58 Halifax Road / Smithy Bridge Road junction has been modelled using the LINSIG software.
- 3.3.4 Full baseline junction capacity assessment outputs are included in **Appendix D** and the following section provides a summary of the results.

A58 Halifax Road/Smithy Bridge Road/Union Road

- 3.3.5 The junction of the A58 Halifax Road/Smithy Bridge Road/Union Road forms a signal-controlled, 4-arm left-right stagger arrangement, with a signal-controlled internal section on the A58 between Smithy Bridge Road and Union Road.
- 3.3.6 Two lane approaches are provided on the A58 Halifax Road arms. In the eastbound direction the lanes are dedicated as ahead only (nearside lane) and as a right turn (offside lane) into Smithy Bridge Road – the latter allowing right-turn traffic to turn within gaps in the oncoming traffic stream and also with an unopposed period at the end of the signal cycle which is controlled by an indicative arrow.
- 3.3.7 The westbound arm allows ahead movements from both lanes, with left turning traffic into Smithy Bridge Road using the nearside lane. Video observations have been undertaken to determine the proportion of the ahead traffic choosing to use the nearside and offside lanes

and these proportions have been used in the modelling of the junction, to reflect the current peak period operation of the junction.

3.3.8 A single lane approach to the signals is provided on both Smithy Bridge Road and Union Road. The cycle times and signal staging included within the LINSIG model have been based on on-site observations at the junction and the signal controller specification for the junction provided by TfGM.

3.3.9 The traffic survey video footage from the 2020 surveys has been used to determine a number of input parameters to the junction capacity model as follows – these parameters have been agreed with RMBC and TfGM during pre-application discussions for the current application and post-application discussions in relation to the previous application:

- The lane assignment for the A58 (east) New Road ahead traffic (i.e. towards Rochdale) – 30% of ahead traffic is observed to use the offside lane in the AM peak and 28% in the PM peak.
- The pedestrian stage (Stage 4) is assumed to be called every cycle. The video observations showed that on average the pedestrian demand is called approximately every other cycle in the AM peak and broadly every 4th cycle in the PM peak. Therefore the inclusion of this stage in every cycle within the LINSIG model presents a robust methodology.
- The cycle time at the junction was recorded a number of times across the peak hours from the video observations. The resultant cycle time adopted for both the AM and PM peak hours is 125 seconds.

3.3.10 TfGM also advised that excess queuing at the end of the peak hours should be included within the junction model. It is a function of signal-controlled junctions that queuing can occur on all arms of the junction during each signal cycle – both in peak and off-peak periods) as each approach has periods where traffic is held on a red signal during the cycle.

3.3.11 The presence of queuing on any approach at the end of the peak hour is therefore not necessarily evidence of excess queued demand on that approach, as it may simply be the case that the approach was subject to a red signal at the end of the peak hour. However, following discussions with RMBC and TfGM, it has been agreed that to provide a robust assessment of the level of excess queuing at the junction at the end of the peak hours, the observed queues derived from the queue survey for 2-3 signal cycles beyond the peak hour have been included within

the traffic demands on each of the approaches. The following table summarises the additional queued demand on each approach that has been added to the peak hour traffic flow on each arm:

Table 3.1: Queue Demand Applied to Base Model (in pcu – passenger car units)

Arm	AM Peak Hour	PM Peak Hour
A58 (east) New Road	54	38
Smithy Bridge Road	19	87
A58 (west) Halifax Road	27	40
Union Road	8	3

3.3.12 The above parameters have been included within the baseline model of the A58 Halifax Road / Smithy Bridge Road junction and a copy of the full LINSIG model output is contained within **Appendix D**. Table 3.2 below presents the summary of the baseline results with the inclusion of the above input parameters alongside the observed queues from the queue survey.

Table 3.2: A58 Halifax Road / Smithy Bridge Road / Union Road Junction – 2020 Baseline Summary Results

Link	Arm/Movement	AM Peak Hour			PM Peak Hour		
		DoS (%)	MMQ (PCUs)	Queue Survey	DoS (%)	MMQ (PCUs)	Queue Survey
1/1	A58 (E) New Road – Ahead & Left	89.6%	28	27	81.4%	23	23
1/2	A58 (E) New Road – Ahead	89.6%			81.4%		
2/1	Smithy Bridge Road – Left & Right	102.8%	29	32	108.5%	41	27
3/1	A58 (W) Halifax Road – Ahead & Left	75.2%	21	15	91.2%	33	21
3/2	A58 (W) Halifax Road – Right	20.0%	4		20.0%	4	
4/1	Union Road – Left & Right	55.9%	3	2	30.0%	1	1
5/1	Eastbound Internal – Ahead	53.9%	0	-	73.1%	0	-
5/2	Eastbound Internal – Right	58.9%	5	-	61.6%	5	-
6/1	Westbound Internal - Ahead	58.9%	6	-	53.2%	5	-

Link	Arm/Movement	AM Peak Hour			PM Peak Hour		
		DoS (%)	MMQ (PCUs)	Queue Survey	DoS (%)	MMQ (PCUs)	Queue Survey
6/2	Westbound Internal – Ahead & Right	61.5%	6	-	66.8%	5	-

DoS = Degree of Saturation

MMQ = Mean Maximum Queue

PCUs = Passenger Car Units

3.3.13 The results show that the baseline junction operation validates well against the results of the queue survey for the junction as a whole, with particularly good correlation with observed queues on the A58 (east) approach. However, the PM peak model overestimates the queues on Smithy Bridge Road and the A58 (west) Halifax Road. Overall, it is concluded that the base LINSIG model provides a good representation of the current on-street operation of the junction and is therefore an appropriate basis upon which to assess the impacts of the proposed residential development. This model has therefore been used for the future year impact assessments, as presented in Section 6.

3.3.14 The junction currently operates under MOVA control, which allows the signal timings at the junction to be varied dynamically, cycle-by-cycle, to respond to live traffic demands. However, this has not been accounted for in the modelling of the junction and therefore the levels of queuing and delay at the junction forecast by the model are therefore likely to represent an over-estimate when compared to the on-street operation.

Alternative Modelling

3.3.15 During post-application discussions with TfGM in response to the previous application, TfGM raised concern that the queue survey results and the baseline operation of the LINSIG model did not reflect the presence of slow moving traffic along the A58 New Road westbound approach to the signalised junction. It is a matter of agreement that the queues forecast within Linsig are representative of stationary vehicles and not slow moving traffic queues.

3.3.16 TfGM therefore suggested that the saturation flows adopted in the LINSIG model for the A58 New Road approach should be reduced until the Degree of Saturation exceeded 100% in the baseline model, to reflect the occurrence of the slow moving queue along the A58.

3.3.17 The saturation flows used in the above model are based upon the formula derived in RR67, which is the accepted method of determining a lane's saturation flow taking account of its geometry, proportion of turning traffic, gradient etc. The saturation flow on the A58 approach

has been calculated (within LINSIG) based on geometric parameters of the junction taken from the junction layout drawing supplied by TfGM with the signal controller specification

3.3.18 The saturation flow calculated in the LINSIG software has been compared to the on-site saturation flow values, derived from the number of vehicles discharging across the signal stop line as observed from the video footage collected at the time of the traffic surveys conducted in February 2020.

3.3.19 The methodology for recording saturation flows has been undertaken in line with commonly used (TfL's) traffic modelling guidance, which recommends the following:

- A minimum of ten typical readings are taken to obtain a mean average.
- The minimum length of each measurement should be 12 seconds.
- Measurements should be conducted using vehicles discharging across the stopline in free-flow and thus unaffected by downstream interference such as congestion or exit-blocking.
- Conditions need to be sufficiently busy that the link is saturated for an adequate period to allow measurement.
- Saturation flow measurements should not include periods of 'lost time' at the start and end of green, as these represent time during which vehicles are accelerating or decelerating and therefore not moving at saturation flow.

3.3.20 A common technique to account for any lost time at the start of the green period is to ignore the first two vehicles to cross a stopline before recording saturation flow measurements. This prevents accelerating vehicles being counted towards the measurements and therefore a potential underestimation of the saturation flow. This method has been applied in the saturation flow calculations.

3.3.21 A total of 10 recordings have been taken of the observed saturation flow on the A58 New Road approach to the signals, for both the AM and PM peak hours. These readings have been averaged and Table 3.3 below presents a comparison of the resultant observed saturation flow measurements with those derived based on the geometric calculations within LINSIG, for the AM and PM peak hours.

Table 3.3: Saturation Flow Comparison

Arm	LINSIG Geometric Calculation	Video Observation
A58 (east) New Road – AM Peak Hour	1,880 pcu/hr	1,863 pcu/hr
A58 (east) New Road – PM Peak Hour	1,849 pcu/hr	1,823 pcu/hr

3.3.22 The above demonstrates that the saturation flows calculated within LINSIG are very similar to those derived from the video survey observations. It is therefore concluded that the saturation flows included within the LINSIG assessments presented above are appropriate and in line with the on-site observations.

3.3.23 Notwithstanding this, consideration has been given to the suggestion made by TfGM to include reduced saturation flows within the model such that Degrees of Saturation in excess of 100% can be achieved on the A58 New Road approach.

3.3.24 An alternative approach to the baseline Linsig model has therefore been undertaken by which the saturation flow on the eastern arm has been manually reduced to a value which results in a Degree of Saturation of over 100% during the peak hours. This alternative approach requires the saturation flow to be reduced to a value of 1600 pcu/hour – a value c.15% below the current observed and modelled saturation flows on this approach.

3.3.25 These manually adjusted saturation flows have been incorporated within the Linsig model and the results of this alternative (TfGM) baseline modelling are presented in Table 3.4 below.

Table 3.4: A58 Halifax Road / Smithy Bridge Road / Union Road Junction – 2020 Alternative (TfGM) Baseline Summary Results

Link	Arm/Movement	AM Peak Hour			PM Peak Hour		
		DoS (%)	MMQ (PCUs)	Queue Survey	DoS (%)	MMQ (PCUs)	Queue Survey
1/1	A58 (E) New Road – Ahead & Left	100.9%	46	27	90.0%	27	23
1/2	A58 (E) New Road – Ahead	100.9%			90.0%		
2/1	Smithy Bridge Road – Left & Right	102.8%	29	32	108.5%	41	27
3/1	A58 (W) Halifax Road – Ahead & Left	75.2%	21	15	91.2%	33	21
3/2	A58 (W) Halifax Road – Right	20.0%	4		20.0%	4	
4/1	Union Road – Left & Right	55.9%	3	2	30.0%	1	1

Link	Arm/Movement	AM Peak Hour			PM Peak Hour		
		DoS (%)	MMQ (PCUs)	Queue Survey	DoS (%)	MMQ (PCUs)	Queue Survey
5/1	Eastbound Internal - Ahead	53.9%	0	-	73.1%	0	-
5/2	Eastbound Internal – Right	73.6%	5	-	68.8%	5	-
6/1	Westbound Internal - Ahead	58.6%	6	-	53.2%	5	-
6/2	Westbound Internal – Ahead & Right	61.4%	6	-	66.8%	5	-

DoS = Degree of Saturation MMQ = Mean Maximum Queue PCUs = Passenger Car Units

3.3.26 Reducing the saturation flow on the A58 (east) New Road arm results in the queue on this approach increasing significantly during the AM peak hour – from 28 pcu's to 46 pcu's. As noted above, this does not correlate as well with the observed queue on this approach as the results of the baseline modelling adopting the Linsig/RR67 calculated saturation flow, as presented in Table 3.2 above.

3.3.27 However, at the request of RMBC and TfGM, the impact of the development has also been assessed adopting the parameters contained within this alternative model – these results are also presented in Section 6.

A58 Halifax Road/Holland Street/Braddocks Close

3.3.28 The junction of A58 Halifax Road/Holland Street/Braddocks Close is a 4-arm priority-controlled crossroads junction, with short right turn bays provided for vehicles turning into Holland Street and Braddocks Close from the A58.

3.3.29 Braddocks Close provides access to a limited number of residential dwellings and the surveyed traffic flows reflect this. As set out above Holland Street provides access to residential dwellings to the south of the A58 Halifax Road.

3.3.30 A summary of the junction capacity results based upon the 2019 baseline traffic flows is presented below at Table 3.5.

Table 3.5: A58 Halifax Road/Holland Street/Braddocks Close Junction- 2019 Baseline Summary Results

Arm/Movement	AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
Holland Street	0.14	0	0.09	0
A58 Halifax Road (east)	0.01	0	0.03	0
Braddocks Close	0.09	0	0.06	0
A58 Halifax Road (west)	0.05	0	0.03	0

RFC = Ratio of Flow to Capacity Max Q = maximum average queue PCUs = Passenger Car Units

- 3.3.31 The results show that the junction operates well within capacity with no queuing identified at the junction in the AM and PM peaks. This is consistent with on-site observations.

A58 Halifax Road/William Street

- 3.3.32 The junction of A58 Halifax Road/William Street is a simple priority-controlled T-Junction arrangement, located on the southern side of the A58 Halifax Road. William Street provides direct access to the existing residential dwellings to the north of the site as well as connection to neighbouring residential streets where access to / from the A58 is restricted.
- 3.3.33 As above, the traffic survey data shows that there are limited movements to/from William Street in the peak hours. A summary of the junction capacity based upon the 2019 baseline flows is presented below at Table 3.6.

Table 3.6: A58 Halifax Road/William Street junction- 2019 Baseline Summary Results.

