

Proposed Residential Development
Kellen Homes, Castleton Sidings, Rochdale

April 2024

TRANSPORT ASSESSMENT

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REPORT

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Rochdale

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1 INTRODUCTION

1.1 Introduction

1.1.1 Eddisons have been instructed by Kellen Homes to advise on the traffic and transport issues relating for a detailed planning application for residential development, including access, car parking, landscaping, open space and associated engineering and infrastructure including an electric substation and foul water pump station.

1.1.2 The report provides information on the traffic and transport planning aspects of the development proposals and assist the local planning authority in the positive determination of the forthcoming planning application.

1.1.3 The application site is located south-west of the centre of Castleton at the southern end of the Fairway. Its location is shown within **Plan 1**.

1.2 Consultation

1.2.1 A Transport Assessment has previously been submitted to Rochdale Council (RC) in support of a previous hybrid planning application for 191 residential dwellings (application ref: 23.00431/HYBR), supported by a suite of technical documents including a Transport Assessment in November 2023.

1.2.2 A response to comments made by Rochdale Council (RC) to the proposals supporting the planning application was circulated by e-mail in December 2023. Further comments were received from RC and responded to in February 2024.

1.2.3 Further comments have been received from Transport for Greater Manchester and National Highways, with responses agreed with each respective party.

1.3 Structure of Report

- 1.3.1** The site was previously occupied mostly by Baggs Yard Railway Sidings although it is now vacant. Further details pertaining to the site's existing use will be provided in Section 2 of this report.
- 1.3.2** Relevant planning policy pertaining to the proposed development site is discussed in Section 3 of the report.
- 1.3.3** The proposal anticipates the erection of 191 new residential dwellings with vehicular access taken from two extensions to the existing cul-de-sacs on Fairway. Further details pertaining to the proposed development will be provided within Section 4.
- 1.3.4** Section 5 provides an assessment of the existing accessibility of the site by non-car travel, before Section 6 discusses the Travel Plan Framework.
- 1.3.5** The traffic impact of the proposed development on the local highway network is considered at Section 7, whilst Section 8 presents an analysis of road safety in the vicinity of the site. Section 9 draws together the conclusions to this report.

2 **EXISTING CONDITIONS**

2.1 **Existing Site Information**

2.1.1 The site extends to approximately 9.02 hectares. The site is vacant and has been cleared of the former railway sidings and associated buildings with only hardstanding remaining.

2.1.2 Prior to this, the site was occupied by Baggs Yard Railway Sidings which was demolished and cleared some years ago. In summary, it is clear that the site has had previous industrial development on the land.

2.2 **Local Highway Network**

2.2.1 The site will be served by two extensions to the existing cul-de-sacs on Fairway. Fairway is around 5.5-metres-wide with 2.0-metre-wide footways on the existing cul-de-sacs, whilst it widens to around 6.5 metres on the looped section which in turn links to Heywood Road to the north of the site.

2.2.2 Heywood Road is around 6-metres-wide with footways of around 2-metres on both sides of the carriageway. There are a series of existing traffic calming features which narrow the carriageway and protect areas of on-street parking.

2.2.3 The A664 Manchester Road is approximately 8-9.5-metres-wide in the vicinity of the site with wide footways on both sides of the road.

2.2.4 Heywood Road and Fairway are both subject to a 20mph speed limit, whilst Manchester Road is subject to a 30mph speed limit.

3 DEVELOPMENT PROPOSALS

3.1.1 The following paragraphs will describe the development proposals and the proposed access arrangements.

3.2 Proposed Development

3.2.1 The development proposals consist of 191 residential dwellings with a range of 2-, 3- and 4-bedroom houses with associated landscaping and open space.

3.2.2 The Fairway was previously accepted by the LHA as being the only vehicular access route to and from the site at the time it was allocated for residential development. However, a secondary vehicular access route is proposed to connect to the west of the site onto Heywood Road. This route will permit traffic to enter the site from the Heywood Road direction in addition to The Fairway but would only allow traffic to exit the site via Fairway.

3.2.3 This would substantially reduce the traffic impact on the existing residential streets to the north and, as described above, would provide an alternative pedestrian and cycle route to and from the site, as shown in **Plan 2**).

3.2.4 The plan shows how the internal road network will encourage traffic to move through the site and to utilise the two Fairway access routes evenly.

3.2.5 The Heywood Road access route plan shows a 5.5-metre-wide road with 2-metres wide footways on both sides as the access enters the site. The priority for traffic has been amended at the junction with the site access route with the western part of Heywood Road to assist road safety in the area as shown in **Plan 2**. The proposed vehicular access into the site from Fairway is shown in **Plan 3**.

3.2.6 The northernmost section of Heywood Road, on its approach to the junction with Manchester Road, is proposed to be slightly widened to allow at least a 5.5-metres, with footways on both sides of the road of between 1.2 and 1.5-metres wide, these being much wider than existing.

3.2.7 In addition, the marked parking bay on the eastern side of Heywood Road has been removed and formal crossing facilities for pedestrians on Heywood Road at the junction with Manchester Road.

3.2.8 The plan also shows the proposed Beeline improvements from the most recent TfGM proposals (taken from Drawing Number A1/2003692/100/001). The Beeline works include a widening of the footway on the northern side of Manchester Road, a formal TOUCAN crossing to the west of the Heywood Road junction.

3.3 Internal Layout

3.3.1 The internal layout has been designed with Manual for Streets in mind and to ensure safe and suitable passage for all pedestrians and road users. A one-way vehicular access into the development will be provided from Heywood Road will serve as the main spine road through the site. The eastern accesses via The Fairways will serve the eastern portion of the site and to allow traffic exiting the site to connect with Heywood Road.

3.3.2 The spine road and various cul-de-sacs will be offered for formal adoption and have turning heads at their ends. Spurs off these turning areas will also serve a number of short private drives accommodating no more than 5 units on each one.

3.3.3 Following consultation with the Local Highway Authority (LHA) the LHA requested the internal highways be constructed to an adoptable standard in terms of construction and safe design including a self-enforcing 20mph zone. As shown in **Plan 2**, the internal layout includes elements of traffic calming where appropriate.

3.4 Refuse Vehicle Access

3.4.1 Refuse vehicle access to the development will be via the new vehicle access points off Fairway. As shown in **Plan 4**, refuse vehicles can access all parts of the residential development and leave the site in forward gear as will all emergency vehicles that are smaller than the refuse vehicle used in this exercise.

3.5 Pedestrian and Cycle Access

3.5.1 Pedestrian and cycle access will be available via the vehicular access points off Fairway, through the East Lancashire Railway (ELR) land to Heywood Road and facilitate connection to the Bee Network.

3.5.2 These links provide pedestrian and cycle connectivity with the surrounding Castleton area. There is an extensive footway network in the vicinity of the site connecting the site to the remainder of the Castleton area and notably the 'day to day' amenities close by, such as, shops, schools, healthcare facilities and employment opportunities.

3.5.3 The internal layout of the site has been designed to provide a safe environment for pedestrians and cyclists with clearly defined walkways, crossing points and traffic calming features where appropriate.

3.6 Emergency Access

3.6.1 The LHA have requested that swept paths should also accommodate the turning movements of an emergency access vehicles. Eddisons note the GM Fire Service (GMFS) have not objected to the proposals. Furthermore, a typical fire engine will be smaller than a refuse vehicle, which has been shown to be able to access all parts of the application site as shown in **Plan 4**.

3.7 Off-site Works

3.7.1 As shown in **Plan 5**, a comprehensive series of off-site traffic management works have been agreed with RC including:

- All traffic calming tables being brought up to a continuous level with footways to improve general access especially for vulnerable users. A number of the existing junction tables have been improved to improve general accessibility for all road users.

- Additional road safety measures on Hanover Street around including a formal build-out has now been included on Hanover Street.
- The introduction of tactile paving and lowered kerbs at all junctions. These have been included on the route between the site and St Edward's Primary School on Hanover Street, these are shown in 13 locations and will provide a substantial improvement to all pedestrians in the area not just those generated by the proposed development.
- The introduction of a zebra crossing on Heywood Road.

4 RELEVANT PLANNING POLICY

4.1 Introduction

4.1.1 This section of the TA reviews the relevant national and local transport planning policy and guidance documents in the context of the proposed development.

4.1.2 It will focus on the National Planning Policy Framework (NPPF), which was first published in March 2012 and last updated in July 2021 and sets out the Government's planning policies for achieving sustainable development. It will also refer to National Planning Practice Guidance.

4.1.3 Local planning policy is taken from the adopted Local Plan.

4.2 National Planning Policy Framework (NPPF)

4.2.1 The latest version of the NPPF was issued in December 2023. The presumption in favour of sustainable development is a central theme running through the NPPF, which states at paragraph 108 that '*Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*

- a) *the potential impacts of development on transport networks can be addressed;*
- b) *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised - for example in relation to the scale, location or density of development that can be accommodated;*
- c) *opportunities to promote walking, cycling and public transport use are identified and pursued;*

- d) *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account - including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.'*

4.2.2 Paragraph 109 of the NPPF states:

'The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.'

4.2.3 As will be demonstrated within this Transport Assessment, the proposed development accords with the policy test contained within paragraph 114 of the NPPF, which states that:

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

- a) *appropriate opportunities to promote sustainable transport modes can be - or have been - taken up, given the type of development and its location;*
- b) *safe and suitable access to the site can be achieved for all users;*
- c) *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*

- d) *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.'*

4.2.4 Paragraph 115 concludes that:

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

4.2.5 Paragraph 116 continues by advising:

'Within this context, applications for development should:

- a) *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second - so far as possible - to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- b) *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- c) *create places that are safe, secure and attractive - which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- d) *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- d) *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.'*

4.2.6 Paragraph 117 advises that:

'All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.'

4.2.7 The provision of a Travel Plan as part of the development is in accordance with the guidance.

4.3 National Planning Practice Guidance

4.3.1 The Government has produced the National Planning Practice Guidance to supplement the NPPF. Within the guidance, there is a specific section clarifying the over-arching principles on Travel Plans, Transport Assessments and Transport Statements. There are also sections advising further on each of the three documents discussed.

4.3.2 The guidance advises that in determining whether a Transport Assessment or Statement will be needed for a proposed development, the local planning authority should take into account a number of considerations. It is considered that the size and nature of this development requires a full Transport Assessment.

4.3.3 It also clarifies the process for establishing a scope for the assessment, and what the document should contain. The guidance has been considered in the preparation of this TA.

4.3.4 The guidance on Travel Plans reinforces the requirement for a Travel Plan, the scope of the document, and need for monitoring to continue the strategy into the future. The guidance has been considered in the production of the accompanying Framework Travel Plan.

4.3.5 It is therefore concluded that the content of this Transport Assessment and accompanying Framework Travel Plan meet the guidance provided within the Planning Practice Guidance.

4.4 Rochdale Local Plan

4.4.1 The Core Strategy Development Plan Document was adopted in October 2016 and sets out the policies for Rochdale’s future development up to 2028 and the planning policies is the key document of the Local Plan.

4.4.2 Policy SD1 refers to ‘Delivering Sustainable Development’. The policy confirms that the council will ‘take a positive approach that reflects the presumption in favour of sustainable development’.

4.4.3 The policy continues to state that ‘planning applications that accord with the policies in the Local Plan will be approved without delay’.

4.4.4 The policy goes on to state the following:

‘Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless material considerations indicate otherwise – taking into account whether:

- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or*
- Specific policies in the National Planning Policy Framework indicate that development should be restricted’.*

4.5 Castleton Station Masterplan

4.5.1 RBC adopted the above document in March 2022. This is a material planning consideration. Within this document the site is identified for residential development.

4.5.2 The following sections of the TA will ensure that the proposals are acceptable and constitute sustainable development in transport terms.

4.5.3 It is therefore considered that the site satisfies the relevant policy requirements of the Rochdale Local Plan with regards to transport and highways issues.

4.6 Planning Policy Summary

4.6.1 The proposed development is in accordance with national and local policy for the following reasons:

- The proposed development will reduce the need to travel due to it being located in close proximity to a range of services such as schools, retail opportunities and health facilities, which are located within a short walk of the site. Further details on the accessibility of the proposed development by non-car modes is provided in Section 5 of this Transport Assessment.
- The site is located in close proximity to a range of public transport opportunities, which will facilitate non-car travel to and from the proposed development.

4.6.2 The site promotes sustainable transport in accordance with the Framework (NPPF) as it facilitates sustainable development and contributes to wider sustainability and health objectives.

5 ACCESSIBILITY BY NON-CAR MODES

5.1 Introduction

5.1.1 In order to accord with the aspirations of the NPPF, any new proposals should extend the choice in transport and secure mobility in a way that supports sustainable development.

5.1.2 New proposals should therefore attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non-car modes, thus assisting in meeting the aspirations of current national and local planning policy.

5.1.3 The accessibility of the proposed site has been considered by the following modes of transport:

- accessibility on foot.
- accessibility by cycle.
- accessibility by bus.
- accessibility by rail.

5.2 Access on Foot

5.2.1 It is important to create a choice of direct, safe, and attractive routes between where people live and where they need to travel in their day-to-day life. This philosophy clearly encourages the opportunity to walk whatever the journey purpose and help to create more active streets and a more vibrant neighbourhood.

5.2.2 Existing footways exist on both sides of Fairway and Heywood Road of around 2-metres in width. These footways provide links to a comprehensive network of routes within the local area, supplemented by a number of controlled crossing points on Manchester Road which facilitate access to the nearby day to day amenities within the area.

5.2.3 The DFT National Travel Survey of 2018 confirms that 80% of all trips less than a mile (1.6km) are carried out on foot.

5.2.4 The Institute of Highways and Transportation (IHT) document 'Guidelines for Providing for Journeys on Foot', provides information on acceptable walking distances. Table 3.2 suggests distances for desirable, acceptable, and preferred maximum walks to 'town centres', 'commuting/schools' and 'elsewhere'. The 'preferred maximum' distances are shown below in **Table 4.1**.

Suggested Preferred Maximum Walk		
Town Centre	Commuting/School	Elsewhere
800m	2,000m	1,200m

Table 4.1 IHT 'Providing for Journeys on Foot' Walk Distances

5.2.5 Manual for Streets (MfS) continues the theme of the acceptability of the 2,000-metre distance in paragraph 4.4.1. This states that '*walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km*'.

5.2.6 **Table 4.2** below summarises this guidance in tabular form.

'Comfortable' Walk	'Preferred Maximum' Walk
800m	2,000m

Table 4.2 Manual for Streets Walk Distances

5.2.7 Further evidence that people will walk further than the suggested ‘preferred maximum’ distances in the IHT ‘Providing for Journeys on Foot’ is contained in a WYG Report entitled ‘Accessibility – How Far Do People Walk and Cycle’. This report refers to National Travel Survey (NTS) data for the UK, excluding London, and confirms the following 85th percentile walk distances:

- All journey purposes – 1,930-metres.
- Commuting – 2,400-metres.
- Shopping – 1,600-metres.
- Education – 3,200 or 4,800-metres.
- Personal business – 1,600-metres.

5.2.8 Overall, in Table 5.1, the document states that 1,950-metres is the 85th percentile distance for walking as the main mode of travel. **Table 4.3** below summarises the various 85th percentile walk distances suggested as guidelines in the WYG Study.

85 th Percentile Walk Distances				Overall Recommended Preferred Max
All Journeys	Commuting	Shopping	Personal	
1,950m	2,100m	1,600m	1,600m	1,950m

Table 4.3 WYG Report/NTS Data Walk Distances

5.2.9 In summary, the distance of 1,950-metres, or around 2-kilometres, represents an acceptable maximum walking distance for most land uses.

5.2.10 The CIHT guidance ‘Planning for Walking’ document from 2015 provides a useful reminder of the health benefits of walking. This states that:

‘A brisk 20 minute walk each day could be enough to reduce an individual’s risk of an early death.’

- 5.2.11** A 20-minute walk equates to a walking distance of around 1,600-metres.
- 5.2.12** In addition, to the pedestrian catchment plan, a review of the proximity of local facilities such as local shops/retail outlets and leisure facilities has been undertaken and the location of these is also shown in **Plan 6**.
- 5.2.13** The 2,000-metre pedestrian catchment illustrates that the majority of Castleton can be accessed, such as, New Bridge Chippy, Annies, Co-op Food, Castleton Primary School, St. Gabriel’s RC Primary School, Castleton Post Office, St Edwards C of E Primary School, Premier – Castleton, Castleton Health & Leisure, Small World Nurseries and Well Castleton – Elizabeth Street.
- 5.2.14** In a recent 2023 YouGov poll, respondents were asked to identify the local amenities they valued the most within a 15-minute walk of their home. The poll results highlight amenities that people consider essential for their day to day lives, such as, grocery stores, healthcare facilities and public transportation. The results of the YouGov Poll are displayed in **Figure 5.1** below:

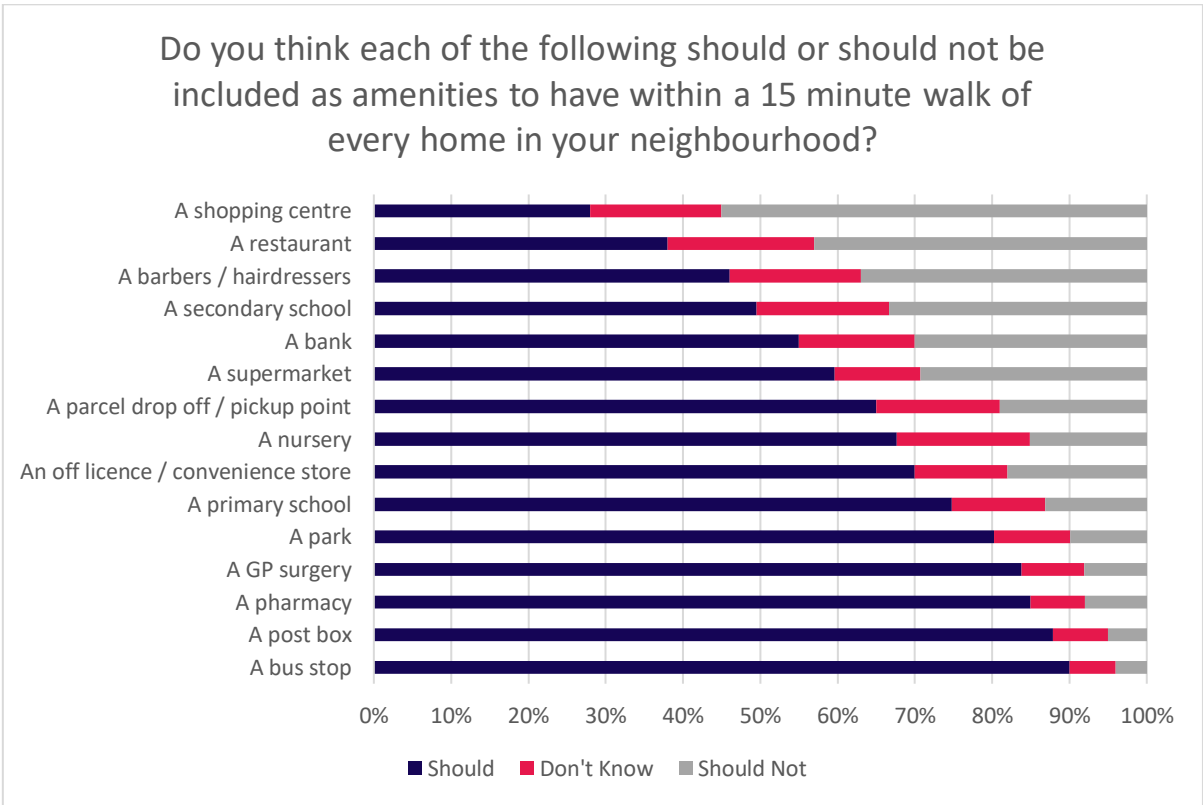


Figure 5.1 YouGov Poll Results (Source YouGov)

5.2.15 Figure 4.1 shows that most respondents, believe that having a bus stop (90%) and a post box (87%) within a short walk of their home is most important. Similarly, a significant proportion of Britons think that medical facilities like a pharmacy (85%) and a GP surgery (83%) should be easily accessible. Less than half of the respondents see the need for a shopping centre (28%), restaurant (38%), or hairdressers (46%) to be located nearby.

5.2.16 **Plan 6** provides an illustrative indication of the areas that can be reached based on a leisurely walk from the site. The plan also displays nearby local amenities, as per those identified within the findings of the recent YouGov poll, showing the site is in close proximity to a number of a local amenities, including bus and rail interchanges, supermarkets, a Post Office, pharmacies, GP surgeries, and leisure facilities.

5.2.17 **Table 5.5** below, shows the approximate walking distance from the centre of the site to several of the local key amenities in the immediate vicinity of the site. The table also confirms whether or not the particular amenity is within the 'preferred maximum' walk distances using the above guideline criteria.

Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
New Bridge Chippy	590m	1,600m	YES
Castleton Post Office	590m	1,600m	YES
Annies	650m	1,600m	YES
Castleton Railway Station	650m	1,600m	YES
Manchester Road (Milne Street) Bus Stops	700m	1,600m	YES
St Edwards C of E Primary School	775m	3,200m	YES
Co-op Food	800m	1,600m	YES
Better Dental, Rochdale	800m	1,600m	YES
Premier - Castleton	830m	1,600m	YES

Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
Castleton Post Office	975m	1,600m	YES
Castleton Health & Leisure	975m	1,600m	YES
Castleton Primary School	1,000m	1,600m	YES
Small World Nurseries	1,030m	1,600m	YES
Castleton Community Playgroup	1,100m	1,600m	YES
Evolution Gym	1,100m	1,600m	YES
St Gabriel's RC Primary School	1,120m	3,200m	YES
Well Castleton – Elizabeth Street	1,225m	1,600m	YES
Castleton Health centre	1,300m	1,600m	YES

Table 5.5 - Approximate Distance from Site to Local Facilities

5.2.18 As can be seen in the above table, the site is located within proximity to a number of local amenities including primary services as well as leisure facilities.

5.2.19 All of the day-to-day amenities are well within the 'preferred maximum' walk distances described earlier in this section and indeed many, including the nearest food store and nearest primary school, are within the 800 metres 'comfortable walk' from the site as contained within MfS guidance.

5.2.20 It is therefore considered that the existing and proposed pedestrian infrastructure will facilitate safe and direct pedestrian linkages between the site and local destinations.

5.3 Access by Cycle

5.3.1 An alternative mode of travel to the site could be achieved by bicycle.

- 5.3.2 The importance of cycling as an alternative mode of travel both now and in the future, is demonstrated by the new rules relating to cyclists contained within the revised Highway Code, which came into force in January 2022.
- 5.3.3 These new rules, which include the 'Hierarchy of Users' or 'Hierarchy of Responsibility', recognise that drivers of vehicles that can cause the greatest harm in the event of a collision bear the greatest responsibility to take care and reduce the danger to others. This together with the simplification of the rules, to make junctions safer and new rules to tackle dangerous overtaking will provide a road environment where cyclists and pedestrians are given priority, feel safer using the road network and further encourage travel by cycle.
- 5.3.4 The Cycling England document 'Integrating Cycling into Development Proposals' advises that *'For short trips, [cycle links] can give cyclists significant advantages over car users in terms of convenience and journey time... Most cycle journeys for non-work purposes and those to rail stations are between 0.5 and 2-miles, but many cyclists are willing to cycle much further. For work, a distance of 5-miles should be assumed.'*
- 5.3.5 This distance equates to a journey of around 25-minutes based on a leisurely cycle speed of 12-kilometres per hour and would encompass parts of Rochdale, Heywood and Middleton.
- 5.3.6 A new cycle link will be provided, connecting the site to Heywood Road, across the East Lancashire Railway-owned land.
- 5.3.7 As shown in **Figure 5.2** below, A Toucan crossing is provided across Manchester Road in the vicinity of the Manchester Road/Heywood Road junction, facilitating access to National Cycle Network (NCN) route 66 located to the east of the site, along the Rochdale Canal.

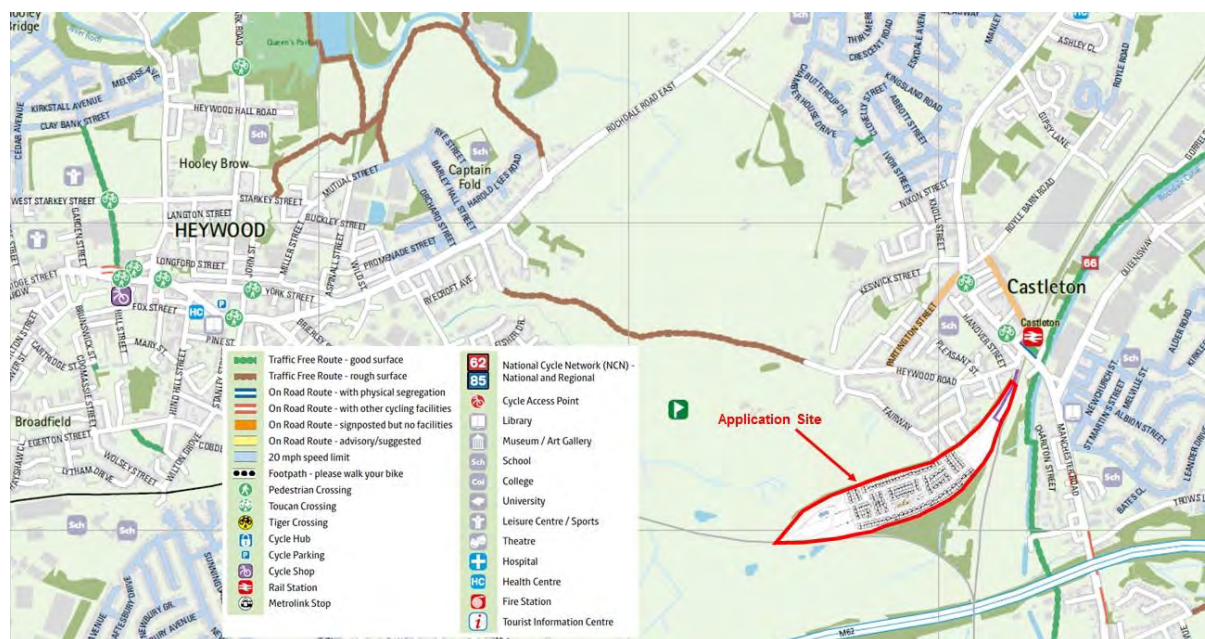


Figure 5.2 – Local Cycle Routes

5.3.8 National cycle route 66, starts north of Rochdale where it runs south into the town centre, where it meets National Cycle Route 92. This route also starts north of Rochdale and ends in the centre of Rochdale. NCN route 66 is located approximately 380-metres from the site, whereas NCN route 92 is located 4.8-kilometres from the site.

5.3.9 The site can therefore be considered as being accessible by cycle.

5.4 Access by Bus

5.4.1 The nearest bus stops to the site are located approximately 700 metres to the east on Manchester Road, around a 10-minute walk from the site. Additional bus stops are located further along Queensway. All the nearest bus stops to the site are shown in **Plan 6**.

5.4.2 A summary of the services available from the nearest bus stops from the development site is provided in **Appendix 1**.

- 5.4.3** The nearest bus stops to the site provides access to six bus services per hour in each direction of travel, throughout the day, to destinations including Rochdale, Middleton, Blackley and Manchester.
- 5.4.4** The above services operate from around 04:59 to around 23:44, making travel by public transport a real alternative to travelling by car for all journey purposes.
- 5.4.5** In order to demonstrate the level of accessibility, some example journey times by bus are presented below **Table 5.6** below.

Destination	Duration
Rochdale Interchange	14 Minutes
Middleton Bus Station	20 Minutes
Blackley	32 Minutes
Harpurhey	34 Minutes
Collyhurst	37 Minutes
Shudehill Interchange	45 Minutes

Table 5.7 - Example Bus Journey Times from the Site

- 5.4.6** The above table demonstrates that Rochdale town centre is an approximately 14-minute bus journey from the site, Middleton is a 20-minute bus journey and Shudehill Interchange (Manchester) is a 45-minute journey by bus from the application site (not including walking time).
- 5.4.7** It is therefore concluded that the site can be considered as highly accessible by bus.

5.5 Accessibility by Rail

5.5.1 Castleton station is the nearest railway station to the site. It can be accessed via a short 8–9-minute walk as the station is 650-metres from the centre of the site. The station is managed by Northern and has 2 platforms, offering a half-hourly service in each direction. Trains to start at Rochdale then stop at all stations including Castleton to Manchester Victoria, and continue via Salford Central, Salford Crescent, Bolton and Darwen to Blackburn, with alternate trains continuing through to Clitheroe.

5.5.2 On Sundays, an hourly service is provided between Manchester Victoria Accrington and Blackburn. Southbound trains continue beyond Manchester Victoria to Wigan Wallgate and Southport via Atherton.

5.5.3 Onward Metrolink connections are available at Rochdale, for Rochdale town centre, Oldham, Failsworth and Manchester Victoria where interchange is available for Metrolink services to Altrincham, Bury, East Didsbury, Manchester Airport and Manchester Piccadilly.

5.5.4 This provides opportunities for travelling to and from the site by rail.

5.6 Accessibility Summary

5.6.1 The proposals have been considered in terms of accessibility by non-car modes for the proposed development.

5.6.2 The following conclusions can be drawn from this section of the report:

- The site is well located to cater for trips on foot and provides potential for a high degree of pedestrian trips between the development and the surrounding area.
- It has been demonstrated that the site is accessible by cycle.

- The services from the bus stops on Manchester Road which connect the site with retail, employment and leisure facilities in Rochdale, Middleton and Manchester. It can therefore be concluded that the proposed development is highly accessible by bus.
- The site has been demonstrated to be accessible by rail with Castleton railway station located within a 10-minute walk from the site.

5.6.3 In light of the above, it is considered that the site is highly accessible and caters for needs of the development's residents and visitors. As such, this will assist in promoting a choice of travel modes other than the private car, as set out in NPPF.

6 PROMOTION OF TRAVEL BY NON-CAR MODES

6.1 Introduction

- 6.1.1 In order to encourage resident and visitor travel to the site by non-car modes, a Travel Plan is included within the application submission.

6.2 Travel Planning Guidance

- 6.2.1 The preparation and adoption of a Travel Plan is an important element of managing the demand for travel to all modern developments. The Department for Transport (DfT) have produced guidance on the preparation of Travel Plans. The document, entitled *‘Good Practice Guidelines: Delivering Travel Plans through the Planning Process’* was published in August 2009.
- 6.2.2 The guidance explains how *“we often need to meet the demands of population and economic growth whilst simultaneously reducing our impact on the environment” and identifies that “The benefits of increases in sustainable travel, in particular cycling and walking, can extend beyond reduction in CO₂ emissions and climate impacts, and include tackling congestion, tackling obesity and health issues, reducing social exclusion and improving quality of life”.*
- 6.2.3 The document sets out an overview of the process and delivery of Travel Plans and states that *“A Travel Plan is a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed.”*
- 6.2.4 The Guidance states that *“Travel Plans should involve the development of agreed explicit outcomes linked to an appropriate package of measures aimed at encouraging more sustainable travel, with an emphasis on reducing single occupancy car use...”* and

“A Travel Plan should seek to establish clear outcomes to be achieved in relation to access and set out all the measures to be implemented in detail, including an action plan, timescales, targets and responsibilities for implementation, monitoring and review.”

- 6.2.5 It is made clear in the document that Travel Plans should focus on achieving the lowest practical level of single occupancy vehicle trips to or from a site and widening the use of other travel modes and assist in the wider aims of encouraging sustainable travel, improving health, reducing congestion, energy consumption and pollution. The Travel Plan, it advises *“needs to address all the journeys that may be made to and from a site.”*
- 6.2.6 The guidance also specifies that “It is important to note that Travel Planning should be developed as one of the means of delivering an area’s sustainable transport strategy. Travel Planning should feature in the policy framework and implementation programs of Regional Spatial Strategies and Local Development Frameworks.”
- 6.2.7 Further guidance relating specifically to residential Travel Plans is presented in the DfT document entitled *“Making Residential Travel Plans Work”* published in June 2007.
- 6.2.8 The document states that:
- “Travel Planning is one of a range of measures known as smarter choices which have been found to be effective on reducing traffic and improving accessibility in residential areas.”*
- 6.2.9 A Residential Travel Plan is a package of measures designed to reduce car use originating from new housing by supporting alternative forms of transport and reducing the need to travel in the first place.

6.2.10 They are an important tool to help deliver accessible, sustainable communities and offer clear benefits to all the parties involved – public, private and the community. They involve meeting the access needs of residents in a new way and require partnerships between developers, local authorities, local communities, and new residents.

6.2.11 The value of Travel Plans in reducing car use to workplaces and schools is widely recognized and many local authorities and developers have experience in their design and implementation. However, until recently, little attention has been given to tackling the origins of journeys from people's homes. Now, forward-thinking developers and local authorities are developing packages of smarter choices to both reduce the traffic generated by new housing developments and increasing the travel choices available to residents. These smarter choices are being set out in Residential Travel Plans.

6.3 Residential Travel Plan

6.3.1 The objective of a Residential Travel Plan is the delivery of the objectives of the NPPF, i.e., to encourage residents to travel to work by bus, rail, on foot and by bicycle.

6.3.2 The Framework Residential Travel Plan outlines physical and management measures that are designed to achieve this objective.

6.3.3 However, the principal measure will consist of a Residents Travel Pack containing relevant material to promote non-car modes of travel and the provision of certain physical measures.

6.3.4 The Travel Pack will contain information to inform residents of the existing long-term strategy for reducing the dependence of residents and visitors on travel by private car.

6.3.5 The site has been demonstrated to benefit from excellent non-car accessibility and it should, therefore, be expected that the adoption of a Travel Plan would be particularly effective.

7 TRAFFIC IMPACT ANALYSIS

7.1 Introduction

7.1.1 Having established that the proposed development site is highly accessible by modes of travel other than the private car and would be in general accordance with transport policies, the following section considers the traffic impact of the development proposals on the local highway network.

7.2 Assessment Criteria

7.2.1 Given the proposed residential land use, it is assumed reasonable to consider the AM and PM weekday peak hours, as being those with the greatest impact on the local highway network.

7.3 Traffic Survey Data

7.3.1 The assessment will be based on a series of traffic counts that have been carried out at the following junctions on the local highway network:

- A664 Manchester Road/Heywood Road priority junction,
- A664 Manchester Road/Durban Street priority junction, and
- A664 Manchester Road/Royal Barn Road/Partington Street staggered priority junction.

7.3.2 These surveys were undertaken on Tuesday 4th June 2019, prior to the COVID pandemic.

7.3.3 The peak hours were identified as 08:00 to 09:00 hours and 16:30 to 17:30 hours, for the AM and PM peaks respectively. The surveyed flows for the AM and PM peak hours are shown in **Figures 1** and **2** respectively.

7.4 Factored Traffic Flows

7.4.1 For the purpose of this TA, assessments have been undertaken for a design horizon of 2025, representing an estimated build out of circa 50-55 units per year up to a total of 191 units, with construction commencing in 2025, as accepted by RC.

7.4.2 In order to factor the surveyed traffic flows to the assumed future year assessment of 2025, as agreed with RC and TfGM, a National Trip End Model (NTEM) adjusted National Road Traffic Model (NTM) growth factor was applied for the area (MSOA Rochdale 017).

- 2019 to 2025 AM Peak = 1.0704.
- 2019 to 2025 PM Peak = 1.0680.

7.4.3 The resultant factored traffic flows are shown in **Figures 3** and **4** for the 2025 factored traffic flows AM and PM peak periods respectively.

7.5 Committed Development

7.5.1 It is noted that the planning authority have not requested the inclusion of any other PfE site to be included within the assessment of the Castleton Sidings site. In addition, the planning application for 495-dwellings at the Cow Top Lane site (planning application ref: 22/01190/FUL) was not objected to by NH and further it recommended that Rochdale, in that case, considered the cumulative impacts of PfE sites rather than NH undertake this assessment.

7.5.2 Furthermore, Eddisons are not aware of any other relevant PfE sites that would be required to be included within the traffic impact analysis.

7.5.3 The site below is understood to be the only committed development in the area that is likely to generate material traffic flows in the vicinity of the site.

- Trub Farm, Castleton (Appeal Ref: APP/P4225/A/12/2185947/NW).

7.5.4 The resultant committed development flows are shown in **Figures 5 and 6** for the AM and PM peak periods respectively.

7.5.5 Furthermore, the traffic impact of the development proposals which utilise both Fairway access points and the additional ingress from Heywood Road have been taken into consideration. As agreed with RC, an element of East Lancashire Railway (ELR) car park generated traffic has been included within the traffic impact analysis.

7.5.6 For robustness, an allowance of 50-vehicular movements into the ELR car park and the same number leaving the car park has been made. This is likely to be an onerous assumption as the peak levels of car parking demand at the ELR facility will not coincide with the weekday peak periods which are being assessed as part of this exercise. The actual level of traffic accessing the ELR car park during background traffic peak periods will be much lower than those flows being utilised in this assessment.

7.5.7 The 50-vehicular movements into and out of the site have been assigned to the local highway network based on a 50/50 split on Manchester Road entering the site and assuming all 50-vehicles leaving the site would do so via the Heywood Road/Manchester Road junction.

7.6 Base Flows

7.6.1 The factored traffic flows in Figures 3 and 4 have been added to the committed development traffic flows in Figures 5 and 6 to produce the 2025 Base Flows shown in **Figures 7 and 8** for the AM and PM peaks respectively.

7.7 Proposed Development

7.7.1 As previously stated, it is proposed to develop the site for 191 residential dwellings.

7.7.2 In order to calculate the number of trips which the proposed dwellings are forecast to generate, the TRICS 7.8.1 database was analysed. Trip rates were obtained in the field of “Residential – Houses Privately Owned” within the range 100 to 300 residential units with Greater London and Eire sites excluded.

7.7.3 Table 7.1 below, summarises the trip generations for the proposed residential units whilst the TRICS output is contained within **Appendix 2**.

Mode	Period	Trip Rate		Trips	
		Arr	Dep	Arr	Dep
Vehicle	AM Peak Hour	0.142	0.381	27	73
	PM Peak Hour	0.357	0.172	68	33

Table 7.1 - Proposed Development Trip Rates and Trips

7.7.4 As can be seen from the above table, the proposed development is predicted to result in 100 two-way trips during the weekday AM peak and 101 two-way trips during the weekday PM peak period.