Arm/Movement	AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
William Street	0.00	0	0.00	0
A58 Halifax Road	0.00	0	0.03	0

RFC = Ratio of Flow to Capacity Max Q = maximum average queue PCUs = Passenger Car Units

- 3.3.34 The results show that the junction operates well within capacity in the AM and PM peaks which is expected due to the low volume of traffic entering and exiting William Street.

Smithy Bridge Road / Milnrow Road

- 3.3.35 The junction of Smithy Bridge Road / Milnrow Road is a three arm mini-roundabout located to the south of the site, Milnrow Road provides an alternative route towards the M62, with the southern Smithy Bridge Road arm providing access towards Hollingworth Lake.

3.3.36 A summary of the junction capacity based upon the 2019 baseline traffic flows is presented in Table 3.7.

Table 3.7 Smithy Bridge Road / Milnrow Road - 2019 Baseline Summary Results

Arm/Movement	AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
Smithy Bridge Road (south)	0.90	7	0.57	1
Milnrow Road	0.69	2	1.19	86
Smithy Bridge Road (north)	0.50	1	0.43	1

RFC = Ratio of Flow to Capacity Max Q = maximum average queue PCUs = Passenger Car Units

3.3.37 The results show that the junction operates within its capacity in the AM peak hour but over capacity in the PM peak hour, with significant queuing shown on the Milnrow Road arm. The queue survey demonstrates that no queueing was experienced at the junction, therefore a site-specific correction factor has been applied to the model on the Milnrow Road arm in the PM peak to ensure the resultant modelled capacity replicates the current junction operation and is reflective of the queue surveys. The Smithy Bridge Road arm is also showing queuing over the queue survey, but no correction factor has been applied to this arm and therefore the AM model is considered robust.

3.3.38 Table 3.8 presents the revised 2019 PM peak hour baseline summary results.

Table 3.7 Smithy Bridge Road / Milnrow Road – 2019 Adjusted Baseline Summary Results

Arm/Movement	PM Peak Hour	
	Max RFC	Max Q (PCUs)
Smithy Bridge Road (south)	0.57	1
Milnrow Road	0.86	6
Smithy Bridge Road (north)	0.48	1

RFC = Ratio of Flow to Capacity Max Q = maximum average queue PCUs = Passenger Car Units

3.3.39 Whilst the site-specific adjusted capacity correction factor has reduced the queue and the junction operates within capacity, the modelled queue is still above the queue recorded in the queue survey. It is therefore considered that the adjusted PM peak hour model is also robust.

Summary

- 3.3.40 Overall it is concluded that the road network surrounding the site currently operates within its capacity during peak periods. There is queuing along the A58 East Road / Halifax Road, particularly during the morning peak hour. The extent of this queuing has been the subject of extensive discussion with RMBC and TfGM and two alternative modelling methodologies have been adopted to reflect the extent of this queuing.

3.4 Personal Injury Accident Data

- 3.4.1 Personal Injury Accident Data has been obtained from TfGM for the surrounding road network including A58 Halifax Road and Smithy Bridge Road within the vicinity of the site and including the junction of Smithy Bridge Road and A58 Halifax Road.
- 3.4.2 Data was obtained for the five-year period from 1st February 2017 – 31st January 2022. Table 3.8 provides a summary of the collisions that were reported during the five-year period. The detailed accident data and a plan showing the location of accidents is included in **Appendix E**.

Table 3.8: Personal Injury Accident Data – 2017-2022

Location	Severity			
	Slight	Serious	Fatal	Total
A58 Halifax Road - Link	3	1	0	4
A58 New Road / Smithy Bridge Road / A58 Halifax Road Junction	2	1	0	3
A58 Halifax Road / Birch Road	4	0	0	4
Smithy Bridge Road / Proposed Site Access	0	0	0	0
Smithy Bridge Road - Link	2	1	0	3
Smithy Bridge Road / Rose Avenue	1	0	0	1
Total	12	3	0	15

- 3.4.3 A total of 15 collisions occurred over this five-year period, 12 of which were slight in nature and three were serious, with no fatal accidents. No accidents occurred in the vicinity of the proposed site access off Smithy Bridge Road.
- 3.4.4 Three accidents occurred at the A58 / Smithy Bridge Road / Union Road signal junction, two of which were slight in nature and one was serious. The first slight accident occurred when a vehicle waiting to turn left onto Smithy Bridge Road was hit in the rear by another vehicle. The second

slight accident occurred when a vehicle turning right into Union Road turned into the path of a vehicle travelling along the A58 Halifax Road. The serious accident occurred when a vehicle travelling north eastbound on the A58 Halifax Road collided with a pedestrian crossing the road from the off-side.

- 3.4.5 Four accidents occurred on Smithy Bridge Road to the south of the proposed site access, with a slight accident occurring at the junction of Rose Avenue, when a vehicle overtook another vehicle travelling southbound and failed to see the pedestrian crossing the road. Possible contributory factors were listed as the driver failing to look properly.
- 3.4.6 The other three accidents occurred on the approach to the level crossing, two of which were slight and one serious. The first slight accident occurred when a cyclist turned right across the path of vehicle travelling southbound along Smithy Bridge Road. The second slight occurred when a vehicle travelling northbound along Smithy Bridge Road was hit in the rear by another vehicle. The serious accident occurred when a motorcycle travelling at high speed lost control and crashed into a property.
- 3.4.7 Four accidents also occurred at the A58 Halifax Road / Birch Road junction, all of which were slight in nature. The first involved a vehicle waiting to turn right into Birch Road and a second approaching vehicle collided with the rear of the first vehicle. The second occurred when a vehicle travelling south westbound along the A58 Halifax Road was held up and a second vehicle collided with the rear of the first vehicle.
- 3.4.8 The third accident occurred where a car decided to overtake several cars and collided head-on with another car travelling the opposite direction. The fourth accident again involved a rear end collision when two vehicles were travelling north along Birch Road.
- 3.4.9 A further four accidents occurred on the A58, two of which occurred to the west of the A58 / Smithy Bridge Road / Union Road junction, which were both slight in nature and involved vehicles either entering or exiting the petrol filling station and two occurred to the east of the A58 / Smithy Bridge Road / Union Road junction, and consisted of a slight and serious accident. The slight accident occurred when a vehicle collided with the rear of another vehicle travelling north eastbound. The serious accident occurred when a vehicle travelling south westbound lost control and collided with a parked vehicle. The contributory factors noted in the records identified the driver as suffering with illness.

3.4.10 Overall it is concluded that there are no significant road safety concerns associated with the local highway network and the majority of incidents that have occurred over the last five years have been as a result of driver error. It is concluded that the proposed development will not have a significant detrimental impact upon road safety in the area.

SECTION 4 Existing Sustainable Transport Provision and Accessibility of the Site

4.1 Introduction

- 4.1.1 Rochdale's Core Strategy requires development proposals to be accessible for all, and to reflect their accessibility criteria as far as possible. Development is also to be located to minimise the need to travel by car and minimise the number and length of car trips made to access local amenities.
- 4.1.2 This section demonstrates that the development site is well located to take advantage of existing sustainable transport infrastructure and local facilities both in Smithy Bridge and along the A58 corridor. Details of the existing sustainable transport provision within the vicinity of the site are set out alongside an appraisal of the accessibility of the site to a range of key facilities with reference to Rochdale Council's accessibility standards, as set out in Appendix 4 of the adopted Core Strategy.
- 4.1.3 A Travel Plan accompanies this application and sets out a range of measures designed to encourage sustainable travel patterns associated with the development proposals. The Travel Plan will be implemented from the outset of the development to maximise the opportunities to influence future travel patterns at the site.

4.2 Cycling and Walking

- 4.2.1 The site is located to maximise the potential for walking and cycling connections within the site and the surrounding areas. The development proposals include enhanced connections to the bus stops on the A58 and Smithy Bridge Road and to Smithy Bridge railway station, as well as local key facilities.
- 4.2.2 The Institution of Highways and Transportation (IHT) Guidance 'Providing for Journeys on Foot' suggests preferred maximum walking distances of 2km. Therefore, it is concluded that a 2km walking catchment represents an appropriate distance for the consideration of journeys on foot and has been considered as part of the accessibility review set out in the next section.
- 4.2.3 In terms of a suitable distance for journeys by bicycle, the Department for Transport's (DfT) Local Transport Note LTN1/20 'Cycle Infrastructure Design' notes two out of every three personal trips

are less than five miles (8km) in length – an achievable distance to cycle for most people, with many shorter journeys also suitable for walking.

- 4.2.4 These potential walking and cycling catchments have been used in the consideration of the accessibility of the site set out below.

Walking

- 4.2.5 Figure 4.1 highlights a 2km walking catchment from the site and shows that many local facilities are located within walking distance of the site. Section 4.4 below provides further detail on the range of facilities which are accessible on foot.
- 4.2.6 As detailed in Section 2, pedestrian accesses will be provided from the site directly onto Smithy Bridge Road and Brooklyn Avenue, providing access to nearby bus stops, Smithy Bridge railway station and key facilities on the A58 and along Smithy Bridge Road.
- 4.2.7 As outlined in Section 2, a PROW currently runs through the site in an east/west direction. As part of the development proposals this footpath will be diverted to tie in with the proposed layout and will be improved as it runs through the site. The diversion of the footpath is from the north-east corner of the site close to its connection with Wuerdle Farm Way and will realign the footpath along the proposed internal footpath/cyclepath provision through the eastern area of open space within the site, improving the facilities for both walkers and cyclists, before tying back into the existing footpath route in the south-west corner of the site along the residential relief road.
- 4.2.8 The PROW will allow further connections to the surrounding areas: with two connections onto Wuerdle Farm Way, a connection to the west to the recently constructed residential development and onwards towards Rochdale; and a connection onto Smithy Bridge Road, providing a more direct access to the northbound bus stop and Smithy Bridge railway station.
- 4.2.9 Footways will be provided throughout the site allowing pedestrian access throughout the site and onto the external highway. As detailed in Section 2, the site will be subject to a 20mph speed limit therefore providing an attractive environment for pedestrians within the site.
- 4.2.10 External footways will tie into the proposed pedestrian connections within the site. Good quality footways are provided on both sides of Smithy Bridge Road providing safe access to the railway station as well as the range of key facilities to the south (as detailed below). Footways are also provided on Brooklyn Avenue, Stott Street, Holland Street and William Street which all offer

pedestrian routes through to the footways along the A58 and to the various facilities to the north of the site. Brooklyn Avenue, Stott Street, William Street and Holland Street are all located within an existing 20mph speed limit providing a safe environment for pedestrians to access the A58.

- 4.2.11 There are a number of signal controlled pedestrian crossings located at regular intervals along the A58 Halifax Road, which enable the safe crossing of pedestrians travelling from the site to the bus stops and a number of key local facilities in the vicinity of the site such as Wardle Academy and local shops on the A58 Halifax Road.
- 4.2.12 As part of the development proposals, 2m-wide footways will be provided on either side of the access into the site and along the Residential Relief Road. A puffin crossing is also proposed on Smithy Bridge Road, providing a safe and controlled crossing point for pedestrians and enhancing connections to the railway station and southbound bus stops on Smithy Bridge Road.
- 4.2.13 Overall, it is considered that the site is well connected to the surrounding areas, with pedestrian connections to the west, north and east. The development has been designed to promote walking for the proposed residents as well as providing an improved environment along the proposed relief road and existing PROWs through the site, a new puffin crossing improving access to the railway station and local connections between the A58 and Smithy Bridge Road.

Cycling

- 4.2.14 Local areas within an 8km cycling distance from the site include Rochdale town centre and surrounding areas, Littleborough, Wardle, Milnrow and a number of other local towns and villages. Further details of the range of facilities available within these catchments are set out in Section 4.4 below.
- 4.2.15 A number of cycle routes are located within the vicinity of the proposed site. National Cycle Route 66 is located to the south of the site and follows the Rochdale Canal providing a mostly traffic-free link towards Littleborough to the north-east and Rochdale (and onwards towards Manchester) to the south (**Image 4.1** below). Access to this route is provided off Smithy Bridge Road to the south of the railway station.
- 4.2.16 The Three Bridges Cycle Route (Regional Route 80) shown in **Image 4.2** is located to the north of the site and routes along Stubley Mill Road and Old Road and provides a connection between Littleborough to the east and Halifax Road to the north of the site. This route consists of a traffic-free section in Littleborough and an advisory route on Stubley Mill Road and Old Road.

Image 4.1: Rochdale Canal (National Cycle Route 66)



Image 4.2: Three Bridges Cycle Route (Regional Route 80)



4.2.17 The section of Smithy Bridge Road running directly past the site frontage is designated as an 'On Road Route - with other cycling facilities'. This southbound section of Smithy Bridge Road is provided with a designated cycle lane, running for c.180m, from opposite the proposed site access to its junction with Rose Avenue to the south providing a connection between the two cycle routes identified above.

4.2.18 A copy of the Rochdale Cycle Map showing each of these surrounding routes is enclosed in **Appendix F**.

4.2.19 To complement the existing cycle routes in the vicinity of the site, a 3m segregated bi-directional cycleway will be provided through the site providing a connection from Smithy Bridge Road in the east to the recently constructed residential development on Tarnside Close to the west allowing for onward connections towards Rochdale town centre, avoiding the A58. It is the intention that the cycle route along the proposed residential relief road will form part of the wider Greater Manchester Beeway Network once the route is complete.

4.2.20 A 3m shared footway/cycleway will also be provided from the residential relief road to Brooklyn Avenue, improving connections to the north from within the development site.