7.7.5 National Highways have requested that the cumulative impact of the proposed site alongside others proposed as part of the proposed PfE is forecast to require mitigation on the M62 between J19-21.

7.7.6 The impact of the proposals on the M62 at any point is likely to be negligible. The traffic flow figures confirm that a maximum of 44 two-way traffic movements would travel to or from the site to the north of the site. This would be the route for all vehicles travelling to the M62 from the site. This route towards Junction 20 of the M62 would involve travelling through a number of key junctions with other potential routes and destinations that residents could be travelling to and from including the majority of Rochdale.

- 7.7.7** Each alternative destination to the north of the site would be likely to reduce any impact of the proposals on the M62 to levels that would be highly likely to be negligible. As such, there would be no requirement for this assessment to include any cumulative impact exercise between Junctions 19 and 21 of the M62.

7.8 Trip Distribution

- 7.8.1** In order to assign the proposed development trips shown in Table 7.1 to the local highway network, reference has been made to the Method of Travel to Work data available from the 2011 census, as agreed with RC.
- 7.8.2** The census data has been obtained for the relevant Middle Super Output Area, Rochdale 017, which encompasses the proposed site.
- 7.8.3** The census data identifies the destination of residents travelling by car and, by using route planning software, the likely routes residents would take when travelling to the various destinations has been determined.
- 7.8.4** The census data and route assumptions are included at **Appendix 3**.
- 7.8.5** The vehicle trips, shown in Table 7.1, have been assigned to the network based on the trip distribution shown in **Figure 9** and the resulting proposed development trips are shown in **Figures 10** and **11** for the weekday AM and PM peaks respectively.

7.9 With Development Flows

- 7.9.1** The forecast development traffic flows depicted in Figures 10 and 11 have been added to the 2025 Base Flows shown in Figures 7 and 8. The resultant 2025 With Development Flows are shown in **Figures 12** and **13** for the AM and PM peak periods.

7.10 Capacity Assessments

- 7.10.1** In order to assess the operation of the junctions on the local highway network, assessments were undertaken at the following junctions:

- A664 Manchester Road/Heywood Road priority junction.
- A664 Manchester Road/Durban Street priority junction; and
- A664 Manchester Road/Royal Barn Road/Partington Street staggered priority junction.

A664 Manchester Road/Heywood Road priority junction

7.10.2 The A664 Manchester Road/Heywood Road priority junction has been assessed using the PICADY module of the Junction 9 programme.

Assessments were undertaken using the 2025 'Base' and 'With Development' flows, the results of which are summarised in **Table 7.2** with the full results contained within **Appendix 4**.

Arm	2025 Base Flows				2025 With Development			
	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
	RFC	Max Q	RFC	Max Q	RFC	Max Q	RFC	Max Q
Railway Approach	0.00	0	0.00	0	0.00	0	0.00	0
A664 Manchester Rd (NW) Ahead/Right	0.16	0	0.14	0	0.24	0	0.22	0
Heywood Road	0.00	0	0.00	0	0.13	0	0.15	0
A664 Manchester Rd (SE) Ahead/Right	0.06	0	0.10	0	0.06	0	0.10	0

Table 7.2 - Summary of PICADY Results for the A664 Manchester Road/Heywood Road priority junction – 2025 Assessments with ELR Traffic

7.10.3 As can be seen from Table 7.2, the A664 Manchester Road/Heywood Road priority junction is forecast to continue to operate well within its theoretical capacity in both the AM and PM peak scenarios.

- 7.10.4** The results also demonstrate that the impact of the proposed development on the junction is minimal.

A664 Manchester Road/Durban Street priority junction

- 7.10.5** The A664 Manchester Road/Durban Street priority junction has been assessed using the PICADY module of the Junction 9 programme.
- 7.10.6** The results for the 'Base' and 'With Development' flow scenarios for 2025 are summarised within **Table 7.3** with the full results contained within **Appendix 5**.

Arm	2025 Base Flows				2025 With Development			
	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
	RFC	Max Q	RFC	Max Q	RFC	Max Q	RFC	Max Q
Durban Street	0.59	1	0.41	1	0.68	2	0.50	1
A664 Manchester Road (S) Ahead/Right	0.22	0	0.13	0	0.25	0	0.22	0

Table 7.3 - Summary of PICADY Results for the A664 Manchester Road/Durban Street priority junction – 2025 Assessments with ELR Traffic

- 7.10.7** As can be seen from the above table, the A664 Manchester Road/Durban Street priority junction is forecast to operate well within its theoretical capacity in all the assessment scenarios.
- 7.10.8** The results also demonstrate a minimal increase in the RFC and Queues, with the maximum increase in queuing being just 1 vehicle. The impact of the proposed development on the operation of this junction can, therefore, be considered minimal.

A664 Manchester Road/Royal Barn Road/Partington Street staggered priority junction

7.10.9 The A664 Manchester Road/Durban Street priority junction has been assessed using the PICADY module of the Junction 9 programme.

7.10.10 The results for the ‘Base’ and ‘With Development’ flow scenarios for 2025 are summarised within **Table 7.4** with the full results contained within **Appendix 6**.

Arm	2025 Base Flows				2025 With Development			
	Weekday AM		Weekday PM		Weekday AM		Weekday PM	
	Deg Sat	Max Q	Deg Sat	Max Q	Deg Sat	Max Q	Deg Sat	Max Q
Royal Barn Road Right Left	74.3%	4	85.3%	8	79.8%	5	90.3%	9
Manchester Road (North) Left Ahead	76.0%	19	70.8%	18	85.2%	23	77.9%	20
Partington Street Left Ahead Right	73.9%	5	76.5%	5	85.6%	9	88.6%	7
Manchester Road (South) Ahead Right	64.6%	15	87.1%	30	73.2%	18	93.3%	34

Table 7.4 - Summary of LINSIG Results for the A664 Manchester Road/Royle Barn Road/Partington Street

7.10.11 As can be seen from the above table, the A664 Manchester Road/Royle Barn Road/Partington Street signalised junction is forecast to operate at around its theoretical capacity in all the assessment scenarios. However, it must be noted that this includes the onerous inclusion of the ELR traffic.

7.10.12 The results also demonstrate a minimal increase in the RFC and queues. The impact of the proposed development on the operation of this junction can, therefore, be considered minimal.

7.11 Link Capacities

- 7.11.1** Consideration has been given to the link capacities along the main routes from the A664 Manchester Road to and from the site via Heywood Road and Heape Street/Fairway.
- 7.11.2** As of March 2020, the relevant DMRB document for Link Capacities, TA 79/99 Traffic Capacity of Urban Roads, has been withdrawn and there are currently no replacement standards in the revised DMRB.
- 7.11.3** Notwithstanding this, in order to fully inform Rochdale Council, an assessment has been undertaken using the now withdrawn standards as these are still considered to provide best practice guidance on link capacities.
- 7.11.4** DMRB Volume 5, Section 1, Part 3, TA 79/99 provides an estimated maximum hourly vehicle capacity for various types of urban roads. The relevance of this document is discussed below.
- 7.11.5** The types of urban roads and the features which affect their traffic capacity are detailed in Table 1 of TA 79/99. Table 2 of TA 79/99 gives the flow capacity for each road type based on carriageway width parameters. The road type which most closely matches Heywood Road, Heape Street, Partington Street and Fairway is a UAP3 (variable standard road carrying mixed traffic with frontage access) classification.
- 7.11.6** As detailed in Table 2 of TA 79/99, based on a 6.1m two-way single carriageway, the UAP3 road type can cater for up to 900 one-way hourly flows in each direction.
- 7.11.7** The main sections of Fairway, Heape Street and Heywood Road have variable carriageways widths of around 6.0 to 7.0-metres and, therefore, 900no. one-way hourly flows is considered an appropriate hourly capacity.
- 7.11.8** The cul-de-sac sections of Fairway are slightly narrower (circa 5.5-metres) along some sections and, therefore, based on a downwards extrapolation of Table 2, it is felt appropriate that Fairway could accommodate around 690 one-way hourly flows in each direction.

- 7.11.9** Following consultation with RC it has been agreed that some of the sections of Partington Street are reduced down to around 3-metres-wide due to on-street car parking. As such, based on a downwards extrapolation of Table 2, it could be assumed that those sections of Partington Street could accommodate around 450no. one-way hourly flows in each direction.
- 7.11.10** The traffic surveys and trip generation exercise has revealed that the main route from the A664 to the site has existing flows, base flows and post development flows as shown on Table 7.5 below.
- 7.11.11** The final column of the table lists the approximate link capacities of each of the routes based on the available carriageway width by reference to DMRB Volume 5, Section 1, Part 3, TA 79/99.

Link	2019 Survey Flows	2026 Base Flows	2026 With Dev Flows	One-Way Capacity
Heywood Road	112	119	140	900
Heape Street/Fairway Loop	132	141	175	900
Fairway Cul-de-sacs	-	-	73	690
Partington Street	-	-	208	450

Table 7.5 - Link Flows and Capacities

- 7.11.12** As can be seen in Table 7.5, the traffic impact analysis has revealed that each route is forecast to have a maximum one-way hourly flow which is well below its theoretical capacity of 690 one-way hourly flows.
- 7.11.13** As such, this demonstrates that the expected vehicular usage of these links falls well below what would be expected on a typical urban road with similar carriageway dimensions and features.

7.12 Capacity Assessment Summary

7.12.1 In summary, the capacity assessment undertaken as part of this traffic impact analysis have demonstrated the following:

- The proposed site access points will be a continuation of the existing Fairway cul-de-sacs. The access points have been designed to accord with highway design standards and are considered to have more than sufficient capacity to accommodate the proposed development traffic.
- The A664 Manchester Road/Heywood Road priority junction is forecast to operate well within capacity in all of the traffic flow scenarios.
- The A664 Manchester Road/Durban Street priority junction is forecast to operate well within capacity in all of the traffic flow scenarios and the impact of the proposals on the junction is considered minimal.
- The A664 Manchester Road/Royal Barn Road/Partington Street staggered priority junction is forecast to operate well within capacity in all of the traffic flow scenarios and the impact of the proposals on the junction is considered minimal.
- The link capacity assessment has demonstrated that Heywood Road, Heape Street, Partington Street and Fairway are operating well within their theoretical capacity and will continue to do so once the development has been completely occupied.

7.12.2 It is therefore concluded that the development proposals will result in a minimal impact on the local highway network.

8 ROAD SAFETY

8.1.1 In order to consider the potential impact of the development on road safety, a brief review of the Crashmap website (www.crashmap.co.uk) has been undertaken. The information provided on the website covered the five-year period 2018 to 2022 in the vicinity of the development site.

8.1.2 According to the data provided there have been no recorded accidents on Heywood Road or on the Fairway, one accident occurred on Partington Street and only five accidents have occurred on Manchester Road between Queensway and Royal Barn Road, as identified in **Figure 8.1** below.

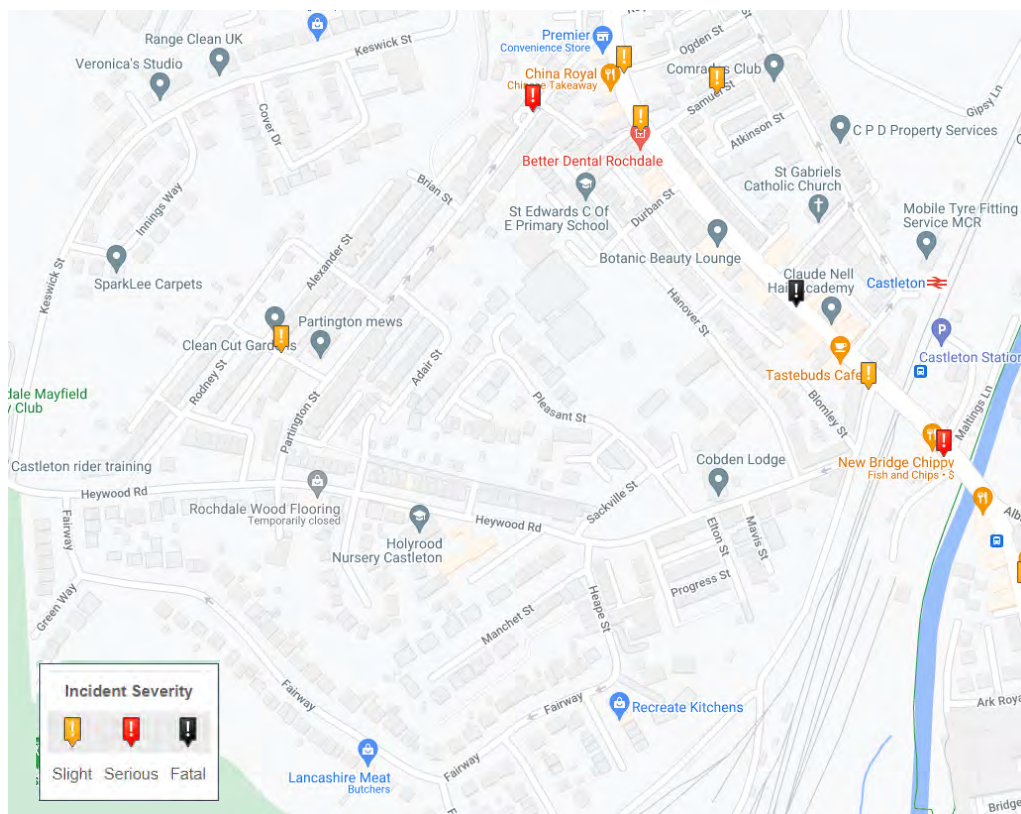


Figure 8.1 – Location of Accidents in the Vicinity of the Site

8.1.3 A review of the personal injury data along the A664 Manchester Road shows that there have been five accidents recorded in the five-year period. One of the accidents was fatal, one was serious, and the remaining three were slight.

8.1.4 Following consultation, National Highways have requested the potential impact of the development on road safety at M62 Junctions 19 and 20. An analysis of STATS19 data provided by Transport for Greater Manchester has been undertaken.

8.1.5 The information provided by Rochdale Council has covered the five-year period September 2018 to August 2023 on both Junctions 19 and 20. **Figure 8.2** below is an image of the accident plot and then subsequently an analysis of road incidents reported at Junction 19 of the M62 is provided.

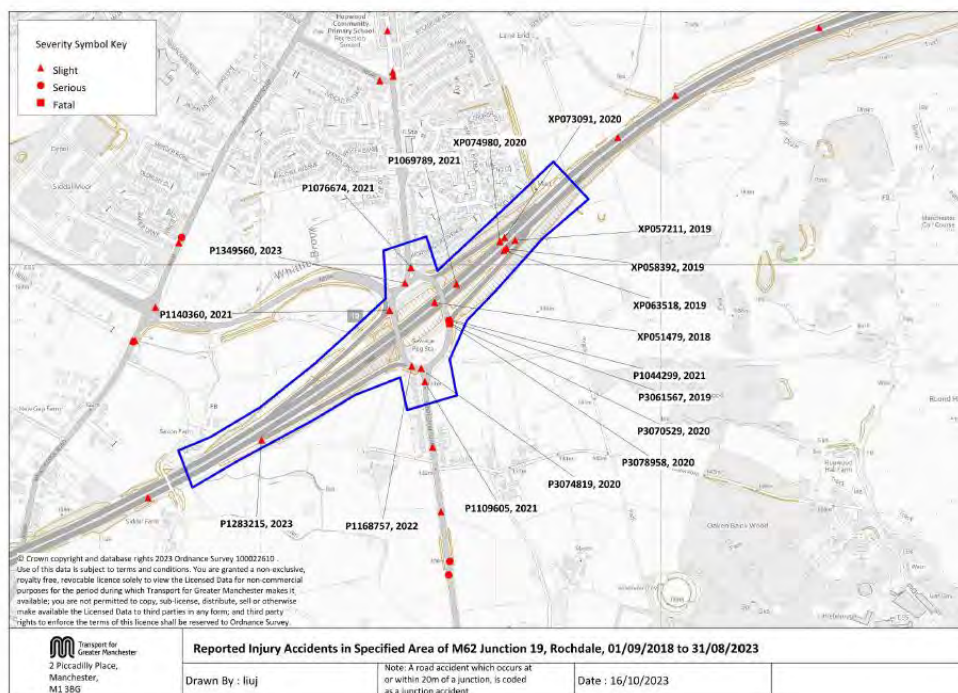


Figure 8.2 - M62 Junction 19 Accident Plot

8.1.6 According to the data provided there have been a total of 18 recorded accidents within the study area as is shown in **Appendix 7**, which in this instance comprises:

- Middleton Road – 2 accidents
- M62, junction 19 eastbound – 4 accidents
- M62, junction 19 westbound – 4 accidents
- M62, junction 19 roundabout – 8 accidents

8.1.7 All recorded accidents identified in the data are detailed below in **Table 8.1**.

Date	Severity	Light Conditions	Weather	Road Conditions	Manoeuvre
21/11/2018	Slight	Daylight	Fine	Dry	Two car collision while changing lanes
16/05/2019	Slight	Daylight	Fine	Dry	Four vehicle collision while changing lanes
04/06/2019	Slight	Daylight	Fine	Dry	Three vehicle shunts
15/09/2019	Serious	Darkness / streetlights	Fine	Dry	Vehicle collides as fails to give way
16/10/2019	Slight	Daylight	Fine	Dry	Collision while changing lanes
18/02/2020	Serious	Darkness / streetlights	Fine	Dry	Vehicle collides with bicycle on slip road
07/07/2020	Slight	Daylight	Rain & Wind	Wet	Three vehicle collision due to road conditions
08/08/2020	Slight	Daylight	Raining	Dry	Vehicle collides with cyclist
14/09/2020	Slight	Darkness	Fine	Dry	Two vehicle collision
15/12/2020	Slight	Daylight	Fine	Wet	Vehicle collides with cyclist
26/04/2021	Slight	Daylight	Other	Dry	Two car collision pulling onto roundabout
22/06/2021	Slight	Daylight	Fine	Dry	Vehicle hits rear of other
25/07/2021	Slight	Daylight	Fine	Dry	Motorcycle rider comes off bike
18/07/2021	Slight	Daylight	Fine	Dry	Rear shunt
15/12/2021	Slight	Darkness	Fine	Dry	Rear shunt approaching roundabout
09/03/2022	Slight	Daylight	Fine	Dry	Collision while entering motorway on slip road
04/03/2023	Slight	Darkness	Fine	Dry	Drunk driver strikes vehicle
28/08/2023	Slight	Daylight	Fine	Dry	Two vehicle collision

Table 8.1 – M62 Junction 19 Accident Summary

8.1.8 **Figure 8.3** below is an image of the accident plot and then subsequently an analysis of road incidents reported at Junction 20 of the M62 is provided.

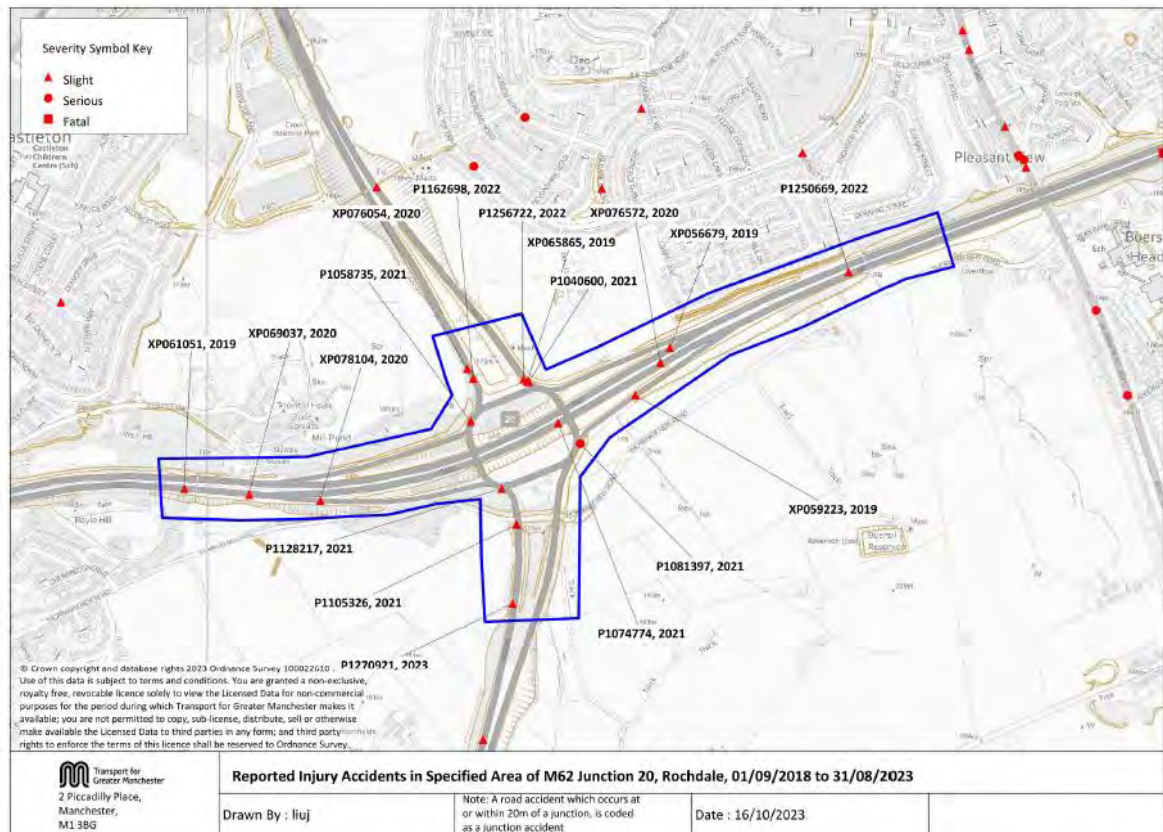


Figure 8.3 - M62 Junction 20 Accident Plot

8.1.9 According to the data provided there have been a total of 18 recorded accidents within the study area as is shown in **Appendix 7**, which in this instance comprises:

- A627 (M) – 7 accidents.
- M62, junction 20 eastbound – 1 accident.
- M62, junction 20 westbound – 7 accidents.
- M62, junction 20 roundabout – 3 accidents.

8.1.10 All recorded accidents identified in the data are detailed below in **Table 8.2**.

Date	Severity	Light Conditions	Weather	Road Conditions	Manoeuvre
11/05/2019	Slight	Daylight	Fine	Dry	Vehicle collides with barrier after losing control
12/07/2019	Slight	Daylight	Fine	Dry	Three vehicle shunt
29/08/2019	Slight	Darkness	Fine	Dry	Vehicle collides with rear of other
07/12/2019	Slight	Darkness	Rain	Wet	Drunken driver collides with vehicle
13/02/2020	Slight	Darkness	Rain	Wet	Vehicle collides as changes lane
13/10/2020	Slight	Daylight	Fine	Wet	Vehicle loses control and collides with car parked on hard shoulder
26/10/2020	Serious	Daylight	Rain & Wind	Wet	Four vehicle rear shunt
05/12/2020	Slight	Darkness	Fine	Dry	Vehicle collides with other due to distraction
19/04/2021	Slight	Daylight	Fine	Dry	Vehicle fails to stop at red light
30/05/2021	Slight	Daylight	Fine	Dry	Rear shunt
08/08/2021	Slight	Daylight	Rain	Wet	Driver loses control and hits other due to water in road
27/08/2021	Serious	Darkness	Fine	Dry	Vehicle loses control and collides with barrier
02/11/2021	Slight	Darkness	Rain	Wet	Vehicle collides with motorcycle
23/11/2021	Slight	Daylight	Fine	Dry	Vehicle changes direction last minute, colliding with other vehicle
14/03/2022	Slight	Darkness	Fine	Dry	Two vehicle collision
23/01/2022	Slight	Darkness	Fine	Dry	Rear shunt
07/12/2022	Slight	Darkness	Fine	Dry	Seven vehicle collision
22/12/2022	Slight	Darkness	Fine	Dry	Three vehicle collision

Table 8.2 – M62 Junction 20 Accident Summary

8.1.11 The data reviewed has not identified any untypical accidents.

- 8.1.12 The data reveals a number of contributing factors involved throughout the incidents. These include drunk driving, distraction, slippery road, careless driving, spray from other vehicles, travelling too fast for conditions and defective brakes. There are also no accident clusters.
- 8.1.13 The evidence shows that there are no particular engineering issues or problems with the road network or junction layouts.
- 8.1.14 It is considered that the proposals for a residential development will not have a detrimental impact on the characteristics and nature of the surrounding highway network or give rise to any road safety issues.

8.2 Road safety Summary

- 8.2.1 The evidence shows that there are no particular engineering issues or problems with the road network or junction layouts.
- 8.2.2 The data reviewed has demonstrated that there are no particular road safety issues in the vicinity of the site.
- 8.2.3 It is not considered that the proposals will unduly change the characteristics or nature of the surrounding highway network and as such will not have a detrimental impact on overall road safety.

9 CONCLUSIONS

9.1.1 Eddisons have been instructed by Kellen Homes to advise on the traffic and transport issues relating to a planning application for a proposed residential development on land at the former Baggs Yard Railway Sidings in Castleton.

9.1.2 A number of conclusions can be drawn from the report, namely:

- The proposed development will be accessed by safe and efficient vehicular access arrangements.
- The report has demonstrated that the proposed development would be highly accessible by non-car travel modes of such as walking, cycling and public transport.
- The proposals will be supported by a Travel Plan to reduce the need to travel by the private car.
- The proposals will not have a severe impact on the local highway network; and
- There is no evidence to suggest that the proposals would have an adverse effect on road safety or the number of accidents in the vicinity.

9.1.3 It can therefore be concluded that the proposals are acceptable in transport and highway terms.

PLANS

PLAN 1



SITE LOCATION

CLIENT:

KELLEN HOMES

DRAWING TITLE:

**CASTLETON, CORUS RAILWAY SIDINGS
SITE LOCATION**

DRAWN:

LG

DATE:

15.04.21

CHECKED:

SM

DATE:

15.04.21

SCALES:

NTS @ A4

Croft Transport Planning & Design
340 Deansgate
Manchester
M3 4LY

Email: info@crofts.co.uk
Tel: 0161 837 7380

Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:

3334-01

REVISION:

-

Eddisons | Incorporating
Croft

~~MP 0.5~~

TFGM Safeguarding
boundary

Issues

- | Legend | |
|---|--|
|  | Indicates 1.6m high feature fence |
|  | Indicates 1.6m high split divisional screen fence |
|  | Indicates proposed tree planting subject to a landscape design and specification. |
|  | Indicates bin collection points. |
|  | Indicates principle entrance door to dwelling. |
|  | Indicates secondary entrance door to dwelling |
|  | Indicates application site boundary. |
|  | Indicates parcel of land allocated to East Lancashire Railway (Outline planning app boundary). |
|  | Indicates affordable units |
|  | Indicates substation |
|  | Indicates pumping station |

A	03.11.23	Amended entrance from heywood road	bp
Rev	Date	Amend	initials

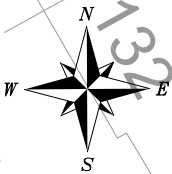
Development	
CASTLETON SIDINGS	
Location	
ROCHDALE	
Drawing Title	
CAD Site Layout	
Job Number	Drawing Number
KH003	KH003-A-100
Revision	Scale
A	1:500 - A0
Drawn By	Date
BP	13.01.22
Checked by	Date Checked
RC	-

1st Floor, 103 Dalton Avenue, Birchwood Park,
Warrington WA3 6YE
T: 01925 363108 W: www.kellenhomes.com



NORTH SOUTH ARIEL VIEW

PLAN 3



NOTES

PLAN 3

THIS IS NOT A CONSTRUCTION DRAWING AND IS FOR INDICATIVE PURPOSES ONLY.
THE DRAWING WILL BE SUBJECT TO CHANGE FOLLOWING LOCAL AUTHORITY REVIEW AND CONFIRMATION OF PUBLIC HIGHWAY AND THIRD PARTY LAND BOUNDARIES.

INDICATIVE SITE BOUNDARY

DENOTES NEW KERBS

REV	DETAILS	DRAWN	CHECKED	DATE
-	-	-	-	-

CLIENT:

KELLEN HOMES

PROJECT:

CASTLETON RAILWAY SERVICES

DRAWING TITLE:

PROPOSED SITE ACCESS ARRANGEMENTS

SCALES:

1:250 @ A3

DRAWN:	GM	CHECKED:	LW	DATE:	FEB 23
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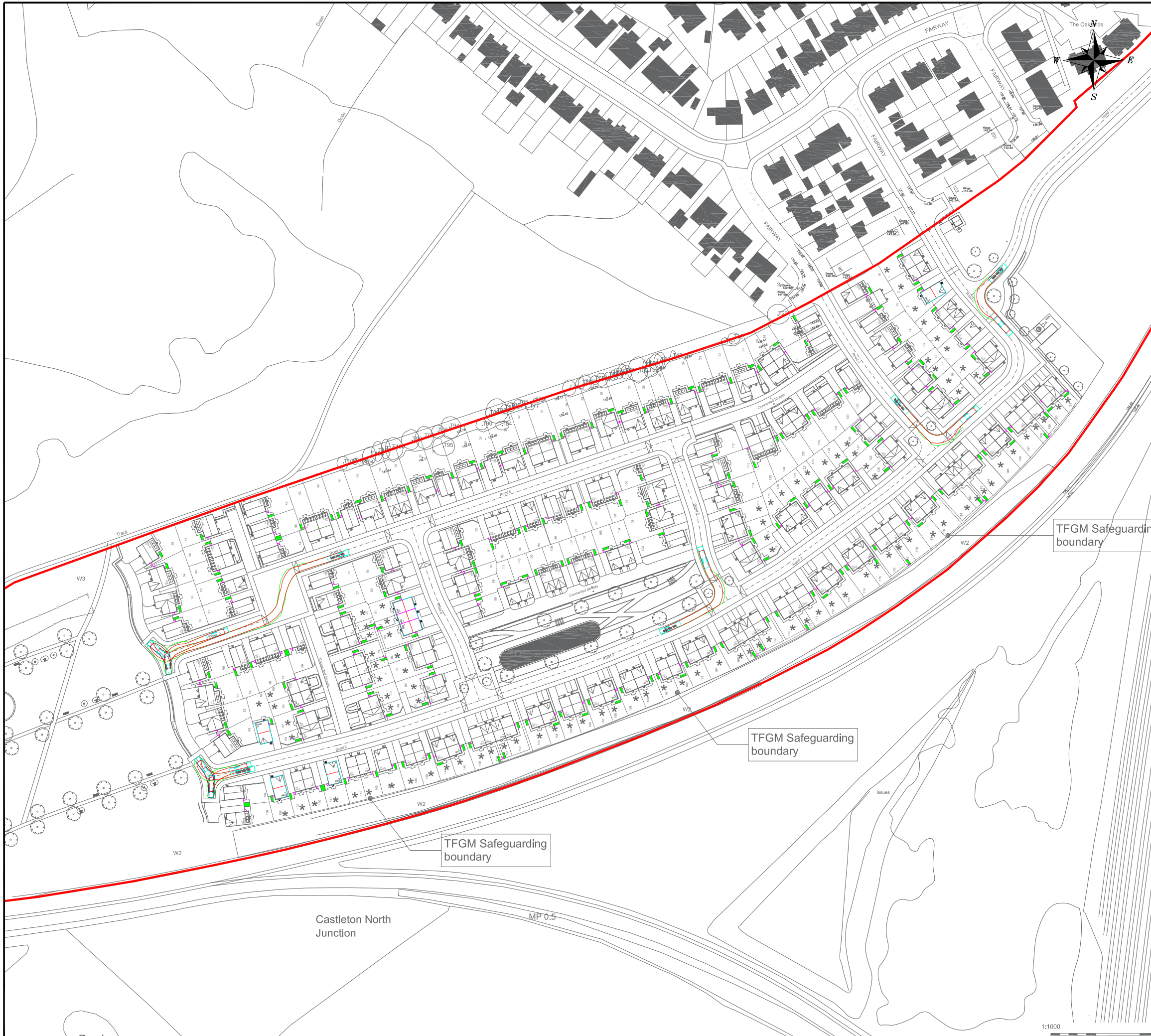
Croft Transport Planning & Design
340 Deansgate
Manchester
M3 4LY

Email: info@crofts.co.uk
Tel: 0161 837 7380
Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:	3334-F01	REVISION:	A
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Z:\projects\3334 Castleton, Corus Railway Sidings\CAD\Croft Drawings\3334-SP01 Rev G.dwg



NOTES

PLAN 4

9.925

1.863.91.4

Rochdale Refuse Vehicle

Overall Length9.925m

Overall Width2.450m

Overall Body Height3.814m

Min Body Ground Clearance0.366m

Track Width2.450m

Lock to lock time4.00s

Kerb to Kerb Turning Radius9.500m

Rochdale Refuse Vehicle

REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT:

KELLEN HOMES

PROJECT:

CASTLETON RAILWAY SIDINGS

DRAWING TITLE:

SWEPT PATH ANALYSIS

SCALES:

1:1000 @ A3

DRAWN:	LG	CHECKED:	LW	DATE:	NOV 23
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Eddisons

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Manchester

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Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:	3334-SP01	REVISION:	G
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Eddisons



PLAN 5

NOTES

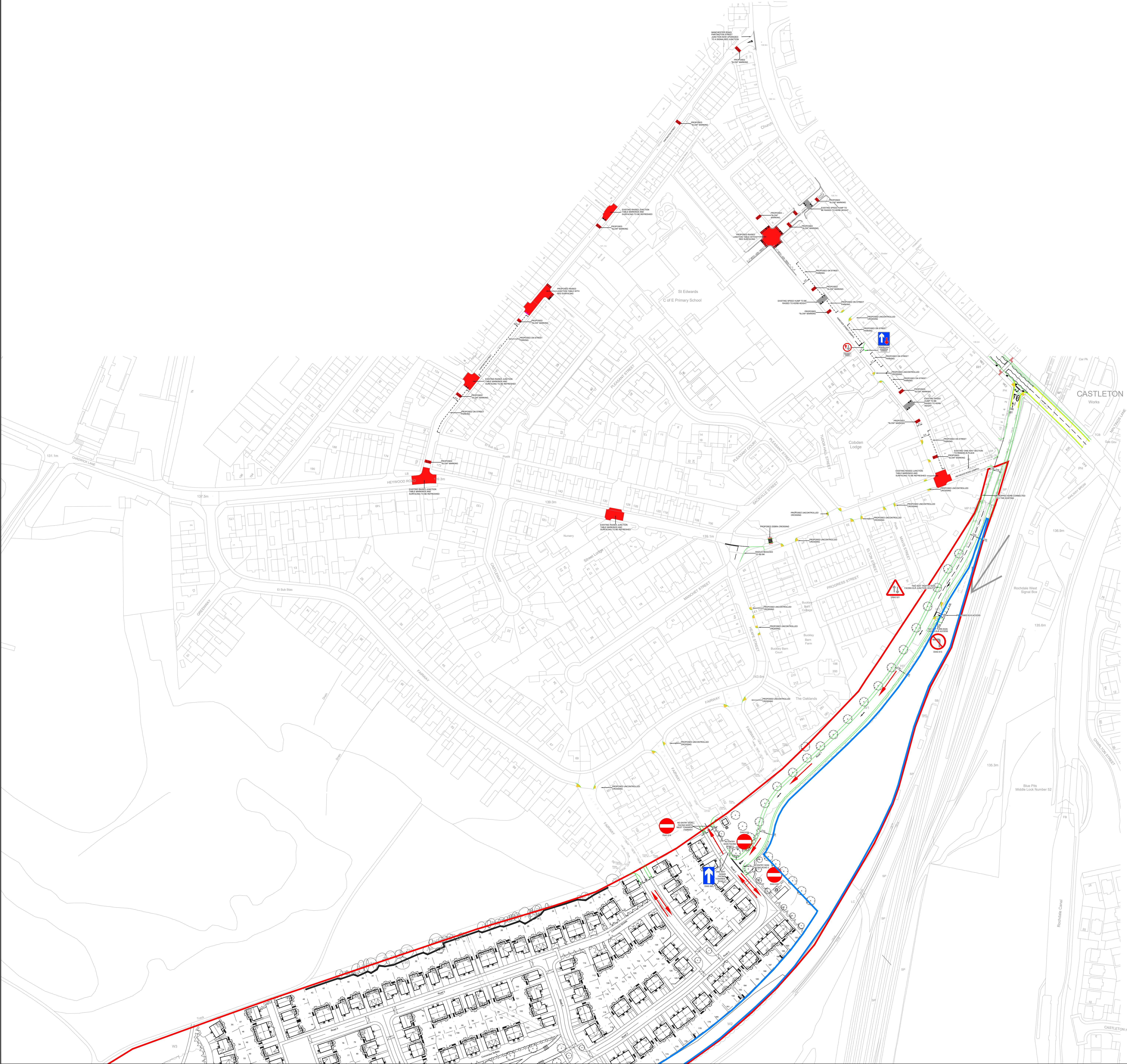
THIS IS NOT A CONSTRUCTION DRAWING AND IS FOR INDICATIVE PURPOSES ONLY. THE DRAWING WILL BE SUBJECT TO CHANGE FOLLOWING LOCAL AUTHORITY REVIEW AND CONFIRMATION OF PUBLIC HIGHWAY AND THIRD PARTY LAND BOUNDARIES.

- INDICATIVE SITE BOUNDARY
- DENOTES NEW KERBS
- EXISTING ADOPTED HIGHWAY

LOCAL AUTHORITY: ROCHDALE BOROUGH COUNCIL
TOTAL AREA OF SITE: 10.9ha



SITE LAYOUT NTS



C A	ADDITIONAL TRAFFIC CALMING SHOWN UPDATED TO LA COMMENTS UPDATED IN LINE WITH LATEST REV OF P10	LR MR JC	JC JC JC	FEB 24 DEC 23 DEC 23
REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT: KELLEN HOMES

PROJECT: CASLETON RAILWAY SERVICES

DRAWING TITLE: PROPOSED TRAFFIC CALMING ARRANGEMENT

SCALES: 1:1000 @ A0

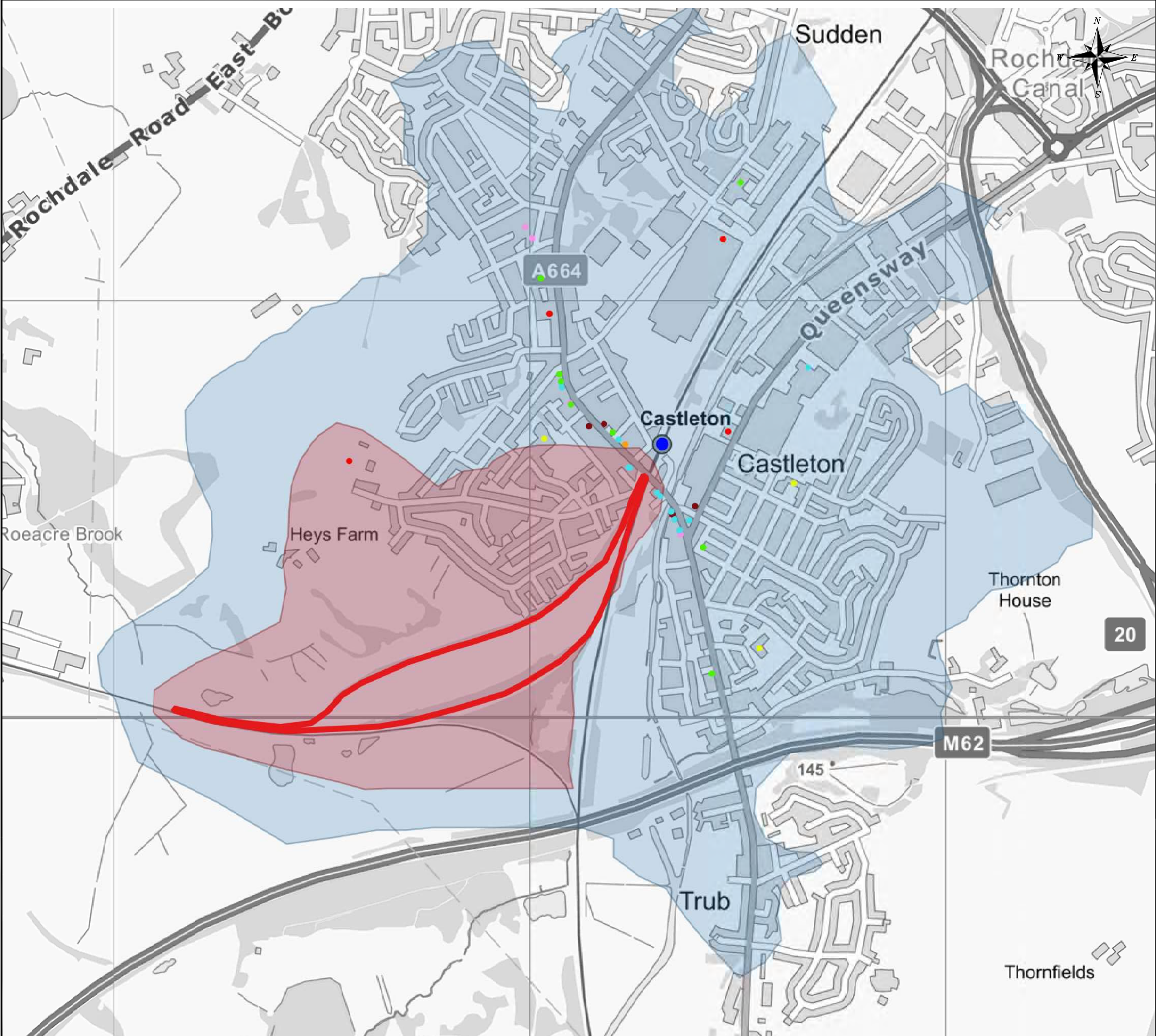
DRAWN: SL CHECKED: JC DATE: DEC 2023

Eddisons
340 Deansgate
Manchester
M3 4LY

Email: info@eddisons.co.uk
Tel: 0161 837 7350
Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER: 3334-F04 REVISION: C

Eddisons



NOTES

PLAN 5

Site Location

800m Pedestrian Catchment

2km Pedestrian Catchment

Nearest Bus Stops

Train Station

Cafe/Takeaway/Public House

Education

Healthcare/Medical

Post Office

Retail

Sport/Leisure

PLAN 6

REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT:

KELLEN HOMES

PROJECT:

CASTLETON, CORUS RAILWAY SIDINGS

DRAWING TITLE:

800M & 2KM PEDESTRIAN CATCHMENT WITH AMENITIES

SCALES:

NTS @ A3

DRAWN:	LG	CHECKED:	SM	DATE:	APR 21
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Croft Transport Planning & Design
340 Deansgate
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Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:	3334-03	REVISION:	-
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Eddisons

Incorporating
Croft

FIGURES

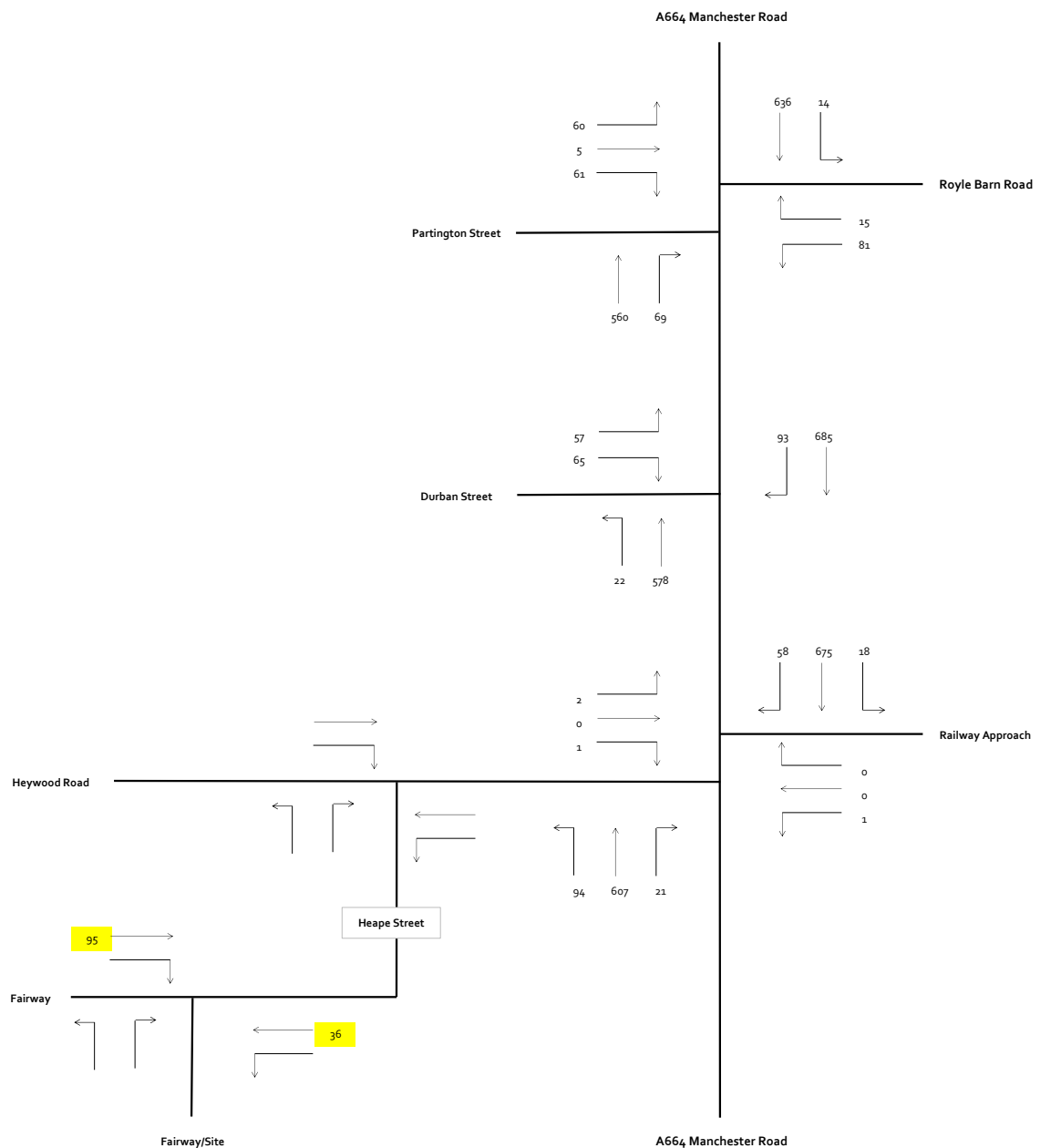


Figure 1 2019 Surveyed Flows - Weekday AM Peak (0800 - 0900)

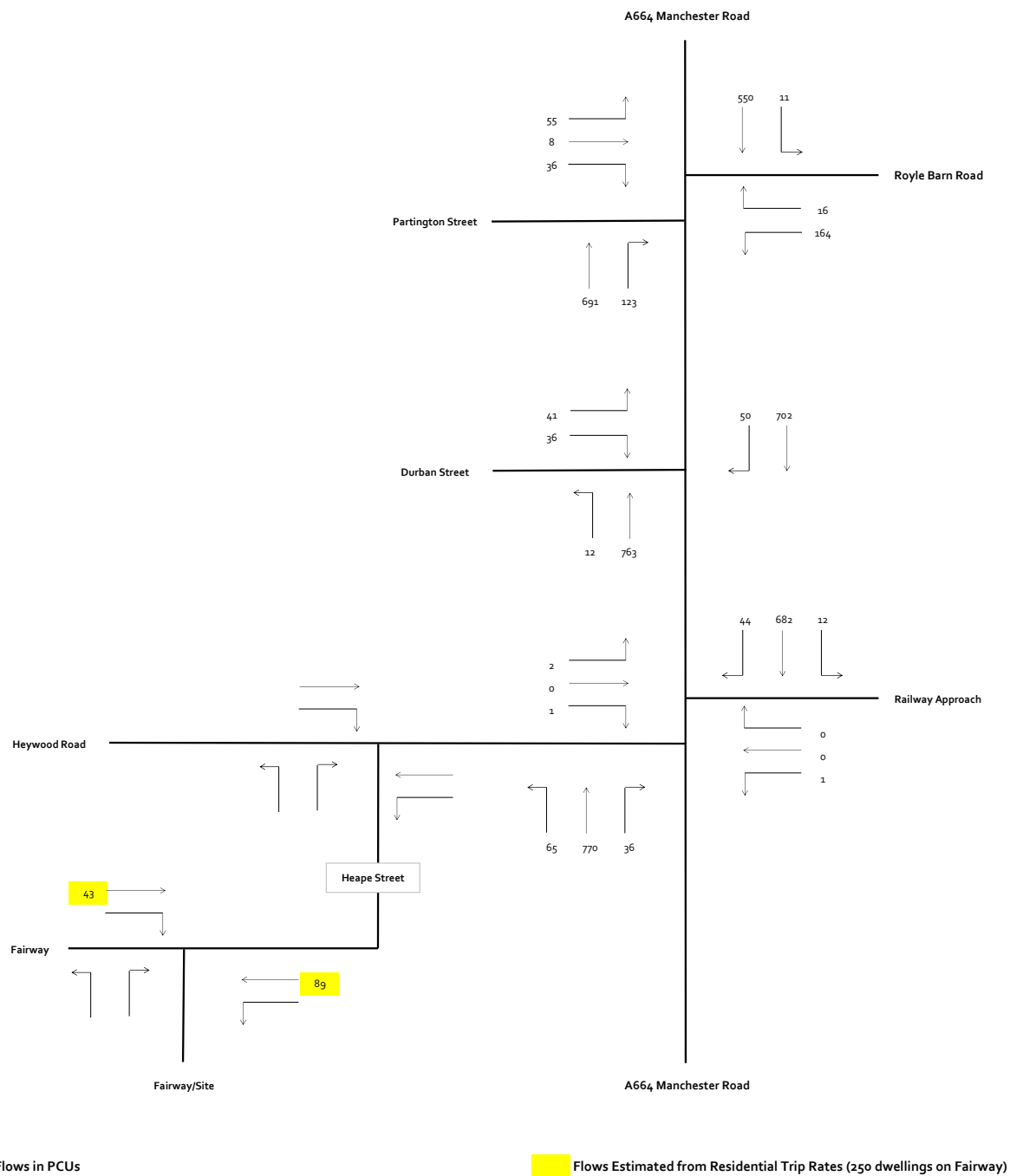


Figure 2 2019 Surveyed Flows - Weekday PM Peak (1700 - 1800)



Growth Factor 2019 - 2025 = 1.0704

Figure 3 2025 Growthed Flows - Weekday AM Peak (0800 - 0900)

Eddisons



Growth Factor 2019 - 2025 = 1.0680

Figure 4 2025 Growthed Flows - Weekday PM Peak (1700 - 1800)

Eddisons

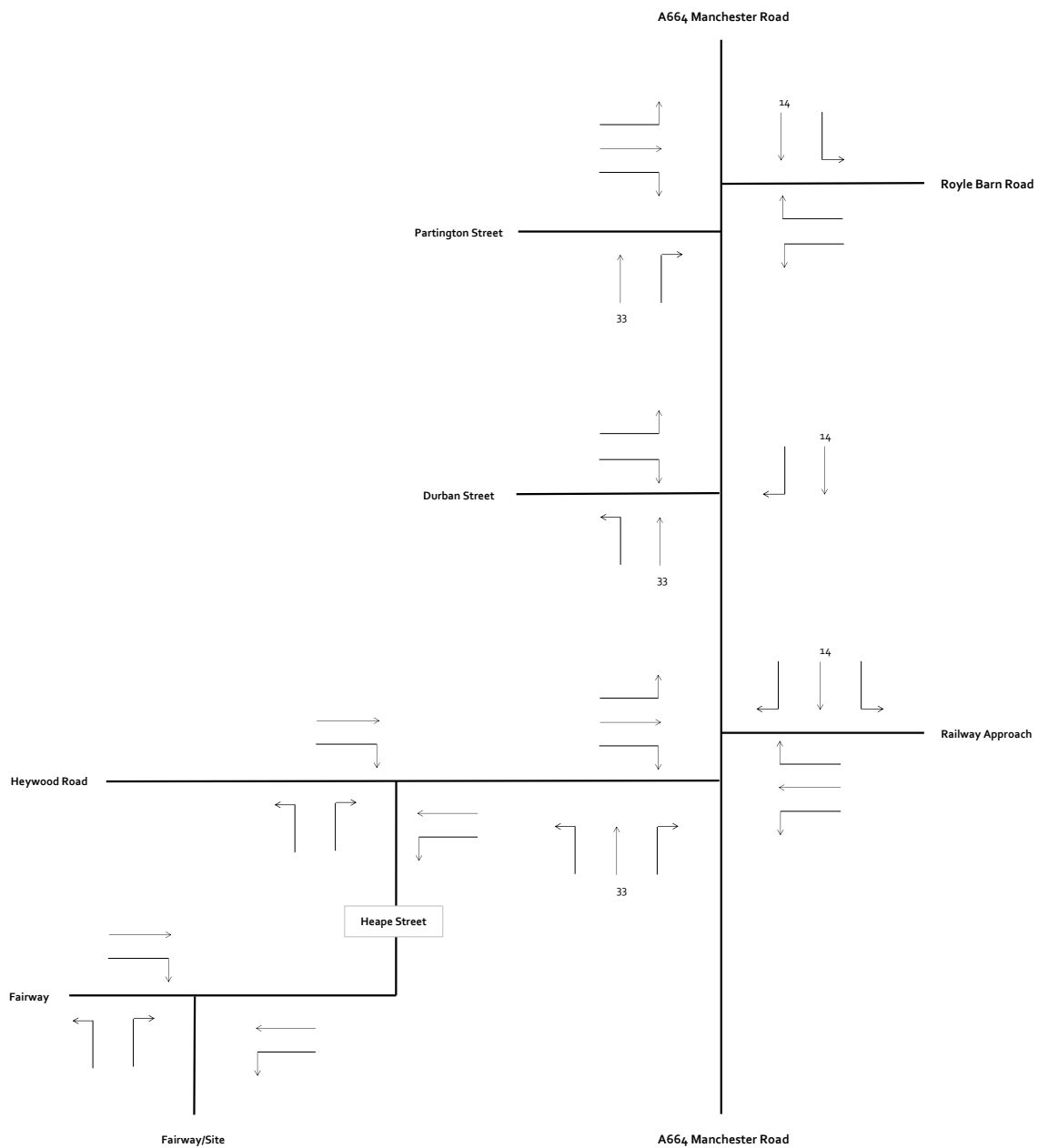


Figure 5 Committed Development Flows - Trub Farm Masterplan (App Ref:11/D54610) - Weekday AM Peak (0800 - 0900)

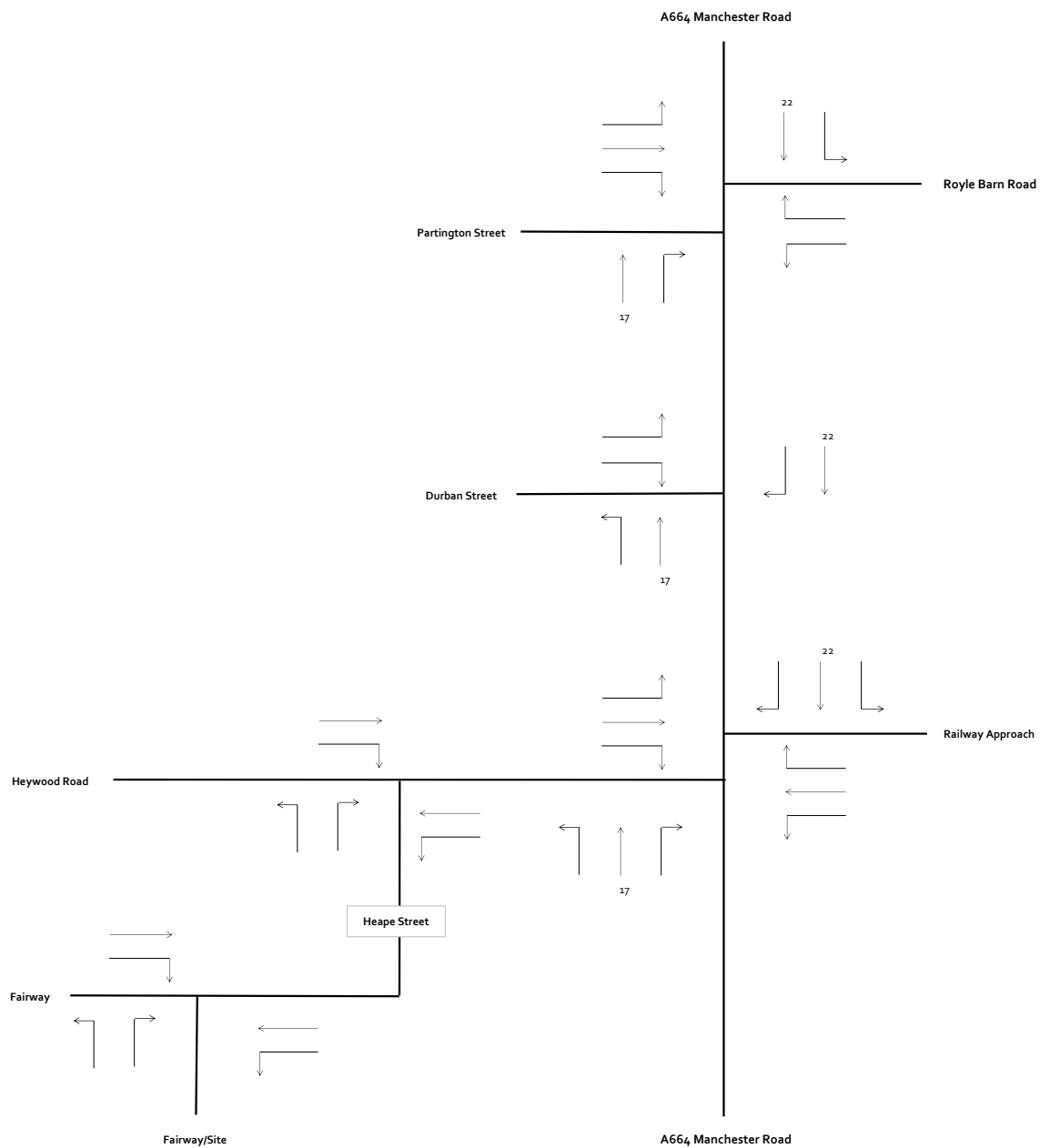


Figure 6 Committed Development Flows - Trub Farm Masterplan (App Ref:11/D54610) - Weekday PM Peak (1700 - 1800)



Figure 7 2025 Base Flows - Weekday AM Peak (0800 - 0900)



Figure 8 2025 Base Flows - Weekday PM Peak (1700 - 1800)

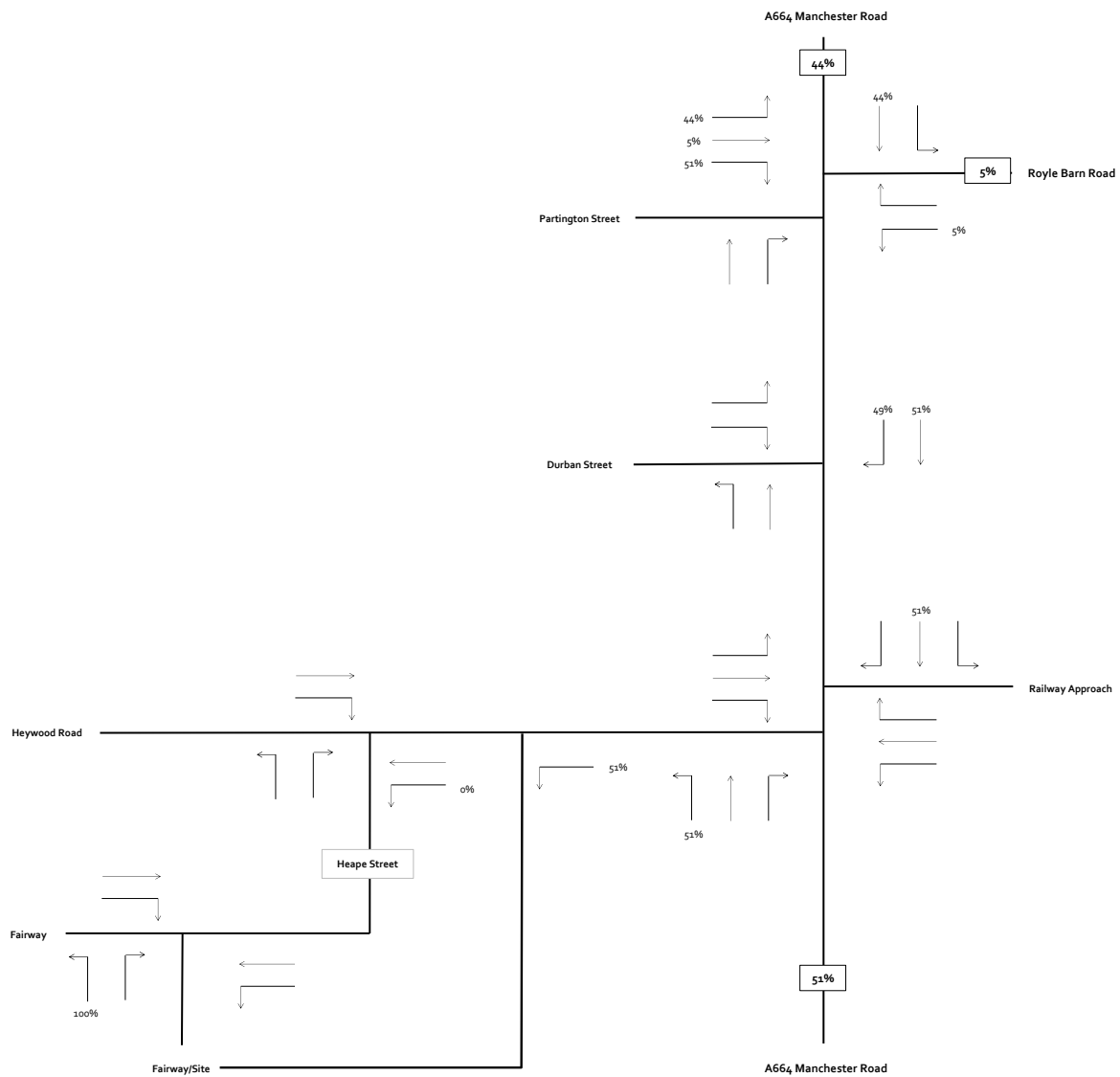


Figure 9 Proposed Residential Distribution

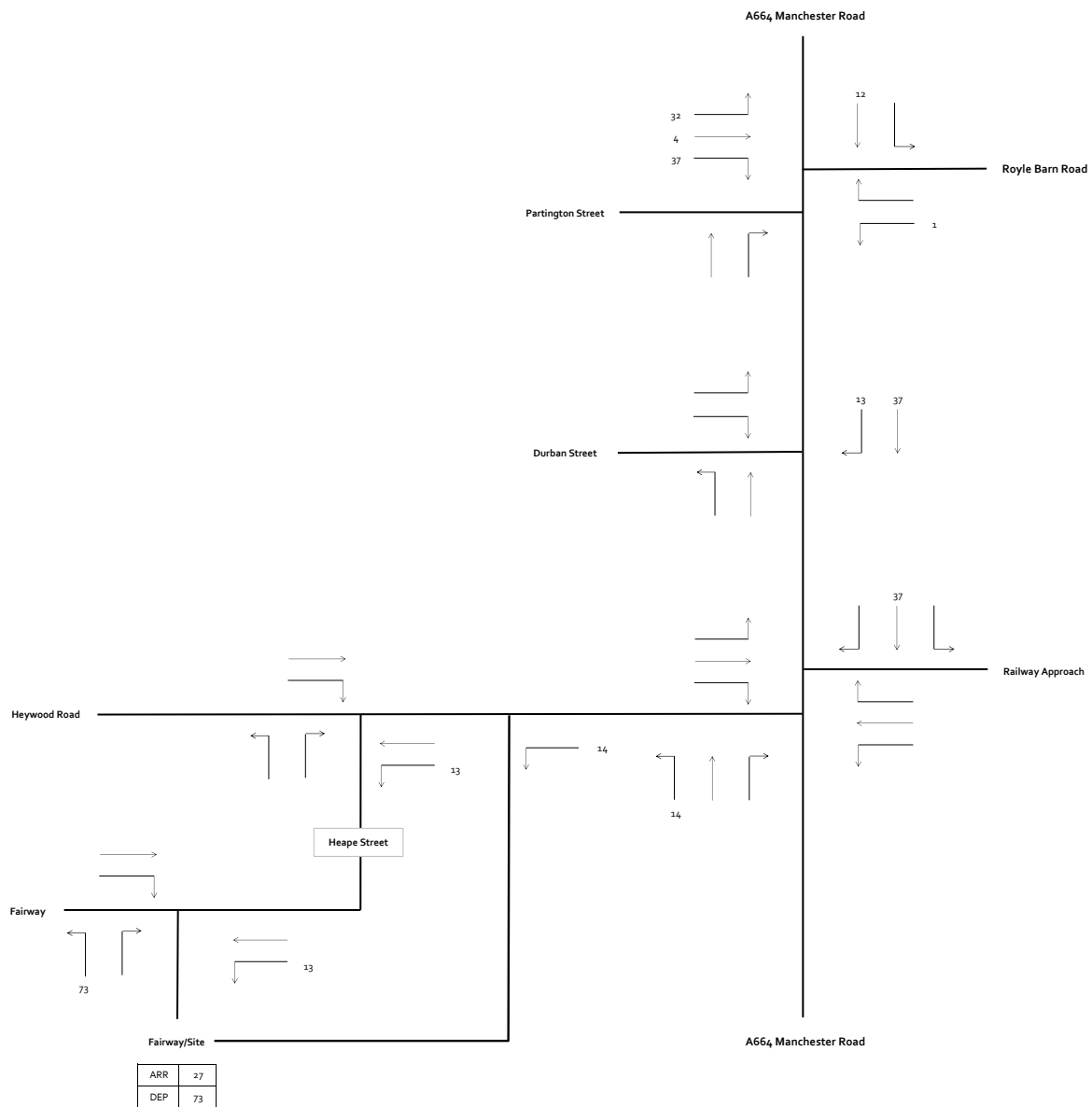


Figure 10 Proposed 191-Unit Development Flows - Weekday AM Peak - (With Heywood Road Entry)

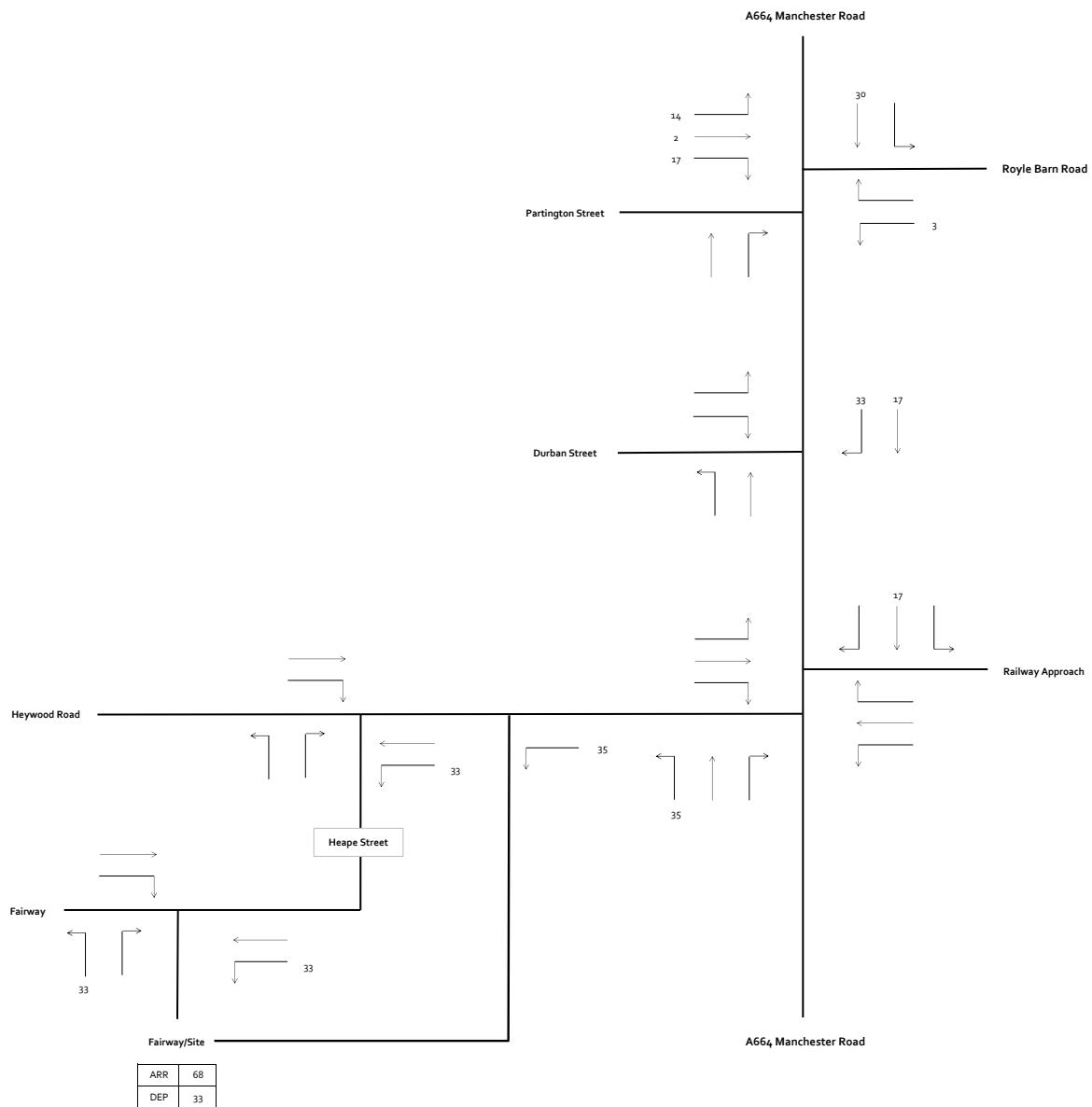


Figure 11 Proposed 191-Unit Development Flows - Weekday PM Peak - (With Heywood Road Entry)

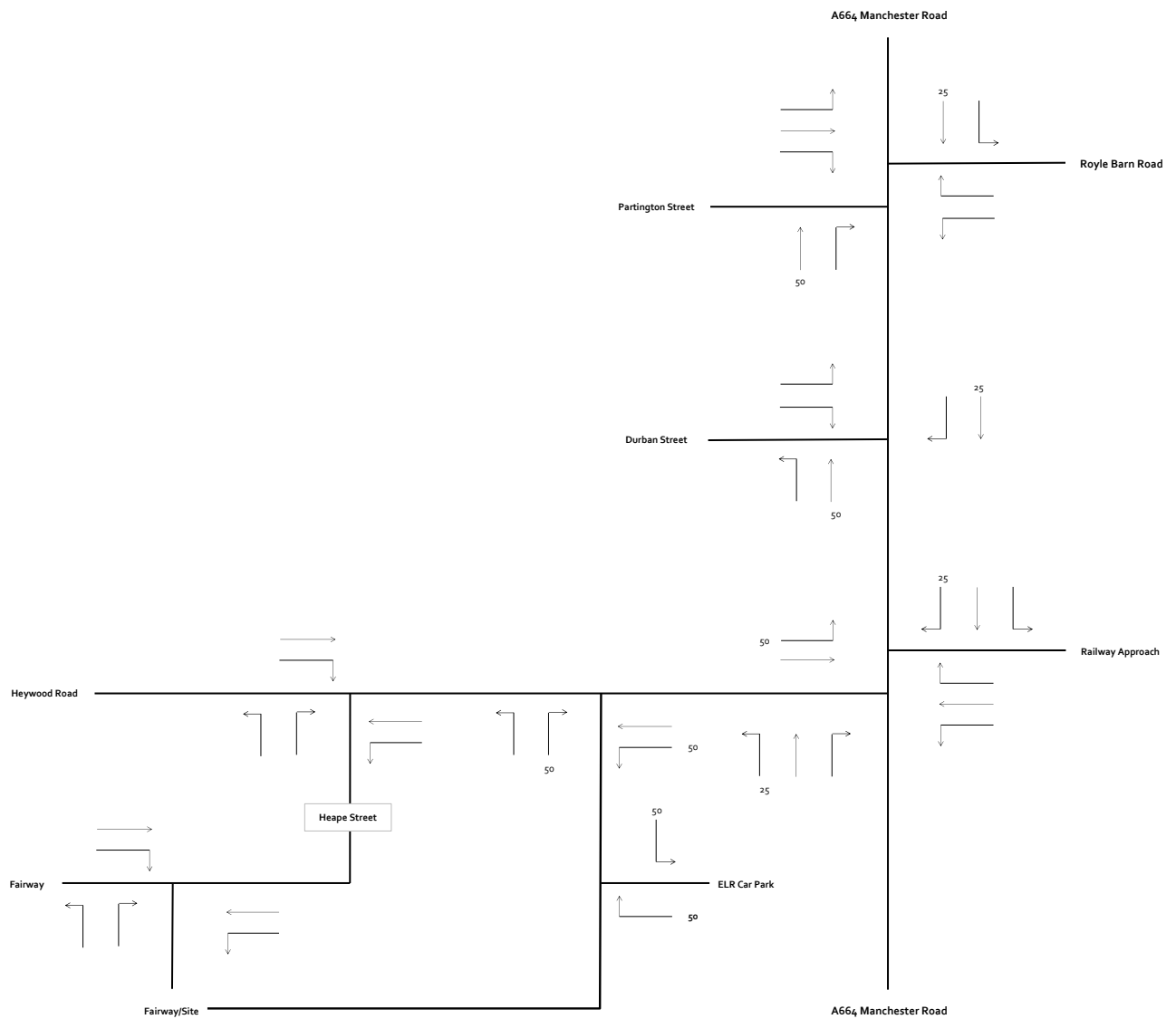


Figure 12 ELR Traffic Flows - Weekday AM Peak (0800 - 0900)

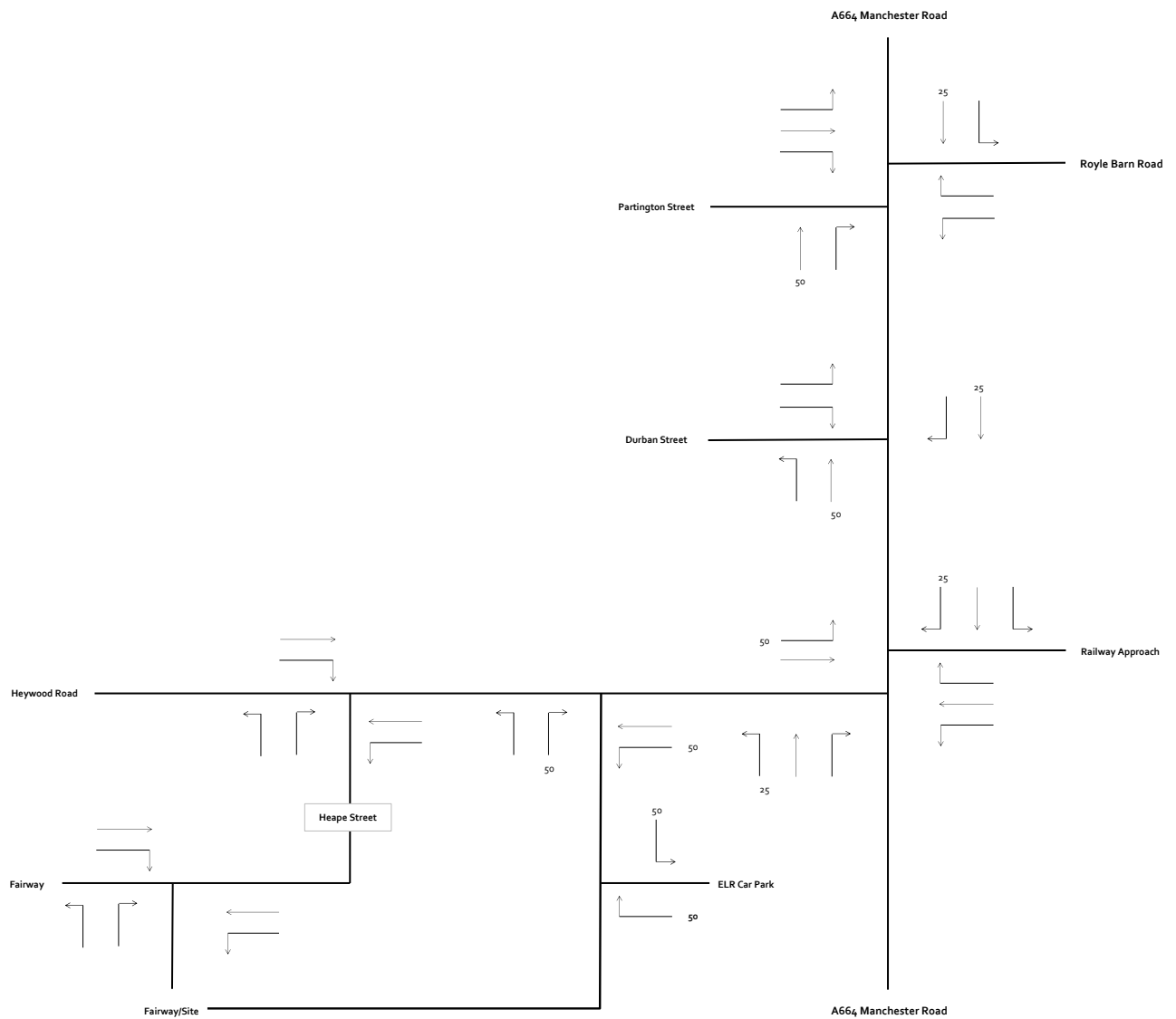


Figure 13 ELR Traffic Flows - Weekday PM Peak (1700 - 1800)