- 4.2.21 Overall, it is concluded that the site is already well served by existing cycle infrastructure and the proposals will enhance the local provision through the creation of new off-road cycle links. The Travel Plan prepared for the site will encourage future residents to cycle to access local facilities.

4.3 Existing Public Transport Provision

- 4.3.1 The proposed development site is very well located in terms of its proximity to public transport – including bus routes along Smithy Bridge Road and the A58 and also through its close proximity to Smithy Bridge railway station.

- 4.3.2 This section sets out the range of locations accessible by public transport from the site.

Bus Services

- 4.3.3 Existing bus stops are located on both Smithy Bridge Road, adjacent to the site access, and on the A58 Halifax Road to the north of the site. The closest bus stops to the centre of the site are on A58 Halifax Road and are c.300-400m from the centre via the proposed pedestrian access onto Brooklyn Avenue.

- 4.3.4 The stops on the A58 Halifax Road are served by the following bus routes:: 456, 457, 458, 587, 590. These services offer connections to a wide variety of locations including Rochdale town centre, Littleborough, Burnley, Todmorden, Halifax and Hebden Bridge.

- 4.3.5 The existing footways along Brooklyn Avenue, Stott Street, William Street and Holland Street provide access to the bus stops on the A58 Halifax Road. A signalised pedestrian crossing is located c.25m to the west of the eastbound bus stop (near Holland Street), which enables the safe crossing of the A58 Halifax Road, allowing pedestrians to easily access the bus stop.

- 4.3.6 Additional bus stops are located on Smithy Bridge Road, approximately 400m from the centre of the site. As detailed in Section 2, the southbound bus stop is to be relocated to the north of the proposed access and Stubley Mill Road, and the northbound bus stop / shelter is proposed to be relocated to the south of its current position, to facilitate the delivery of the puffin crossing near the site access. The revised bus stop locations are shown on the site access plan contained in the Drawings section at the end of the report.

- 4.3.7 These stops are served by bus route 458 which offers a service between Rochdale and Littleborough, as well as to a number of destinations in the surrounding areas.

4.3.8 All of the bus stops on the A58 and Smithy Bridge Road are within 400m of the centre of the site, which is consistent with the Council's accessibility standard.

4.3.9 There are also a number of school bus services operating along Smithy Bridge Road, which connect the site to the nearby Wardle Academy, Hollingworth Academy and St Cuthbert's RC High School.

4.3.10 Figure 4.2 illustrates the location of the existing bus stops and bus routes along the A58 Halifax Road and Smithy Bridge Road, within the vicinity of the site. Table 4.1 below provides a summary of the local bus services which operate within the vicinity of the site location. Table 4.2 summarises the school services available in the local area.

Table 4.1: Local Bus Services

Service	Route	Mon-Friday		Saturday		Sunday	
		Day	Evening	Day	Evening	Day	Evening
Smithy Bridge Road Bus Stops							
458	Rochdale- Smallbridge-Wardle- Smithy Bridge-Hollingworth Lake- Littleborough	30 mins	1 hour	30 mins	1 hour	1 hour	1 hour
R5	Littleborough – Stubley – Smithy Bridge – Milnrow Firgrove – Rochdale	1 hour	-	1 hour	-	-	-
A58 Halifax Road Bus Stops							
457	Rochdale-Smallbridge - Littleborough - Stansfield – Shore Circular	1 hour	1 hour	1 hour	1 hour	1 hour	1 hour
458	Rochdale- Smallbridge-Wardle- Smithy Bridge-Hollingworth Lake- Littleborough	30 mins	1 hour	30 mins	1 hour	1 hour	1 hour
587	Rochdale – Littleborough – Ripponden-Halifax	1 hour	-	1 hour	-	4 services	
590	Rochdale- Smallbridge- Littleborough-Todmorden- Hebden Bridge-Halifax	30 mins	1 hour	30 mins	1 hour	1 hour	1 hour

Source: TfGM

Table 4.2: School Bus Services

Service	Route	Mon-Friday	
		To School	Arriving From School
850	Wardle - Hollingworth Academy	1 service at 0810	1 service at 1508
890	Shore – Littleborough – Wardle - Milnrow - St Cuthbert's RC High School	1 service at 0734	1 service at 1541
891	Shore – Littleborough – Wardle - Milnrow - St Cuthbert's RC High School	1 service at 0731	1 service at 1533
894	Shore – Littleborough – Wardle - Milnrow - St Cuthbert's RC High School	1 service at 0735	1 service at 1526

Source: TfGM * Return journey via public bus service 456

4.3.11 It is therefore concluded that the site is well located to benefit from a range of existing bus services within the vicinity of the site within an acceptable walking distance for residents. The proposed internal pedestrian and cycle links will further enhance access to these existing services.

4.3.12 Bus timetable information for the local services is provided in **Appendix G**.

Rail Services

4.3.13 Smithy Bridge railway station is located c.700m to the southeast of the centre of the site – within the recommended walking distance as set out in the Council's accessibility standard. Smithy Bridge station can be accessed easily from the site via the existing footways along Smithy Bridge Road. The enhanced pedestrian and cycling facilities proposed as part of the site access design and the proposed puffin crossing will further improve walking/cycling connections to the railway station for existing and proposed residents and there is cycle parking available at the station.

4.3.14 An 'at grade' level crossing is provided at the station where Smithy Bridge Road intersects the railway line. Full barriers and warning lights/signs are provided at the level crossing. A grade-separated pedestrian link is provided on the eastern side of Smithy Bridge Road providing a stepped route underneath the railway line, allowing pedestrians to cross the railway line when the barriers are activated.

4.3.15 The station operates a number of frequent rail services, connecting Smithy Bridge to locations including Rochdale, Manchester, Leeds, Burnley and Blackburn. The frequency of these services is summarised in Table 4.3 below.

Table 4.3: Existing Rail Services

Route	Frequency (Mins)					
	Monday - Friday		Saturday		Sunday	
	Day	Eve	Day	Eve	Day	Eve
Smithy Bridge – Rochdale & Manchester Victoria*	60	60	60	60	60	60
Smithy Bridge – Leeds	60	60 ¹	60	60 ¹	120	120
Smithy Bridge – Blackburn	60	60	60	60	60	60

¹ 3-hour frequency between 9pm – 12am

* Provides onward journeys to additional destinations

4.3.16 Rail services to Rochdale and Manchester Victoria continue through these stations to additional destinations, including Southport, Wigan or Kirkby.

4.3.17 The above demonstrates that the site is well served by high frequency rail services to a number of key local destinations including Rochdale, Manchester and Leeds, and that the railway station itself is located within an acceptable walking distance of the site.

4.3.18 A rail map of Greater Manchester is included in **Appendix H**.

Metrolink

4.3.19 There is a Metrolink stop in Rochdale Town Centre, which is accessible from the site. This line provides access to Manchester City Centre and onwards to Didsbury. Interchanges are available within Manchester city centre to access the wider Great Manchester region via Metrolink and other services..

4.4 Accessibility of the Site

4.4.1 The accessibility of the site has been appraised taking account of the existing range of local services available within the vicinity of the site.

4.4.2 The NPPF and RMBC's local policies encourage new developments to be located where key services and facilities are accessible via a range of modes. Therefore, the following section

considers the accessibility of the proposed site to key facilities, taking into account the existing and proposed sustainable transport provision outlined in Sections 4.2 and 4.3 above and also with reference to Rochdale Council's accessibility standards as set out within the Core Strategy.

4.4.3 Table 4.4 below outlines the closest facilities to the site and presents the distance and walking time to reach each facility, measured from the centre of the site. The locations of these facilities are shown on Figure 4.1. The type and nature of the facilities shown in the table are consistent with those identified within the Council's accessibility standards.

4.4.4 As outlined at the start of this section, facilities are considered accessible on foot if they are within a 2km walking distance and / or accessible by cycle if they are within 8km of the site. Where facilities are not located within walking/cycling distance, details of public transport connections are provided.

Table 4.4: Accessibility Appraisal

Uses	Nearest Service/Facility	Distance from Centre of Site (walk time *)	Accessible by Walking (W), Cycle (C), Public Transport (PT)
Local Shops	Spar and Texaco	400m (5 min)	W/C
	Premier	400m (5 min) & 950m (12 min)	W/C
Local Centres	Smithy Bridge	1km (13 min)	W/C
Town Centres	Rochdale Town Centre	4km	C, PT (13 min by rail and 23 min by bus)
Leisure	Littleborough Leisure Centre	2.4km (30 min)	C/PT (16 min by bus)
	Hollingworth Lake	1.6km (20 min)	W/C
Community Centre	The Bridge Centre	600m (8 min)	W/C
Children's Play / Local Open Space	LEAP on site / playing fields off Smithy Bridge Road	On site / 1.1km (14 min)	W/C
Outdoor Sport Facilities	Littleborough Cricket Club	2.5km (31 min)	C/PT (16 min by bus)
Employment	Mayer Industrial Park	1.7km (22 min)	W/C
Health	Littleborough Group Practice	1.8km (23 min)	W/C
	Unicare Pharmacy	1km (13 min)	W/C
Hospital	Birch Hill Hospital	1.1km (14min)	W/C
Primary School	Smithy Bridge Foundation Primary School	800m (10 min)	W/C

Uses	Nearest Service/Facility	Distance from Centre of Site (walk time *)	Accessible by Walking (W), Cycle (C), Public Transport (PT)
	St Andrews C of E Primary School	650m (8 min)	W/C
	St Marys C of E Primary School	1.5km (19 min)	W/C
Secondary School	Wardle Academy	950m (12 min)	W/C
	Hollingworth Academy	4.4km	PT
	St Cuthbert's RC High School	6.8km	PT
Bus Stops	A58 Halifax Road	350m (4.5 min)	W
	Smithy Bridge Road	400m (5 min)	W
Railway Stations	Smithy Bridge Railway Station	700m (9 min)	W/C

* Walk time in minutes – calculated based upon a typical walking speed of 1.3m/s

4.4.5 Figure 4.1 illustrates a wider range of key local services and facilities, also indicating a 2km walking catchment from the centre of the site and the routes of the bus services that stop adjacent to the site at Smithy Bridge Road and on the A58.

4.4.6 The following considers the accessibility of the site to education, employment, health, leisure and retail destinations via sustainable travel modes.

Education

4.4.7 There are a number of primary schools located within close proximity of the site and well within the 2km walking catchment. Smithy Bridge Foundation Primary School and St Andrew's CofE Primary School are the closest primary schools to the site and are both located within 800m from the centre of the site, which equates to a 10-minute walk or less.

4.4.8 Whilst these primary schools are beyond Rochdale Council's 400m accessibility standard for access to primary schools, they are within the suggested acceptable walking distance of 1,000m set out in the IHT 'Providing for Journeys on Foot' guidance document. It is therefore considered likely that walking would present an attractive travel choice for parents/pupils accessing the schools.

4.4.9 Wardle Academy is located within 1km of the site. The school can be accessed within a 12-minute walk of the centre of site and is also within an acceptable cycle distance. Rochdale's accessibility standards outline that secondary schools should be within a 30-minute public transport journey, but do not outline a standard for non-public transport (i.e. walk / cycle)

journeys. However, given that a journey on foot can be made in less than half the target duration of a journey by public transport, and the school is accessible by the bus services that run along Smithy Bridge Road and the A58 with an overall journey time of 9 minutes, it is considered that the school is readily accessible from the site.

4.4.10 Additional secondary schools are located within Rochdale town centre and can be accessed via the bus services within the vicinity of the site. Dedicated school bus services are also provided to Hollingworth Academy and St Cuthbert's High School.

4.4.11 Overall, it is concluded that the site has a very good level of accessibility to local schools.

Employment

4.4.12 Rochdale town centre provides a range of employment opportunities which can be accessed via the bus services outlined in Table 4.1 above, with the 454 and 457 services offering a 30-minute frequency to Rochdale. Alternatively, the town centre can be accessed via the frequent rail services from Smithy Bridge Station, with a rail journey time of approximately 4-minutes to Rochdale.

4.4.13 Manchester, Leeds and Blackburn can also be accessed directly from Smithy Bridge Station providing further employment opportunities for proposed residents. Manchester can be accessed within a rail journey time of c.20 minutes with a rail journey time to Leeds of c.70 minutes.

4.4.14 There are also a number of employment opportunities located in the surrounding towns, including Littleborough Industrial Estate, Mayer Industrial Estate and the Smallbridge Business Park, plus jobs associated with schools, shops and other local facilities, which can be accessed by walking, cycling and public transport.

4.4.15 Rochdale's accessibility standards for employment outlines that employment uses should be within a 30-minute total journey time by public transport. The accessibility of the site to Rochdale and surrounding local employment opportunities therefore means that the site meets the Council's standard in this regard.

Healthcare

4.4.16 A number of healthcare facilities (including GP's, hospitals and pharmacies) are located within the 2km walking catchment of the site.

- 4.4.17 The closest GP facility is the Littleborough Group Practice, located 1.8km east of the site, which equates to approximately 23-minute walk from the centre of the site. The eastbound bus services on the A58 Halifax Road also provide access to the GP surgery with an 11-minute total journey time.
- 4.4.18 Unicare Pharmacy in Smithy Bridge is the nearest pharmacy to the site and is located 1km to the south of the site, which is approximately a 13-minute walk from the centre of the site.
- 4.4.19 Whilst the location of the health centre does not meet Rochdale's accessibility standard of provision within 400m, there is a variety of facilities within a reasonable walking distance of the centre of the site and are therefore considered accessible from the site. Furthermore, the facilities within Littleborough and Smithy Bridge are accessible by bus (or rail) from the site.
- 4.4.20 The closest hospital to the site is Birch Hill Hospital, located 1.1km to the north of the site, which is less than 15 minutes' walk. Rochdale's accessibility standard does not outline a standard for non-public transport journeys, however given that a journey on foot can be made in less than half the target duration of a journey by public transport, it is considered that the hospital is accessible from the site. Bus services on Smithy Bridge Road also provide direct access to the hospital.
- 4.4.21 The development will therefore be well served in terms of access to a range of healthcare facilities by sustainable transport modes.