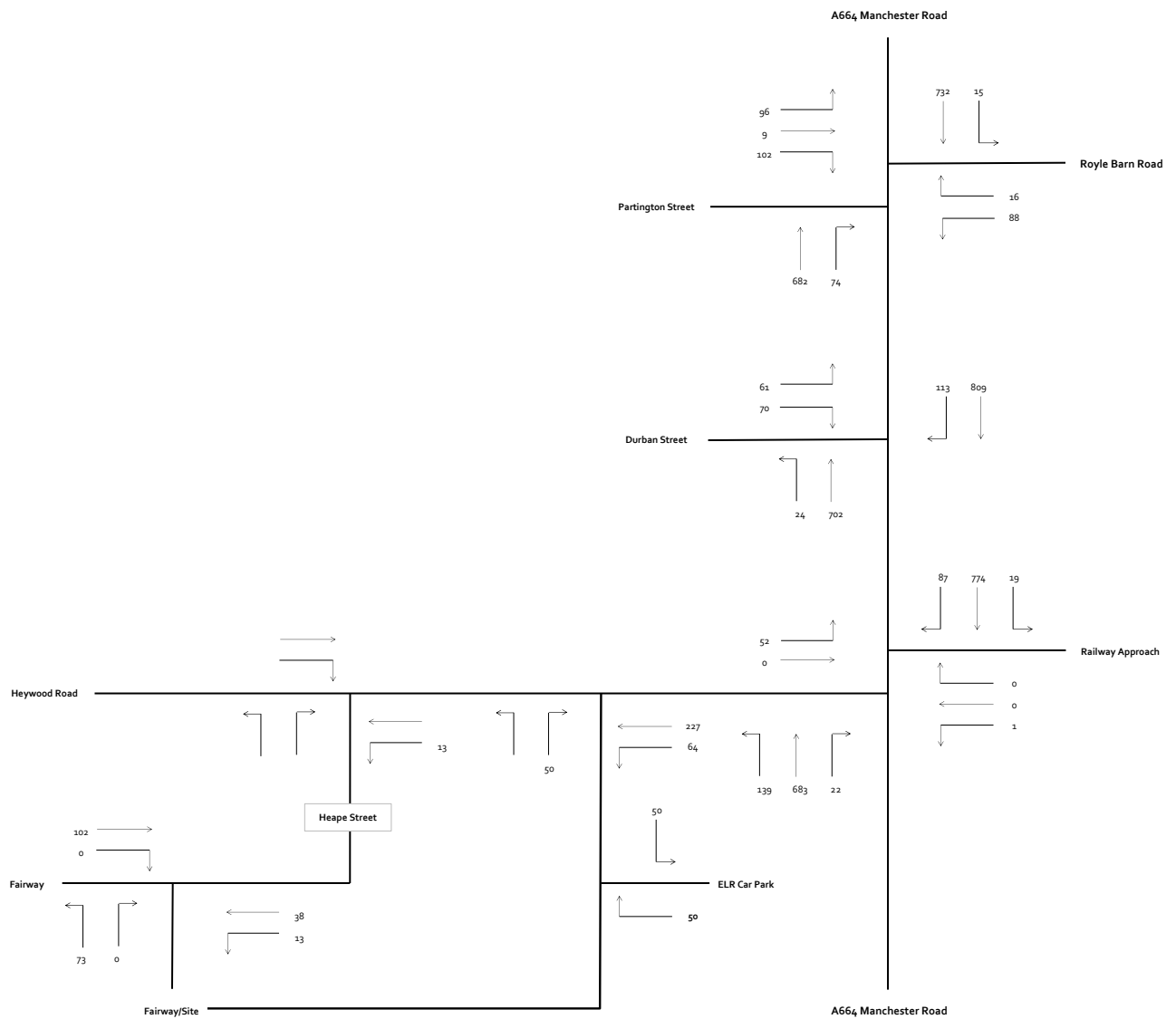


Figure 14 2025 With Development Flows - Weekday AM Peak (0800 - 0900)

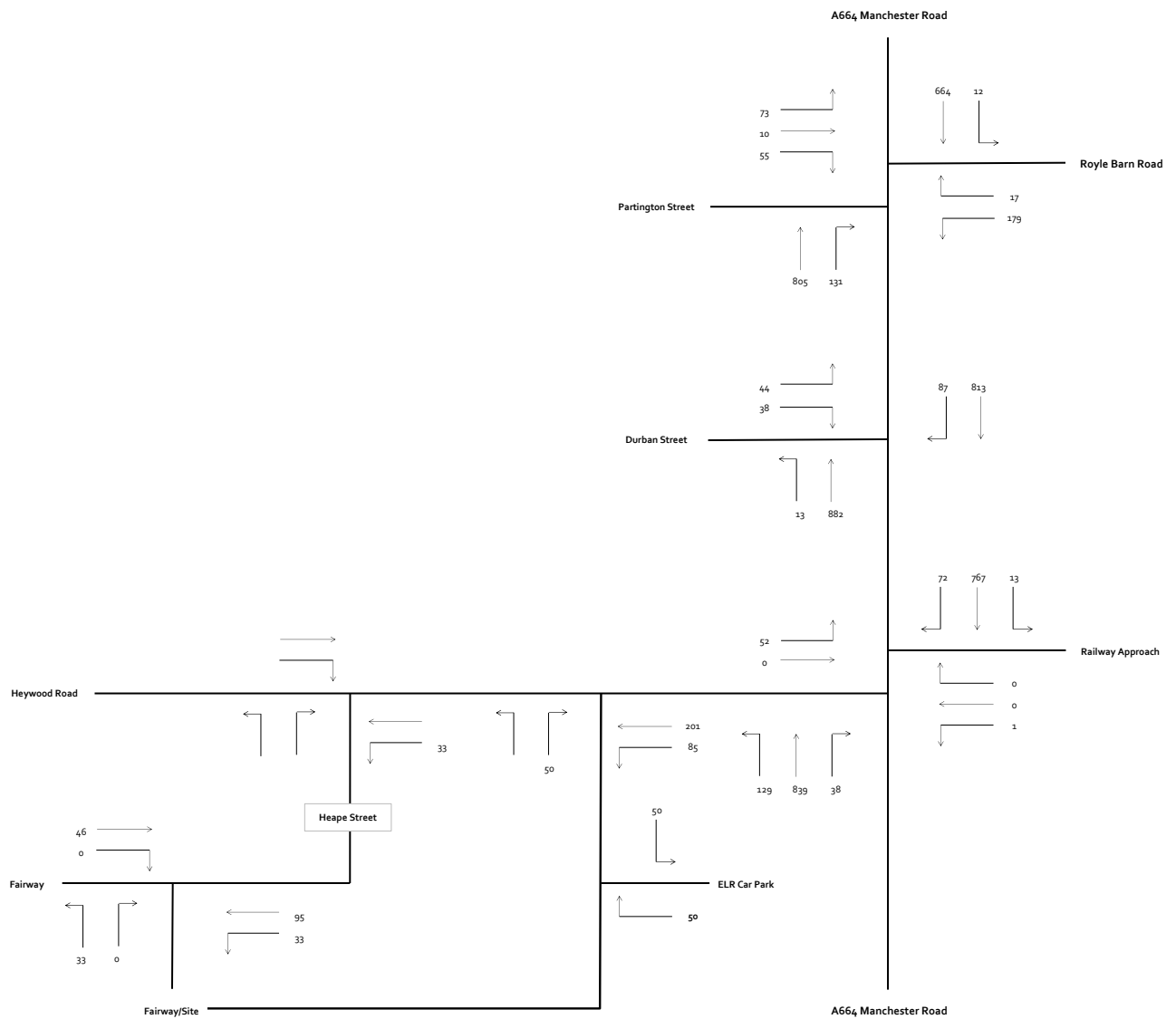


Figure 15 2025 With Development Flows - Weekday PM Peak (1700 - 1800)

APPENDICES

APPENDIX 1

Bus Service Times and Frequencies

Serv. No.	Route	Monday - Friday			Saturday			Sunday	Weekday		Saturday		Sunday	
		<08:00	08:00-17:00	17:00>	<08:00	08:00-17:00	17:00>		Start	Stop	Start	Stop	Start	Stop
17	Shudehill Interchange - Edenfield Road	15 Services	10 mins	34 Services	8 Services	10 mins	27 Services	15 mins	04:59	00:18	05:21	00:18	06:18	00:18
	Edenfield Road to Shudehill Interchange	17 Services	10 mins	30 Services	9 Services	10 mins	29 Services	15 mins	00:14	23:44	00:14	23:45	00:16	23:46
17A	Shudehill Interchange to Rochdale Interchange	1 Service	-	-	-	-	-	-	05:37	05:37	-	-	-	-
	Rochdale Interchange to Shudehill Interchange	1 Service	-	-	-	-	-	-	05:29	05:29	-	-	-	-
880	Edenfield Road to St Cuthbert's RC High School	1 Service	-	-	-	-	-	-	07:55	07:55	-	-	-	-
	St Cuthbert's RC High School to Edenfield Road	-	1 Service	-	-	-	-	-	15:23	15:23	-	-	-	-
881	Chesham Avenue to Oulder Hill Leadership Academy	1 Service	-	-	-	-	-	-	07:32	07:32	-	-	-	-
	Oulder Hill Leadership Academy to Chesham Avenue	-	1 Service	-	-	-	-	-	15:37	15:37	-	-	-	-

APPENDIX 2

TRICS Output

Calculation Reference: AUDIT-851401-210420-0423

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	2 days
	HF HERTFORDSHIRE	1 days
	KC KENT	2 days
	SC SURREY	1 days
	WS WEST SUSSEX	3 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	NF NORFOLK	3 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
11	SCOTLAND	
	FA FALKIRK	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
 Actual Range: 110 to 297 (units:)
 Range Selected by User: 100 to 300 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 08/10/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	4 days
Tuesday	1 days
Wednesday	3 days
Thursday	3 days
Friday	4 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	13 days
Directional ATC Count	2 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	13

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	14
Out of Town	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village,

Secondary Filtering selection:

Use Class:

C3 15 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	4 days
10,001 to 15,000	5 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	10 days
1.6 to 2.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	8 days
No	7 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 15 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DV-03-A-02 MILLHEAD ROAD HONITON	HOUSES & BUNGALOWS	DEVON
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 116 Survey date: FRIDAY 25/09/15		
2	ES-03-A-03 SHEPHAM LANE POLEGATE	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 212 Survey date: MONDAY 11/07/16		
3	ES-03-A-04 NEW LYDD ROAD CAMBER	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 134 Survey date: FRIDAY 15/07/16		
4	FA-03-A-02 ROSEBANK AVENUE & SPRINGFIELD DRIVE FALKIRK	MIXED HOUSES	FALKIRK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 161 Survey date: WEDNESDAY 29/05/13		
5	HF-03-A-03 HARE STREET ROAD BUNTINGFORD	MIXED HOUSES	HERTFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 160 Survey date: MONDAY 08/07/19		
6	KC-03-A-04 KILN BARN ROAD AYLESFORD DITTON	SEMI-DETACHED & TERRACED	KENT
	Edge of Town Residential Zone Total No of Dwellings: 110 Survey date: FRIDAY 22/09/17		
7	KC-03-A-07 RECVLVER ROAD HERNE BAY	MIXED HOUSES	KENT
	Edge of Town Residential Zone Total No of Dwellings: 288 Survey date: WEDNESDAY 27/09/17		
8	NF-03-A-06 BEAUFORT WAY GREAT YARMOUTH BRADWELL	MIXED HOUSES	NORFOLK
	Edge of Town Residential Zone Total No of Dwellings: 275 Survey date: MONDAY 23/09/19		
9	NF-03-A-07 SILFIELD ROAD WYMONDHAM	MIXED HOUSES & FLATS	NORFOLK
	Edge of Town Out of Town Total No of Dwellings: 297 Survey date: FRIDAY 20/09/19		
			Survey Type: DIRECTIONAL ATC COUNT

LIST OF SITES relevant to selection parameters (Cont.)

10	NF-03-A-16	MIXED HOUSES & FLATS	NORFOLK
	NORWICH COMMON		
	WYMONDHAM		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	138	
	Survey date: TUESDAY	20/10/15	Survey Type: DIRECTIONAL ATC COUNT
11	SC-03-A-05	MIXED HOUSES	SURREY
	REIGATE ROAD		
	HORLEY		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	207	
	Survey date: MONDAY	01/04/19	Survey Type: MANUAL
12	ST-03-A-07	DETACHED & SEMI-DETACHED	STAFFORDSHIRE
	BEACONSIDE		
	STAFFORD		
	MARSTON GATE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	248	
	Survey date: WEDNESDAY	22/11/17	Survey Type: MANUAL
13	WS-03-A-04	MIXED HOUSES	WEST SUSSEX
	HILLS FARM LANE		
	HORSHAM		
	BROADBRIDGE HEATH		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	151	
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL
14	WS-03-A-08	MIXED HOUSES	WEST SUSSEX
	ROUNDSTONE LANE		
	ANGMERING		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	180	
	Survey date: THURSDAY	19/04/18	Survey Type: MANUAL
15	WS-03-A-09	MIXED HOUSES & FLATS	WEST SUSSEX
	LITTLEHAMPTON ROAD		
	WORTHING		
	WEST DURRINGTON		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	197	
	Survey date: THURSDAY	05/07/18	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	192	0.098	15	192	0.307	15	192	0.405
08:00 - 09:00	15	192	0.142	15	192	0.381	15	192	0.523
09:00 - 10:00	15	192	0.154	15	192	0.184	15	192	0.338
10:00 - 11:00	15	192	0.133	15	192	0.163	15	192	0.296
11:00 - 12:00	15	192	0.129	15	192	0.151	15	192	0.280
12:00 - 13:00	15	192	0.167	15	192	0.156	15	192	0.323
13:00 - 14:00	15	192	0.172	15	192	0.162	15	192	0.334
14:00 - 15:00	15	192	0.170	15	192	0.207	15	192	0.377
15:00 - 16:00	15	192	0.284	15	192	0.175	15	192	0.459
16:00 - 17:00	15	192	0.295	15	192	0.181	15	192	0.476
17:00 - 18:00	15	192	0.357	15	192	0.172	15	192	0.529
18:00 - 19:00	15	192	0.303	15	192	0.190	15	192	0.493
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.404			2.429			4.833

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

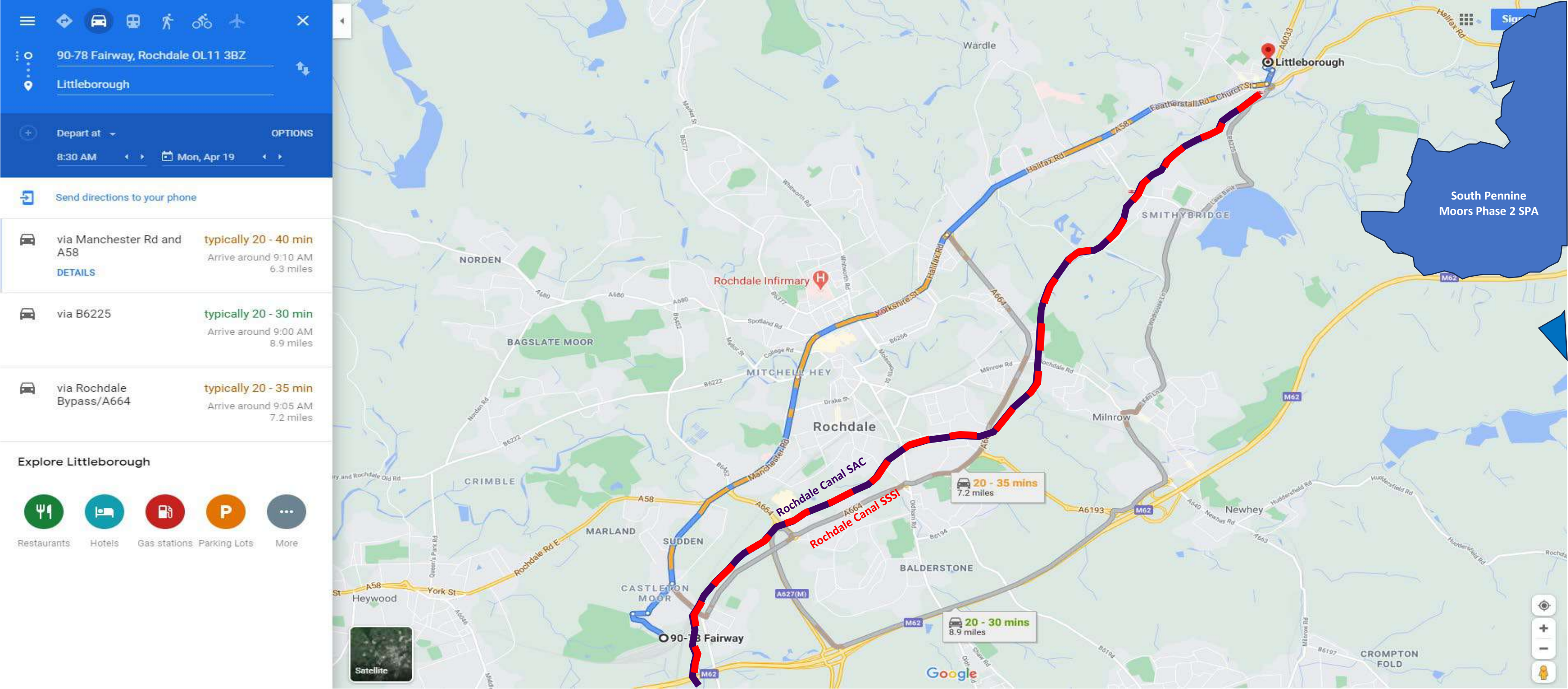
Trip rate parameter range selected: 110 - 297 (units:)
 Survey date range: 01/01/13 - 08/10/20
 Number of weekdays (Monday-Friday): 19
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 3
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

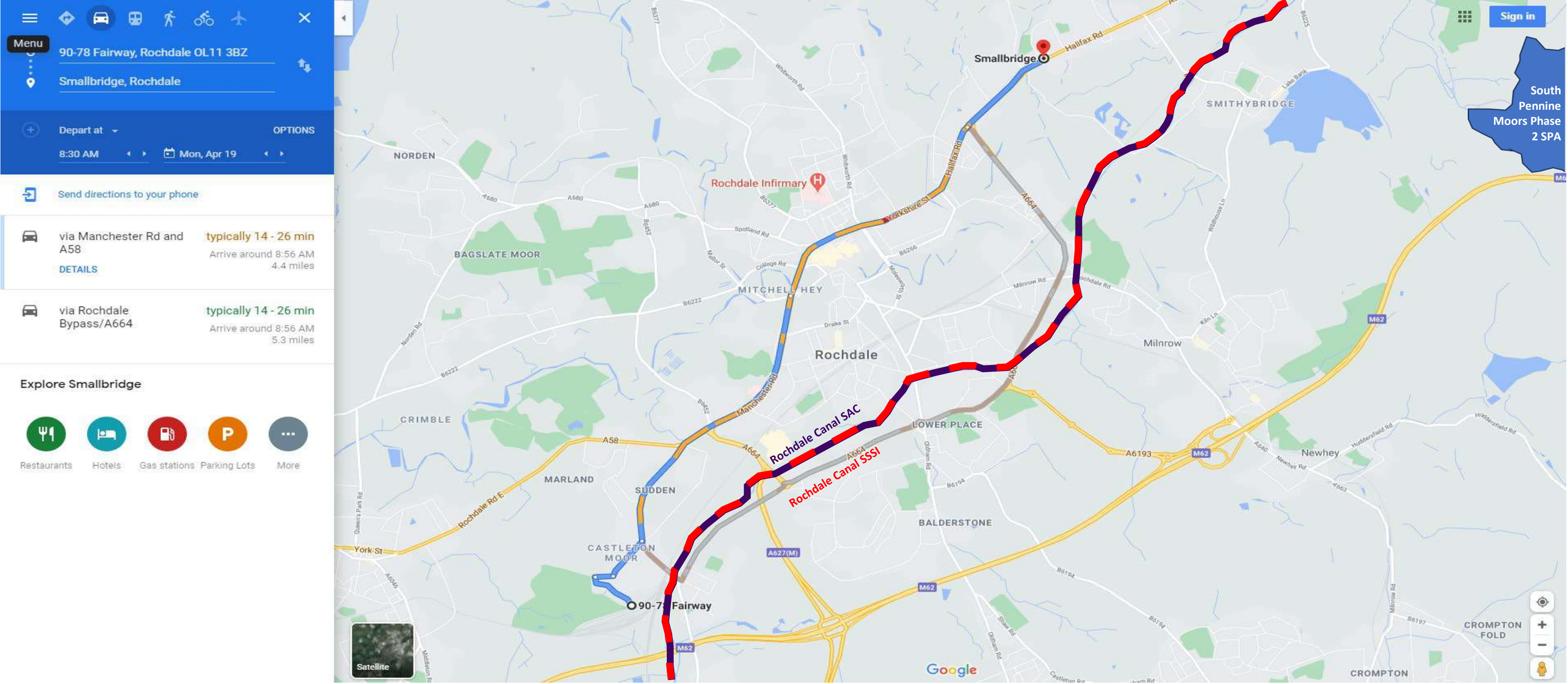
APPENDIX 3

CENSUS data

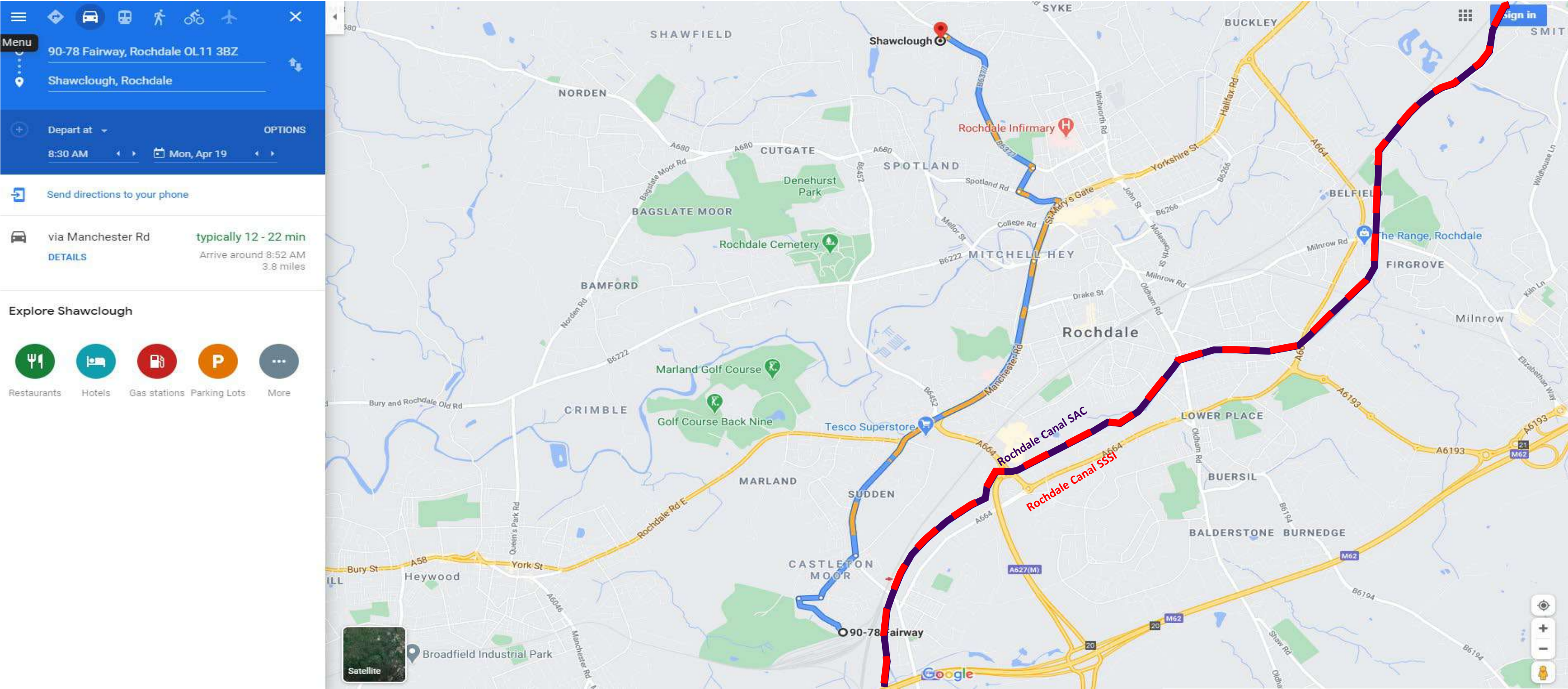
MSOA	Distribution Route				SAC/SSSI/SPA					
	A664 Manchester Road (North)	A664 Manchester Road (South)	Royal Barn Road	Queensway	Rochdale Canal SAC	Rochdale Canal SSSI	Manchester Mosses SAC	Holcroft Moss SSSI	Peak District Moors (South Pennine Moors Phase 1) SPA	South Pennine Moors Phase 2 SPA
Rochdale 001	0.61%	0.00%	0.00%	0.61%						
Rochdale 004	0.54%	0.00%	0.00%	0.54%						
Rochdale 005	2.11%	0.00%	0.00%	0.00%						
Rochdale 008	1.53%	0.00%	0.00%	1.53%	18	18				
Rochdale 009	2.58%	0.00%	0.00%	0.00%						
Rochdale 010	14.59%	0.00%	0.00%	0.00%						
Rochdale 012	1.20%	0.00%	0.00%	1.20%	14	14				
Rochdale 013	0.54%	0.00%	0.00%	0.54%	7	7				
Rochdale 015	2.23%	0.00%	0.00%	2.23%	27	27				
Rochdale 016	0.00%	0.00%	0.00%	2.06%	25	25				
Rochdale 017	0.00%	0.00%	5.04%	5.04%	61	61				
Rochdale 018	3.43%	0.00%	0.00%	0.00%						
Rochdale 019	1.55%	0.00%	0.00%	0.00%						
Rochdale 020	4.36%	0.00%	0.00%	0.00%						
Rochdale 021	0.00%	2.25%	0.00%	0.00%	27	27				
Rochdale 024	0.00%	3.33%	0.00%	0.00%	40	40				
Bury	7.27%	0.00%	0.00%	0.00%						
Manchester CC	0.00%	4.67%	0.00%	4.67%	56	56				
Oldham	0.00%	12.34%	0.00%	0.00%	149	149				
Rossendale	1.55%	0.00%	0.00%	0.00%						
Salford	0.00%	1.74%	0.00%	1.74%	21	21				
Stockport	0.00%	1.41%	0.00%	0.00%	17	17				
Tameside	0.00%	1.69%	0.00%	0.00%	20	20				
Trafford	0.00%	0.00%	0.00%	3.28%	40	40				
TOTAL	44.09%	27.43%	5.04%	23.44%	523	523	0	0	0	0



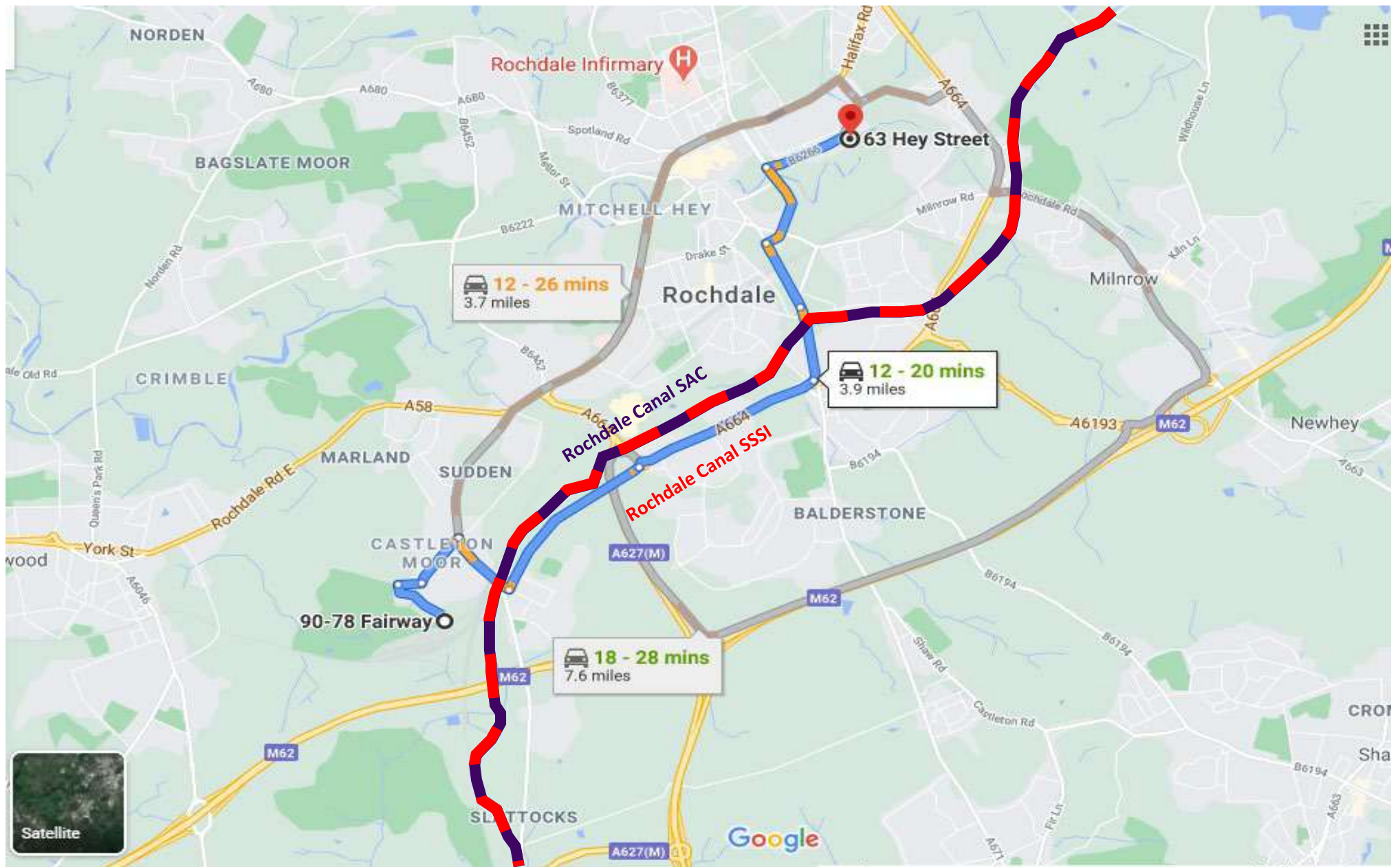
Rochdale 001 - Manchester Road (N) / Queensway



Rochdale 004 - Manchester Road (N) / Queensway



Rochdale 005- Manchester Road (N)



Rochdale 008 - Manchester Road (N)/Queensway

Rochdale 009 - Manchester Road (N)

90-78 Fairway, Rochdale OL11 3BZ

Caribbean Vybz, 17 The Butts, Rochdale

Depart at

8:30 AM

Mon, Apr 19

OPTIONS

Send directions to your phone

via Manchester Rd

typically 10 - 18 min

Arrive around 8:48 AM

2.7 miles

DETAILS

via Roch Valley Way/B6452

typically 12 - 20 min

Arrive around 8:50 AM

3.4 miles

Explore Caribbean Vybz

Restaurants

Hotels

Gas stations

P

Parking Lots

More

12 - 20 mins

3.4 miles

10 - 18 mins

2.7 miles

Satellite

Google

Map data ©2021 United Kingdom Terms Privacy Send feedback 500 m

Rochdale 010 - Manchester Road (N)

90-78 Fairway, Rochdale OL11 3BZ

Globe Park, Rochdale OL16 5EB

Depart at

8:30 AM

Mon, Apr 19

OPTIONS

Send directions to your phone

via Rochdale Bypass/A664

typically 12 - 18 min

Arrive around 8:48 AM

3.3 miles

DETAILS

via Manchester Rd

typically 14 - 24 min

Arrive around 8:54 AM

3.6 miles

via M62

typically 14 - 20 min

Arrive around 8:50 AM

6.0 miles

Explore Globe Park

Restaurants

Hotels

Gas stations

Parking Lots

More

14 - 24 mins
3.6 miles

12 - 18 mins
3.3 miles

14 - 20 mins
6 miles

Sign in

Satellite

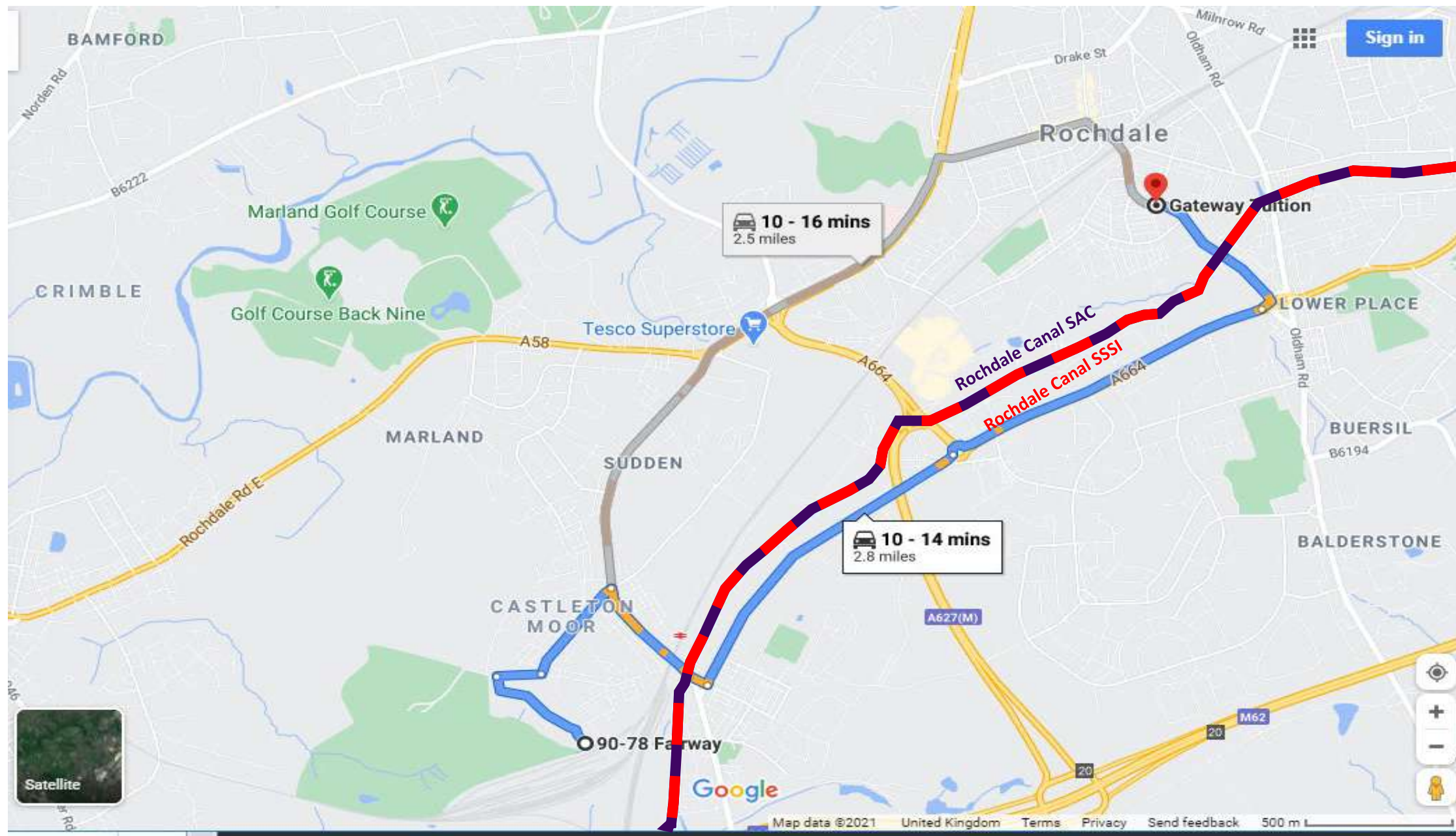
Google

Rochdale 012 - Manchester Road (N) / Queensway

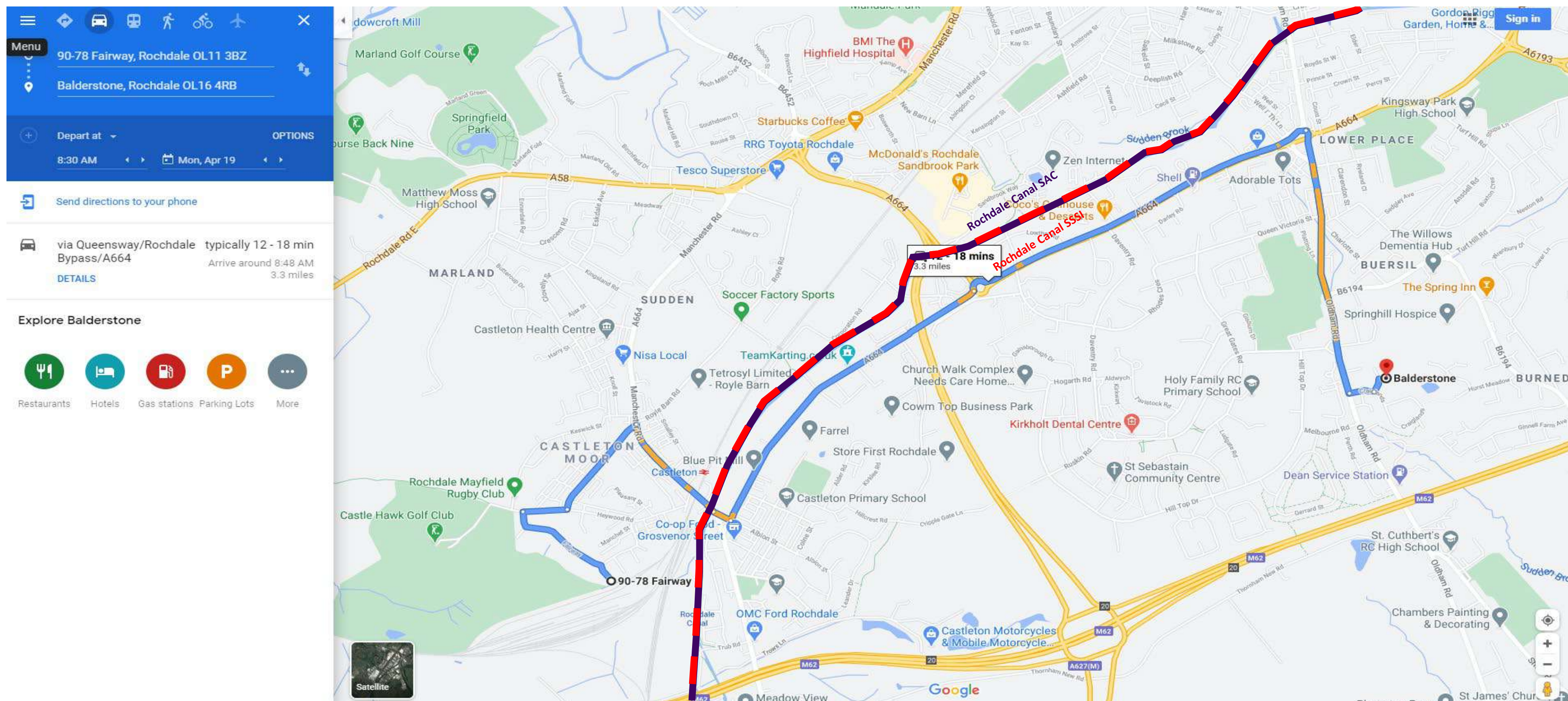
The screenshot displays the Google Maps interface for a journey from 90-78 Fairway, Rochdale OL11 3BZ to Milnrow, Rochdale. The map shows three suggested routes, each with a typical travel time and distance. The first route, via M62, is highlighted in green and takes 14-20 minutes for 5.8 miles. The second route, via Manchester Rd and A640, is highlighted in orange and takes 16-28 minutes for 4.6 miles. The third route, via Manchester Rd, is highlighted in red and takes 18-35 minutes for 5.8 miles. The map also shows local landmarks such as Rochdale Infirmary, Rochdale Cemetery, and Rochdale Canal SAC. The map is zoomed in on the Rochdale area, showing the M62 motorway and the A640 road.

Route	Typical Time	Distance
via M62	14 - 20 min	5.8 miles
via Manchester Rd and A640	16 - 28 min	4.6 miles
via Manchester Rd	18 - 35 min	5.8 miles

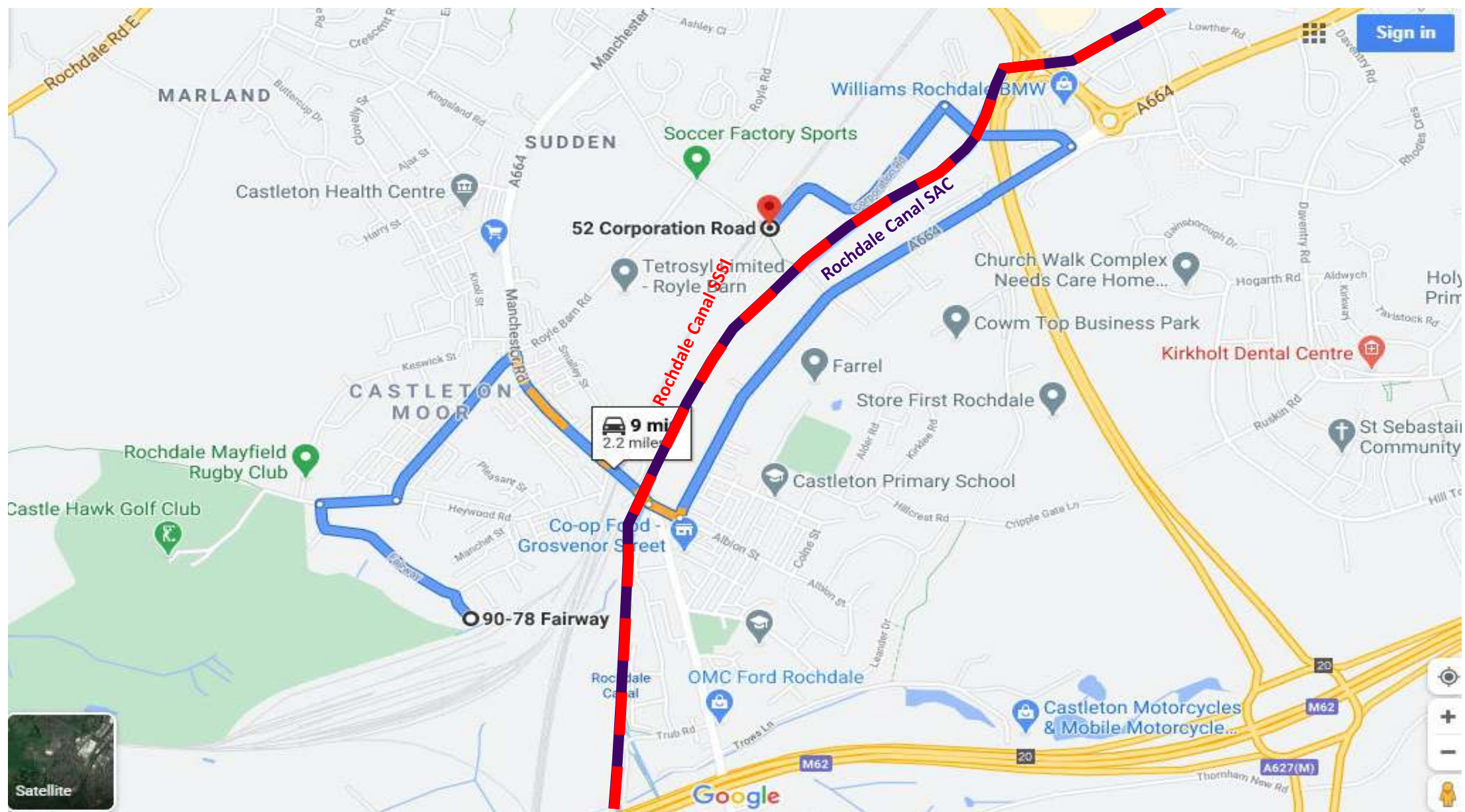
Rochdale 013 - Manchester Road (N) / Queensway



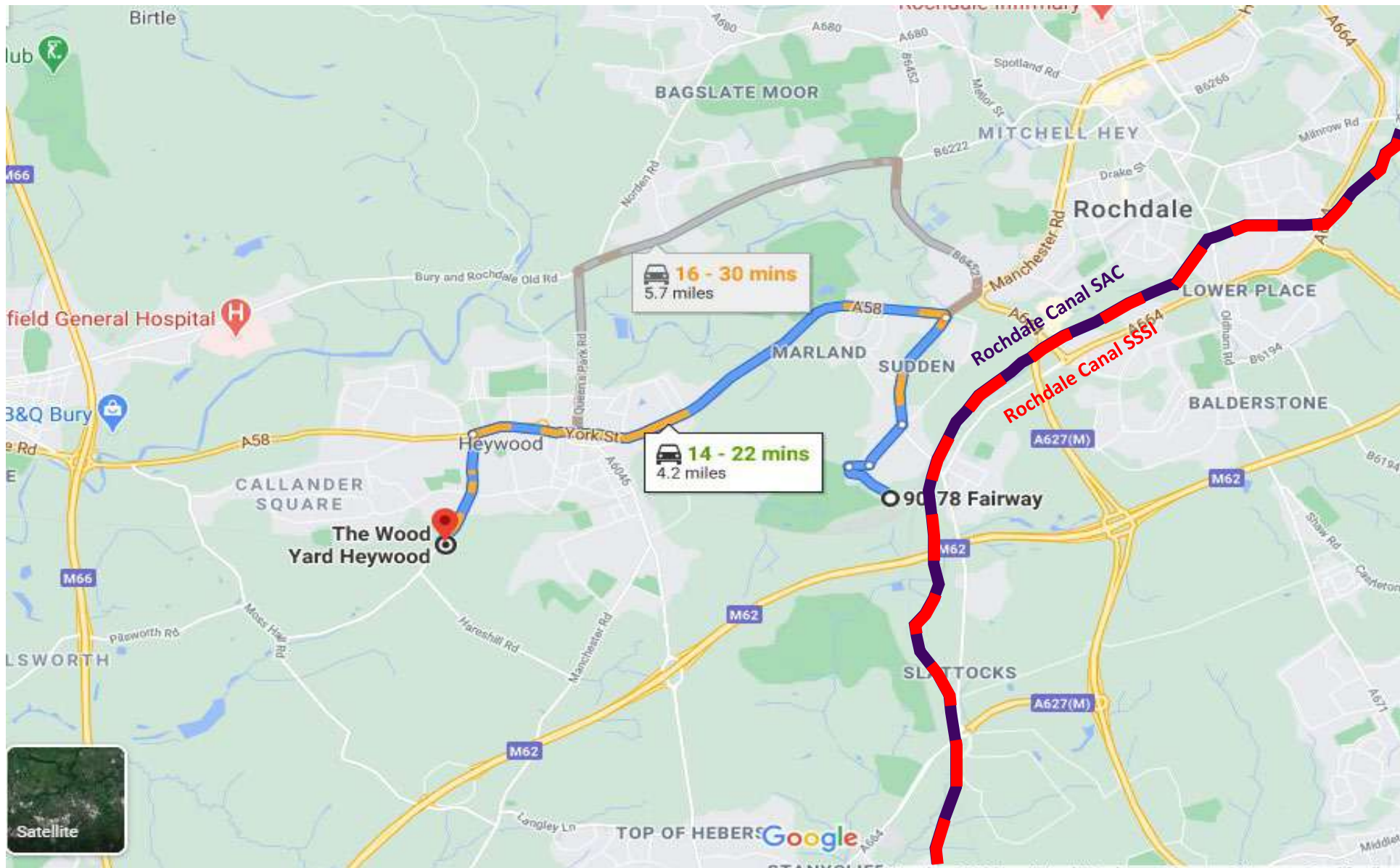
Rochdale 015 - Manchester Road (N)/Queensway



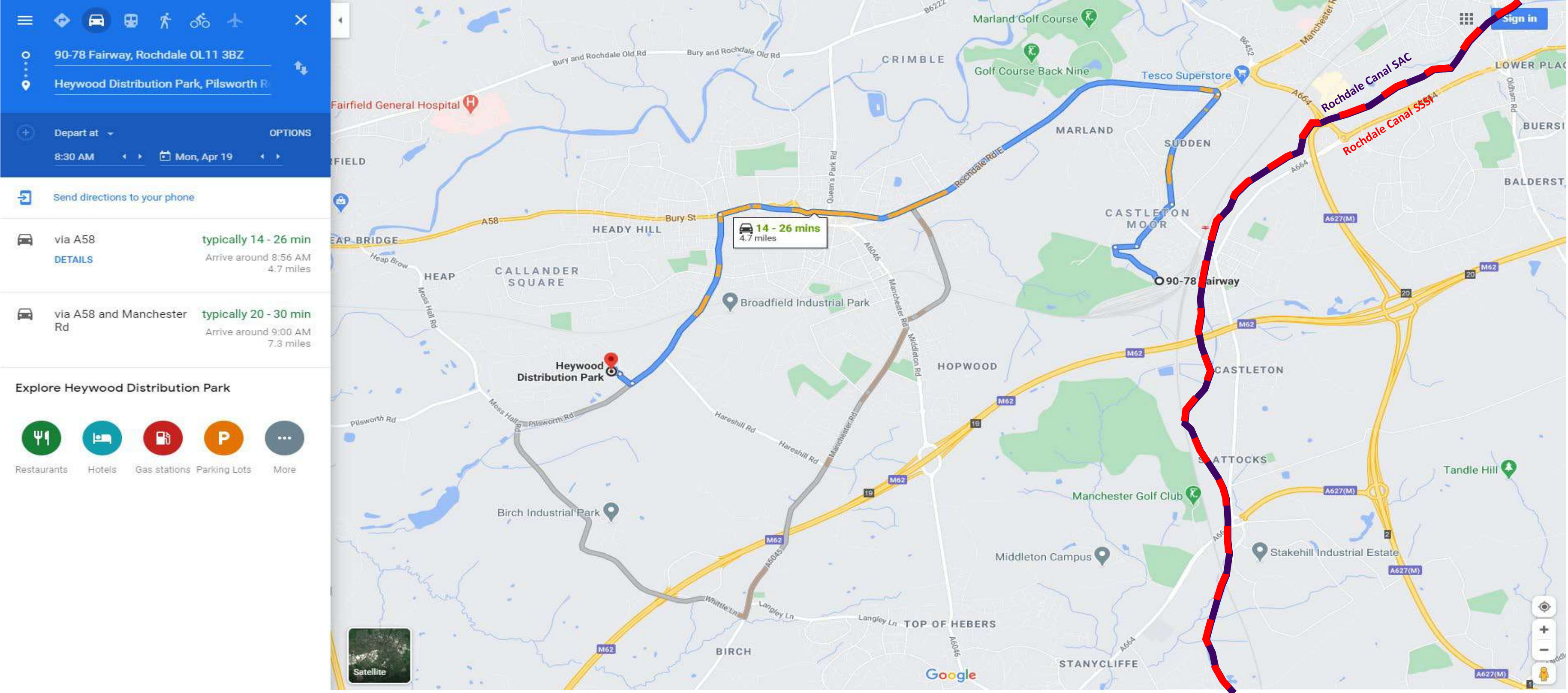
Rochdale 016- Queensway



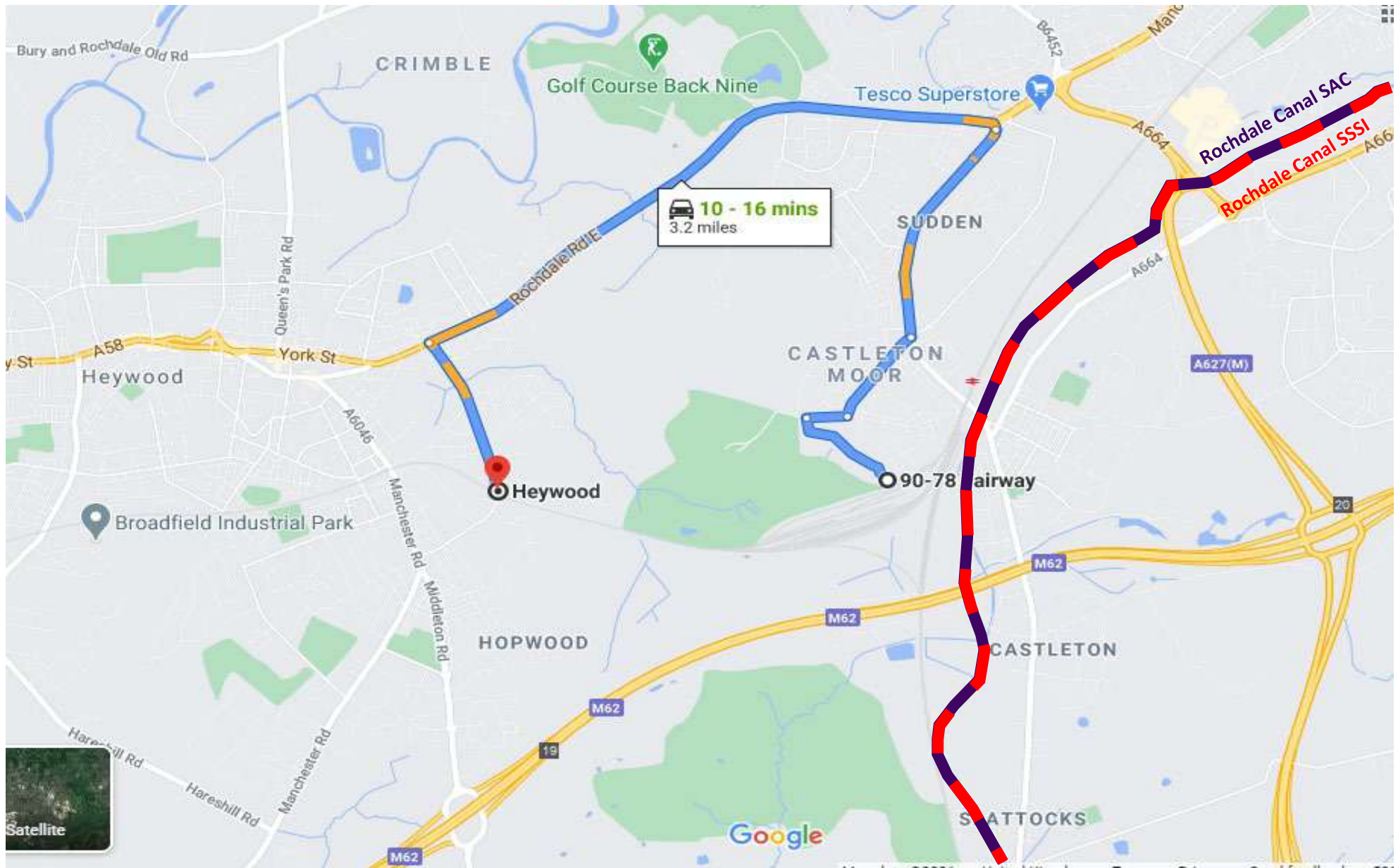
Rochdale 017 - Queensway/Royal Barn Road Industrial Estates



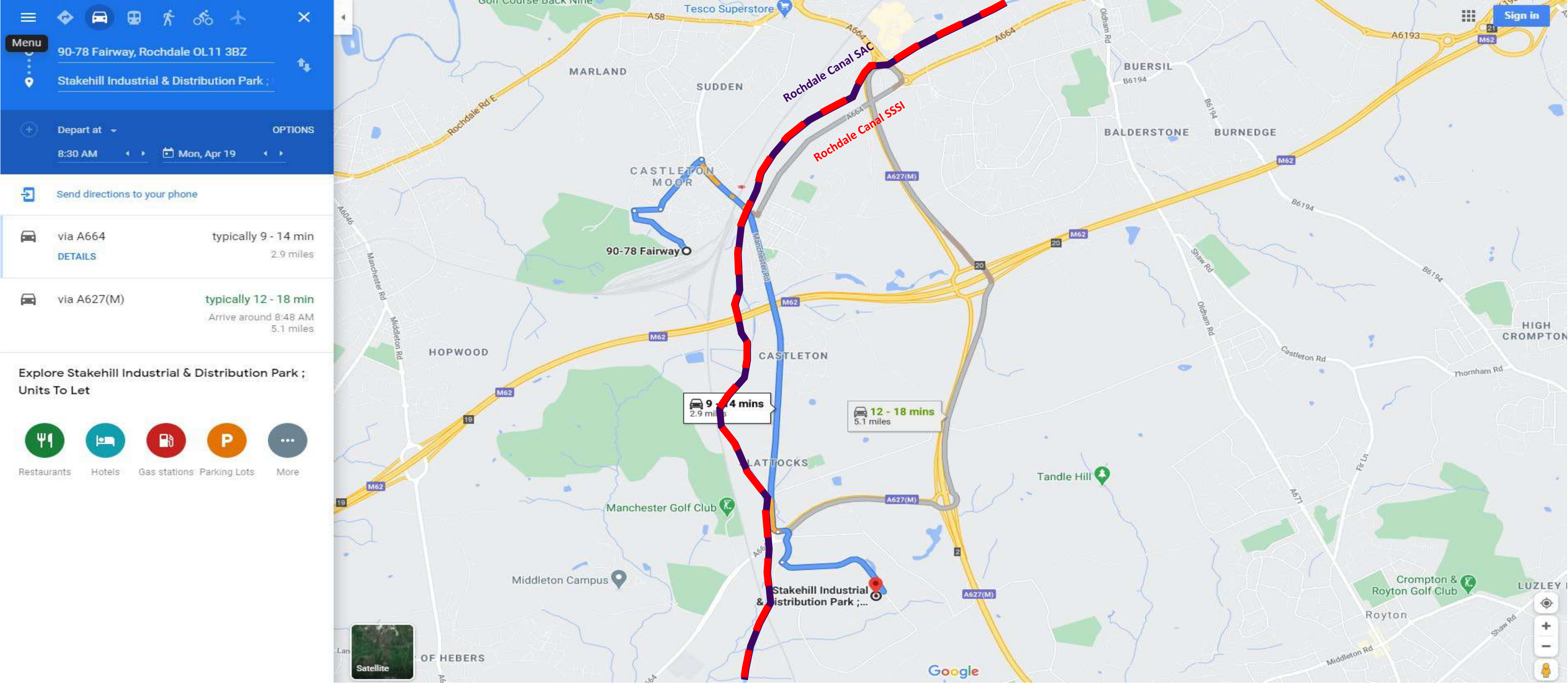
Rochdale 018 - Manchester Road (N)



Rochdale 019 - Manchester Road (N)

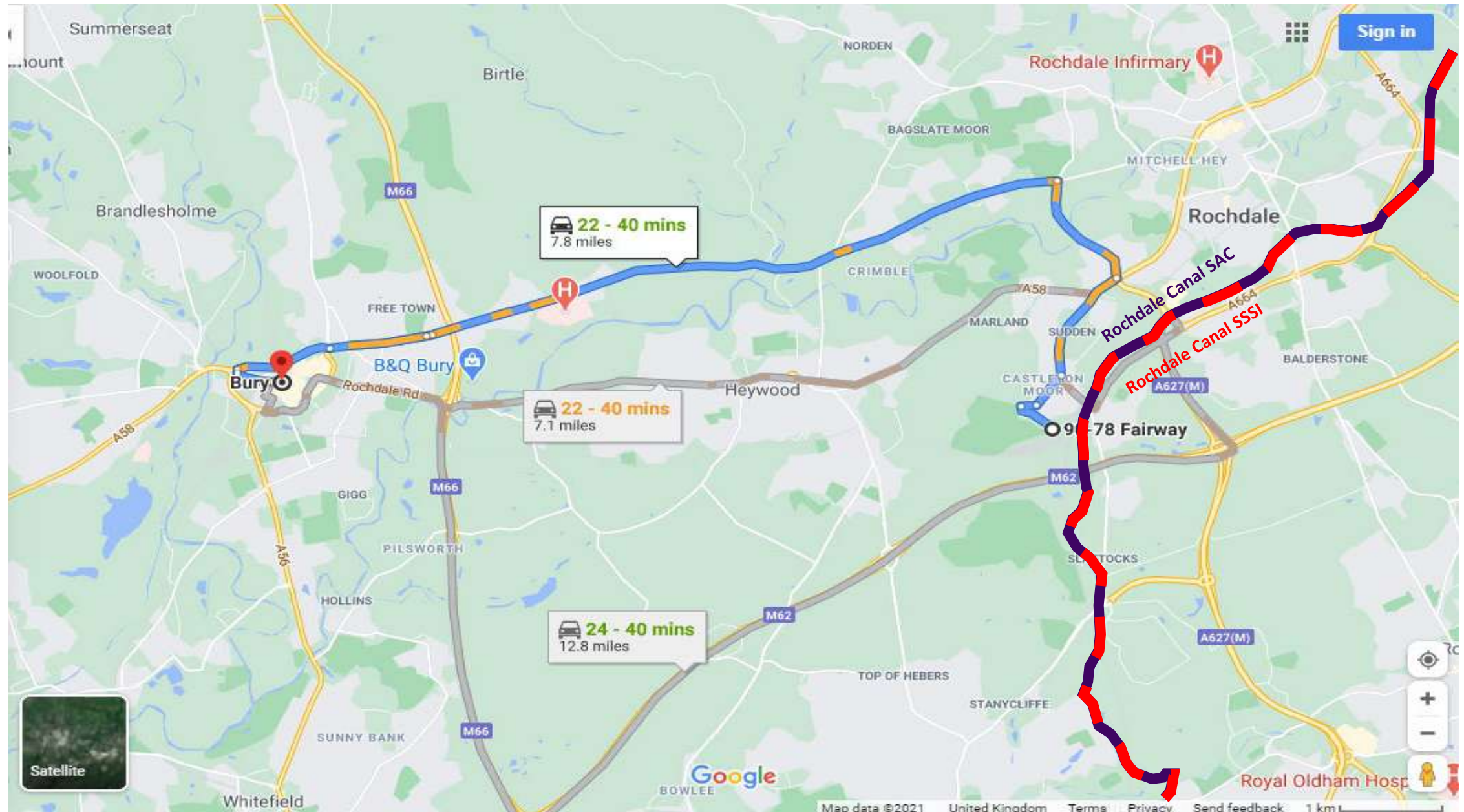


Rochdale 020 - Heywood

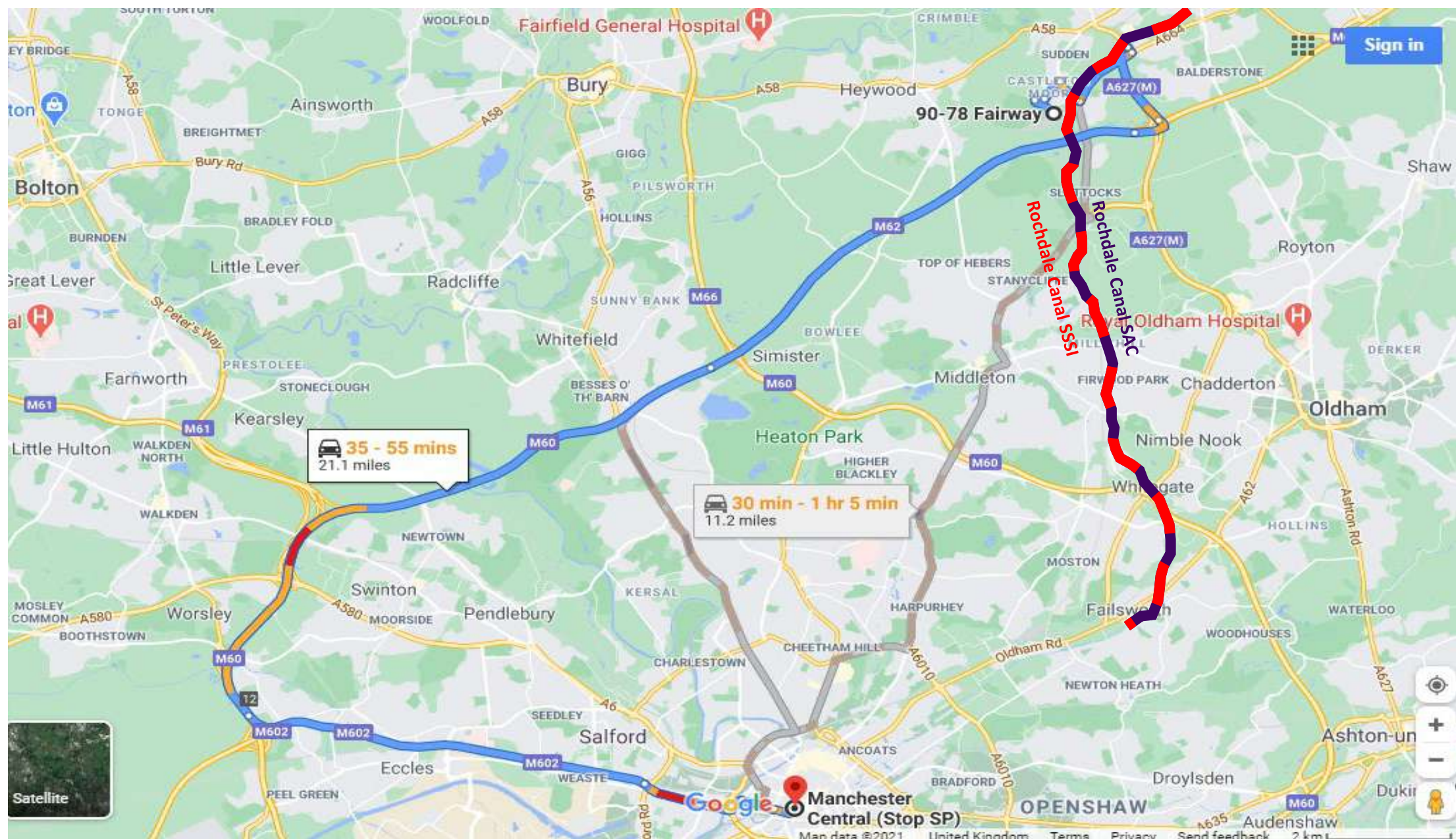


Rochdale 021- Manchester Road (S)

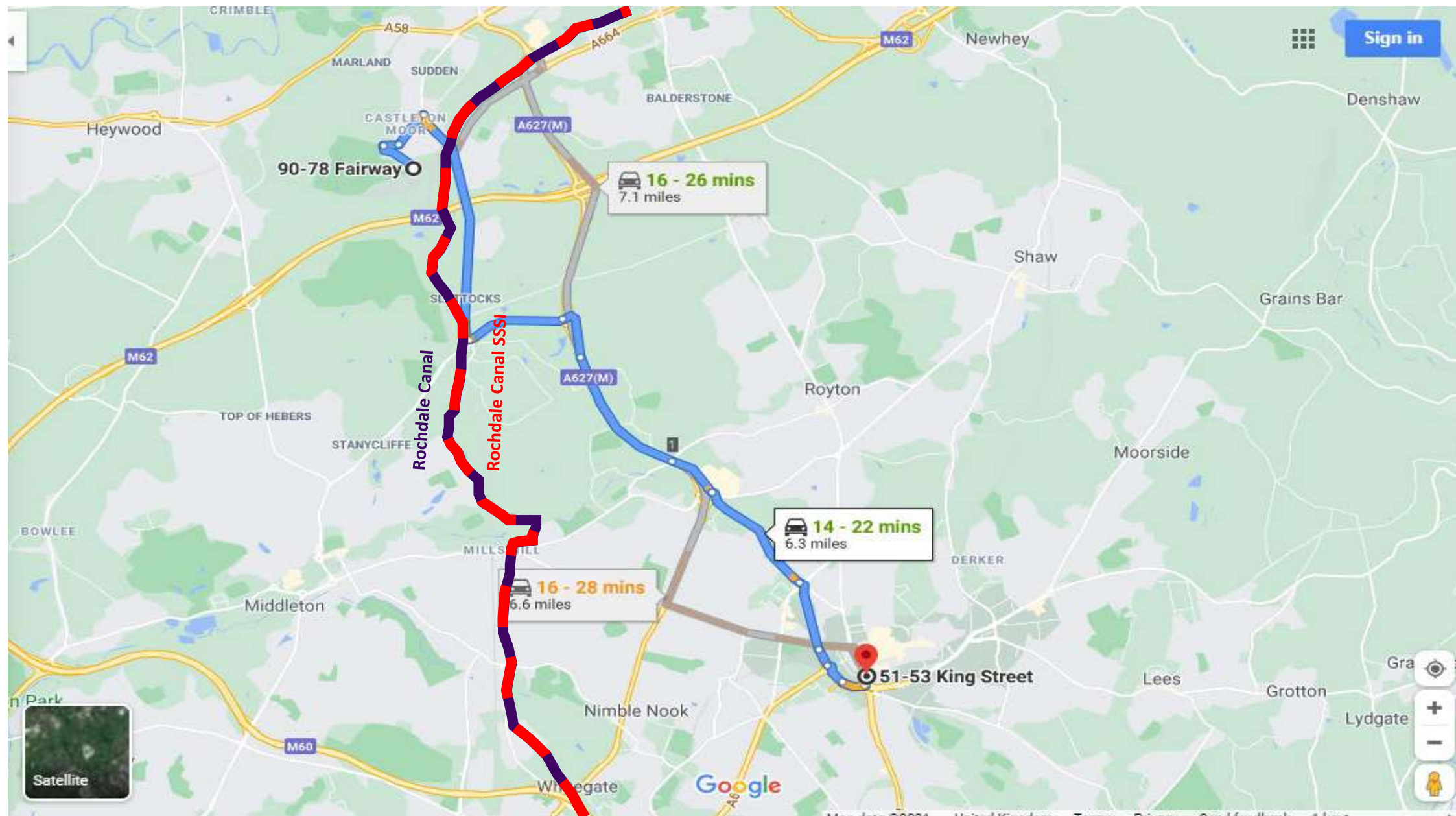




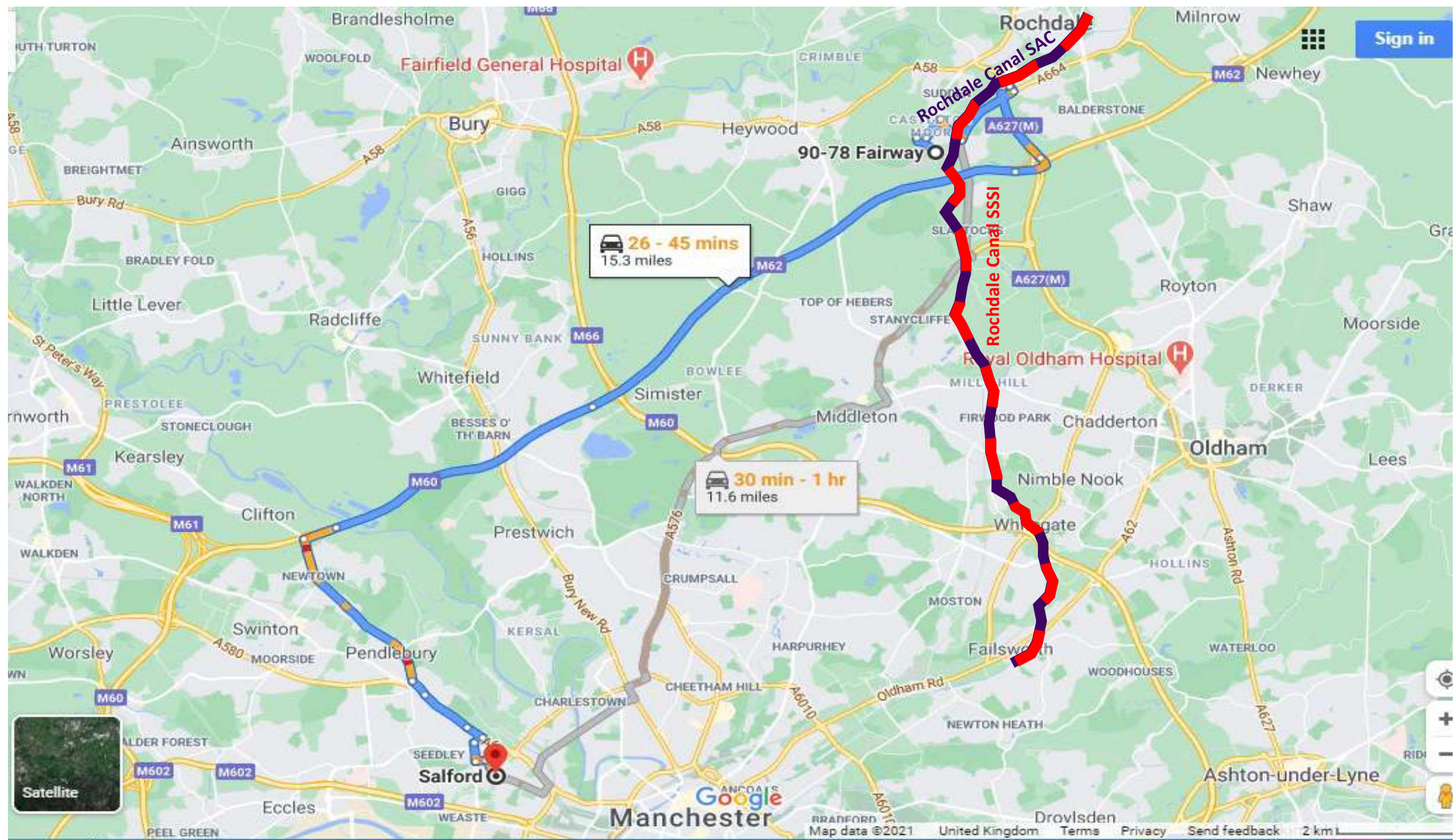
Bury - Manchester Road (N)



Manchester City Centre - Queensway/Manchester Road (S)



Oldham - Manchester Road (S)



Salford - Manchester Road (S)/Queensway

Menu

90-78 Fairway, Rochdale OL11 3BZ

Stockport

Depart at 8:30 AM Mon, Apr 19

OPTIONS

Send directions to your phone

via M60

typically 28 - 50 min

Arrive around 9:20 AM

16.8 miles

DETAILS

via A664 and M60

typically 30 - 50 min

Arrive around 9:20 AM

16.8 miles

via M62 and M60

typically 35 - 55 min

Arrive around 9:25 AM

28.7 miles

Explore Stockport

Restaurants

Hotels

Gas stations

Parking Lots

More

0-78 Fairway

16.8 miles

28 - 50 mins

Rochdale Canal SSSI

16.8 miles

30 - 50 mins

Rochdale Canal SAC

16.8 miles

28 - 50 mins

35 - 55 mins

28.7 miles

Stockport

Manchester

Peak District Moors (South Pennine Moors Phase 1) SPA

Peak District Moors (South Pennine Moors Phase 1) SPA

Stockport - Manchester Road (S)

90-78 Fairway, Rochdale OL11 3BZ

Ashton-under-Lyne

Depart at

8:30 AM

Mon, Apr 19

OPTIONS

Send directions to your phone

via M60

typically 22 - 45 min

Arrive around 9:15 AM

11.4 miles

DETAILS

via A664 and M60

typically 26 - 45 min

Arrive around 9:15 AM

11.4 miles

via A627

typically 24 - 45 min

Arrive around 9:15 AM

10.0 miles

Explore Ashton-under-Lyne

Restaurants

Hotels

Gas stations

P

Parking Lots

More

A Google Maps interface showing a route from 90-78 Fairway, Rochdale OL11 3BZ to Ashton-under-Lyne. The map displays three suggested driving routes. The first route, via the M60, is highlighted in orange and takes typically 22-45 minutes, arriving around 9:15 AM over 11.4 miles. The second route, via the A664 and M60, is highlighted in green and takes typically 26-45 minutes, also arriving around 9:15 AM over 11.4 miles. The third route, via the A627, is highlighted in blue and takes typically 24-45 minutes, arriving around 9:15 AM over 10.0 miles. The map also shows the Rochdale Canal SAC and SSSI, and the Peak District Moors (South Pennine Moors Phase 1) SPA. A 'Satellite' view button is visible in the bottom left corner of the map area.