Retail and Leisure

- 4.4.22 The nearest convenience stores to the site are the Spar store located at the Texaco garage and the Premier Store situated on the A58 Halifax Road, both approximately 400m to the north of the site. This meets Rochdale Council's accessibility standard for access to local shops. In addition, the post office on the A58 New Road and the Premier store on Smithy Bridge Road to the south of the site are both located c.950m from the centre of the site, within an acceptable walking distance.
- 4.4.23 There are a number of leisure facilities located within the surrounding area, such as Smithy Bridge Library, Littleborough Leisure Centre, Littleborough Cricket Club and a range of facilities at Hollingworth Lake. These can be accessed either on foot/cycle or via any of the bus services departing within the vicinity of the site and meet Rochdale Council's accessibility standard which outlines that these facilities should be within a 20-minute public transport journey time.

- 4.4.24 A LEAP (Local Equipped Area for Play) is also proposed on the site and will be available for the proposed residents and residents from the surrounding areas. This also accords with the Council's accessibility standard for children's play space.
- 4.4.25 Rochdale town centre is located c.4km to the west of the site and can be accessed via the rail services from Smithy Bridge Rail Station, with a rail journey time of 4-minutes, and the bus services along Smithy Bridge Road / A58 Halifax Road.
- 4.4.26 Rochdale is anticipated to provide a key retail destination for residents of the site, with a number of supermarkets including Asda, Morrisons and Aldi within the town. It is also home to a number of retail parks and shopping centres, as well as its own high street retail facilities, and a range of leisure facilities such as Rochdale Leisure Centre.
- 4.4.27 Smithy Bridge Railway Station also provides frequent connections to other city centres, such as Manchester and Leeds, which provide a wider range of retail and leisure facilities.
- 4.4.28 Overall it is concluded that the site is well located in terms of its accessibility to a wide range of food and non-food retail uses and to a variety of leisure opportunities.

4.5 Travel Plan

- 4.5.1 A Framework Travel Plan has also been prepared in support of this planning application, which incorporates a range of measures to build upon the accessibility of the site and encourages sustainable travel at the site. The Travel Plan measures will encourage both active travel and the use of public transport, consistent with the NPPF and local transport policy objectives.

4.6 Summary

- 4.6.1 It is considered that the site is very well served by the existing and proposed sustainable transport provision. The proposed development site is located within close proximity to a number of key facilities and services, which are accessible via sustainable non-car modes including walking and cycling. The existing public transport provides a wide range of connections to key locations such as Rochdale, Manchester and Leeds, comprising both bus and rail provision, and is of high frequency.
- 4.6.2 The site accords with a number of the Council's accessibility standards, as set out in the Core Strategy. The Council notes that these standards are presented as a guide, with developments

expected to meet as many of them as is reasonable. As set out above, even for those uses where the threshold is not met, a significant number are located such that access by non-car modes is nonetheless considered a realistic option for future residents.

- 4.6.3 The site is therefore considered to be located within a sustainable location, within the context of the NPPF.

SECTION 5 Traffic Impact Methodology

5.1 Introduction

5.1.1 This section outlines the methodology adopted for determining development traffic and future year background traffic flows used in the assessment of the traffic impacts of the proposals on the surrounding local highway network.

5.1.2 This section also outlines the committed developments included within the assessment, growth factors applied to background traffic flows on the network and the distribution and assignment of trips associated with the proposed development of 199 dwellings.

5.2 Assessment Years

5.2.1 In order to present a robust assessment of the traffic impacts associated with the proposed development, an agreed assessment year of 2028 has been assessed, which takes account of the likely build out rates for the development.

5.2.2 Growth factors have been derived from the National Transport Model (NTM) within TEMPro 7.2, for the local area in which the site is located (MSOA Rochdale 003) for the years 2019-2028 and 2020 – 2028 to coincide with the date of the original surveyed traffic flows. The growth factors applied to the 2019 and 2020 surveyed traffic flows are shown in Table 5.1.

Table 5.1: NTM/TEMPro Growth Factors – Rochdale 003 MSOA

	Growth Factors	
	AM	PM
2019 - 2028	1.0664	1.0609
2020 - 2028	1.0531	1.0488

Source: TEMPro

5.2.3 These factors have been applied to the 2019/2020 baseline traffic flows described in Section 3 above, and the resulting 2028 baseline flows are included at **Appendix C**.

5.2.4 As described in Section 3 of this report, updated ATC surveys were conducted on Smithy Bridge Road and A58 Halifax Road which confirm that the 2019/2020 traffic surveys remain a representative and robust estimate of current traffic flows on the adjacent highway network.

5.3 Committed Developments

5.3.1 As agreed with Rochdale Council the traffic associated with the following committed developments has been considered within the assessment presented as part of this application:

- A58 New Road development – 110 dwellings
- Lambs Fold (off Holland Street) development- 10 dwellings
- Land off Union Road development – 13 dwellings

5.3.2 Traffic flows associated with these committed developments have been taken from their respective Transport Assessments / Transport Statements, where possible, and are shown on the respective traffic flow diagrams in **Appendix C**.

5.4 Trip Generation

5.4.1 In order to forecast the amount of traffic associated with the proposed Taylor Wimpey development, residential vehicular trip rates have been derived from the TRICS database. The full TRICS outputs are provided in **Appendix I**. The selection criteria used to calculate these residential trip rates is as follows:

- Residential- Houses Privately Owned (HPO);
- Sites with 100-491 Dwellings;
- Sites located in England;
- Suburban and Edge of Town locations; and
- Monday-Friday Surveys.

5.4.2 The selected sites are considered to be comparable to the proposed site in terms of their scale, location and overall level of accessibility.

5.4.3 In addition, the rank order of the selected sites has been derived to identify the spread of trip rates across each of the sites. The trip rates are broadly consistent with the exception of one site (Site Reference: SH-03-A-04) which has higher trip rates in the AM and PM peak periods. This site has been retained within the TRICS selection to provide a robust assessment of the likely trips from the proposed site. The rank order outputs and a trip generation graph for the selected sites are also included in **Appendix I**.

- 5.4.4 The resulting vehicular trip rates from the selected sites are consistent with those adopted for the previous application, which have been accepted by RMBC. The trips rates are also comparable with trips rates derived from the latest version of the TRICS database using the same criteria as outlined above.
- 5.4.5 The rates and resultant trip generation associated with the proposed 199 dwellings are presented in Table 5.2.

Table 5.2: Trip Rates and Trip Generation

	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
Trip Rates – Houses Privately Owned (trips / dwelling)	0.113	0.345	0.302	0.181
Trip Generation – 199 dwellings	22	69	60	36

Source: TRICS

- 5.4.6 The proposed development is forecast to produce fewer than 100 two-way trips in the AM and PM peaks, with fewer trips forecast at other times of the day and at weekends. This level of traffic represents fewer than two vehicle trips across the wider network every minute.

5.5 Trip Distribution and Assignment

- 5.5.1 The trips associated with the development will include journeys to a wide range of destinations with a variety of journey purposes. The detail on how the development trips are broken down into their component journey purposes and distributed and assigned across the local highway network is set out below, and has been agreed with RMBC as part of discussions relating to this application and the previous application.
- 5.5.2 Journey purpose data has been extracted from TEMPro for the Rochdale 003 & 004 Middle Super Output Areas (MSOAs) which include the site and adjacent residential areas. The proportional breakdown of the individual journey purposes is outlined in Table 5.3.

Table 5.3: Residential Trips-Journey Purpose Breakdown

Journey Purpose	AM Peak Period	PM Peak Period
Work	52.3%	39.3%
Employer's Business	7.0%	5.6%
Education	16.2%	6.1%
Shopping	10.8%	16.2%
Personal Business	8.2%	10.9%
Recreation/Social	2.3%	7.5%
Visiting Friends/Family	1.7%	12.0%
Holiday	1.5%	2.4%
Total	100%	100%

Source: TEMPro

5.5.3 The development-generated trips associated with each of the above journey purposes have been distributed across the local highway using the following methodology – full details are set out in **Appendix J**:

- Work/Employer's Business- using 2011 journey to work Census data;
- Education- based on nearby school locations;
- Shopping- based on likely local shopping destinations; and
- Personal Business/Recreation/Visiting Friends and Family/Holiday- based on likely local destinations.

Work and Employer's Business

5.5.4 Work and Employer's business trips have been distributed based upon the pattern of car driver trips from adjacent residential areas derived from the 2011 Census journey to work data, using a combination of the Rochdale 003 and 004 MSOA level datasets. Table 5.4 presents the key employment locations based on the Census journey to work data. A detailed breakdown of the Journey to Work Census Data is provided in **Appendix J**.

Table 5.4: Key Employment Locations

Location		Journey to Work Proportion
Rochdale	Rochdale Town Centre	22.3%
	Smithy Bridge & Smallbridge	6.9%
	Littleborough and Wardle	6.2%
	Heywood	4.6%
	Middleton area & Stakehill Industrial Estate	3.5%
	Milnrow	3.0%
	Rest of Rochdale	8.5%
Oldham		11.2%
Manchester		6.4%
Bury		4.9%
Salford		2.8%
Trafford		2.0%
Rest of Greater Manchester		4.4%
Calderdale		3.0%
Rossendale		1.6%
Other		8.7%

Source: Nomis – Journey to Work Census Data

- 5.5.5** The table shows that c.55% of all work trips are likely to be made to destinations within Rochdale Borough with almost half of these being located in/around Rochdale town centre. Approximately 87% of all work-related trips are located within Greater Manchester with a further 4%-5% located in the adjacent boroughs of Rossendale and Calderdale.

Education

- 5.5.6** Education trips have been split equally into primary and secondary school trips. For primary school vehicular trips, it has been assumed that these are split between schools in the vicinity of the site, based on proximity, as follows:

- St. Andrews C of E Primary School– 50%
- Smithy Bridge Foundation Primary School – 50%

- 5.5.7** It has been assumed that the majority of secondary school trips (90%) will be to Wardle Academy as the nearest school, with the remaining 10% assumed to travel to schools in Rochdale town centre.

Shopping

- 5.5.8 Shopping trips have been disaggregated into food and non-food-based shopping trips, which have been split equally between the two shopping purposes.
- 5.5.9 It is assumed for food-based shopping trips, the largest proportion of these (50%) will be undertaken in Rochdale town centre as there is a range of supermarkets available to proposed residents. The remaining trips are assumed to be split between foodstores in Milnrow (30%) and Littleborough town centre (20%). As some food shopping trips will be able to be undertaken to the local convenience stores near the site, likely with many trips made on foot, this is assumed to present a robust assumption in terms of the distribution of traffic across the network.
- 5.5.10 The largest proportion of non-food shopping trips have again assumed to be made in Rochdale town centre (50%), with the remaining trips split between Manchester city centre (30%) and Littleborough town centre (20%).

Leisure Trips

- 5.5.11 The majority of trips associated with leisure purposes (personal business, recreation, visiting friends and family), are expected to be made locally or to the surrounding larger towns and villages. Therefore, the following split has been assumed: Rochdale town centre- 50%, Manchester city centre- 30% and Smithy Bridge- 20%. As holiday trips only make up a small proportion of the peak hour trips (c.2%) then the assignment of traffic to routes towards Manchester and Rochdale will include traffic seeking to access the wider highway network.

5.6 Trip Assignment

- 5.6.1 The trip distribution proportions outlined above have been applied to the development traffic generation and the trips assigned to various local routes within the study area, based upon the quickest and most logical route from the proposed development during peak times using Google Maps. Longer distance vehicular trips to the M62 have been assigned via the either the A58 (30%) or Wildhouse Lane (70%).
- 5.6.2 The proposed development distribution and resultant traffic assignment as agreed with RMBC are shown in the traffic flow diagrams included in **Appendix C**.

5.7 Sustainable Mode Trip Generation

- 5.7.1 The site is well located to enable future residents to take full advantage of a wide range of sustainable transport infrastructure in the area.
- 5.7.2 A range of local facilities have been identified within walking and cycling distance of the site, and the site benefits from its close proximity to existing bus routes that pass along Smithy Bridge Road and the A58 Halifax Road and also to Smithy Bridge railway station that lies within a 10-minute walk of the site.
- 5.7.3 The proposals include significant investment in sustainable transport infrastructure, including a proposed segregated cycleway and shared footpath/cyclepath across the site, connecting into existing pedestrian and cycle routes on the surrounding network. In addition to this, a new puffin crossing will be delivered on Smithy Bridge Road, close to the proposed site access. These measures complement and improve local networks and offer genuine alternatives to the private car for future residents of the site.
- 5.7.4 'Total person' trip rates – i.e. trips by all modes of travel - have been derived from the TRICS selection criteria detailed above. The total person trip rates and subsequent trip generation for the 199 dwellings is outlined in Table 5.5 below.