Tameside - Manchester Road (S)



Trafford - Queensway

APPENDIX 4

PICADY Output: A664 Manchester Road/Heywood Road

Junctions 9					
PICADY 9 - Priority Intersection Module					
Version: 9.5.2.1013					
© Copyright TRL Limited, 2019					
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk					
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution					

Filename: Heywood Road Manchester Road - Left Right Stagger.j9
Path: Z:\projects\3334 Castleton, Corus Railway Sidings\Picady
Report generation date: 20/12/2023 15:48:00

- »2019 Surveyed Flows, AM
- »2019 Surveyed Flows, PM
- »2025 Base Flows, AM
- »2025 Base Flows, PM
- »2025 With Development, AM
- »2025 With Development, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2019 Surveyed Flows										
Stream B-ACD	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream AB-CD		0.2	9.31	0.15	A		0.1	10.04	0.12	B
Stream D-ABC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream CD-AB		0.1	7.98	0.05	A		0.1	7.80	0.09	A
2025 Base Flows										
Stream B-ACD	D3	0.0	0.00	0.00	A	D4	0.0	0.00	0.00	A
Stream AB-CD		0.2	9.87	0.16	A		0.2	10.63	0.14	B
Stream D-ABC		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream CD-AB		0.1	8.20	0.06	A		0.1	7.74	0.10	A
2025 With Development										
Stream B-ACD	D5	0.0	0.00	0.00	A	D6	0.0	0.00	0.00	A
Stream AB-CD		0.3	10.44	0.24	B		0.3	11.50	0.22	B
Stream D-ABC		0.2	9.64	0.13	A		0.2	10.99	0.15	B
Stream CD-AB		0.1	8.44	0.06	A		0.1	7.82	0.10	A

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

File summary

File Description

Title	Castleton Railway Sidings
Location	
Site number	3334
Date	20/12/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EDD
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Surveyed Flows	AM	ONE HOUR	08:00	09:30	15	✓
D2	2019 Surveyed Flows	PM	ONE HOUR	17:00	18:30	15	✓
D3	2025 Base Flows	AM	ONE HOUR	08:00	09:30	15	✓
D4	2025 Base Flows	PM	ONE HOUR	17:00	18:30	15	✓
D5	2025 With Development	AM	ONE HOUR	08:00	09:30	15	✓
D6	2025 With Development	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2019 Surveyed Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		0.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A664 Manchester Road (NW)		Major
B	Railway Approach		Minor
C	A664 Manchester Road (SE)		Major
D	Heywood Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	8.00		✓	2.20	100.0	✓	2.00
C	8.00				130.0	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.25	0	0
D	One lane	3.10	14	11

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
AB-D	832	-	-	-	-	-	0.245	0.245	0.245	-	-
B-A	490	0.089	0.225	0.225	-	-	0.142	0.322	-	0.142	0.322
B-CD	640	0.098	0.248	0.248	-	-	-	-	-	-	-
CD-B	649	0.252	0.252	0.252	-	-	-	-	-	-	-
D-AB	837	-	-	-	-	-	0.247	0.247	0.098	-	-
D-C	492	-	0.143	0.324	0.143	0.324	0.227	0.227	0.090	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Surveyed Flows	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	751	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	722	100.000
D		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	18	675	58
	B	0	0	0	0
	C	607	21	0	94
	D	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-B					17	25
A-C					619	929
A-D					53	80
AB-CD	0.15	9.31	0.2	A	54	82
AB-C					618	927
D-ABC	0.00	0.00	0.0	A	0	0
C-D					86	129
C-A					557	835
C-B					19	29
CD-AB	0.05	7.98	0.1	A	20	30
CD-A					556	834

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	371	0.000	0	0.0	0.0	0.000	A
A-B	14	3			14				
A-C	508	127			508				
A-D	44	11			44				
AB-CD	44	11	503	0.088	44	0.0	0.1	7.835	A
AB-C	508	127			508				
D-ABC	0	0	373	0.000	0	0.0	0.0	0.000	A
C-D	71	18			71				
C-A	457	114			457				
C-B	16	4			16				
CD-AB	16	4	521	0.031	16	0.0	0.0	7.131	A
CD-A	457	114			457				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	333	0.000	0	0.0	0.0	0.000	A
A-B	16	4			16				
A-C	607	152			607				
A-D	52	13			52				
AB-CD	53	13	480	0.110	53	0.1	0.1	8.419	A
AB-C	606	151			606				
D-ABC	0	0	334	0.000	0	0.0	0.0	0.000	A
C-D	85	21			85				
C-A	546	136			546				
C-B	19	5			19				
CD-AB	20	5	501	0.039	20	0.0	0.0	7.488	A
CD-A	545	136			545				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	278	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	743	186			743				
A-D	64	16			64				
AB-CD	66	17	453	0.146	66	0.1	0.2	9.296	A
AB-C	741	185			741				
D-ABC	0	0	278	0.000	0	0.0	0.0	0.000	A
C-D	103	26			103				
C-A	688	167			688				
C-B	23	6			23				
CD-AB	25	6	476	0.052	25	0.0	0.1	7.980	A
CD-A	686	167			686				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	278	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	743	188			743				
A-D	64	16			64				
AB-CD	88	17	453	0.146	88	0.2	0.2	9.308	A
AB-C	741	185			741				
D-ABC	0	0	278	0.000	0	0.0	0.0	0.000	A
C-D	103	26			103				
C-A	688	167			688				
C-B	23	6			23				
CD-AB	25	6	476	0.052	25	0.1	0.1	7.982	A
CD-A	666	167			666				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	333	0.000	0	0.0	0.0	0.000	A
A-B	16	4			16				
A-C	607	152			607				
A-D	52	13			52				
AB-CD	53	13	480	0.110	53	0.2	0.1	8.432	A
AB-C	606	151			606				
D-ABC	0	0	334	0.000	0	0.0	0.0	0.000	A
C-D	85	21			85				
C-A	546	138			546				
C-B	19	5			19				
CD-AB	20	5	501	0.039	20	0.1	0.0	7.489	A
CD-A	545	138			545				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	371	0.000	0	0.0	0.0	0.000	A
A-B	14	3			14				
A-C	508	127			508				
A-D	44	11			44				
AB-CD	44	11	503	0.088	44	0.1	0.1	7.853	A
AB-C	506	127			506				
D-ABC	0	0	372	0.000	0	0.0	0.0	0.000	A
C-D	71	18			71				
C-A	457	114			457				
C-B	16	4			16				
CD-AB	16	4	521	0.031	16	0.0	0.0	7.135	A
CD-A	457	114			457				

2019 Surveyed Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		0.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Surveyed Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	738	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	871	100.000
D		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	12	682	44
	B	0	0	0	0
	C	770	36	0	65
	D	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-B					11	17
A-C					626	939
A-D					40	61
AB-CD	0.12	10.04	0.1	B	41	62
AB-C					625	938
D-ABC	0.00	0.00	0.0	A	0	0
C-D					60	89
C-A					707	1060
C-B					33	50
CD-AB	0.09	7.60	0.1	A	37	55
CD-A					703	1054

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	355	0.000	0	0.0	0.0	0.000	A
A-B	9	2			9				
A-C	513	128			513				
A-D	33	8			33				
AB-CD	33	8	474	0.070	33	0.0	0.1	8.161	A
AB-C	513	128			513				
D-ABC	0	0	343	0.000	0	0.0	0.0	0.000	A
C-D	49	12			49				
C-A	580	145			580				
C-B	27	7			27				
CD-AB	29	7	540	0.053	29	0.0	0.1	7.030	A
CD-A	578	145			578				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	313	0.000	0	0.0	0.0	0.000	A
A-B	11	3			11				
A-C	613	153			613				
A-D	40	10			40				
AB-CD	40	10	445	0.090	40	0.1	0.1	8.882	A
AB-C	613	153			613				
D-ABC	0	0	298	0.000	0	0.0	0.0	0.000	A
C-D	58	15			58				
C-A	692	173			692				
C-B	32	8			32				
CD-AB	35	9	529	0.067	35	0.1	0.1	7.296	A
CD-A	689	172			689				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	251	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	751	188			751				
A-D	48	12			48				
AB-CD	50	12	408	0.122	50	0.1	0.1	10.034	B
AB-C	750	187			750				
D-ABC	0	0	232	0.000	0	0.0	0.0	0.000	A
C-D	72	18			72				
C-A	848	212			848				
C-B	40	10			40				
CD-AB	46	12	520	0.089	46	0.1	0.1	7.593	A
CD-A	841	210			841				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	251	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	751	188			751				
A-D	48	12			48				
AB-CD	50	12	408	0.122	50	0.1	0.1	10.042	B
AB-C	750	187			750				
D-ABC	0	0	232	0.000	0	0.0	0.0	0.000	A
C-D	72	18			72				
C-A	848	212			848				
C-B	40	10			40				
CD-AB	46	12	520	0.089	46	0.1	0.1	7.595	A
CD-A	841	210			841				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	313	0.000	0	0.0	0.0	0.000	A
A-B	11	3			11				
A-C	813	153			813				
A-D	40	10			40				
AB-CD	40	10	445	0.090	40	0.1	0.1	8.893	A
AB-C	813	153			813				
D-ABC	0	0	298	0.000	0	0.0	0.0	0.000	A
C-D	58	15			58				
C-A	692	173			692				
C-B	32	8			32				
CD-AB	35	9	529	0.067	35	0.1	0.1	7.304	A
CD-A	689	172			689				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	355	0.000	0	0.0	0.0	0.000	A
A-B	9	2			9				
A-C	513	128			513				
A-D	33	8			33				
AB-CD	33	8	474	0.070	33	0.1	0.1	8.174	A
AB-C	513	128			513				
D-ABC	0	0	343	0.000	0	0.0	0.0	0.000	A
C-D	49	12			49				
C-A	580	145			580				
C-B	27	7			27				
CD-AB	29	7	540	0.053	29	0.1	0.1	7.038	A
CD-A	578	145			578				

2025 Base Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		0.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2025 Base Flows	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	818	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	808	100.000
D		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	19	737	82
	B	0	0	0	0
	C	883	22	0	101
	D	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-B					17	26
A-C					676	1014
A-D					57	85
AB-CD	0.16	9.87	0.2	A	59	88
AB-C					675	1012
D-ABC	0.00	0.00	0.0	A	0	0
C-D					93	139
C-A					627	940
C-B					20	30
CD-AB	0.06	8.20	0.1	A	22	32
CD-A					625	938

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	352	0.000	0	0.0	0.0	0.000	A
A-B	14	4			14				
A-C	555	139			555				
A-D	47	12			47				
AB-CD	47	12	488	0.097	47	0.0	0.1	8.142	A
AB-C	554	139			554				
D-ABC	0	0	351	0.000	0	0.0	0.0	0.000	A
C-D	76	19			76				
C-A	514	129			514				
C-B	17	4			17				
CD-AB	17	4	512	0.034	17	0.0	0.0	7.283	A
CD-A	514	128			514				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	309	0.000	0	0.0	0.0	0.000	A
A-B	17	4			17				
A-C	663	166			663				
A-D	56	14			56				
AB-CD	57	14	464	0.123	57	0.1	0.1	8.829	A
AB-C	661	165			661				
D-ABC	0	0	307	0.000	0	0.0	0.0	0.000	A
C-D	91	23			91				
C-A	614	154			614				
C-B	20	5			20				
CD-AB	21	5	491	0.043	21	0.0	0.0	7.672	A
CD-A	613	153			613				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	247	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	811	203			811				
A-D	68	17			68				
AB-CD	72	18	437	0.165	72	0.1	0.2	9.858	A
AB-C	808	202			808				
D-ABC	0	0	243	0.000	0	0.0	0.0	0.000	A
C-D	111	28			111				
C-A	752	188			752				
C-B	24	6			24				
CD-AB	27	7	466	0.057	27	0.0	0.1	8.202	A
CD-A	750	187			750				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	247	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	811	203			811				
A-D	68	17			68				
AB-CD	72	18	437	0.165	72	0.2	0.2	9.873	A
AB-C	808	202			808				
D-ABC	0	0	243	0.000	0	0.0	0.0	0.000	A
C-D	111	28			111				
C-A	752	188			752				
C-B	24	6			24				
CD-AB	27	7	466	0.057	27	0.1	0.1	8.204	A
CD-A	750	187			750				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	309	0.000	0	0.0	0.0	0.000	A
A-B	17	4			17				
A-C	663	166			663				
A-D	56	14			56				
AB-CD	57	14	464	0.123	57	0.2	0.1	8.847	A
AB-C	661	165			661				
D-ABC	0	0	307	0.000	0	0.0	0.0	0.000	A
C-D	91	23			91				
C-A	614	154			614				
C-B	20	5			20				
CD-AB	21	5	490	0.043	21	0.1	0.0	7.678	A
CD-A	613	153			613				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	352	0.000	0	0.0	0.0	0.000	A
A-B	14	4			14				
A-C	555	139			555				
A-D	47	12			47				
AB-CD	47	12	488	0.097	47	0.1	0.1	8.164	A
AB-C	554	139			554				
D-ABC	0	0	351	0.000	0	0.0	0.0	0.000	A
C-D	78	19			78				
C-A	514	129			514				
C-B	17	4			17				
CD-AB	17	4	512	0.034	17	0.0	0.0	7.288	A
CD-A	514	128			514				

2025 Base Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		0.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 Base Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	809	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	946	100.000
D		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	12	750	47
	B	0	0	0	0
	C	839	38	0	69
	D	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-B					11	17
A-C					688	1032
A-D					43	65
AB-CD	0.14	10.63	0.2	B	44	66
AB-C					687	1031
D-ABC	0.00	0.00	0.0	A	0	0
C-D					63	95
C-A					770	1155
C-B					35	52
CD-AB	0.10	7.74	0.1	A	40	60
CD-A					765	1147

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	335	0.000	0	0.0	0.0	0.000	A
A-B	9	2			9				
A-C	585	141			585				
A-D	35	9			35				
AB-CD	36	9	461	0.077	35	0.0	0.1	8.459	A
AB-C	584	141			584				
D-ABC	0	0	323	0.000	0	0.0	0.0	0.000	A
C-D	52	13			52				
C-A	632	158			632				
C-B	29	7			29				
CD-AB	31	8	532	0.058	30	0.0	0.1	7.168	A
CD-A	630	157			630				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	288	0.000	0	0.0	0.0	0.000	A
A-B	11	3			11				
A-C	674	169			674				
A-D	42	11			42				
AB-CD	43	11	430	0.100	43	0.1	0.1	9.287	A
AB-C	674	168			674				
D-ABC	0	0	273	0.000	0	0.0	0.0	0.000	A
C-D	62	16			62				
C-A	754	189			754				
C-B	34	9			34				
CD-AB	38	10	522	0.073	38	0.1	0.1	7.447	A
CD-A	750	188			750				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	217	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	826	206			826				
A-D	52	13			52				
AB-CD	54	13	392	0.137	54	0.1	0.2	10.622	B
AB-C	824	206			824				
D-ABC	0	0	197	0.000	0	0.0	0.0	0.000	A
C-D	76	19			76				
C-A	924	231			924				
C-B	42	10			42				
CD-AB	51	13	516	0.098	51	0.1	0.1	7.735	A
CD-A	915	229			915				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	217	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	826	206			826				
A-D	52	13			52				
AB-CD	54	13	392	0.137	54	0.2	0.2	10.633	B
AB-C	824	206			824				
D-ABC	0	0	197	0.000	0	0.0	0.0	0.000	A
C-D	76	19			76				
C-A	924	231			924				
C-B	42	10			42				
CD-AB	51	13	516	0.098	51	0.1	0.1	7.740	A
CD-A	915	229			915				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	288	0.000	0	0.0	0.0	0.000	A
A-B	11	3			11				
A-C	674	169			674				
A-D	42	11			42				
AB-CD	43	11	430	0.100	43	0.2	0.1	9.302	A
AB-C	674	168			674				
D-ABC	0	0	273	0.000	0	0.0	0.0	0.000	A
C-D	62	16			62				
C-A	754	189			754				
C-B	34	9			34				
CD-AB	38	10	522	0.073	38	0.1	0.1	7.453	A
CD-A	750	188			750				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	335	0.000	0	0.0	0.0	0.000	A
A-B	9	2			9				
A-C	565	141			565				
A-D	35	9			35				
AB-CD	38	9	461	0.077	38	0.1	0.1	8.471	A
AB-C	564	141			564				
D-ABC	0	0	323	0.000	0	0.0	0.0	0.000	A
C-D	52	13			52				
C-A	632	158			632				
C-B	29	7			29				
CD-AB	31	8	532	0.058	31	0.1	0.1	7.177	A
CD-A	630	157			630				

2025 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		0.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2025 With Development	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	880	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	844	100.000
D		ONE HOUR	✓	52	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A	B	C	D
	A	0	19	774	87
	B	0	0	0	0
	C	683	22	0	139
	D	52	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
D	0	0	0	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-B					17	28
A-C					710	1065
A-D					80	120
AB-CD	0.24	10.44	0.3	B	85	128
AB-C					705	1057
D-ABC	0.13	9.64	0.2	A	48	72
C-D					128	191
C-A					627	940
C-B					20	30
CD-AB	0.06	8.44	0.1	A	22	33
CD-A					673	1009

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	335	0.000	0	0.0	0.0	0.000	A
A-B	14	4			14				
A-C	583	146			583				
A-D	65	16			65				
AB-CD	67	17	467	0.138	66	0.0	0.2	6.539	A
AB-C	581	145			581				
D-ABC	39	10	496	0.079	39	0.0	0.1	7.870	A
C-D	105	26			105				
C-A	514	129			514				
C-B	17	4			17				
CD-AB	17	4	502	0.034	17	0.0	0.0	7.434	A
CD-A	552	138			552				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	289	0.000	0	0.0	0.0	0.000	A
A-B	17	4			17				
A-C	696	174			696				
A-D	78	20			78				
AB-CD	82	20	468	0.175	82	0.2	0.2	9.327	A
AB-C	692	173			692				
D-ABC	47	12	469	0.100	47	0.1	0.1	8.531	A
C-D	125	31			125				
C-A	614	154			614				
C-B	20	5			20				
CD-AB	21	5	479	0.044	21	0.0	0.0	7.862	A
CD-A	659	165			659				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	220	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	852	213			852				
A-D	96	24			96				
AB-CD	107	27	452	0.237	107	0.2	0.3	10.411	B
AB-C	841	210			841				
D-ABC	57	14	431	0.133	57	0.1	0.2	9.634	A
C-D	153	38			153				
C-A	752	188			752				
C-B	24	6			24				
CD-AB	27	7	454	0.080	27	0.0	0.1	8.439	A
CD-A	806	202			806				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	220	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	852	213			852				
A-D	96	24			96				
AB-CD	107	27	452	0.237	107	0.3	0.3	10.440	B
AB-C	841	210			841				
D-ABC	57	14	431	0.133	57	0.2	0.2	9.642	A
C-D	153	38			153				
C-A	752	188			752				
C-B	24	6			24				
CD-AB	27	7	454	0.080	27	0.1	0.1	8.441	A
CD-A	806	202			806				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	289	0.000	0	0.0	0.0	0.000	A
A-B	17	4			17				
A-C	696	174			696				
A-D	78	20			78				
AB-CD	82	20	468	0.175	82	0.3	0.2	9.363	A
AB-C	692	173			692				
D-ABC	47	12	469	0.100	47	0.2	0.1	8.541	A
C-D	125	31			125				
C-A	614	154			614				
C-B	20	5			20				
CD-AB	21	5	479	0.044	21	0.1	0.0	7.866	A
CD-A	660	165			660				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	335	0.000	0	0.0	0.0	0.000	A
A-B	14	4			14				
A-C	583	148			583				
A-D	65	16			65				
AB-CD	67	17	487	0.138	67	0.2	0.2	8.575	A
AB-C	581	145			581				
D-ABC	39	10	496	0.079	39	0.1	0.1	7.888	A
C-D	105	26			105				
C-A	514	129			514				
C-B	17	4			17				
CD-AB	17	4	502	0.034	17	0.0	0.0	7.439	A
CD-A	553	138			553				

2025 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Left-Right Stagger	Two-way		0.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2025 With Development	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	852	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	1008	100.000
D		ONE HOUR	✓	52	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	13	767	72
	B	0	0	0	0
	C	839	38	0	129
	D	52	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
D	0	0	0	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-B					12	18
A-C					704	1058
A-D					66	99
AB-CD	0.22	11.50	0.3	B	70	105
AB-C					700	1049
D-ABC	0.15	10.99	0.2	B	48	72
C-D					118	178
C-A					770	1155
C-B					35	52
CD-AB	0.10	7.82	0.1	A	40	61
CD-A					812	1218

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	322	0.000	0	0.0	0.0	0.000	A
A-B	10	2			10				
A-C	577	144			577				
A-D	54	14			54				
AB-CD	55	14	455	0.121	55	0.0	0.1	8.982	A
AB-C	578	144			578				
D-ABC	39	10	465	0.084	39	0.0	0.1	8.446	A
C-D	97	24			97				
C-A	632	158			632				
C-B	29	7			29				
CD-AB	31	8	527	0.059	31	0.0	0.1	7.247	A
CD-A	688	167			688				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	271	0.000	0	0.0	0.0	0.000	A
A-B	12	3			12				
A-C	690	172			690				
A-D	65	16			65				
AB-CD	67	17	428	0.158	67	0.1	0.2	9.984	A
AB-C	687	172			687				
D-ABC	47	12	431	0.108	47	0.1	0.1	9.357	A
C-D	116	29			116				
C-A	754	189			754				
C-B	34	9			34				
CD-AB	39	10	516	0.075	39	0.1	0.1	7.532	A
CD-A	796	199			796				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	194	0.000	0	0.0	0.0	0.000	A
A-B	14	4			14				
A-C	844	211			844				
A-D	79	20			79				
AB-CD	88	22	401	0.220	88	0.2	0.3	11.466	B
AB-C	836	209			836				
D-ABC	57	14	385	0.149	57	0.1	0.2	10.973	B
C-D	142	36			142				
C-A	924	231			924				
C-B	42	10			42				
CD-AB	52	13	513	0.101	52	0.1	0.1	7.813	A
CD-A	971	243			971				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	194	0.000	0	0.0	0.0	0.000	A
A-B	14	4			14				
A-C	844	211			844				
A-D	79	20			79				
AB-CD	88	22	401	0.220	88	0.3	0.3	11.496	B
AB-C	836	209			836				
D-ABC	57	14	385	0.149	57	0.2	0.2	10.986	B
C-D	142	36			142				
C-A	924	231			924				
C-B	42	10			42				
CD-AB	52	13	513	0.101	52	0.1	0.1	7.817	A
CD-A	971	243			971				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	271	0.000	0	0.0	0.0	0.000	A
A-B	12	3			12				
A-C	690	172			690				
A-D	65	16			65				
AB-CD	67	17	428	0.158	68	0.3	0.2	10.021	B
AB-C	687	172			687				
D-ABC	47	12	431	0.108	47	0.2	0.1	9.374	A
C-D	116	29			116				
C-A	754	189			754				
C-B	34	9			34				
CD-AB	39	10	517	0.075	39	0.1	0.1	7.542	A
CD-A	797	199			797				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	0	322	0.000	0	0.0	0.0	0.000	A
A-B	10	2			10				
A-C	577	144			577				
A-D	54	14			54				
AB-CD	55	14	455	0.121	55	0.2	0.1	9.016	A
AB-C	578	144			578				
D-ABC	39	10	465	0.084	39	0.1	0.1	8.465	A
C-D	97	24			97				
C-A	632	158			632				
C-B	29	7			29				
CD-AB	31	8	527	0.059	31	0.1	0.1	7.255	A
CD-A	669	167			669				

APPENDIX 5

PICADY Output: A664 Manchester Road/Durban Street

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.5.2.1013			
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Filename: Manchester Road_Durban Street V5.j9
Path: Z:\projects\3334 Castleton, Corus Railway Sidings\Picady
Report generation date: 21/12/2023 09:11:09

- »Existing Layout - 2019 Surveyed Flows, AM
- »Existing Layout - 2019 Surveyed Flows, PM
- »Existing Layout - 2025 Base Flows, AM
- »Existing Layout - 2025 Base Flows, PM
- »Existing Layout - 2025 With Dev Flows, AM
- »Existing Layout - 2025 With Dev Flows, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Existing Layout - 2019 Surveyed Flows								
Stream B-AC	0.9	24.86	0.48	C	0.5	21.46	0.34	C
Stream C-AB	0.2	7.92	0.19	A	0.1	8.27	0.11	A
Existing Layout - 2025 Base Flows								
Stream B-AC	1.4	35.81	0.69	E	0.7	27.85	0.41	D
Stream C-AB	0.3	8.35	0.22	A	0.1	8.71	0.13	A
Existing Layout - 2025 With Dev Flows								
Stream B-AC	1.9	51.06	0.68	F	0.9	39.24	0.50	E
Stream C-AB	0.4	8.71	0.25	A	0.3	9.45	0.22	A

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

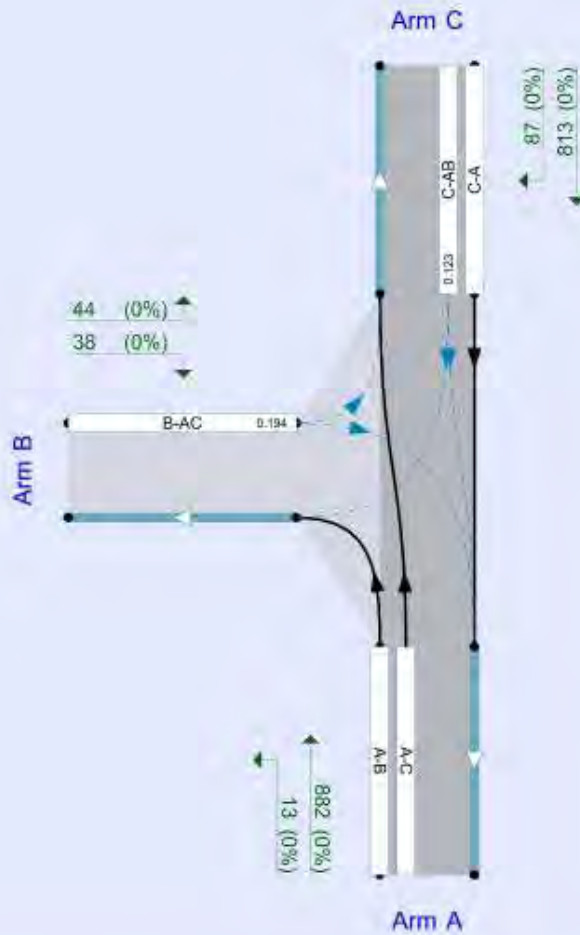
File summary

File Description

Title	Corus Railway Station, Castleton
Location	
Site number	3334
Date	16/04/2021
Version	
Status	TIA
Identifier	
Client	
Jobnumber	
Enumerator	EDD\George.Monks
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Flows show signal traffic control (PCU/s).
Streams (downstream and/or RFC %).

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Surveyed Flows	AM	ONE HOUR	08:00	09:30	15	✓
D2	2019 Surveyed Flows	PM	ONE HOUR	17:00	18:30	15	✓
D3	2025 Base Flows	AM	ONE HOUR	08:00	09:30	15	✓
D4	2025 Base Flows	PM	ONE HOUR	17:00	18:30	15	✓
D5	2025 With Dev Flows	AM	ONE HOUR	08:00	09:30	15	✓
D6	2025 With Dev Flows	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000



Existing Layout - 2019 Surveyed Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.53	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Manchester Road (S)		Major
B	Durban Street		Minor
C	Manchester Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00		✓	2.20	250.0	✓	2.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	19	16

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	492	0.090	0.226	0.142	0.323
B-C	634	0.097	0.246	-	-
C-B	719	0.278	0.278	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Surveyed Flows	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	600	100.000
B		ONE HOUR	✓	122	100.000
C		ONE HOUR	✓	778	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A	B	C	
	A	0	22	578
	B	65	0	57
	C	685	93	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A	B	C	
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.48	24.86	0.9	C	112	168
C-AB	0.19	7.92	0.2	A	88	132
C-A					626	939
A-B					20	30
A-C					530	796

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	92	23	372	0.247	91	0.0	0.3	12.756	B
C-AB	71	18	600	0.118	70	0.0	0.1	6.787	A
C-A	515	129			515				
A-B	17	4			17				
A-C	435	109			435				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	110	27	334	0.329	109	0.3	0.5	15.976	C
C-AB	86	21	582	0.147	85	0.1	0.2	7.250	A
C-A	614	153			614				
A-B	20	5			20				
A-C	520	130			520				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	134	34	279	0.482	133	0.5	0.9	24.350	C
C-AB	108	27	582	0.191	107	0.2	0.2	7.908	A
C-A	749	187			749				
A-B	24	6			24				
A-C	636	159			636				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	134	34	279	0.482	134	0.9	0.9	24.861	C
C-AB	108	27	582	0.191	108	0.2	0.2	7.917	A
C-A	749	187			749				
A-B	24	6			24				
A-C	636	159			636				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	110	27	334	0.329	111	0.9	0.5	16.304	C
C-AB	86	21	582	0.147	86	0.2	0.2	7.264	A
C-A	614	153			614				
A-B	20	5			20				
A-C	520	130			520				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	92	23	371	0.247	93	0.5	0.3	12.943	B
C-AB	71	18	600	0.118	71	0.2	0.1	6.805	A
C-A	515	129			515				
A-B	17	4			17				
A-C	435	109			435				

Existing Layout - 2019 Surveyed Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Surveyed Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	775	100.000
B		ONE HOUR	✓	77	100.000
C		ONE HOUR	✓	752	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	12	783
	B	36	0	41
	C	702	50	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.34	21.46	0.5		71	106
C-AB	0.11	8.27	0.1	A	46	70
C-A					644	985
A-B					11	17
A-C					700	1050

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	14	358	0.162	57	0.0	0.2	11.934	B
C-AB	38	9	559	0.068	38	0.0	0.1	6.905	A
C-A	528	132			528				
A-B	9	2			9				
A-C	574	144			574				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	17	315	0.219	69	0.2	0.3	14.584	B
C-AB	45	11	529	0.086	45	0.1	0.1	7.436	A
C-A	631	158			631				
A-B	11	3			11				
A-C	686	171			686				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	21	252	0.336	84	0.3	0.5	21.265	
C-AB	56	14	491	0.114	56	0.1	0.1	8.270	A
C-A	772	193			772				
A-B	13	3			13				
A-C	840	210			840				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	21	252	0.336	85	0.5	0.5	21.465	
C-AB	56	14	491	0.114	56	0.1	0.1	8.275	A
C-A	772	193			772				
A-B	13	3			13				
A-C	840	210			840				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	17	315	0.220	70	0.5	0.3	14.730	B
C-AB	45	11	529	0.088	45	0.1	0.1	7.444	A
C-A	631	158			631				
A-B	11	3			11				
A-C	688	171			688				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	14	358	0.162	58	0.3	0.2	12.026	B
C-AB	38	9	559	0.068	38	0.1	0.1	6.912	A
C-A	528	132			528				
A-B	9	2			9				
A-C	574	144			574				

Existing Layout - 2025 Base Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2025 Base Flows	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	878	100.000
B		ONE HOUR	✓	131	100.000
C		ONE HOUR	✓	847	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	24	652
	B	70	0	61
	C	747	100	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.59	35.81	1.4	E	120	180
C-AB	0.22	8.35	0.3	A	98	144
C-A					681	1022
A-B					22	33
A-C					598	897

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	25	350	0.282	97	0.0	0.4	14.148	B
C-AB	77	19	587	0.130	76	0.0	0.2	7.043	A
C-A	581	140			581				
A-B	18	5			18				
A-C	491	123			491				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	29	307	0.383	117	0.4	0.6	18.834	C
C-AB	93	23	587	0.164	93	0.2	0.2	7.580	A
C-A	689	167			689				
A-B	22	5			22				
A-C	588	147			588				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	36	244	0.591	141	0.6	1.3	34.115	D
C-AB	118	30	550	0.215	118	0.2	0.3	8.337	A
C-A	814	204			814				
A-B	26	7			26				
A-C	718	179			718				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	36	244	0.591	144	1.3	1.4	35.811	E
C-AB	118	30	550	0.215	118	0.3	0.3	8.351	A
C-A	814	204			814				
A-B	26	7			26				
A-C	718	179			718				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	29	307	0.384	121	1.4	0.6	19.614	C
C-AB	93	23	587	0.164	93	0.3	0.2	7.598	A
C-A	669	167			669				
A-B	22	5			22				
A-C	588	147			588				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	25	350	0.282	100	0.6	0.4	14.442	B
C-AB	77	19	587	0.130	77	0.2	0.2	7.065	A
C-A	561	140			561				
A-B	18	5			18				
A-C	491	123			491				

Existing Layout - 2025 Base Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 Base Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	845	100.000
B		ONE HOUR	✓	82	100.000
C		ONE HOUR	✓	825	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	13	832
	B	38	0	44
From	C	772	53	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	0	0	0
From	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.41	27.85	0.7	D	75	113
C-AB	0.13	8.71	0.1	A	49	74
C-A					708	1061
A-B					12	18
A-C					763	1145

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	339	0.182	61	0.0	0.2	12.907	B
C-AB	40	10	545	0.074	40	0.0	0.1	7.125	A
C-A	581	145			581				
A-B	10	2			10				
A-C	626	157			626				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	291	0.253	73	0.2	0.3	16.489	C
C-AB	48	12	513	0.094	48	0.1	0.1	7.736	A
C-A	693	173			693				
A-B	12	3			12				
A-C	748	187			748				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	219	0.411	89	0.3	0.7	27.326	D
C-AB	60	15	473	0.127	60	0.1	0.1	8.701	A
C-A	848	212			848				
A-B	14	4			14				
A-C	916	229			916				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	219	0.412	90	0.7	0.7	27.851	D
C-AB	60	15	473	0.127	60	0.1	0.1	8.711	A
C-A	848	212			848				
A-B	14	4			14				
A-C	916	229			916				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	291	0.253	75	0.7	0.3	18.788	C
C-AB	48	12	513	0.094	48	0.1	0.1	7.747	A
C-A	693	173			693				
A-B	12	3			12				
A-C	748	187			748				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	339	0.182	62	0.3	0.2	13.036	B
C-AB	40	10	545	0.074	40	0.1	0.1	7.139	A
C-A	581	145			581				
A-B	10	2			10				
A-C	626	157			626				

Existing Layout - 2025 With Dev Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2025 With Dev Flows	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	726	100.000
B		ONE HOUR	✓	131	100.000
C		ONE HOUR	✓	922	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	24	702
	B	70	0	61
	C	809	113	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.68	51.06	1.9	F	120	180
C-AB	0.25	8.71	0.4	A	111	166
C-A					735	1103
A-B					22	33
A-C					644	966

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	25	332	0.297	97	0.0	0.4	15.220	C
C-AB	87	22	580	0.150	86	0.0	0.2	7.279	A
C-A	607	152			607				
A-B	18	5			18				
A-C	529	132			529				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	29	284	0.414	117	0.4	0.7	21.344	C
C-AB	107	27	583	0.189	106	0.2	0.2	7.879	A
C-A	722	181			722				
A-B	22	5			22				
A-C	631	158			631				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	36	213	0.676	140	0.7	1.8	46.425	E
C-AB	138	35	552	0.251	138	0.2	0.4	8.688	A
C-A	877	219			877				
A-B	26	7			26				
A-C	773	193			773				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	36	213	0.677	144	1.8	1.9	51.056	F
C-AB	138	35	552	0.251	138	0.4	0.4	8.708	A
C-A	877	219			877				
A-B	26	7			26				
A-C	773	193			773				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	29	284	0.415	123	1.9	0.7	22.893	C
C-AB	107	27	583	0.189	107	0.4	0.2	7.904	A
C-A	722	181			722				
A-B	22	5			22				
A-C	831	158			831				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	25	332	0.297	100	0.7	0.4	15.608	C
C-AB	87	22	580	0.150	87	0.2	0.2	7.307	A
C-A	607	152			607				
A-B	18	5			18				
A-C	529	132			529				

Existing Layout - 2025 With Dev Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2025 With Dev Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	895	100.000
B		ONE HOUR	✓	82	100.000
C		ONE HOUR	✓	900	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	13	882
	B	38	0	44
From	C	813	87	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	0	0	0
From	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.50	39.24	0.9	E	75	113
C-AB	0.22	9.45	0.3	A	84	126
C-A					742	1113
A-B					12	18
A-C					809	1214

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	319	0.194	61	0.0	0.2	13.919	B
C-AB	67	17	540	0.123	66	0.0	0.1	7.584	A
C-A	611	153			611				
A-B	10	2			10				
A-C	664	166			664				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	285	0.278	73	0.2	0.4	18.741	C
C-AB	81	20	513	0.158	81	0.1	0.2	8.329	A
C-A	728	182			728				
A-B	12	3			12				
A-C	793	198			793				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	182	0.497	88	0.4	0.9	37.671	E
C-AB	105	26	488	0.216	104	0.2	0.3	9.429	A
C-A	886	222			886				
A-B	14	4			14				
A-C	971	243			971				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	182	0.497	90	0.9	0.9	39.241	E
C-AB	105	26	488	0.216	105	0.3	0.3	9.449	A
C-A	886	222			886				
A-B	14	4			14				
A-C	971	243			971				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	18	285	0.279	76	0.9	0.4	19.299	C
C-AB	81	20	513	0.158	82	0.3	0.2	8.352	A
C-A	728	182			728				
A-B	12	3			12				
A-C	793	198			793				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	318	0.194	62	0.4	0.2	14.098	B
C-AB	67	17	540	0.123	67	0.2	0.1	7.607	A
C-A	611	153			611				
A-B	10	2			10				
A-C	684	166			684				

APPENDIX 6

PICADY Output: A664 Manchester Road/Royal Barn
Road/Partington Street

User and Project Details

Project:	Castleton, Corus Railway Sidings
Title:	
Location:	
Additional detail:	
File name:	Manchester Road - Partington Street - Royal Barn Road.lsg3x
Author:	
Company:	
Address:	

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Ind. Arrow	B	3	3
F	Cycle		6	6
G	Cycle		7	4
H	Pedestrian		5	5
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		5	5

Phase Intergreens Matrix

		Starting Phase										
			A	B	C	D	E	F	G	H	I	J
Terminating Phase	A		-	6	6	4	7	-	5	7	9	-
	B	-		8	5	-	10	-	9	10	5	-
	C	6	6		7	6	5	-	9	6	9	-
	D	6	6	7		6	8	7	9	8	6	5
	E	5	-	8	5		10	-	-	10	5	-
	F	5	5	6	5	5		-	-	-	-	-
	G	-	-	-	5	-	-		-	-	-	-
	H	8	8	8	8	-	-	-		-	-	-
	I	9	9	9	9	9	-	-	-		-	-
	J	10	10	9	10	10	-	-	-	-		-
	K	-	-	-	8	-	-	-	-	-	-	

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	G	Losing	3	3
2	3	B	Losing	3	3
2	3	G	Losing	3	3
4	1	F	Losing	5	5
4	1	H	Losing	2	2
4	1	I	Losing	1	1
4	3	F	Losing	5	5
4	3	G	Losing	5	5
4	3	H	Losing	2	2
4	3	I	Losing	1	1
4	3	K	Losing	2	2
4	5	F	Losing	3	3
4	5	H	Losing	1	1
5	3	G	Losing	3	3

Prohibited Stage Change

Terminated Stage Ending						
	To Stage					
From Stage		1	2	3	4	5
	1		4	8	10	8
	2	5		8	10	8
	3	7	7		9	7
	4	10	10	10		9
	5	6	6	8	9	

Phases in Stage

Stage No.	Phases in Stage
1	A B G K
2	B E G K
3	D
4	F G H I J K
5	C G K

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
3/1 (Partington Street)	7/1 (Right)	1439	0	1/1	1.09	To 7/1 (Left)	2.00	1.00	0.50	2	2.00
4/1 (Manchester Road (South))	6/1 (Right)	1439	0	2/1	1.09	All	4.00	3.00	0.50	4	4.00

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Royal Barn Road)	U	C	2	3	60.0	Geom	-	3.60	0.00	Y	Arm 5 Right	Inf
2/1 (Manchester Road (North))	U	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 7 Left	6.00
											Arm 6 Left	8.00
											Arm 7 Ahead	Inf
3/1 (Partington Street)	O	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	12.00
											Arm 7 Right	10.00
4/1 (Manchester Road (South))	O	B E	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	18.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Lane Saturation Flows

Scenario 1: '2025 Base Flows - AM Peak' (FG1: '2025 Base Flows - AM Peak', Plan 1: 'Network Control Plan 1')

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Royal Barn Road)	3.60	0.00	Y	Arm 5 Right	Inf	15.5 %	1631	1631	
				Arm 7 Left	6.00	84.5 %			
2/1 (Manchester Road (North))	3.40	0.00	Y	Arm 6 Left	8.00	2.1 %	1947	1947	
				Arm 7 Ahead	Inf	97.9 %			
3/1 (Partington Street)	3.50	0.00	Y	Arm 5 Left	12.00	47.8 %	1728	1728	
				Arm 6 Ahead	12.00	3.7 %			
				Arm 7 Right	10.00	48.5 %			
4/1 (Manchester Road (South))	3.40	0.00	Y	Arm 5 Ahead	Inf	89.5 %	1938	1938	
				Arm 6 Right	18.00	10.5 %			
5/1	Infinite Saturation Flow						Inf	Inf	
6/1	Infinite Saturation Flow						Inf	Inf	
7/1	Infinite Saturation Flow						Inf	Inf	

Scenario 2: '2025 Base Flows - PM Peak' (FG2: '2025 Base Flows - PM Peak', Plan 1: 'Network Control Plan 1')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Royal Barn Road)	3.60	0.00	Y	Arm 5 Right	Inf	8.9 %	1608	1608
				Arm 7 Left	6.00	91.1 %		
2/1 (Manchester Road (North))	3.40	0.00	Y	Arm 6 Left	8.00	1.9 %	1948	1948
				Arm 7 Ahead	Inf	98.1 %		
3/1 (Partington Street)	3.50	0.00	Y	Arm 5 Left	12.00	55.7 %	1733	1733
				Arm 6 Ahead	12.00	8.5 %		
				Arm 7 Right	10.00	35.8 %		
4/1 (Manchester Road (South))	3.40	0.00	Y	Arm 5 Ahead	Inf	85.2 %	1931	1931
				Arm 6 Right	18.00	14.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2025 With Development - AM Peak' (FG3: '2025 With Development - AM Peak', Plan 1: 'Network Control Plan 1')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Royal Barn Road)	3.60	0.00	Y	Arm 5 Right	Inf	15.4 %	1630	1630
				Arm 7 Left	6.00	84.6 %		
2/1 (Manchester Road (North))	3.40	0.00	Y	Arm 6 Left	8.00	2.0 %	1948	1948
				Arm 7 Ahead	Inf	98.0 %		
3/1 (Partington Street)	3.50	0.00	Y	Arm 5 Left	12.00	46.4 %	1728	1728
				Arm 6 Ahead	12.00	4.3 %		
				Arm 7 Right	10.00	49.3 %		
4/1 (Manchester Road (South))	3.40	0.00	Y	Arm 5 Ahead	Inf	90.2 %	1939	1939
				Arm 6 Right	18.00	9.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2025 With Development - PM Peak' (FG4: '2025 With Development - PM Peak', Plan 1: 'Network Control Plan 1')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Royal Barn Road)	3.60	0.00	Y	Arm 5 Right	Inf	8.7 %	1608	1608
				Arm 7 Left	6.00	91.3 %		
2/1 (Manchester Road (North))	3.40	0.00	Y	Arm 6 Left	8.00	1.8 %	1949	1949
				Arm 7 Ahead	Inf	98.2 %		
3/1 (Partington Street)	3.50	0.00	Y	Arm 5 Left	12.00	52.9 %	1731	1731
				Arm 6 Ahead	12.00	7.2 %		
4/1 (Manchester Road (South))	3.40	0.00	Y	Arm 7 Right	10.00	39.9 %	1932	1932
				Arm 5 Ahead	Inf	86.0 %		
5/1				Arm 6 Right	18.00	14.0 %		
6/1							Inf	Inf
7/1							Inf	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 Base Flows - AM Peak'	08:00	09:00	01:00	
2: '2025 Base Flows - PM Peak'	17:00	18:00	01:00	
3: '2025 With Development - AM Peak'	08:00	09:00	01:00	
4: '2025 With Development - PM Peak'	17:00	18:00	01:00	

Traffic Flows, Desired**FG1: '2025 Base Flows - AM Peak'****Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	15	695	0	710
	B	16	0	87	0	103
	C	632	74	0	0	706
	D	64	5	65	0	134
	Tot.	712	94	847	0	1653

FG2: '2025 Base Flows - PM Peak'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	12	609	0	621
	B	17	0	175	0	192
	C	755	131	0	0	886
	D	59	9	38	0	106
	Tot.	831	152	822	0	1805

FG3: '2025 With Development - AM Peak'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	15	732	0	747
	B	16	0	88	0	104
	C	682	74	0	0	756
	D	96	9	102	0	207
	Tot.	794	98	922	0	1814

FG4: '2025 With Development - PM Peak'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	12	664	0	676
	B	17	0	179	0	196
	C	805	131	0	0	936
	D	73	10	55	0	138
	Tot.	895	153	898	0	1946

Stage Timings

Scenario 1: '2025 Base Flows - AM Peak' (FG1: '2025 Base Flows - AM Peak', Plan 1: 'Network Control Plan 1')

Stage	1	2	3	4	5	1	2	3	5
Duration	47	3	7	5	7	47	3	12	8
Change Point	0	53	60	75	89	105	158	165	185

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	76.0%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	76.0%
1/1	Royal Barn Road Right Left	U	N/A	N/A	C		2	15	-	103	1631	139	74.3%
2/1	Manchester Road (North) Left Ahead	U	N/A	N/A	A		2	94	-	710	1947	935	76.0%
3/1	Partington Street Left Ahead Right	O	N/A	N/A	D		2	19	-	134	1728	181	73.9%
4/1	Manchester Road (South) Ahead Right	O	N/A	N/A	B	E	2	114	12	706	1938	1093	64.6%
5/1		U	N/A	N/A	-		-	-	-	712	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	94	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	847	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	65	62	12	9.9	5.1	0.3	15.3	-	-	-	-
Unnamed Junction	-	-	65	62	12	9.9	5.1	0.3	15.3	-	-	-	-
1/1	103	103	-	-	-	1.3	1.3	-	2.6	91.8	2.9	1.3	4.3
2/1	710	710	-	-	-	4.2	1.6	-	5.8	29.4	17.6	1.6	19.1
3/1	134	134	0	56	9	1.6	1.3	0.0	3.0	79.8	3.9	1.3	5.2
4/1	706	706	65	6	3	2.8	0.9	0.3	4.0	20.2	14.3	0.9	15.2
5/1	712	712	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	847	847	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

LinSig V1 style report

C1	PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	15.34	Cycle Time (s):	200
	PRC Over All Lanes (%):	18.5	Total Delay Over All Lanes(pcuHr):	15.34		

Stage Timings

Scenario 2: '2025 Base Flows - PM Peak' (FG2: '2025 Base Flows - PM Peak', Plan 1: 'Network Control Plan 1')

Stage	1	2	3	4	5	1	2	3	5
Duration	46	3	7	5	17	42	3	7	9
Change Point	0	52	59	74	88	114	162	169	184

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	87.1%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	87.1%
1/1	Royal Barn Road Right Left	U	N/A	N/A	C		2	26	-	192	1608	225	85.3%
2/1	Manchester Road (North) Left Ahead	U	N/A	N/A	A		2	88	-	621	1948	877	70.8%
3/1	Partington Street Left Ahead Right	O	N/A	N/A	D		2	14	-	106	1733	139	76.5%
4/1	Manchester Road (South) Ahead Right	O	N/A	N/A	B	E	2	108	12	886	1931	1018	87.1%
5/1		U	N/A	N/A	-		-	-	-	831	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	822	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	94	63	11	12.7	8.4	0.4	21.5	-	-	-	-
Unnamed Junction	-	-	94	63	11	12.7	8.4	0.4	21.5	-	-	-	-
1/1	192	192	-	-	-	2.3	2.5	-	4.9	91.0	5.9	2.5	8.4
2/1	621	621	-	-	-	4.0	1.2	-	5.2	30.2	16.9	1.2	18.1
3/1	106	106	0	35	3	1.3	1.5	0.0	2.8	96.2	3.2	1.5	4.7
4/1	886	886	94	29	8	5.0	3.2	0.4	8.6	35.0	26.8	3.2	30.0
5/1	831	831	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	822	822	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

LinSig V1 style report

C1	PRC for Signalled Lanes (%):	3.4	Total Delay for Signalled Lanes (pcuHr):	21.51	Cycle Time (s):	200
	PRC Over All Lanes (%):	3.4	Total Delay Over All Lanes(pcuHr):	21.51		

Stage Timings

Scenario 3: '2025 With Development - AM Peak' (FG3: '2025 With Development - AM Peak', Plan 1: 'Network Control Plan 1')

Stage	1	2	3	4	5	1	2	3	5
Duration	39	3	10	5	7	49	3	16	7
Change Point	0	45	52	70	84	100	155	162	186

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	85.6%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	85.6%
1/1	Royal Barn Road Right Left	U	N/A	N/A	C		2	14	-	104	1630	130	79.8%
2/1	Manchester Road (North) Left Ahead	U	N/A	N/A	A		2	88	-	747	1948	877	85.2%
3/1	Partington Street Left Ahead Right	O	N/A	N/A	D		2	26	-	207	1728	242	85.6%
4/1	Manchester Road (South) Ahead Right	O	N/A	N/A	B	E	2	108	12	756	1939	1032	73.2%
5/1		U	N/A	N/A	-		-	-	-	794	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	922	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	64	104	9	12.4	8.4	0.4	21.2	-	-	-	-
Unnamed Junction	-	-	64	104	9	12.4	8.4	0.4	21.2	-	-	-	-
1/1	104	104	-	-	-	1.3	1.7	-	3.0	105.5	2.8	1.7	4.6
2/1	747	747	-	-	-	5.1	2.8	-	7.9	38.1	20.1	2.8	22.9
3/1	207	207	0	96	6	2.5	2.6	0.0	5.1	87.9	6.4	2.6	9.0
4/1	756	756	64	7	3	3.5	1.4	0.4	5.2	25.0	17.0	1.4	18.4
5/1	794	794	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	922	922	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

LinSig V1 style report

C1	PRC for Signalled Lanes (%):	5.2	Total Delay for Signalled Lanes (pcuHr):	21.25	Cycle Time (s):	200
	PRC Over All Lanes (%):	5.2	Total Delay Over All Lanes(pcuHr):	21.25		

Stage Timings

Scenario 4: '2025 With Development - PM Peak' (FG4: '2025 With Development - PM Peak', Plan 1: 'Network Control Plan 1')

Stage	1	2	3	4	5	1	2	3	5
Duration	45	3	8	5	12	42	3	8	13
Change Point	0	51	58	74	88	109	157	164	180

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	93.3%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	93.3%
1/1	Royal Barn Road Right Left	U	N/A	N/A	C		2	25	-	196	1608	217	90.3%
2/1	Manchester Road (North) Left Ahead	U	N/A	N/A	A		2	87	-	676	1949	867	77.9%
3/1	Partington Street Left Ahead Right	O	N/A	N/A	D		2	16	-	138	1731	156	88.6%
4/1	Manchester Road (South) Ahead Right	O	N/A	N/A	B	E	2	107	12	936	1932	1003	93.3%
5/1		U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	153	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	898	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	87	80	19	14.3	14.1	0.5	28.8	-	-	-	-
Unnamed Junction	-	-	87	80	19	14.3	14.1	0.5	28.8	-	-	-	-
1/1	196	196	-	-	-	2.4	3.5	-	5.9	108.3	5.9	3.5	9.4
2/1	676	676	-	-	-	4.5	1.7	-	6.2	33.3	18.0	1.7	19.8
3/1	138	138	0	44	11	1.7	2.9	0.0	4.7	121.5	4.0	2.9	6.9
4/1	936	936	87	36	8	5.7	5.9	0.4	12.0	46.2	27.6	5.9	33.5
5/1	895	895	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	153	153	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	898	898	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

LinSig V1 style report

C1	PRC for Signalled Lanes (%):	-3.7	Total Delay for Signalled Lanes (pcuHr):	28.82	Cycle Time (s):	200
	PRC Over All Lanes (%):	-3.7	Total Delay Over All Lanes(pcuHr):	28.82		

APPENDIX 7

M62 Junctions 19 & 20 STATS19 Accident Data

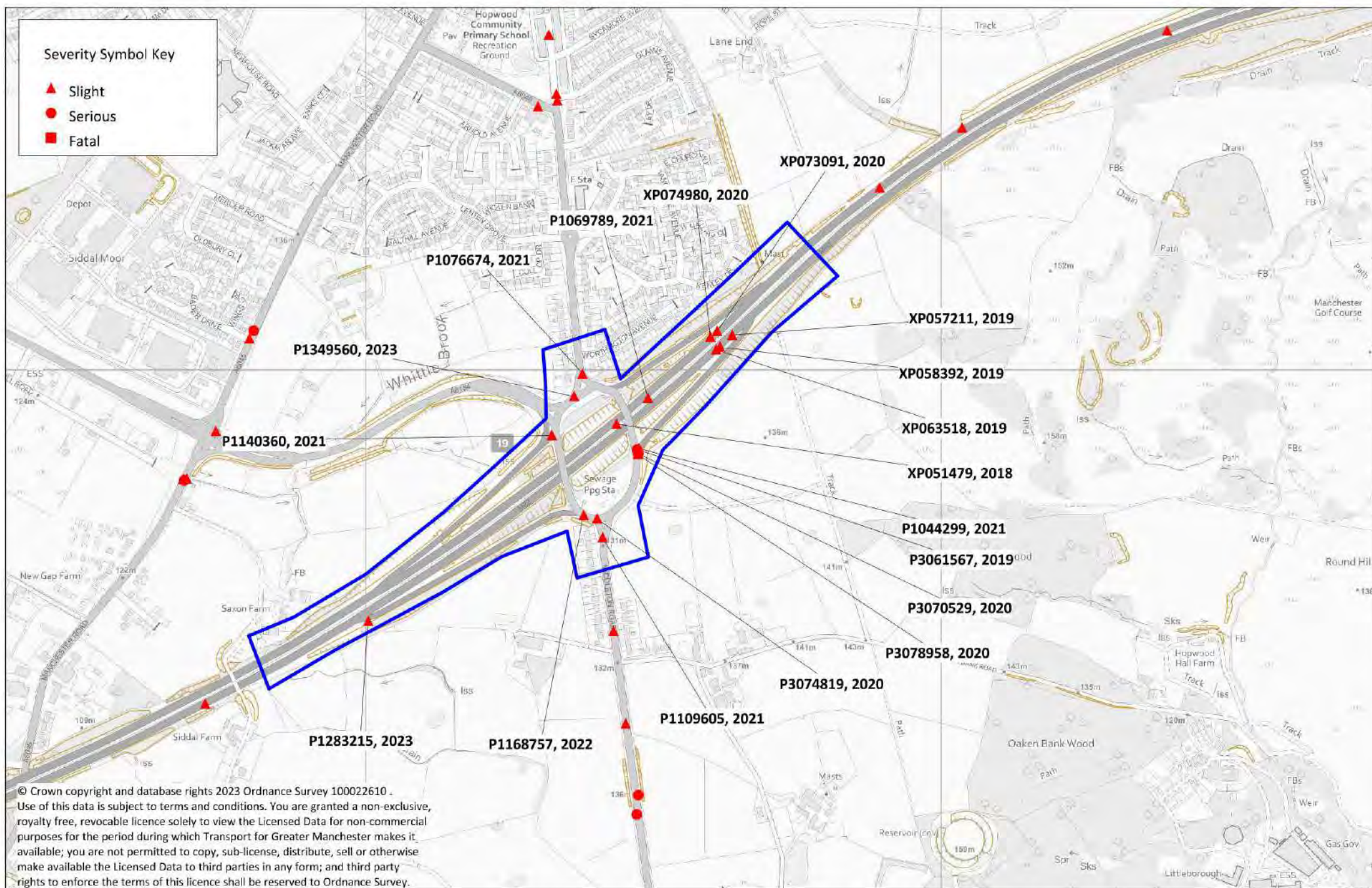
TRANSPORT FOR GREATER MANCHESTER



Traffic Accident Data for

Eddisons

**Reported Road Injury Accidents in the Specified Area of
M62 Junction 19, Rochdale.
01/09/2018 to 31/08/2023**



TRANSPORT FOR GREATER MANCHESTER



Reported Road Injury Accidents in Specified Area of M62 Junction 19, Rochdale. 01/09/2018 to 31/08/2023

Injury Accidents	Sep - Dec 2018	2019	2020	2021	2022	Jan - Aug 2023	Total
Fatal	0	0	0	0	0	0	0
Serious	0	1	1	0	0	0	2
Slight	1	3	4	5	1	2	16
Total	1	4	5	5	1	2	18

Standard Totals Report : Reported Injury Accidents in Specified Area of M62 Junction 19, Rochdale, 01/09/2018 to 31/08/2023

Accidents

Serious	2
Slight	16
Total Accidents	18

Casualties Broken Down By Type

Car (Driver)	0-15	16+	Total
Slight	0	17	17
Total	0	17	17

Car (Passenger)	0-15	16+	Total
Serious	1	0	1
Slight	2	10	12
Total	3	10	13

TWPV (Rider)	0-15	16+	Total
Slight	0	1	1
Total	0	1	1

Cyclist (Rider)	0-15	16+	Total
Serious	0	1	1
Slight	0	2	2
Total	0	3	3
Total	3	31	34

Casualties By Age and Sex

Severity	0 - 15	16 - 59	60 - 69	70 +	Total
Serious					
Male	0	1	0	0	1
Female	1	0	0	0	1
Total	1	1	0	0	2
Slight					
Male	2	21	0	1	24
Female	0	6	1	1	8
Total	2	27	1	2	32
Total Casualties	3	28	1	2	34

Casualties By Age and Class

Severity	0 - 15	16 - 59	60 - 69	70 +	Total
Serious					
Driver or rider	0	1	0	0	1
Veh or pillion pas	1	0	0	0	1
Total	1	1	0	0	2
Slight					
Driver or rider	0	18	1	1	20
Veh or pillion pas	2	9	0	1	12
Total	2	27	1	2	32
Total Casualties	3	28	1	2	34

Cyclist (Rider and Pillion) and Pedestrian Casualties By Age

Severity	0 - 15	16 - 59	60 - 69	70 +	Total
Serious	0	1	0	0	1
Slight	0	2	0	0	2
Total Casualties	0	3	0	0	3

Standard Report - Reported Injury Accidents in Specified Area of M62 Junction 19, Rochdale, 01/09/2018 to 31/08/2023

This printout has been generated from the Transport for Greater Manchester's database of road traffic accident records using the query system, GMAXI.

The road traffic accident database contains STATS19 data supplied by Greater Manchester Police and further validated by the Highways Forecasting and Analytical Services (HFAS) section of Transport for Greater Manchester. It is maintained by HFAS on behalf of the ten District Councils in Greater Manchester.

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Accident Reference Number: P1283215				Day: Saturday		Date: 04/03/2023					Time: 21:15				
Place Reported: Scene				District: Rochdale		Contributory Factors					Vehicle Details				
Location: M62 On-slip Road 30 metres SW Of M62 SW-bound, Marker Post 60.5						Factor Conf Ref			Type Move From To Skid			Casualty Details			
Description: Both Vehs Trav Sw-bd M62 On-slip Road, V1 (Intoxicated) O/takes V2 On Its O/s, N/s Of V1 Collides With O/s Of V2						DDrugs VLike V1			Car O/Tkg NE SW S&O			Type Sex Age Sev Pupil			
						DAggre VLike V1			Car Ahead NE SW			1 Drv M 19 Slight Un			
Locational Details				Conditions		Accident Details									
Road: M62		Junction Details:		Road Surface: Dry		Severity:		Slight							
OSGR: 386003 408563		Junction Control: n/a		Light Conditions: Dark		No. of Vehicles:		2							
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties:		1							

Accident Reference Number: P1140360				Day: Wednesday		Date: 15/12/2021					Time: 17:20				
Place Reported: Self				District: Rochdale		Contributory Factors					Vehicle Details				
Location: M62 Off-slip Road at junction with Heywood Interchange Roundabout						Factor Conf Ref			Type Move From To Skid			Casualty Details			
Description: Both Vehs Trav Ne-bd M62 Off-slip Rd. V1 Slows Approaching Rdabt. V2 (LGV) Trav Behind & Front Collides With Rear Of V1. V2 Fts									Car Stopg SW NE			Type Sex Age Sev Pupil			
									LGV Ahead SW NE			1 Drv F 42 Slight Un			
Locational Details				Conditions		Accident Details									
Road: M62/A6046		Junction Details: Rdbt		Road Surface: Dry		Severity:		Slight							
OSGR: 386322 408886		Junction Control: GW		Light Conditions: Dark		No. of Vehicles:		2							
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties:		1							

Accident Reference Number: P1349560				Day: Monday		Contributory Factors			Date: 28/08/2023					Time: 19:00					
Place Reported: Else				District: Rochdale		Factor Conf Ref			Vehicle Details					Casualty Details					
Location: Heywood Interchange Roundabout at junction with Middleton Road										Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav On Heywood Interchange Rdabt, V1 Trav N-bd Exits Onto Middleton Rd, V2 Trav E-bd Continues On Rdabt, Front Of V1 Colls With O/s Of V2. V1 Fts										Car	Ahead	W	N						
										Car	Ahead	W	E		1 Drv	M	31	Slight	Un
Locational Details				Conditions		Accident Details													
Road:	A6046/A6046		Junction Details:	Rdbt	Road Surface:	Dry	Severity:	Slight											
OSGR:	386361	408954	Junction Control:	GW	Light Conditions:	Light	No. of Vehicles:	2											
Speed Limit:	30		Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:	1											
Accident Reference Number: P1076674				Day: Sunday		Contributory Factors			Date: 18/07/2021					Time: 09:20					
Place Reported: Self				District: Rochdale		Factor Conf Ref			Vehicle Details					Casualty Details					
Location: Middleton Road 25 metres N Of Heywood Interchange										Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav S Middleton Rd, V1 Slows For Traffic, V2 Trav Behind & Front Collides With Rear Of V1										Car	Stopg	N	S		1 Pas	M	18	Slight	Un
										Car	Ahead	N	S						
Locational Details				Conditions		Accident Details													
Road:	A6046		Junction Details:		Road Surface:	Dry	Severity:	Slight											
OSGR:	386376	408993	Junction Control:	n/a	Light Conditions:	Light	No. of Vehicles:	2											
Speed Limit:	30		Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:	1											
Accident Reference Number: P1168757				Day: Wednesday		Contributory Factors			Date: 09/03/2022					Time: 07:50					
Place Reported: Self				District: Rochdale		Factor Conf Ref			Vehicle Details					Casualty Details					
Location: Heywood Interchange Roundabout at junction with M62 SW-bound On-slip Road										Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav W-bd Heywood Interchange Rdabt & Both Exit Onto M62 Sw-bd On-slip Road, N/s Of V2 Collides With O/s Of V1. V2 Fts										Car	Ahead	S	W		1 Drv	F	43	Slight	Un
										Car	Ahead	S	W						
Locational Details				Conditions		Accident Details													
Road:	A6046/M62		Junction Details:	Rdbt	Road Surface:	Dry	Severity:	Slight											
OSGR:	386378	408747	Junction Control:	GW	Light Conditions:	Light	No. of Vehicles:	2											
Speed Limit:	40		Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:	1											
Accident Reference Number: P3074819				Day: Saturday		Contributory Factors			Date: 08/08/2020					Time: 14:19					
Place Reported: Else				District: Rochdale		Factor Conf Ref			Vehicle Details					Casualty Details					
Location: Heywood Interchange at junction with Middleton Road										Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: V2 (Pedal Cycle) Trav E Heywood Interchange On Rdabt, V1 Trav N Middleton Rd Enters Rdabt To Trav W, V2 Cannot Slows Down & N/s Collides With O/s Of V1										Car	TurnL	S	W						
										p/c	Ahead	E	W		1 Rid	M	34	Slight	
Locational Details				Conditions		Accident Details													
Road:	A6046/A6046		Junction Details:	Rdbt	Road Surface:	Dry	Severity:	Slight											
OSGR:	386401	408741	Junction Control:	GW	Light Conditions:	Light	No. of Vehicles:	2											
Speed Limit:	40		Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:	1											

Accident Reference Number: P1109605				Day: Tuesday		Contributory Factors			Date: 22/06/2021			Time: 10:55							
Place Reported: Self				District: Rochdale		Factor Conf Ref			Vehicle Details			Casualty Details							
Location: Middleton Road 30 metres S Of Heywood Interchange Roundabout										Type	Move	From To	Skid	Type	Sex Age Sev Pupil				
Description: Both Vehs Trav N Middleton Rd, V2 Slows Approaching Heywood Interchange Rdabt, V1 Trav Behind & Collides With Rear Of V2										Car	Ahead	S N							
										Car	Stopg	S N		1 Drv M 49 Slight Un					
														2 Pas F 40 Slight Un					
														3 Pas M 19 Slight Un					
Locational Details				Conditions		Accident Details													
Road:	A6046	Junction Details:	Road Surface:	Dry	Severity:	Slight													
OSGR:	386411 408708	Junction Control: n/a	Light Conditions:	Light	No. of Vehicles:	2													
Speed Limit: 40		Ped Crossing:	Weather Conditions:	Fine	No. of Casualties:	3													
Accident Reference Number: XP051479				Day: Wednesday		Contributory Factors			Date: 21/11/2018			Time: 16:55							
Place Reported: Else				District: Rochdale		Factor Conf Ref			Vehicle Details			Casualty Details							
Location: M62 NE-Bound, Marker Post 61.1										Type	Move	From To	Skid	Type	Sex Age Sev Pupil				
Description: Both Vehs Trav Ne-bd M62, V2 (Taxi) In Third Lane In Heavy Traffic When V1 (MGV) Tried To Get Into Lane 3 But Collides V2. V1 FTS										MGV	chInR	SW NE							
										Taxi	Ahead	SW NE		1 Drv M 32 Slight					
Locational Details				Conditions		Accident Details													
Road:	M62	Junction Details:	Road Surface:	Dry	Severity:	Slight													
OSGR:	386435 408906	Junction Control: n/a	Light Conditions:	Light	No. of Vehicles:	2													
Speed Limit: 70		Ped Crossing:	Weather Conditions:	Fine	No. of Casualties:	1													
Accident Reference Number: P3061567				Day: Sunday		Contributory Factors			Date: 15/09/2019			Time: 01:05							
Place Reported: Scene				District: Rochdale		Factor Conf Ref			Vehicle Details			Casualty Details							
Location: Heywood Interchange Roundabout at junction with M62 Off-slip Road										Type	Move	From To	Skid	Type	Sex Age Sev Pupil				
Description: V2 Trav S Heywood Interchange Rdabt, V1 Trav Sw M62 Off-slip Rd Enters Rdabt, V1 Fails To Give Way, Rear Of V1 Collides With Front Of V2							DGWor	VLike	V1	Car	Ahead	NE SW		1 Drv M 43 Slight					
							DSpee	VLike	V1					3 Pas M 6 Slight					
							DSpee	VLike	V2					4 Pas M 2 Slight					
							DFLook	VLike	V1					5 Pas M 40 Slight					
Locational Details				Conditions		Accident Details			Car	Ahead	N S		6 Pas F 15 Serious						
Road:	A6046/M62	Junction Details: Rdbt	Road Surface:	Dry	Severity:	Serious							2 Drv M 54 Slight						
OSGR:	386471 408861	Junction Control: GW	Light Conditions:	Dark	No. of Vehicles:	2							7 Pas M 24 Slight						
Speed Limit: 40		Ped Crossing:	Weather Conditions:	Fine	No. of Casualties:	8							8 Pas M 24 Slight						
Accident Reference Number: P3078958				Day: Tuesday		Contributory Factors			Date: 15/12/2020			Time: 11:30							
Place Reported: Scene				District: Rochdale		Factor Conf Ref			Vehicle Details			Casualty Details							
Location: Heywood Interchange at junction with M62 Off-slip Road										Type	Move	From To	Skid	Type	Sex Age Sev Pupil				
Description: V1 Trav W Exits M62 Off-slip Rd Enters Heywood Interchange Rdabt, V2 (Pedal Cycle) Trav S-bd On Rdabt, Driver Of V1 Affects By Dazzling Sun & O/s Hits N/s Of V2							DSun	VLike	V1	Car	Ahead	E W							
										p/c	Ahead	N S		1 Rid M 51 Slight					
Locational Details				Conditions		Accident Details													
Road:	A6046/M62	Junction Details: Rdbt	Road Surface:	Wet	Severity:	Slight													
OSGR:	386472 408853	Junction Control: GW	Light Conditions:	Light	No. of Vehicles:	2													
Speed Limit: 30		Ped Crossing:	Weather Conditions:	Fine	No. of Casualties:	1													

Accident Reference Number: P3070529			Day: Tuesday			Contributory Factors			Date: 18/02/2020			Time: 18:45		
Place Reported: Else			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: Middleton Road Heywood Interchange at junction with M62 SW-bound Exit Slip Road						Type	Move	From To	Skid			Type	Sex	Age
Description: V2 (Pedal Cycle) Trav S Middleion Rd Rdabt, V1 Trav Sw-bd M62 Exit Slip Road Enters Rdabt & Collides Rear Of V2						DJnOvr	Poss	V1						
						DTurn	Poss	V1	Car	Ahead	NE S			
						DPanic	Poss	V1	p/c	Ahead	N S	1 Rid	M	30 Serious
Locational Details			Conditions			Accident Details								
Road:	A6046/M62	Junction Details:	Rdbt	Road Surface:	Dry	Severity:		Serious						
OSGR:	386473 408854	Junction Control:	GW	Light Conditions:	Dark	No. of Vehicles:		2						
Speed Limit:	40	Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:		1						
Accident Reference Number: P1044299			Day: Monday			Contributory Factors			Date: 26/04/2021			Time: 16:29		
Place Reported: Self			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: M62 Off-slip Road at junction with Heywood Interchange Roundabout						Type	Move	From To	Skid			Type	Sex	Age
Description: Both Vehs Trav Sw M62 Off-slip Rd, V2 Waiting To Pull Out Onto Rdabt, V1 Collides With Rear Of V2														
						Car	Ahead	NE SW						
						Car	Stopg	NE SW				1 Drv	F	65 Slight
Locational Details			Conditions			Accident Details								
Road:	M62/A6046	Junction Details:	Rdbt	Road Surface:	Dry	Severity:		Slight						
OSGR:	386474 408863	Junction Control:	GW	Light Conditions:	Light	No. of Vehicles:		2						
Speed Limit:	70	Ped Crossing:		Weather Conditions:	Othr	No. of Casualties:		1						
Accident Reference Number: P1069789			Day: Sunday			Contributory Factors			Date: 25/07/2021			Time: 11:00		
Place Reported: Scene			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: M62 NE-Bound, Marker Post 61.1						Type	Move	From To	Skid			Type	Sex	Age
Description: V1 (Motorcycle) Trav Ne-bd M62, Rider's Protective Coat Which Is Around His Waist Gets Caught In Rear Wheel & Throws Rider Off Bike														
						m/cl	Ahead	SW NE	Skid			1 Rid	M	24 Slight
Locational Details			Conditions			Accident Details								
Road:	M62	Junction Details:		Road Surface:	Dry	Severity:		Slight						
OSGR:	386490 408951	Junction Control:	n/a	Light Conditions:	Light	No. of Vehicles:		1						
Speed Limit:	70	Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:		1						
Accident Reference Number: XP074980			Day: Monday			Contributory Factors			Date: 14/09/2020			Time: 00:21		
Place Reported: Scene			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: M62 NE-bound, Marker Post 61.3						Type	Move	From To	Skid			Type	Sex	Age
Description: Both Vehs Trav Ne-bd M62 In Lane 2, N/s Of V1 Collides With Rear O/s Of V2														
						DTired	Poss	V1	Car	Ahead	SW NE	1 Drv	M	38 Slight
						DFLook	Poss	V1	Car	Ahead	SW NE	2 Drv	M	85 Slight
Locational Details			Conditions			Accident Details								
Road:	M62	Junction Details:		Road Surface:	Dry	Severity:		Slight						
OSGR:	386598 409057	Junction Control:	n/a	Light Conditions:	Dark	No. of Vehicles:		2						
Speed Limit:	70	Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:		3						

Accident Reference Number: XP063518				Day: Wednesday		Date: 16/10/2019					Time: 12:50								
Place Reported: Scene				District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details					
Location: M62 SW-bound (Towards Junction 19), Marker Post 61.3						Factor Conf Ref			Type Move From To Skid					Type Sex Age Sev Pupil					
Description: Both Vehs Trav Sw-bd M62, V1 Attempts To Change Lane To Right Into Lane 4 Which Is Occupied By V2, V2 Swerves & Collides With N/s Barrier						DTurn Poss V1													
						DJudge Poss V1			Car chInR NE SW										
									Car Ahead NE SW					1 Drv M 31 Slight					
Locational Details				Conditions		Accident Details													
Road: M62		Junction Details:		Road Surface: Dry		Severity: Slight													
OSGR: 386608 409035		Junction Control: n/a		Light Conditions: Light		No. of Vehicles: 2													
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties: 1													
Accident Reference Number: XP073091				Day: Tuesday		Date: 07/07/2020					Time: 10:00								
Place Reported: Scene				District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details					
Location: M62 NE-bound Junction 19, 60 metres SW Of M62 On-slip Road, Marker Post 61.3						Factor Conf Ref			Type Move From To Skid					Type Sex Age Sev Pupil					
Description: All Vehs Trav Ne-bd M62 Slippery Road, V1 In Lane 3, V2 In Lane 1, V3 In Lane 2. V1 Aquaplanes Into Central Reservation Across Into Lane 1 & Collides With V2 & V3						Slip VLike V1													
						DRain VLike V1			Car Ahead SW NE					1 Drv M 27 Slight					
						DPanic Poss V1								5 Pas F 52 Slight					
									Car Ahead SW NE					2 Drv M 50 Slight					
									Car Ahead SW NE					3 Drv M 55 Slight					
														4 Pas F 29 Slight					
Locational Details				Conditions		Accident Details													
Road: M62		Junction Details:		Road Surface: Wet		Severity: Slight													
OSGR: 386610 409067		Junction Control: n/a		Light Conditions: Light		No. of Vehicles: 3													
Speed Limit: 70		Ped Crossing:		Weather Conditions: R&W		No. of Casualties: 5													
Accident Reference Number: XP058392				Day: Tuesday		Date: 04/06/2019					Time: 13:30								
Place Reported: Else				District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details					
Location: M62 SW-bound, Marker Post 61.3						Factor Conf Ref			Type Move From To Skid					Type Sex Age Sev Pupil					
Description: All Vehs Trav Sw-bd M62, V1 Collides With Rear Of V2, V2 Then Shunts Into Rear Of V3																			
									Car Ahead NE SW					1 Drv M 29 Slight					
									Car Ahead NE SW										
									Car Ahead NE SW										
Locational Details				Conditions		Accident Details													
Road: M62		Junction Details:		Road Surface: Dry		Severity: Slight													
OSGR: 386615 409040		Junction Control: n/a		Light Conditions: Light		No. of Vehicles: 3													
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties: 1													
Accident Reference Number: XP057211				Day: Thursday		Date: 16/05/2019					Time: 09:11								
Place Reported: Scene				District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details					
Location: M62 Westbound at junction with Off-slip Road Jct 19, Mp 61.3						Factor Conf Ref			Type Move From To Skid					Type Sex Age Sev Pupil					
Description: All Vehs Trav W-bd M62, V1 (MGV) Moves Lane To Left & Collides With V2 Which Spins Into V3 Who Then Hits V4						DFLook VLike V1													
									MGV chInL E W										
									Car Ahead E W Skid					2 Pas F 48 Slight					
									Car Ahead E W										
									Car Ahead E W Skid					1 Drv M 30 Slight					
Locational Details				Conditions		Accident Details													
Road: M62/M62		Junction Details: Slip		Road Surface: Dry		Severity: Slight													
OSGR: 386636 409060		Junction Control: GW		Light Conditions: Light		No. of Vehicles: 4													
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties: 2													

Abbreviations used in GMAXI Reports for New Contributory Factors - 2005/06

WARNING: Please note that -

Codes 101 to 999 only relate to accidents from 1 April 2005. - New National Factors introduced by DfT

Codes 1001 to 1154 relate to accidents from 1 April 1999 to 31 March 2005 only. - Local Factors introduced

Accidents before 1 April 1999 do not have contributory factors attached.