Table 5.5: Total Person Trip Rates and Trip Generation

	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
Total Person Trip Rates (trips / dwelling)	0.149	0.546	0.452	0.272
Person Trip Generation – 199 dwellings (no. trips)	30	109	90	54

Source: TRICS (Appendix I)

- 5.7.5 Whilst the above TRICS data gives details of total person trips by all modes of travel (including vehicular trip generation), the likely modal split of sustainable trips for future residents of the site has been considered with reference to local travel patterns derived from Census journey to work data (MSOA Rochdale 003 & 004). It is noted that these trips focus on employment-based trips and therefore do not take account of the likely high levels of walking / cycling / bus journeys associated with trips to schools.

5.7.6 The following Table 5.6 sets out the forecast modal split and trip generation of the development by sustainable travel modes.

Table 5.6: Modal Split (Census Data) and Resultant Multi-Modal Trip Generation

Method of Travel	Modal Split (%)	AM Peak		PM Peak	
		Arrivals	Departures	Arrivals	Departures
Trips by Sustainable Travel Modes					
Walking	9%	3	10	8	5
Cycling	1%	0	1	1	1
Bus	7%	2	7	6	4
Train	4%	1	5	4	2
Total Sustainable Modes	21%	6	23	19	12
Vehicular Trips					
Vehicle Drivers	71%	21	77	64	38
Vehicle Passengers	7%	2	8	6	4

5.7.7 The trips by sustainable modes have been further disaggregated into journey purposes to determine the likely destination of each trip. The range of journey purposes as outlined above include work, education, shopping and leisure trips and these will be spread over a variety of surrounding routes based on their respective destinations. Further detail on the breakdown of these trips is provided in **Appendix K**.

5.7.8 Pedestrian crossing facilities are provided along the A58 allowing residents to access bus stops and local facilities on both sides of this corridor, and to destinations to the north of the site. The retention of the proposed public rights of way routes through the site and the internal footway and footpath links will also enhance routes to and from the north of the site.

5.7.9 There are footways on both sides of Smithy Bridge Road, including across the railway line at the level crossing, with a further stepped pedestrian route provided underneath the railway line, allowing pedestrian access when the level crossing barriers are down. The proposed puffin crossing on Smithy Bridge Road close to the proposed site access will further enhance pedestrian and cycle connections in the vicinity of the site.

- 5.7.10 As detailed in Section 4, a number of cycle routes are available within the vicinity of the site, which provide connections to the east and west. These connections will also be enhanced through the delivery of the proposed pedestrian / cycle route through the site.
- 5.7.11 Walking represents the largest proportion of sustainable trips and it is anticipated that c.13 two-way pedestrian trips would be generated in the AM and PM peaks. The majority of trips are forecast to use connections to the north of the site to access facilities off the A58 and along Smithy Bridge Road.
- 5.7.12 A number of local facilities located to the south of the site, including the primary school, will require pedestrians to cross the railway line at Smithy Bridge Station. The number of pedestrian trips which are likely to need to cross the railway line either via the at-grade footways or via the stepped underpass is 4-5 two-way trips in the AM and PM peaks which represents approximately one-third of all peak hour walking trips. The existing pedestrian provision is considered to be sufficient to safely accommodate these forecast additional trips associated with the proposals.
- 5.7.13 It is anticipated that up to 10 two-way bus trips will be generated by the development during the AM and PM peaks. All bus trips are likely to use the bus stops on Smithy Bridge Road adjacent to the site access or those on A58 Halifax Road to the north of the site.
- 5.7.14 The site is forecast to result in 6 two-way rail trips in the AM and PM peaks which would all use Smithy Bridge Station and the majority of these trips will travel towards Rochdale and Manchester. The proposed puffin crossing will offer improved crossing facilities on Smithy Bridge Road and the footways / pedestrian underpass allow access to platforms on both sides of the railway line.
- 5.7.15 Cycling currently accounts for a limited number of trips in the local area - based on the existing proportions, the site is forecast to generate 2 two-way trips in the AM and PM peaks. The existing and proposed cycle infrastructure within the vicinity of the site, including the new routes through the site and the wider connections to the Beeway network will help to encourage further use of cycling as a mode of travel for future residents.
- 5.7.16 As demonstrated above, the site is located in a sustainable location with excellent connections to bus services, rail services and footway and cycle networks. The design of the development will provide numerous connections to the surrounding areas as well as provide enhanced facilities for future and existing residents.

- 5.7.17 Overall it is concluded that the additional trips by sustainable travel modes generated by the development can be accommodated within the existing networks and the location of the site with reference to existing and proposed active travel and public transport modes will encourage the use of these modes in preference to car travel. The following section considers the impacts of the development's vehicular traffic generation upon the surrounding road network.
- 5.7.18 The assessment does not take account of any reductions in car travel resulting from the site's good accessibility to a range of facilities or the effects of the Travel Plan which will be implemented as part of the scheme, and is therefore considered to provide a robust appraisal.

SECTION 6 Traffic Impact Assessment

6.1 Introduction

- 6.1.1 This section considers the impact of the development-generated traffic upon the surrounding highway network. As outlined in the Introduction, the extent of the study area across which the impacts need to be assessed was agreed with Rochdale Council during pre-application scoping discussions.
- 6.1.2 As detailed above the proposed residential development will generate fewer than 100 two-way vehicle trips in the AM and PM peak hours, which equates to less than two additional vehicles per minute across the local highway network.
- 6.1.3 Once the traffic leaves the site at Smithy Bridge Road it will dissipate across the surrounding network based on the trip distribution assumptions set out in the last section.
- 6.1.4 The development is anticipated to add between 65-69 two-way trips at the A58 / Smithy Bridge Road signal-controlled junction in the AM and PM peaks, which is equivalent to just over one additional vehicle every minute, spread across all arms of the junction. A detailed appraisal of the impacts of the development traffic upon the existing signalised junction of the A58 / Smithy Bridge Road is set out in this section.
- 6.1.5 Of the traffic passing through the junction, 55 (AM) and 60 (PM) two-way trips head westwards along the A58 Halifax Road, of which a small proportion subsequently turns north towards Wardle Academy and Birch Hill Hospital. Less than one vehicle per minute therefore continues along the A58 towards Rochdale.
- 6.1.6 The development is forecast to add 26 two-way trips along Smithy Bridge Road, south of the site in the AM peak and 27 two-way trips in the PM peak. Again, this equates to less than one vehicle every two minutes in either direction along this link which is not expected to have a significant impact upon the surrounding routes. However, notwithstanding this, as these trips will need to pass over the level crossing to the south of the site, further consideration has been given to the potential impacts on the level crossing within this section.
- 6.1.7 The findings of the detailed junction capacity assessments conducted for the agreed junctions within the study area are outlined below.

6.2 Junction Capacity Assessments

6.2.1 This section of the report presents an assessment of the traffic impacts associated with the proposed development on the local study area network, as agreed during scoping discussions. It considers the change in traffic flows at junctions within the study area once the proposed development is in place and the impacts of the development generated traffic at these junctions.

6.2.2 Junction capacity assessments have been conducted for the following scenarios in order to determine the traffic impacts of the proposed development:

- 2028 Base plus Committed Developments; and
- 2028 Base plus Committed Developments plus Proposed Development.

6.2.3 Detailed capacity assessments have been carried out at the following junctions:

- A58 Halifax Road/Smithy Bridge Road/Union Road;
- A58 Halifax Road/ William Street;
- A58 Halifax Rd/Holland Street/Braddocks Close;
- Smithy Bridge Road / Milnrow Road; and
- Site Access/Smithy Bridge Road (2028 plus Committed Developments plus Proposed Development scenario only).

6.2.4 Full capacity assessment reports are included in **Appendix L**, and a summary of the results for each junction is set out below.

6.2.5 Consideration has also been given to the impact of the traffic upon the Smithy Bridge Road level crossing to the south of the site and an initial overview of the potential effects of the proposed Residential Relief Road is set out. In

A58 Halifax Road/Smithy Bridge Road/Union Road

6.2.6 As outlined above, the development results in an increase of one additional vehicle passing through the junction every minute, during the peak hours. A summary of the results of the assessment of the capacity of the junction based upon the 2028 Base plus Committed Development, and 2028 Base plus Committed plus Proposed Development scenarios is presented below in Table 6.1.

- 6.2.7 The impacts of the development upon the junction have been assessed using the Linsig model described in Section 3, but with amendments to the stage timings to reflect the changes in traffic flows passing through the junction as a result of background traffic growth, committed developments and the proposed development.
- 6.2.8 The lane assignment for the A58 New Road westbound (ahead) traffic (i.e. towards Rochdale) has also been increased to reflect the greater likelihood of traffic making use of the offside lane as traffic flows increase on the approach. The increase has only been applied in the AM peak hour and has been increased from 30% to 33%, which represents an actual increase in traffic using the lane of 25 pcu's across the hour, or less than one additional vehicle per signal cycle. The proportion using the lane during the PM peak hour has remained at 28%, consistent with the baseline model.
- 6.2.9 Table 6.1 below presents the results of the impact assessment which has been conducted using the validated Linsig model as described in Section 3.

Table 6.1: A58 Halifax Road / Smithy Bridge Road / Union Road – Future Year Results

Link	Arm/Movement	2028 Base + Committed				2028 Base + Committed + Development			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)
1/1	A58 New Road – Ahead & Left	96.5%	37	87.6%	27	99.9%	45	90.9%	29
1/2	A58 New Road – Ahead	96.5%		87.6%		99.9%		90.9%	
2/1	Smithy Bridge Road	105.6%	35	112.0%	51	109.9%	47	111.2%	51
3/1	A58 Halifax Road – Ahead & Left	79.9%	23	97.6%	43	79.9%	23	100.7%	51
3/2	A58 Halifax Road – Right	21.0%	4	21.1%	4	22.4%	5	25.3%	5
4/1	Union Road – Left & Right	62.4%	3	33.7%	1	63.5%	3	34.7%	2
5/1	Eastbound Internal - Ahead	57.9%	0	78.9%	0	59.4%	0	80.4%	0
5/2	Eastbound Internal - Right	68.4%	5	72.1%	6	82.7%	6	88.6%	7

Link	Arm/Movement	2028 Base + Committed				2028 Base + Committed + Development			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)
6/1	Westbound Internal - Ahead	60.6%	6	62.5%	8	61.5%	6	66.1%	9
6/2	Westbound Internal – Ahead & Right	75.7%	8	67.3%	6	78.3%	9	69.7%	7

DoS = Degree of Saturation

MMQ = Mean Maximum Queue

PCUs = Passenger Car Units

- 6.2.10 The results show that the majority of the junction is forecast to operate within capacity in the future year both without and with the development. The only exception to this is the Smithy Bridge Road arm which is forecast to operate above its capacity in both the AM and PM peak hour, which consistent with the baseline modelling presented earlier in this report.
- 6.2.11 The analysis shows that the addition of the traffic associated with the proposed development does not have a significant impact upon the operation of the junction. The maximum increase in queuing resulting from the development is an increase of 12 pcus (from 35 to 47 pcus) in the AM peak on the Smithy Bridge Road arm.
- 6.2.12 The modelling indicates that queuing is expected to increase in future years on the A58 and Smithy Bridge Road approaches to the junction, above that shown in the base year modelling presented in Section 3. The addition of background traffic growth and committed development traffic to the junction represents an increase in traffic passing through the junction of c.160 vehicles, compared to the increase of c.65 vehicles associated with the proposed development. The general increase in traffic along the A58 corridor forms part of the Council's rationale for the proposed Residential Relief Road and the proposed new route will help to alleviate this queuing in the future.
- 6.2.13 As noted earlier, the existing signalised junction operates under MOVA control, but this has not been reflected within the LINSIG model. MOVA aids the capacity of the junction by providing variable green times at the junction dependent on the traffic volumes on each arm, with resultant reductions in delay. As a result, the forecast operation of the junction shown in Table 6.1, above is therefore considered to present a robust and potentially worst-case assessment of the future operation.

6.2.14 It can therefore be concluded that the development does not have a significant detrimental impact on the operation of the junction, and certainly none which would be deemed severe within the context to the NPPF.

Alternative Modelling

6.2.15 An additional assessment of the impact of the development proposals has been conducted based upon the alternative Linsig modelling parameters requested by TfGM – as described in Section 3 above. The changes to the model primarily relate to reduced saturation flows on the A58 New Road approach to the junction. The results of the junction capacity modelling adopting the TfGM model parameters are presented in Table 6.2 below.

Table 6.2: A58 Halifax Road / Smithy Bridge Road / Union Road –Future Year Results – Alternative (TfGM) Modelling Parameters

Link	Arm/Movement	2028 Base + Committed				2028 Base + Committed + Development			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)
1/1	A58 New Road – Ahead & Left	108.2%	78	96.8%	36	111.9%	92	97.4%	37
1/2	A58 New Road – Ahead	108.2%		96.8%		111.9%		97.4%	
2/1	Smithy Bridge Road – Left & Right	105.6%	35	112.0%	51	109.9%	47	114.5%	58
3/1	A58 Halifax Road – Ahead & Left	79.9%	23	97.6%	43	79.9%	23	99.1%	47
3/2	A58 Halifax Road – Right	21.0%	4	21.1%	4	22.4%	5	24.9%	5
4/1	Union Road – Left & Right	62.4%	3	33.7%	1	63.5%	3	34.7%	2
5/1	Eastbound Internal - Ahead	57.9%	0	78.9%	0	59.4%	0	79.9%	0
5/2	Eastbound Internal - Right	77.5%	5	82.9%	6	82.7%	6	102.5%	11
6/1	Westbound Internal - Ahead	56.9%	6	62.6%	8	56.4%	6	64.7%	9

Link	Arm/Movement	2028 Base + Committed				2028 Base + Committed + Development			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)	DoS (%)	MMQ (PCUs)
6/2	Westbound Internal – Ahead & Right	72.1%	7	67.0%	6	73.2%	8	69.6%	7

DoS = Degree of Saturation

MMQ = Mean Maximum Queue

PCUs = Passenger Car Units

6.2.16 As with the baseline model results, the alternative parameters have the effect of increasing the queuing at the junction, when compared to the validated model parameters above. Notwithstanding this, whilst the overall queuing at the junction has increased – in particular along the A58 New Road in the morning peak hour – the impact of the proposed development is broadly comparable – resulting in an increase in queuing of 12-14 vehicles on the key approaches. Overall, it is still concluded that the impact of the development is not significant and certainly not severe.

6.2.17 Table 6.3 below presents a summary of the increase in queuing at the junction resulting from the development for both sets of modelling parameters, highlighting that the impacts of the development are similar regardless of the modelling methodology and, on both cases are not severe within the context of the NPPF.

Table 6.3: Impacts of the Development Traffic – Differences in Queuing

	A58 New Road (east)	Smithy Bridge Road	A58 Halifax Road (west)	Union Road
Queuing Difference in the AM Peak Hour	+8	+12	+1	0
Queuing Difference in the PM Peak Hour	+2	0	+8	+1
Alternative Modelling				
Queuing Difference in the AM Peak Hour	+14	+12	+1	0
Queuing Difference in the PM Peak Hour	+1	+7	+4	+1

Residential Relief Road

- 6.2.18 As noted above, the proposed Residential Relief Road will provide an alternative route to and therefore relief along the A58 corridor.
- 6.2.19 The proposed development is not reliant on RMBC's proposed residential relief road, in so far as it is agreed with RMBC that whilst the development will add traffic to the A58 corridor, the development could proceed in advance of the completion of the full route between Smithy Bridge Road and Albert Royds Street. This is also confirmed within the Places for Everyone documents, which note that the development will be responsible for delivering the eastern section of the route and the supporting traffic analysis set out within the Locality Assessment transport evidence for GMA25 Roch Valley concludes that the residential relief road is a 'supportive mitigation' (i.e. not essential to the delivery of any one allocation) rather than 'necessary mitigation' (i.e. essential for a site to come forward), to facilitate the development.
- 6.2.20 The effects of the proposed residential relief road were not modelled as part of the Locality Assessment for the proposed GMA25 allocation (i.e. the current application site), but the report does outline that the residential relief road would remove traffic from the A58 and potentially negate the need for other improvements along the A58.
- 6.2.21 RMBC has confirmed that further detailed modelling of the residential relief road will be conducted in due course, but that a detailed assessment of the effects of the new route is not required to support this. Notwithstanding this, RMBC has provided details of initial modelling of the new route that RMBC/TfGM has conducted and this is referenced below.
- 6.2.22 RMBC's proposed residential relief road will run between Smithy Bridge Road and Albert Royds Street, offering an alternative route to the A58, and relieve traffic conditions in the area.
- 6.2.23 Once the relief road has been completed, the development traffic which is expected to route through the A58 signal junction and westbound towards Rochdale would be more likely to use the new route. At this point, the impacts of the development traffic upon the A58 / Smithy Bridge Road signals would therefore be substantially reduced with the relief road in place, than has been assessed in the analysis presented above.
- 6.2.24 As noted above, TfGM has conducted an initial assessment of the residential relief road using the 2017 Greater Manchester SATURN model, to give a preliminary understanding of the potential impacts of the proposed residential relief road. A copy of the TfGM note summarising this initial assessment is contained within **Appendix M**. This preliminary modelling

demonstrates that the traffic flow along the proposed residential relief road would range between 275 – 400 pcus in both directions, which equates to between 14%-20% of the traffic currently travelling along the A58 Halifax Road.

- 6.2.25** This scale of traffic along the new route, together with the traffic associated with the proposed development, is well within the capacity of a 7.3m wide single carriageway and therefore the new route is expected to operate satisfactorily. The consequential reduction in traffic volumes along the A58 corridor will also benefit the forecast traffic conditions along the existing route.
- 6.2.26** An initial assessment has concluded that the proposed site access would also continue to operate within its capacity with the forecast level of increased traffic associated with the relief road passing through the junction.
- 6.2.27** Overall, it is concluded that the impacts of the development upon the A58/Smithy Bridge Road are acceptable, based upon the existing highway network and that the delivery of the proposed residential relief road will enable much of the development-generated traffic to use the new route and therefore further reduce the impacts at the existing junction.

A58 Halifax Road/Holland Street/Braddocks Close

- 6.2.28** The impact of the development upon the junction of the A58 / Holland Street to the north of the site has also been assessed. Traffic associated with the development will pass along the A58 through the junction but will not add to the turning movements at the junction. A summary of the 2028 future year scenario (Junctions9/PICADY) results are presented below in Table 6.4.

Table 6.4: A58 Halifax Road / Holland Street / Braddocks Close Future Year Results

Arm/Movement	2028 Base + Committed				2028 Base + Committed + Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
Holland Street	0.17	0	0.08	0	0.18	0	0.08	0
A58 Halifax Road (east)	0.01	0	0.00	0	0.02	0	0.00	0
Braddocks Close	0.10	0	0.08	0	0.10	0	0.08	0
A58 Halifax Road (west)	0.05	0	0.00	0	0.06	0	0.00	0

RFC = Ratio of Flow to Capacity

Max Q = maximum average queue

PCUs = Passenger Car Units

6.2.29 The results show that the junction is anticipated to operate well within its capacity and with no significant queuing experienced on the Holland Street arm with the development in place, in either peak hour. It is therefore concluded that the proposed development will not have a detrimental impact on the operation of the junction. Once the proposed residential relief road has been completed, the impacts of the development traffic upon this junction will be negligible.

A58 Halifax Road/William Street

6.2.30 The impacts of the proposals have also been assessed at the junction of A58/William Street to the north of the site. Again, traffic generated by the development will only pass through the junction along the A58 and will not increase turning movements at the junction. A summary of the 2028 future year scenario results are presented below at Table 6.5.

Table 6.5: A58 Halifax Road / William Street Future Year Results

Arm/Movement	2028 + Base + Committed				2028 + Base + Committed + Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
William Street	0.00	0	0.01	0	0.00	0	0.01	0
Halifax Road – Right Turn	0.00	0	0.04	0	0.00	0	0.04	0

RFC = Ratio of Flow to Capacity Max Q = maximum average queue PCUs = Passenger Car Units

6.2.31 The results show that the junction operates well within capacity with no queuing observed at the junction, once the development traffic is added. The impacts of the development at the junction are therefore considered to be negligible. Once the proposed residential relief road has been completed, the impacts of the development traffic upon this junction will further reduced.

Site Access/Smithy Bridge Road

6.2.32 As outlined in Section 2, access to the development will be taken directly from Smithy Bridge Road at the eastern end of the site, with a simple priority-controlled T-Junction proposed. The operation of the junction has been modelled using PICADY/Junctions 9 software, and the results of the 2026 Base plus Committed plus Development traffic flow scenario are outlined in Table 6.6 below.

Table 6.6: Smithy Bridge Road / Site Access Junction

Arm/Movement	AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
Site Access	0.16	0	0.08	0
Smithy Bridge Road – Right Turn	0.04	0	0.11	0

RFC = Ratio of Flow to Capacity Max Q = maximum average queue PCUs = Passenger Car Units

6.2.33 The results show that the proposed access is expected to operate well within its capacity with no queueing expected during the peak hours. The junction is therefore considered to provide a safe and satisfactory means of access to the proposed development and, as outlined above, would continue to operate within capacity with the proposed increase in traffic along the relief road.

Smithy Bridge Road / Milnrow Road

6.2.34 The impact of the development upon the Smithy Bridge Road / Milnrow Road mini-roundabout to the south of the site has also been assessed. The same junction model has been used as for the baseline modelling, as described in Section 3. As described above, the model is considered to present a robust basis for the model, potentially overestimating the extent of the existing queuing at the junction.

6.2.35 The majority of the traffic associated with the development enters and exits Milnrow Road from Smithy Bridge Road (north). The maximum additional flow on any one approach arm in the AM peak hour is 20 vehicles which is equivalent to one additional vehicle every three minutes. In the PM peak hour the maximum increase on any single approach to the junction is 11 vehicles which the equivalent of 1 additional car every 6 minutes. This scale of increase in traffic at the junction is not expected to have a significant impact upon the operation of the junction.

6.2.36 Nonetheless, a detailed junction capacity assessment has been undertaken to determine the impact of the development traffic upon the mini-roundabout. A summary of the 2028 future year scenario (Junctions9/PICADY) results is presented below in Table 6.7.

Table 6.7: Smithy Bridge Road / Milnrow Road - Future Year Results

Arm/Movement	2028 + Committed				2028 + Committed + Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)	Max RFC	Max Q (PCUs)
B6225 Smithy Bridge Road	0.97	14	0.62	2	0.99	17	0.63	2
Milnrow Road	0.73	3	0.92	10	0.74	3	0.94	11
Smithy Bridge Road	0.56	1	0.54	1	0.60	2	0.56	1

- 6.2.37 The results show that the junction is expected to continue operate within its capacity in both the AM and PM peak hours. The impact of the development traffic on the operation of the junction is minimal, with a maximum increase an RFC of 0.02 and an increase in queuing of three pcus on any arm of the junction. Smithy Bridge Road / Level Crossing
- 6.2.38 Based on the traffic flows described above, the development would generate up to 20 vehicles eastbound and 6 vehicles westbound in the AM peak hour, and 17 vehicles westbound and 10vehicles eastbound in the PM peak hour, across the level crossing.
- 6.2.39 This equates to a maximum demand of one car every three minutes in any one direction during the peak hours, with lower levels at other times of the day.
- 6.2.40 The operation of the level crossing has been observed during the AM peak – which represents the business period for the development. It was recorded that the barriers were down at the level crossing for a total of 19 minutes across five separate closure periods, between 0750 – 0840 with an average duration of 4 minutes. The observed level crossing closure data is included within **Appendix N**.
- 6.2.41 The maximum time that the barriers were closed for at any one time was 6 minutes, which occurred once during the AM peak hour. As detailed above, during the busiest peak hour the development is forecast to lead to, on average, one extra car travelling eastbound (the busiest direction) every 3 minutes. Therefore, even when the barriers are closed for the longest observed period of six minutes, the resultant average increase in potential queuing at the crossing would be two vehicles.
- 6.2.42 Thus, it can be concluded that the development would not have a significant impact on the operation of the level crossing and the associated queuing when the barriers are down.

6.3 Conclusions

- 6.3.1 This section has demonstrated that the traffic impacts associated with the proposed development would largely be negligible. The greatest impacts would be at the A58 / Smithy Bridge Road signal-controlled junction where a modest increase in queuing is forecast
- 6.3.2 The proposed residential relief road scheme would offer relief to traffic along the A58 corridor and would also provide an alternative route for the development traffic flows which would otherwise use the A58 towards Rochdale. This new route would therefore reduce the level of development traffic that would pass through the A58/Smithy Bridge Road junction and would significantly reduce traffic impacts at the junction and along the A58 corridor.
- 6.3.3 It has also been demonstrated that the proposed site access arrangements are suitable to accommodate the forecast level of traffic associated with the proposed development.
- 6.3.4 Overall it is concluded that the impacts of the development proposals upon the surrounding network would be acceptable and would not be severe.