Code	ContribFactor1Name	ContribFactor1Abb
0	None	
101	Poor or defective road surface	Surf
102	Deposit on road (eg oil, mud, chippings)	Dposit
103	Slippery road (due to weather)	Slip
104	Inadequate/masked signs or road markings	Mark
105	Defective traffic signals	DefATS
106	Traffic calming (eg speed cushions, road humps, chicanes)	TCalm
107	Temporary road layout (eg contraflow)	TmpRd
108	Road layout (eg bend, hill, narrow carriageway)	RdLay
109	Animal or object in carriageway	ObjInC
201	Tyres illegal, defective or under inflated	VTyres
202	Defective lights or indicators	VLight
203	Defective brakes	VBrake
204	Defective steering or suspension	VSteer
205	Defective or missing mirrors	VMirr
206	Overloaded or poorly loaded vehicle or trailer	VLoad
301	Disobeyed automatic traffic signal	DATS
302	Disobeyed Give Way or Stop sign or markings	DGWorS
303	Disobeyed double white line	DWhite
304	Disobeyed pedestrian crossing facility	DPedX
305	Illegal turn or direction of travel	DITurn
306	Exceeding speed limit	DSpeed
307	Travelling too fast for conditions	DFast
308	Following too close	DTgate
309	Vehicle travelling along pavement	DPave
310	Cyclist entering road from pavement	DCPave
401	Junction overshoot	DJnOvr
402	Junction restart	DJnRst
403	Poor turn or manoeuvre	DTurn
404	Failed to signal/misleading signal	DSign
405	Failed to look properly	DFLook
406	Failed to judge other person's path or speed	DJudge
407	Passing too close to cyclist, horse rider or pedestrian	DClose
408	Sudden braking	DBrake
409	Swerved	DSwerv
410	Loss of control	DLossC
501	Impaired by alcohol	DAlcoh
502	Impaired by drugs (illicit or medicinal)	DDrugs
503	Fatigue	DTired
504	Uncorrected, defective eyesight	DEye
505	Illness or disability, mental or physical	DIllns
506	Not displaying lights at night or in poor visibility	DNoLit
507	Cyclist wearing dark clothing at night	DCDark
508	Driver using mobile phone	DMobPh
509	Distraction in vehicle	DDisIn
510	Distraction outside vehicle	DDisOu
601	Aggressive driving	DAggre
602	Careless/reckless/in a hurry	DCare

603	Nervous/uncertain/panic	DPanic
604	Driving too slow or conditions or slow vehicle (eg tractor)	DSlow
605	Learner or inexperienced driver/rider	DLearn
606	Inexperience of driving on the left	DInDrL
607	Inexperience with type of vehicle	DInVeh
701	Stationary or parked vehicle(s)	DStat
702	Vegetation	DVeg
703	Road layout (eg bend, winding road, hill crest)	DRdLay
704	Buildings, road signs, street furniture	DBuild
705	Dazzling headlights	DHLigt
706	Dazzling sun	DSun
707	Rain, sleet, snow, or fog	DRain
708	Spray from other vehicles	DFog
709	Visor or windscreen dirty or scratched	DSpray
710	Vehicle blind spot	DWscrm
801	Crossed road masked by stationary or parked vehicle	PXMask
802	Failed to look properly	PFLook
803	Failed to judge vehicle's path or speed	PJudge
804	Wrong use of pedestrian crossing facility	PPedX
805	Dangerous action in carriageway (eg playing)	PDange
806	Impaired by alcohol	PAIcoh
807	Impaired by drugs (illicit or medicinal)	PDrugs
808	Careless/reckless/in a hurry	PCare
809	Pedestrian wearing dark clothing at night	PCloth
810	Disability or illness, mental or physical	PIllns
901	Stolen vehicle	StoVeh
902	Vehicle in course of crime	VCrime
903	Emergency vehicle on call	EmVeh
904	Vehicle door opened or closed negligently	VDoor
999	Other	Other
1001	Failed to stop (mandatory sign)	Fstop
1002	Failed to give way	Fgive
1003	Failed to avoid pedestrian (pedestrian not to blame)	FAPed
1004	Failed to avoid vehicle or object in carriageway	FAObj
1005	Failure to signal/misleading signal	Fsig
1006	Loss of control of vehicle	Loss
1007	Pedestrian entered carriageway without due care	Ped
1008	Passenger fell in or near PSV	Pfell
1009	Swerved to avoid object in carriageway	Swerv
1010	Sudden braking	Brake
1011	Poor turn/manoeuvre	Turn
1012	Poor overtaking	Over
1013	Drove wrong way (e.g. 1-way street)	1Way
1014	Opening door carelessly	Door
1015	Other	Other
1101	Impairment alcohol	Alcoh
1102	Impairment drugs	Drugs
1103	Impairment fatigue	Tired
1104	Impairment illness	Ill
1105	Distraction stress/emotional state of mind	Stress
1106	Distraction physical in/on vehicle	DPhIn
1107	Distraction physical outside vehicle	DPhOut
1108	Behaviour panic	Panic
1109	Behaviour careless/thoughtless/reckless	Care
1110	Behaviour nervous/uncertain	Nerve
1111	Behaviour in a hurry	Hurry

1112	Failure to judge other person's path or speed	Fjudg
1113	Disability	Disab
1114	Failed to look	F2look
1115	Looked but did not see	Nsee
1116	Inattention	Inatt
1117	Person hit wore dark or inconspicuous clothing	Cloth
1118	Other (Personal details)	Pother
1119	Crossed from behind parked vehicle etc	Cross
1120	Ignored lights at crossing	Xlight
1121	Excessive Speed	Speed
1122	Following too close	Tgate
1123	Inexperience of driving	InDri
1124	Inexperience of vehicle	InVeh
1125	Interaction or competition with other road users	Users
1126	Aggressive driving	Aggr
1127	Lack of judgement of own path	Judge
1128	Tyres wrong pressure	Press
1129	Tyres deflation before impact	Deflat
1130	Tyres worn/insufficient tread	Tread
1131	Defective lights or signals	Signal
1132	Defective brakes	Brakes
1133	Other (Vehicle defects)	Vother
1134	Site details poor road surface	Surf
1135	Site details poor/no street lighting	Lightg
1136	Site details inadequate signing	Sign
1137	Site details steep hill	Hill
1138	Site details narrow road	Narr
1139	Site details bend/winding road	Rbend
1140	Site details roadworks	Works
1141	Slippery road	Slip
1142	High winds	Winds
1143	Earlier accident	Earli
1144	Other (Local conditions)	Lother
1145	View windows obscured	Obs
1146	View glare from sun	Glare
1147	View glare from headlights	Head
1148	Surroundings bend/winding road	Bend
1149	Surroundings stationary parked vehicle	Stat
1150	Surroundings moving vehicle	Move
1151	Surroundings buildings, fences, vegetation etc	Fence
1152	Weather (e.g. mist or sleet)	Weath
1153	Failed to see pedestrian or vehicle in blindspot	Blind
1154	Animal out of control	Animal
9999	GMP Out of Range	OoR

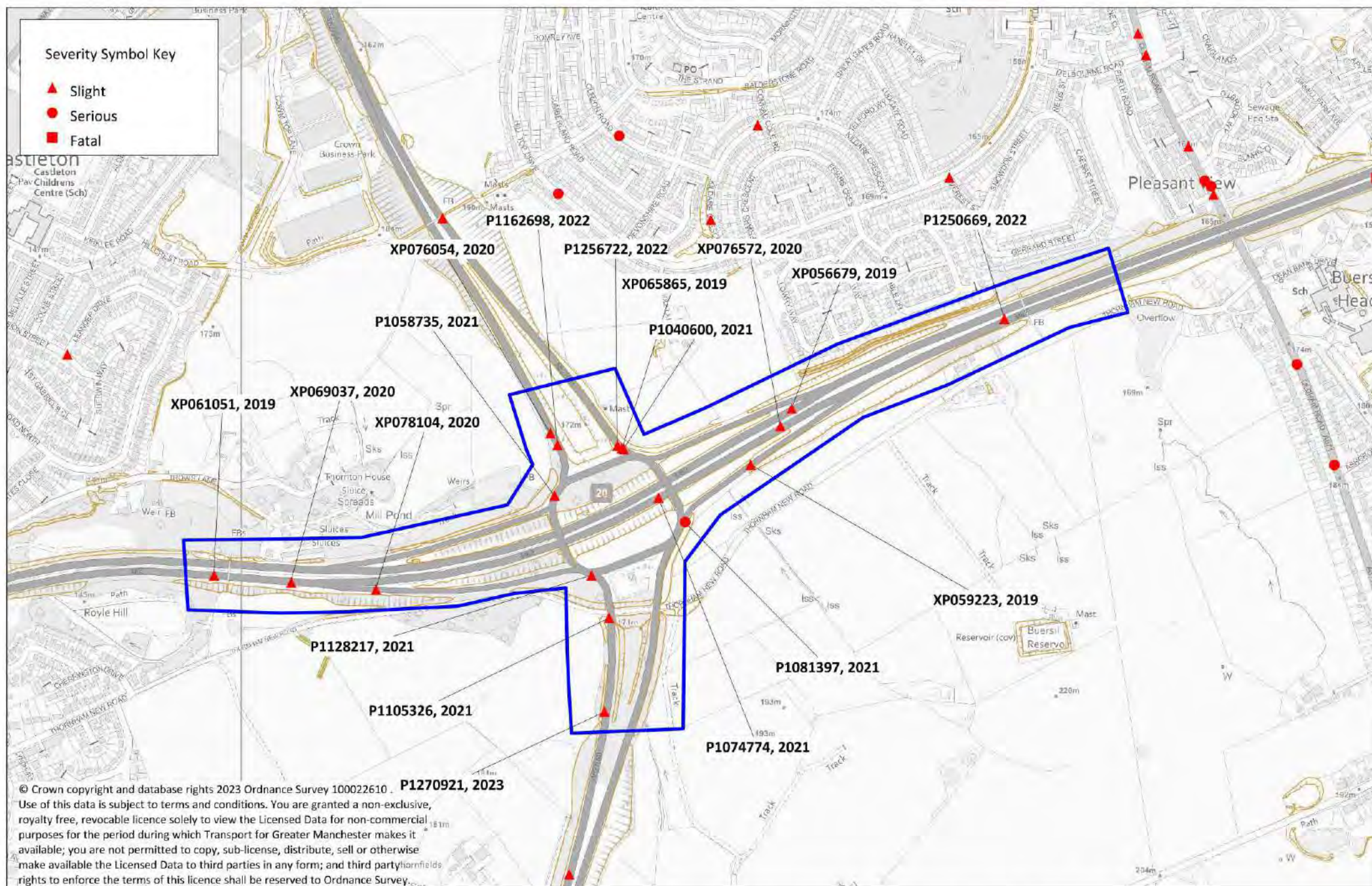
TRANSPORT FOR GREATER MANCHESTER



Traffic Accident Data for

Eddisons

**Reported Road Injury Accidents in the Specified Area of
M62 Junction 20, Rochdale.
01/09/2018 to 31/08/2023**



TRANSPORT FOR GREATER MANCHESTER



Reported Road Injury Accidents in Specified Area of M62 Junction 20, Rochdale. 01/09/2018 to 31/08/2023

Injury Accidents	Sep - Dec 2018	2019	2020	2021	2022	Jan - Aug 2023	Total
Fatal	0	0	0	0	0	0	0
Serious	0	0	0	1	0	0	1
Slight	0	4	4	5	3	1	17
Total	0	4	4	6	3	1	18

Standard Totals Report : Reported Injury Accidents in Specified Area of M62 Junction 20, Rochdale, 01/09/2018 to 31/08/2023

Accidents

Serious	1
Slight	17
Total Accidents	18

Casualties By Age and Sex

Severity	0 - 15	16 - 59	60 - 69	70 +	Total
Serious					
Male	0	1	0	0	1
Total	0	1	0	0	1
Slight					
Male	0	14	1	0	15
Female	0	6	1	0	7
Total	0	20	2	0	22
Total Casualties	0	21	2	0	23

Casualties By Age and Class

Severity	0 - 15	16 - 59	60 - 69	70 +	Total
Serious					
Veh or pillion pas	0	1	0	0	1
Total	0	1	0	0	1
Slight					
Driver or rider	0	18	1	0	19
Veh or pillion pas	0	2	1	0	3
Total	0	20	2	0	22
Total Casualties	0	21	2	0	23

Casualties Broken Down By Type

Car (Driver)	0-15	16+	Total
Slight	0	14	14
Total	0	14	14
Car (Passenger)	0-15	16+	Total
Serious	0	1	1
Slight	0	2	2
Total	0	3	3
TWPV (Rider)	0-15	16+	Total
Slight	0	1	1
Total	0	1	1
Other (Driver)	0-15	16+	Total
Slight	0	4	4
Total	0	4	4
Other (Passenger)	0-15	16+	Total
Slight	0	1	1
Total	0	1	1
Total	0	23	23

Standard Report - Reported Injury Accidents in Specified Area of M62 Junction 20, Rochdale, 01/09/2018 to 31/08/2023

This printout has been generated from the Transport for Greater Manchester's database of road traffic accident records using the query system, GMAXI.

The road traffic accident database contains STATS19 data supplied by Greater Manchester Police and further validated by the Highways Forecasting and Analytical Services (HFAS) section of Transport for Greater Manchester. It is maintained by HFAS on behalf of the ten District Councils in Greater Manchester.

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Accident Reference Number: XP061051						Day: Thursday		Contributory Factors			Date: 29/08/2019					Time: 21:40															
Place Reported: Scene						District: Rochdale		Factor			Conf			Ref			Vehicle Details			Casualty Details											
Location: M62 Westbound, Marker Post 63.9 (Near To Junction 20)																	Type			Sex			Age			Sev			Pupil		
Description: Both Vehs Trav W-bd M62, V1 Collides With Rear Of V2. V1 Fts																															
Locational Details						Conditions		Accident Details																							
Road: M62						Junction Details:		Road Surface: Dry			Severity: Slight																				
OSGR: 388953 409935						Junction Control: n/a		Light Conditions: Dark			No. of Vehicles: 2																				
Speed Limit: 70						Ped Crossing:		Weather Conditions: Fine			No. of Casualties: 1																				
Accident Reference Number: XP069037						Day: Thursday		Contributory Factors			Date: 13/02/2020					Time: 05:31															
Place Reported: Else						District: Rochdale		Factor			Conf			Ref			Vehicle Details			Casualty Details											
Location: M62 Westbound 30 metres W Of M62 On-slip Road																	Type			Sex			Age			Sev			Pupil		
Description: Both Vehs Trav W-bd M62, V1 (MGV) Changes Lane & Collides With Rear Of V2. V1 Fts																															
Locational Details						Conditions		Accident Details																							
Road: M62						Junction Details:		Road Surface: Wet			Severity: Slight																				
OSGR: 389087 409922						Junction Control: n/a		Light Conditions: Dark			No. of Vehicles: 2																				
Speed Limit: 70						Ped Crossing:		Weather Conditions: Rain			No. of Casualties: 1																				

Accident Reference Number: XP078104			Day: Saturday			Contributory Factors			Date: 05/12/2020			Time: 18:42		
Place Reported: Scene			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: M62 On-slip Road at junction with M62 Westbound Carriageway, Marker Post 64.2						Type	Move	From To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav W-bd M62 On-slip Road, V1 (Distraction In Veh) Fails To Look Properly & Collides With Rear Of V2						DDisIn	VLike	V1						
						DFLook	VLike	V1						
						Car	Ahead	E W		1 Drv	F	27	Slight	
						Car	Ahead	E W						
Locational Details			Conditions			Accident Details								
Road:	M62/M62	Junction Details: Slip	Road Surface:	Dry		Severity:		Slight						
OSGR:	389235 409910	Junction Control: GW	Light Conditions:	Dark		No. of Vehicles:		2						
Speed Limit:	70	Ped Crossing:	Weather Conditions:	Fine		No. of Casualties:		1						
Accident Reference Number: XP076054			Day: Tuesday			Contributory Factors			Date: 13/10/2020			Time: 14:30		
Place Reported: Scene			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: A627(M) 85 metres NW Of Thornham Interchange						Type	Move	From To	Skid	Type	Sex	Age	Sev	Pupil
Description: V2 Is Parked On Hard Shoulder. V1 Trav Nw A627(M) Loses Control As Result Of Weather Conditions & N/s Collides With Rear Of V2						Slip	VLike	V1						
						RdLay	VLike	V1						
						Other	VLike	V1						
						Car	Lbend	SE NW		1 Drv	M	40	Slight	
						othr	Parkd	Pk Pk						
Locational Details			Conditions			Accident Details								
Road:	A627(M)	Junction Details:	Road Surface:	Wet		Severity:		Slight						
OSGR:	389539 410183	Junction Control: n/a	Light Conditions:	Light		No. of Vehicles:		2						
Speed Limit:	70	Ped Crossing:	Weather Conditions:	Fine		No. of Casualties:		1						
Accident Reference Number: P1058735			Day: Sunday			Contributory Factors			Date: 30/05/2021			Time: 14:30		
Place Reported: Else			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: Thornham Interchange Roundabout 20 metres NE Of M62 Eastbound Off-slip Road						Type	Move	From To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav Ne Thornham Interchange Rdabt, V2 Trav Behind & Front Collides With Rear Of V1						Car	Ahead	SW NE		1 Drv	F	30	Slight	Un
						Car	Ahead	SW NE						
Locational Details			Conditions			Accident Details								
Road:	A627(M)/M62	Junction Details: Rdabt	Road Surface:	Dry		Severity:		Slight						
OSGR:	389547 410074	Junction Control: TS	Light Conditions:	Light		No. of Vehicles:		2						
Speed Limit:	70	Ped Crossing:	Weather Conditions:	Fine		No. of Casualties:		1						
Accident Reference Number: P1162698			Day: Monday			Contributory Factors			Date: 14/03/2022			Time: 22:40		
Place Reported: Self			District: Rochdale			Factor Conf Ref			Vehicle Details			Casualty Details		
Location: A627(M) Northbound 60 metres N Of M62 Junction 20 Roundabout						Type	Move	From To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav N-bd A637(M) Twds Rochdale. V2 Trav On Left Lane, V1 (MGV) Trav Behind & Front Collides With Rear Of V2						MGV	Ahead	S N						
						Car	Ahead	S N		1 Drv	M	36	Slight	Un
Locational Details			Conditions			Accident Details								
Road:	A627(M)	Junction Details:	Road Surface:	Dry		Severity:		Slight						
OSGR:	389552 410162	Junction Control: n/a	Light Conditions:	Dark		No. of Vehicles:		2						
Speed Limit:	30	Ped Crossing:	Weather Conditions:	Fine		No. of Casualties:		1						

Accident Reference Number: P1128217
Day: Tuesday
Place Reported: Self
District: Rochdale
Location: A627(M) at junction with Thornham Interchange Roundabout
Description: Both Vehs Trav N A627(M). V1 Approaching Rdabt, At Last Minute V2 Decides To Trav W-bd Onto M62 On-slip Road, O/s Of V2 Collides With N/s Of V1. V2 Fts

Locational Details		Conditions		Accident Details	
Road:	A627(M)/A627(M)	Junction Details:	Rdbt	Road Surface:	Dry
OSGR:	389611 409935	Junction Control:	TS	Severity:	Slight
Speed Limit:	70	Ped Crossing:		No. of Vehicles:	2
				Weather Conditions:	Fine
				No. of Casualties:	1

Contributory Factors
Date: 23/11/2021
Time: 14:00

Vehicle Details					Casualty Details							
Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
			Car	Ahead	S	N		1 Drv	F	50	Slight	Un
			Car	TurnL	S	W						

Accident Reference Number: P1270921
Day: Monday
Place Reported: Self
District: Rochdale
Location: A627(M) Northbound, Marker Post 3.8
Description: Both Vehs Trav N A627 (M), V2 Waiting To Go Ahead But Held Up, V1 Fails To Stop & Front Collides With Rear Of V2

Locational Details		Conditions		Accident Details	
Road:	A627(M)	Junction Details:		Road Surface:	Dry
OSGR:	389634 409697	Junction Control:	n/a	Severity:	Slight
Speed Limit:	70	Ped Crossing:		No. of Vehicles:	2
				Weather Conditions:	Fine
				No. of Casualties:	1

Contributory Factors
Date: 23/01/2023
Time: 18:30

Vehicle Details					Casualty Details							
Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
			Car	Ahead	S	N						
			Car	Waitg	S	N		1 Drv	F	32	Slight	Un

Accident Reference Number: P1105326
Day: Tuesday
Place Reported: Else
District: Rochdale
Location: A627(M) 80 metres S Of Thornham Interchange
Description: Both Vehs Trav Nw A627 Approaching Thornham Interchange Rdabt, Front Of V1 Collides With Rear Of V2 (Motorcycle), Causes Rider To Be Dismounted

Locational Details		Conditions		Accident Details	
Road:	A627(M)	Junction Details:		Road Surface:	Wet
OSGR:	389642 409861	Junction Control:	n/a	Severity:	Slight
Speed Limit:	70	Ped Crossing:		No. of Vehicles:	2
				Weather Conditions:	Rain
				No. of Casualties:	1

Contributory Factors
Date: 02/11/2021
Time: 05:20

Vehicle Details					Casualty Details							
Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
			Car	Lbend	S	NW						
			m/c	Lbend	S	NW		1 Rid	M	61	Slight	Un

Accident Reference Number: P1256722
Day: Thursday
Place Reported: Scene
District: Rochdale
Location: A627(M) 22 metres NW Of Thornham Interchange Roundabout
Description: All Vehs Trav Se A627(M) Appr Rdabt, Front Of V1 Collides With Rear Of V2 & V3

Locational Details		Conditions		Accident Details	
Road:	A627(M)	Junction Details:		Road Surface:	Dry
OSGR:	389656 410161	Junction Control:	n/a	Severity:	Slight
Speed Limit:	70	Ped Crossing:		No. of Vehicles:	3
				Weather Conditions:	Fine
				No. of Casualties:	1

Contributory Factors
Date: 22/12/2022
Time: 22:00

Vehicle Details					Casualty Details							
Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
			Car	Ahead	NW	SE	O/t					
			Car	Ahead	NW	SE						
			Car	Ahead	NW	SE		1 Drv	M	36	Slight	Un

Accident Reference Number: XP065865					Day: Saturday		Date: 07/12/2019					Time: 03:35							
Place Reported: Scene					District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details				
Location: A627(M) Off-slip Road 10 metres NW Of Thornham Interchange Roundabout, Junction 20							Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav Se-bd A627(M) Off-slip Road Towards M62, V2 Stops At Lights, V1 (Drunken Driver) Loses Control & Collides Rear Of V2							DAIcoh	VLike	V1						1 Drv	F	35	Slight	
					DFLook	VLike	V1	Car	Ahead	NW	SE		2 Drv	M	28	Slight			
Locational Details					Conditions		Accident Details												
Road:	A627(M)/A627(M)		Junction Details:	Rdbt	Road Surface:	Wet	Severity:	Slight											
OSGR:	389664	410156	Junction Control:	TS	Light Conditions:	Dark	No. of Vehicles:	2											
Speed Limit:	70		Ped Crossing:		Weather Conditions:	Rain	No. of Casualties:	2											
Accident Reference Number: P1040600					Day: Monday		Date: 19/04/2021					Time: 10:44							
Place Reported: Scene					District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details				
Location: A627M at junction with Thornham Interchange Roundabout							Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav S A627(M) Towards Thornham Interchange Rdabt, V2 Staty At Red Ats, V1 Fails To See & N/s Collides With Rear N/s Bumper & Wing Mirror Of V2										Car	Ahead	N	S						
								Car	Ahead	N	S		1 Drv	M	54	Slight	Un		
Locational Details					Conditions		Accident Details												
Road:	A627(M)/A627(M)		Junction Details:	Rdbt	Road Surface:	Dry	Severity:	Slight											
OSGR:	389667	410155	Junction Control:	TS	Light Conditions:	Light	No. of Vehicles:	2											
Speed Limit:	70		Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:	1											
Accident Reference Number: P1074774					Day: Sunday		Date: 08/08/2021					Time: 09:15							
Place Reported: Scene					District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details				
Location: M62 Westbound, Marker Post 64.7							Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: Both Vehs Trav W-bd M62. V1 In La 3 & V2 (LGV) In La 2. V1 Hits Patch Of Standing Water, Driver Loses Control & N/s Hits O/s Of V2. V2 Loses Control & Hits N/s Barrier							Slip	Poss	V1										
								Car	Ahead	E	W	Skid							
										LGV	Ahead	E	W	Skid	1 Drv	M	40	Slight	Un
Locational Details					Conditions		Accident Details												
Road:	M62		Junction Details:		Road Surface:	Wet	Severity:	Slight											
OSGR:	389728	410070	Junction Control:	n/a	Light Conditions:	Light	No. of Vehicles:	2											
Speed Limit:	70		Ped Crossing:		Weather Conditions:	Rain	No. of Casualties:	1											
Accident Reference Number: P1081397					Day: Friday		Date: 27/08/2021					Time: 00:15							
Place Reported: Scene					District: Rochdale		Contributory Factors			Vehicle Details					Casualty Details				
Location: Thornham Interchange at junction with M62 Off-slip Road							Factor	Conf	Ref	Type	Move	From	To	Skid	Type	Sex	Age	Sev	Pupil
Description: V1 Trav Sw M62 Off-slip Enters Thornhall Interchange Rdabt, V1 Loses Control As It Attempts To Negotiate Exit On Rdabl & Front Collides With N/s Barriers							DTurn	VLike	V1						1 Drv	M	18	Slight	Un
								DLoss	VLike	V1	Car	Ahead	NE	S		2 Pas	M	19	Serious
Locational Details					Conditions		Accident Details												
Road:	M62/A627(M)		Junction Details:	Rdbt	Road Surface:	Dry	Severity:	Serious											
OSGR:	389774	410028	Junction Control:	TS	Light Conditions:	Dark	No. of Vehicles:	1											
Speed Limit:	70		Ped Crossing:		Weather Conditions:	Fine	No. of Casualties:	2											

Accident Reference Number: XP059223				Day: Friday		Contributory Factors			Date: 12/07/2019					Time: 16:40					
Place Reported: Scene				District: Rochdale															
Location: M62 SW-bound Off-slip Road (Junction 20), marker post 64.8							Factor Conf Ref			Vehicle Details					Casualty Details				
Description: All Vehs Trav Sw-bd M62 On Exit Slip Road, V2 Staty In Queue Of Traffic, V1 Collides With Rear Of V2, V2 Then Collides With Rear Of V3							VBrake Poss V1			Type Move From To Skid					Type Sex Age Sev Pupl				
										Car Ahead NE SW Skid									
										Car Waitg NE SW Skid					1 Pas F 67 Slight				
										Car Waitg NE SW									
Locational Details				Conditions		Accident Details													
Road: M62		Junction Details:		Road Surface: Dry		Severity: Slight													
OSGR: 389888 410128		Junction Control: n/a		Light Conditions: Light		No. of Vehicles: 3													
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties: 1													
Accident Reference Number: XP076572				Day: Monday		Contributory Factors			Date: 26/10/2020					Time: 08:26					
Place Reported: Scene				District: Rochdale															
Location: M62 SW-bound, Marker Post 64.8							Factor Conf Ref			Vehicle Details					Casualty Details				
Description: All Vehs Trav Sw-bd M62 In Torrential Rain. V4 Slows In Lane 2 As Result Of Traffic, As Does V3 In Lane 2. V2 Brakes But Hits Rear Of V3 & Then Rear Of V4. V1 Then Hits V2							DFog Poss V1			Type Move From To Skid					Type Sex Age Sev Pupl				
							DFog Poss V2			Car Ahead NE SW									
							DFast Poss V1			Car Ahead NE SW									
							DFast Poss V2			Car Ahead NE SW					1 Drv M 57 Slight				
										Car Ahead NE SW									
Locational Details				Conditions		Accident Details													
Road: M62		Junction Details:		Road Surface: Wet		Severity: Slight													
OSGR: 389940 410195		Junction Control: n/a		Light Conditions: Light		No. of Vehicles: 4													
Speed Limit: 70		Ped Crossing:		Weather Conditions: R&W		No. of Casualties: 1													
Accident Reference Number: XP056679				Day: Saturday		Contributory Factors			Date: 11/05/2019					Time: 11:55					
Place Reported: Scene				District: Rochdale															
Location: M62 NE-bound at junction with M62 On-slip Road Marker Post 65.0							Factor Conf Ref			Vehicle Details					Casualty Details				
Description: V1 Trav Ne-bd M62, Driver Fails To Look Properly, Loses Control Left Carriageway O/s & Collides Central Crash Barrier							DFLook VLike V1			Type Move From To Skid					Type Sex Age Sev Pupl				
							DLoss VLike V1			Car Lbend SW NE Skid					1 Pas F 30 Slight				
Locational Details				Conditions		Accident Details													
Road: M62/M62		Junction Details: Slip		Road Surface: Dry		Severity: Slight													
OSGR: 389960 410226		Junction Control: GW		Light Conditions: Light		No. of Vehicles: 1													
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties: 1													
Accident Reference Number: P1250669				Day: Wednesday		Contributory Factors			Date: 07/12/2022					Time: 06:48					
Place Reported: Scene				District: Rochdale															
Location: M62 Westbound, Marker Post 65.4							Factor Conf Ref			Vehicle Details					Casualty Details				
Description: All Vehs Trav W-bd M62, V1 Brakes, V3 Brakes, V2(LGV), V5 & V6 Swerve Past V3 To O/s, V7 Passes V3 & Hits V6, V4 (LGV) Passes V3 & Hits V5 (LGV)										Type Move From To Skid					Type Sex Age Sev Pupl				
										Car Ahead E W									
										LGV Ahead E W									
										Car Ahead E W					1 Drv M 29 Slight Un				
										LGV Ahead E W					2 Drv M 35 Slight Un				
															3 Pas M 35 Slight Un				
										LGV Ahead E W					4 Drv M 38 Slight Un				
										Car Ahead E W									
										Car Ahead E W									
Locational Details				Conditions		Accident Details													
Road: M62		Junction Details:		Road Surface: Dry		Severity: Slight													
OSGR: 390331 410382		Junction Control: n/a		Light Conditions: Dark		No. of Vehicles: 7													
Speed Limit: 70		Ped Crossing:		Weather Conditions: Fine		No. of Casualties: 4													

Abbreviations used in GMAXI Reports for New Contributory Factors - 2005/06

WARNING: Please note that -

Codes 101 to 999 only relate to accidents from 1 April 2005. - New National Factors introduced by DfT

Codes 1001 to 1154 relate to accidents from 1 April 1999 to 31 March 2005 only. - Local Factors introduced

Accidents before 1 April 1999 do not have contributory factors attached.

Code	ContribFactor1Name	ContribFactor1Abb
0	None	
101	Poor or defective road surface	Surf
102	Deposit on road (eg oil, mud, chippings)	Dposit
103	Slippery road (due to weather)	Slip
104	Inadequate/masked signs or road markings	Mark
105	Defective traffic signals	DefATS
106	Traffic calming (eg speed cushions, road humps, chicanes)	TCalm
107	Temporary road layout (eg contraflow)	TmpRd
108	Road layout (eg bend, hill, narrow carriageway)	RdLay
109	Animal or object in carriageway	ObjInC
201	Tyres illegal, defective or under inflated	VTyres
202	Defective lights or indicators	VLight
203	Defective brakes	VBrake
204	Defective steering or suspension	VSteer
205	Defective or missing mirrors	VMirr
206	Overloaded or poorly loaded vehicle or trailer	VLoad
301	Disobeyed automatic traffic signal	DATS
302	Disobeyed Give Way or Stop sign or markings	DGWorS
303	Disobeyed double white line	DWhite
304	Disobeyed pedestrian crossing facility	DPedX
305	Illegal turn or direction of travel	DITurn
306	Exceeding speed limit	DSpeed
307	Travelling too fast for conditions	DFast
308	Following too close	DTgate
309	Vehicle travelling along pavement	DPave
310	Cyclist entering road from pavement	DCPave
401	Junction overshoot	DJnOvr
402	Junction restart	DJnRst
403	Poor turn or manoeuvre	DTurn
404	Failed to signal/misleading signal	DSign
405	Failed to look properly	DFLook
406	Failed to judge other person's path or speed	DJudge
407	Passing too close to cyclist, horse rider or pedestrian	DClose
408	Sudden braking	DBrake
409	Swerved	DSwerv
410	Loss of control	DLossC
501	Impaired by alcohol	DAlcoh
502	Impaired by drugs (illicit or medicinal)	DDrugs
503	Fatigue	DTired
504	Uncorrected, defective eyesight	DEye
505	Illness or disability, mental or physical	DIllns
506	Not displaying lights at night or in poor visibility	DNoLit
507	Cyclist wearing dark clothing at night	DCDark
508	Driver using mobile phone	DMobPh
509	Distraction in vehicle	DDisIn
510	Distraction outside vehicle	DDisOu
601	Aggressive driving	DAggre
602	Careless/reckless/in a hurry	DCare

603	Nervous/uncertain/panic	DPanic
604	Driving too slow or conditions or slow vehicle (eg tractor)	DSlow
605	Learner or inexperienced driver/rider	DLearn
606	Inexperience of driving on the left	DInDrL
607	Inexperience with type of vehicle	DInVeh
701	Stationary or parked vehicle(s)	DStat
702	Vegetation	DVeg
703	Road layout (eg bend, winding road, hill crest)	DRdLay
704	Buildings, road signs, street furniture	DBuild
705	Dazzling headlights	DHLigt
706	Dazzling sun	DSun
707	Rain, sleet, snow, or fog	DRain
708	Spray from other vehicles	DFog
709	Visor or windscreen dirty or scratched	DSpray
710	Vehicle blind spot	DWscrm
801	Crossed road masked by stationary or parked vehicle	PXMask
802	Failed to look properly	PFLook
803	Failed to judge vehicle's path or speed	PJudge
804	Wrong use of pedestrian crossing facility	PPedX
805	Dangerous action in carriageway (eg playing)	PDange
806	Impaired by alcohol	PAIcoh
807	Impaired by drugs (illicit or medicinal)	PDrugs
808	Careless/reckless/in a hurry	PCare
809	Pedestrian wearing dark clothing at night	PCloth
810	Disability or illness, mental or physical	PIllns
901	Stolen vehicle	StoVeh
902	Vehicle in course of crime	VCrime
903	Emergency vehicle on call	EmVeh
904	Vehicle door opened or closed negligently	VDoor
999	Other	Other
1001	Failed to stop (mandatory sign)	Fstop
1002	Failed to give way	Fgive
1003	Failed to avoid pedestrian (pedestrian not to blame)	FAPed
1004	Failed to avoid vehicle or object in carriageway	FAObj
1005	Failure to signal/misleading signal	Fsig
1006	Loss of control of vehicle	Loss
1007	Pedestrian entered carriageway without due care	Ped
1008	Passenger fell in or near PSV	Pfell
1009	Swerved to avoid object in carriageway	Swerv
1010	Sudden braking	Brake
1011	Poor turn/manoeuvre	Turn
1012	Poor overtaking	Over
1013	Drove wrong way (e.g. 1-way street)	1Way
1014	Opening door carelessly	Door
1015	Other	Other
1101	Impairment alcohol	Alcoh
1102	Impairment drugs	Drugs
1103	Impairment fatigue	Tired
1104	Impairment illness	Ill
1105	Distraction stress/emotional state of mind	Stress
1106	Distraction physical in/on vehicle	DPhIn
1107	Distraction physical outside vehicle	DPhOut
1108	Behaviour panic	Panic
1109	Behaviour careless/thoughtless/reckless	Care
1110	Behaviour nervous/uncertain	Nerve
1111	Behaviour in a hurry	Hurry

1112	Failure to judge other person's path or speed	Fjudg
1113	Disability	Disab
1114	Failed to look	F2look
1115	Looked but did not see	Nsee
1116	Inattention	Inatt
1117	Person hit wore dark or inconspicuous clothing	Cloth
1118	Other (Personal details)	Pother
1119	Crossed from behind parked vehicle etc	Cross
1120	Ignored lights at crossing	Xlight
1121	Excessive Speed	Speed
1122	Following too close	Tgate
1123	Inexperience of driving	InDri
1124	Inexperience of vehicle	InVeh
1125	Interaction or competition with other road users	Users
1126	Aggressive driving	Aggr
1127	Lack of judgement of own path	Judge
1128	Tyres wrong pressure	Press
1129	Tyres deflation before impact	Deflat
1130	Tyres worn/insufficient tread	Tread
1131	Defective lights or signals	Signal
1132	Defective brakes	Brakes
1133	Other (Vehicle defects)	Vother
1134	Site details poor road surface	Surf
1135	Site details poor/no street lighting	Lightg
1136	Site details inadequate signing	Sign
1137	Site details steep hill	Hill
1138	Site details narrow road	Narr
1139	Site details bend/winding road	Rbend
1140	Site details roadworks	Works
1141	Slippery road	Slip
1142	High winds	Winds
1143	Earlier accident	Earli
1144	Other (Local conditions)	Lother
1145	View windows obscured	Obs
1146	View glare from sun	Glare
1147	View glare from headlights	Head
1148	Surroundings bend/winding road	Bend
1149	Surroundings stationary parked vehicle	Stat
1150	Surroundings moving vehicle	Move
1151	Surroundings buildings, fences, vegetation etc	Fence
1152	Weather (e.g. mist or sleet)	Weath
1153	Failed to see pedestrian or vehicle in blindspot	Blind
1154	Animal out of control	Animal
9999	GMP Out of Range	OoR

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