SECTION 7 Summary and Conclusions

7.1 Summary

- 7.1.1 Taylor Wimpey has commissioned i-Transport LLP to provide transport advice in relation to a full planning application for a residential development on land to the west of Smithy Bridge Road, Smithy Bridge, Rochdale.
- 7.1.2 The proposals will bring forward 199 residential dwellings, including a mix of detached and semi-detached houses, with garages and driveways provided to minimise on-street parking.
- 7.1.3 The proposals set out in this application are consistent with a previous application (planning application ref: 19/00881/FUL) for the site also submitted by Taylor Wimpey. The primary change to the proposals from a transport perspective relate to the delivery of the eastern section of RMBC's proposed residential relief road, which will provide a connection between Smithy Bridge Road and Albert Royds Street, with the aim of relieving traffic from the A58 corridor.
- 7.1.4 Access to the site will be via a new simple T-junction off Smithy Bridge Road which will also form part of the residential relief road in the longer-term. A total of four priority T-junctions will be provided onto the residential relief road within the application site, to serve the development parcels.
- 7.1.5 The access junction has been designed to accommodate the forecast development traffic and separate provision is made within the junction design for pedestrians and cyclists, including the implementation of a new puffin crossing immediately south of the proposed access. The capacity assessments contained within this TA clearly show that the proposed Smithy Bridge access junction will operate well within capacity.
- 7.1.6 An accessibility appraisal has been conducted for the site, identifying how future residents of the site will be able to access a range of key services and facilities by sustainable transport modes. The site is very well located to benefit from access to sustainable transport modes, including its proximity to Smithy Bridge railway station a short distance from the site, and also to existing bus routes along Smithy Bridge Road and along the A58 Halifax Road to the north.
- 7.1.7 The accessibility appraisal has demonstrated that there is a range of existing facilities and services within walking/cycling distance for new residents, including primary and secondary schools, GP surgeries, employment areas and shops. Furthermore, the existing bus and rail

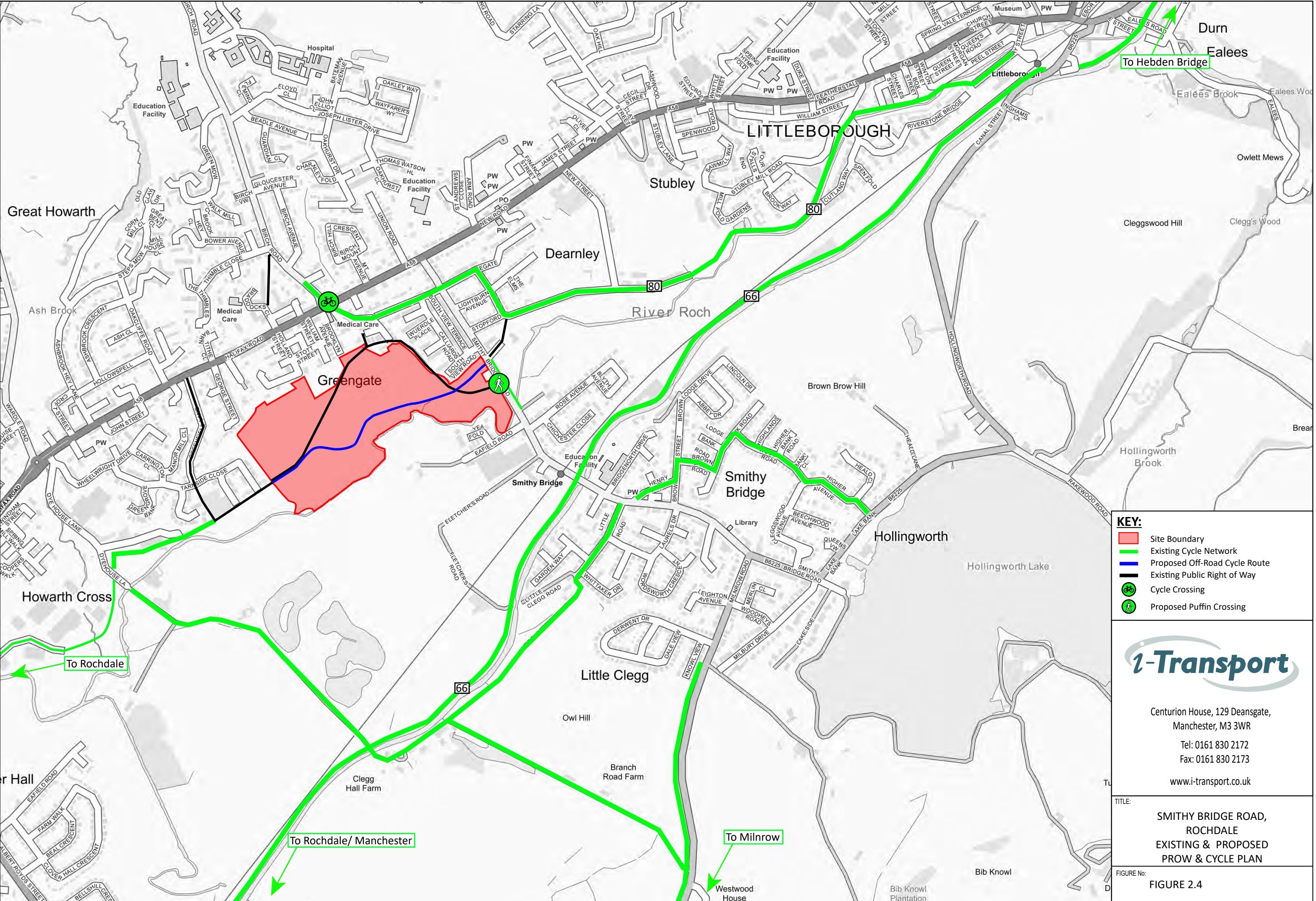
services provide linkages to Rochdale, Littleborough and other local areas as well as to wider destinations including Manchester and Leeds, offering access to additional facilities in these locations.

- 7.1.8 The impacts of the development upon the surrounding highway network have been tested – across a study area agreed with Rochdale Council during pre-application scoping discussions. The development is expected to generate fewer than 100 two-way vehicle trips during the peak hours, with lower levels at other times. This equates to less than two vehicles per minute in any direction across the wider highway network.
- 7.1.9 The impacts of this development traffic at key surrounding junctions and links has been assessed, taking account of background traffic growth and traffic associated with other committed developments in the area, as agreed with RMBC during pre-application scoping discussions.
- 7.1.10 A review of the collision data covering the surrounding highway network for the most recently available five-year period has also been conducted. This showed that there is no pattern to the recorded collisions and concludes that there are no significant road safety concerns associated with the local highway network that would be exacerbated by the proposed development.
- 7.1.11 The junction capacity assessments conducted demonstrate that the addition of the development traffic will not have a significant detrimental impact on the surrounding local highway network, including at junctions along the A58 Halifax Road and along Smithy Bridge Road, including at the level crossing associated with the railway station.
- 7.1.12 The impact of the development at the signalised junction of the A58 Halifax Road / Smithy Bridge Road would be to increase queuing on several approaches to the junction. However, the increased levels of queueing are not considered to be significant and the traffic would not have a detrimental impact upon the operation of the junction. The impacts of the proposals are therefore not severe within the context of the NPPF.
- 7.1.13 The proposed development would deliver the eastern section of the Council's proposed residential relief road, representing the delivery of c.one third of the length of the new route. This would offer relief to the A58 Halifax Road corridor and reduce the development traffic flows passing through the A58 /Smithy Bridge Road signalised junction once the route is complete. A

7.2 Conclusions

- 7.2.1 It is concluded that the proposals represent sustainable development in the context of the National Planning Policy Framework (NPPF) and Rochdale Council's Core Strategy.
- 7.2.2 The site is accessible to a wide range of key facilities and services via walking/cycling, and there are a wide range of opportunities for sustainable transport modes in the local area, therefore reducing the reliance on car-based travel.
- 7.2.3 The proposed access arrangements have been designed to provide safe and suitable access to the site for all users. The access proposals include a comprehensive package of associated pedestrian and cycle measures.
- 7.2.4 Detailed traffic assessment has demonstrated that the impacts of the proposed development are not severe in the context of NPPF and there is therefore no highways reason preventing this application from being approved.

FIGURES



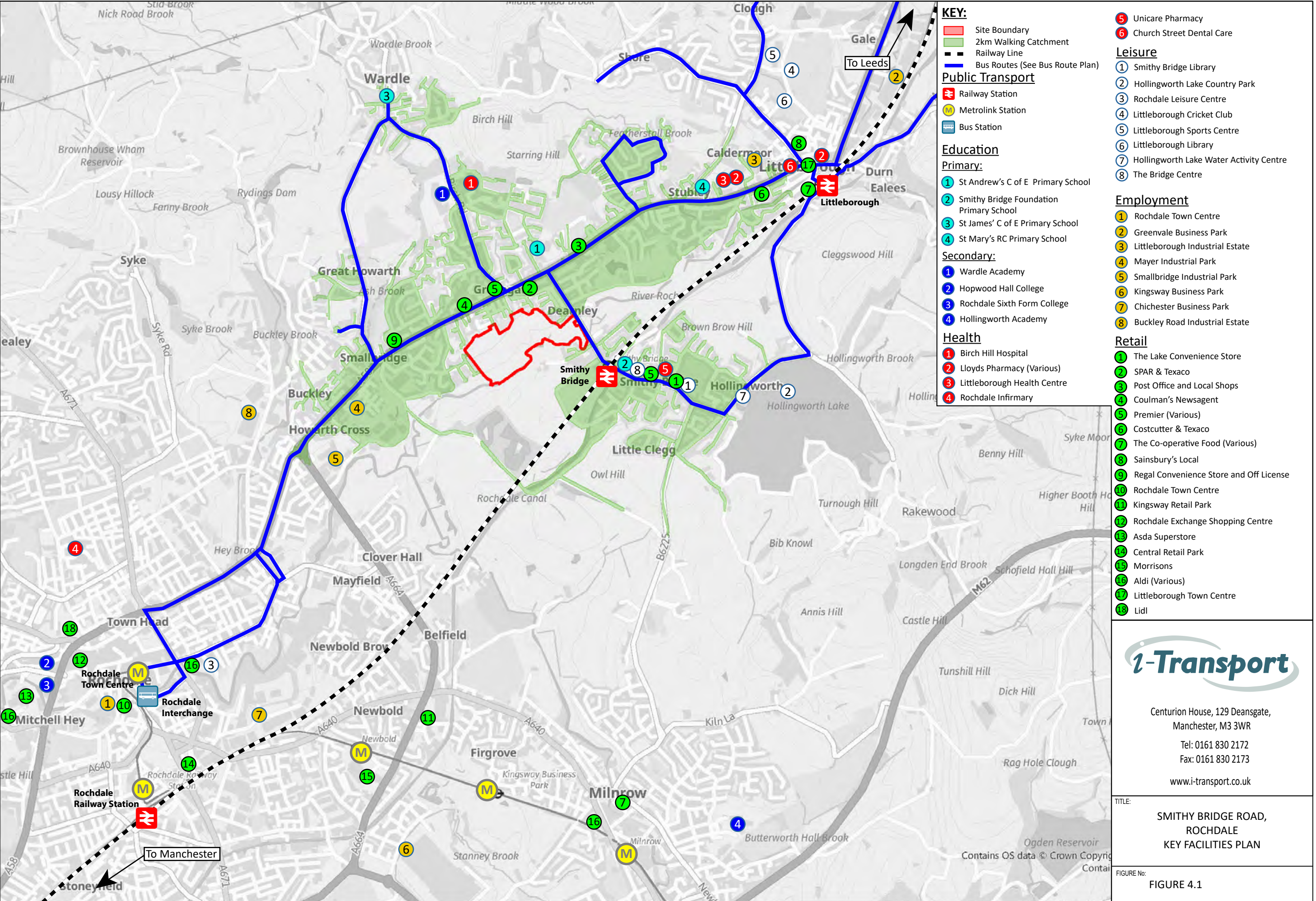
- KEY:**
- Site Boundary
 - Existing Cycle Network
 - Proposed Off-Road Cycle Route
 - Existing Public Right of Way
 - Cycle Crossing
 - Proposed Puffin Crossing

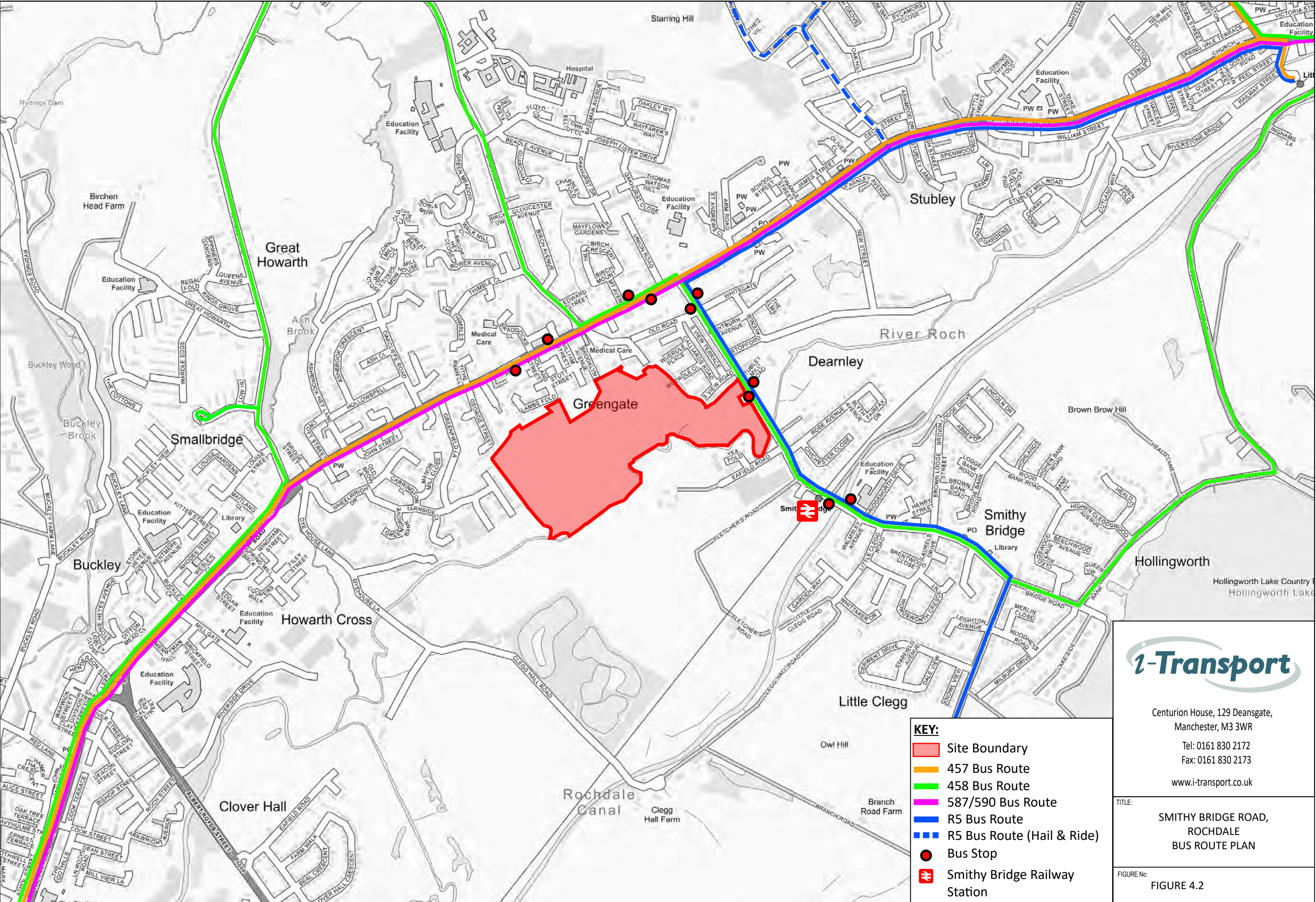


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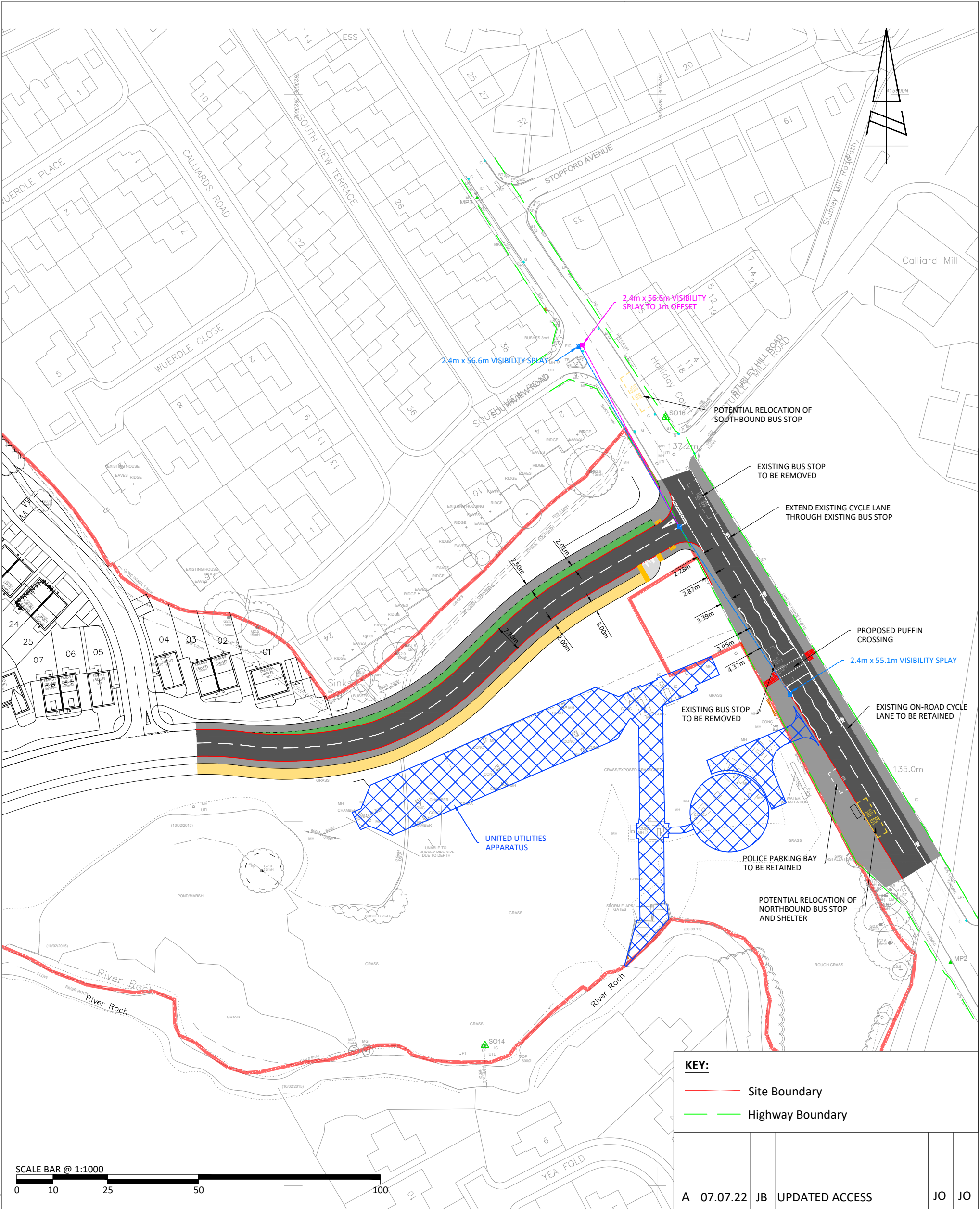
TITLE:
**SMITHY BRIDGE ROAD,
ROCHDALE
EXISTING & PROPOSED
PROW & CYCLE PLAN**

FIGURE No:
FIGURE 2.4





DRAWINGS



KEY:					
Site Boundary					
Highway Boundary					

REV	DATE	BY	DESCRIPTION	CHK	APD
A	07.07.22	JB	UPDATED ACCESS	JO	JO

STATUS: FOR INFORMATION					
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SCALE @ A3:	CHECKED:	APPROVED:
1:1000	JO	VE
FILE REF:	DRAWN:	DATE:
ITM11353	JB	14.06.22

DRAWING No:	ITM11353-SK-026				
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PROJECT No:	ITM11353			REV:	A
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CLIENT:

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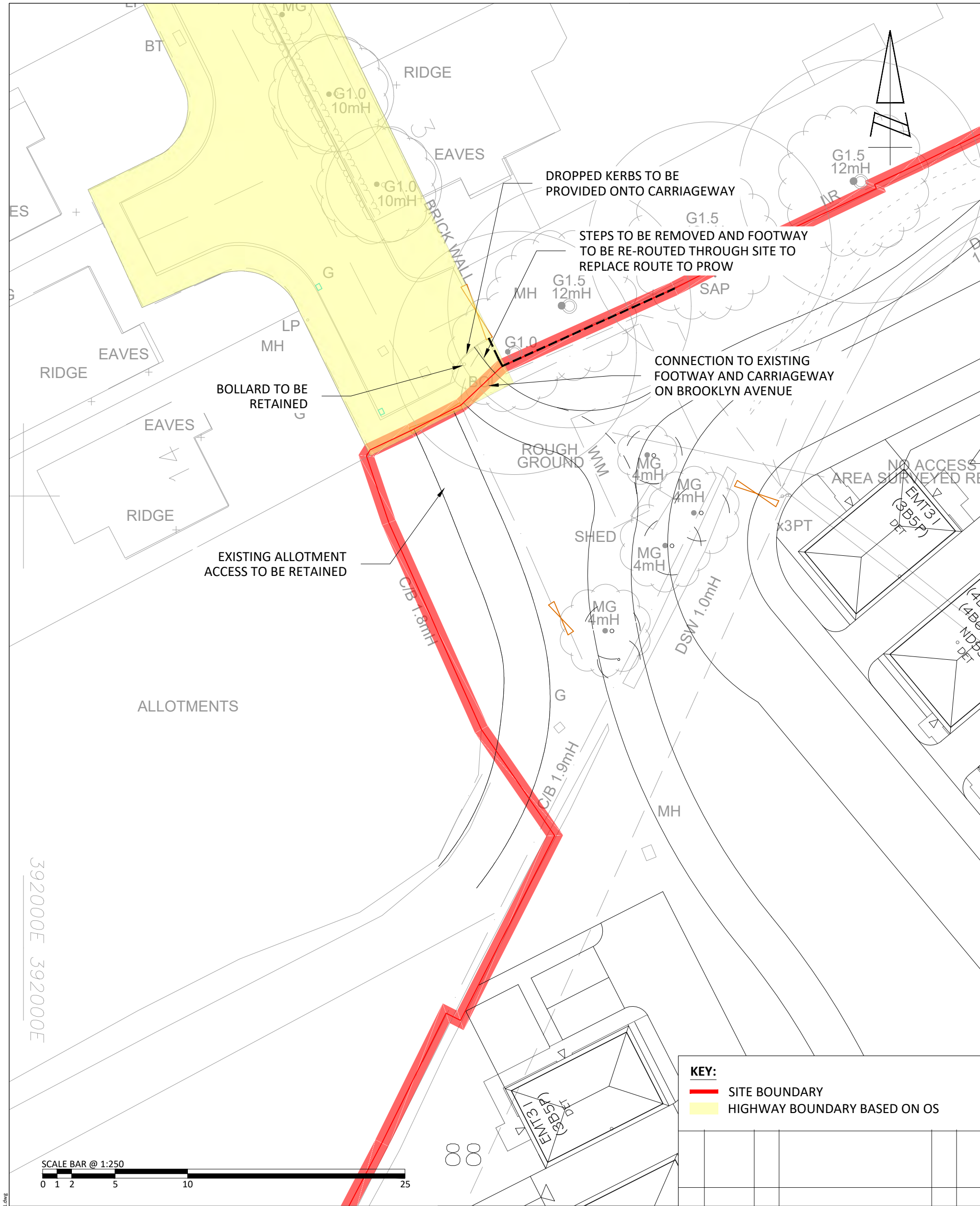
www.i-transport.co.uk

TITLE:

SITE ACCESS FROM SMITHY BRIDGE ROAD

PROJECT:

SMITHY BRIDGE ROAD



392000E 392000E



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CLIENT:

TAYLOR WIMPEY

TITLE:

PROPOSED PEDESTRIAN/CYCLE ACCESS FROM BROOKLYN AVENUE

PROJECT:

SMITHY BRIDGE ROAD

KEY:

- SITE BOUNDARY
- HIGHWAY BOUNDARY BASED ON OS

REV	DATE	BY	DESCRIPTION	CHK	APD

STATUS:

FOR INFORMATION

SCALE @ A3: 1:250	CHECKED: JO	APPROVED: VE
FILE REF: ITM11353	DRAWN: JB	DATE: 18.08.22
DRAWING No: ITM11353-SK-031		
PROJECT No: ITM11353	REV: -	



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APPENDIX A. Masterplan

Smithy Bridge Lane, Rochdale Layout Schedule						
	House Type	Dwelling Type	Square Footage	No. Units	No Storeys	Total Sqft
OPEN MARKET						
2 BED SEMI-DETACHED HOUSES	8					
	BEAFORD	(EMA22 - 2B3P)	778	8	2	6224
3 BED SEMI-DETACHED HOUSES	60					
	EYNSFORD	(EMA33 - 3B4P)	972	30	2	29160
	HARRTON	(EMB31 - 3B5P)	1141	30	2.5	34230
3 BED DETACHED HOUSES	52					
	TETFORD	(EMA35 - 3B5P)	1021	19	2	19399
	AYNESDALE	(EMT31 - 3B5P)	1058	19	2	20102
	BYRNEHAM	(EMG31 - 3B5P)	1126	14	2	15764
4 BED DETACHED HOUSES	67					
	COLFORD	(EMA43 - 4B5/6P)	1262	23	2	28796
	HUBHAM	(EMG43 - 4B7P)	1370	23	2	31510
	RIGHTFORD	(EMA46 - 4B7P)	1374	21	2	28854
5 BED DETACHED HOUSES	12					
	AIRETON	(EMB51 - 5B7P)	1652	12	2.5	19824
TOTAL				199		233863
						100.0



Site Boundary

Residential
Character Area A

Residential
Character Area B

Residential
Character Area C

Residential
Character Area Green Wedge

Residential
Character Area Roch Valley

Relief Road
6.5m Carriageway
2x 2m Footpath
3m Bi-Directional Cycleway

Residential Street
5.5m

Private Drive
4.5m

Shared Pedestrian &
Cycle Path
3m

Public Right of Way
2m (dropped kerbs at eastern
crossing point along relief road)
Refer to drawing 206A for details.

Dutch Crossing Points
Raised Table and Formal
Pedestrian and Cycle Crossings.

Existing Vegetation

Proposed Vegetation

Public Open Space

Green Wedge A
Including 2m footpath and
formal meeting places.

Green Wedge B
Including 3m Cycle Link, PROW,
and LEAP.

LEAP
Play equipment within 20m
offset to housing (shaded).

SUDS Pond
Including planting scheme

Water Storage
Subterranean Water Storage.

Retained Wet Area
Refer to Ecological Survey

River Roch
8m Offset

N		1:1000 SCALE		www.pegasusgroup.co.uk	
H	Plot 59/78 parking amended, garages moved to reduce drives	04/03/22	RW	AG	
G	Minor amendments in line with client comments	22/02/22	RW	AG	
F	Amendments to layout as comments	10/02/22	RW	AG	
E	Minor amendments to various plots as client comments	17/01/22	RW	AG	
D	Plots 141-159 reorganised to suit retaining wall solutions	12/01/22	RW	AG	
C	Plot 105 Handled, turning head adjacent plot 19/25 Improved	20/12/21	RW	AG	
B	Plot 92 House type amended, Schedule updated to suit	19/11/21	RW	AG	
A	Amendments to layout and updated schedule	18/11/21	RW	AG	
Rev	Description	Date	Drawn	Chk'd	
Q	Amendments to various plots as clients comments	31/08/22	AG	AG	
P	Amendments to PROW and Cycle Connection	22/08/22	AG	AG	
N	Minor amendments to various plots as clients/LPA requirements	29/06/22	JW/RW	AG	
M	Minor amendments to various plots as clients comments	09/06/22	HE	AG	
L	Plots 101-104 reorganised to reduce numbers off private drive, House type swap to plots 34, 38 and plot 41.	28/03/22	RW	AG	
K	Minor amendments to layout and coordination with logo	18/03/22	RW	AG	
J	Sales area updated & minor tweaks and schedule to suit	11/03/22	RW	AG	
		Date	Drawn	Chk'd	