sanderson associates (consulting engineers) ltd

Highways | Traffic | Transportation | Water

Sanderson Associates (Consulting Engineers) Ltd, Sanderson House
Jubilee Way, Grange Moor, Huddersfield, West Yorkshire WF4 4TD
T 01924 844080
F 01924 844081
mail@sandersonassociates.co.uk
www.sandersonassociates.co.uk

Prepared on behalf of

meller

Meller Limited

Proposed Additional Parking and Access
Martin Brower Logistics, Hill Top Road, Heywood

Transport Assessment

VAT No. GB 873219218
Company No. 3235830
Registered Office
Sanderson House, Jubilee Way
Grange Moor WF4 4TD

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This document has been prepared in accordance with procedure OP/P02 of the *Fairhurst Quality and Environmental Management System*

This document has been prepared in accordance with the instructions of the client, Meller Limited, for the client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

Acknowledgements:

Google MyMaps, Google streetview and OpenRouteService have been used to generate figures included in this report.

Extracts from Axis Framework Travel Plan ref 1962-01-TP01d Nov 2016, Rochdale BC drawing A0/2001345/100/001 and Rochdale BC drawing A0/2001345/100/002 Rev B have been included in this report.

An extract of the TfGM cycle map for the Rochdale area has been included in this report.

Reference to modelling contained within Focus Transport Statement J000058-TS01e is made in this report.

An extract from the online Crashmap Pro database has been included in this report.

The TRICS database has been used in this report to calculate traffic generations.

Disclaimer

The methodology adopted and the sources of information used by Sanderson Associates (Consulting Engineers) Ltd in providing its services are outlined within this Report.

Any information provided by third parties and referred to herein has not been checked or verified by Sanderson Associates (Consulting Engineers) Ltd, unless otherwise expressly stated within this report.

This report was checked and approved on the 30/03/2022 and the Report is therefore valid on this date, circumstances, regulations and professional standards do change which could subsequently affect the validity of this Report.

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Contents

Page No

Appendices

APPENDIX A

Site Layout Plan

APPENDIX B

Drawing 300662-002 Swept Path Analysis

APPENDIX C

TRICS Data

1 Introduction

1.1 Sanderson Associates (Consulting Engineers) Ltd has been appointed to prepare a Transport Assessment to support the application for additional parking areas at Martin Brower Logistics, Hill Top Road, Heywood. The location of the site in relation to the local area is shown on **Figure 1**, below.

Figure 1 – Location of site ***[GoogleMyMaps]***

1.2 In accordance with Planning Practice Guidance *'Transport evidence bases in plan making and decision taking'* this Transport Assessment addresses key transport issues including:

- the local highway network
- the access arrangements to the proposed development
- the proposed development and its operational facilities
- the impact of the development on the local highway network in terms of highway safety and operation
- accessibility of the site in relation to sustainable transport and local facilities

1.3 National Planning Policy

1.3.1 With regards to the planning policy context of the development, Paragraph 110 of the National Planning Policy Framework (NPPF), revised in July 2021, 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, give the type of development and its location;

b) Safe and suitable access to the site can be achieved for all people;

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 46 ; 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."

1.3.2 Paragraph 111 goes on to say;

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

1.4 Local Planning Policy

1.4.1 Rochdale Borough Council's Core Strategy document, dated October 2016, "*sets out the long-term spatial strategy for future development of Rochdale Borough*".

1.4.2 Policy E3 'Focusing on economic growth corridors and areas' states that:

"In the South Heywood employment area we will:

a. Promote the development of the following key sites:

- *Heywood Distribution Park - designated as a Simplified Planning Zone (SPZ) it has potential for further major employment development; and*

- *North of Hareshill Road - land with permission for B1,B2 & B8 development.*

b. Support improvements to all existing employment areas within South Heywood to maintain and enhance the quality of employment premises;

c. Promote the area mainly for distribution uses;

d. Promote infrastructure improvements and traffic management to service new and existing development and reduce heavy goods traffic in Heywood town centre and residential areas;

e. Promote the extension of the East Lancs Railway line to Castleton to provide a commuter rail service to and from Manchester, with a new station close to Pilsworth Road (Policy T1b); and

f. Promote the provision of bus services from Middleton to improve access to jobs in Heywood."

1.4.3 This Transport Assessment has been prepared as required by Policy T2 'Improved accessibility' which states that:

"We will also expect developments to be supported by a Transport Assessment (TA) and Travel Plan (TP) if forecast trips exceed the indicative thresholds set out in DfT Guidance on Transport Assessments or any of the following thresholds:

i. 100 or more vehicle movements per day (24 hours);

ii. 60 or more person trips in any peak hour (between 07-00 & 10-00 and / or 16-00 & 19-00);

iii. 30 or more vehicle movements in any hour;

iv. More than 20 Heavy Goods Vehicles (over 7.5 tonnes) movements per day;

v. Any goods vehicle movement between midnight and 6am;

vi. Any significant abnormal loads; and

vii. 50 or more car parking spaces are proposed."

1.4.4 Policy DM1 'General development requirements' goes on to say that:

"All development proposals, including changes of use of land and buildings, extensions and alterations, will be expected to demonstrate that they: [...]

d. Mitigate against any impacts due to noise, air, dust, light and odour pollution, traffic generation or inadequate access, where such mitigation is identified as being necessary;

e. Provide satisfactory vehicular access with adequate parking, manoeuvring, and servicing arrangements taking into account of the proposed use and location"

1.5 Planning History

1.5.1 Since the unit's construction there have been a number of related planning applications as detailed below:

- 95/D32703 – extension to existing industrial unit
- 99/D36071 – use of land to form car park extensions and erection of 2.4 metre high link fence
- 01/D38545 – erection of plant room and associated equipment
- 06/D47200 – construction of car park extension
- 08/D51504 – erection of temporary warehouse building for storage and recycling of cardboard
- 10/D53313 – construction of new lorry docking structure to south elevation of distribution building
- 11/D54743 – installation of new sugar silo
- 19/00010/FUL – proposed erection of a new open fronted cardboard recycling/bailing building to northwest of site

2 Existing Situation

2.1 The Site

2.1.1 The site is located to the east of the existing Martin Brower unit and car park, to the northwest side of Hill Top Road. The site lies within the well-established industrial/commercial area to the south of Heywood which comprises Heywood Distribution Park and Hareshill Business Park. The approximate extent of the development site, which is currently an unused and unmaintained area of grass and other vegetation, is shown in **Figure 2**, below.

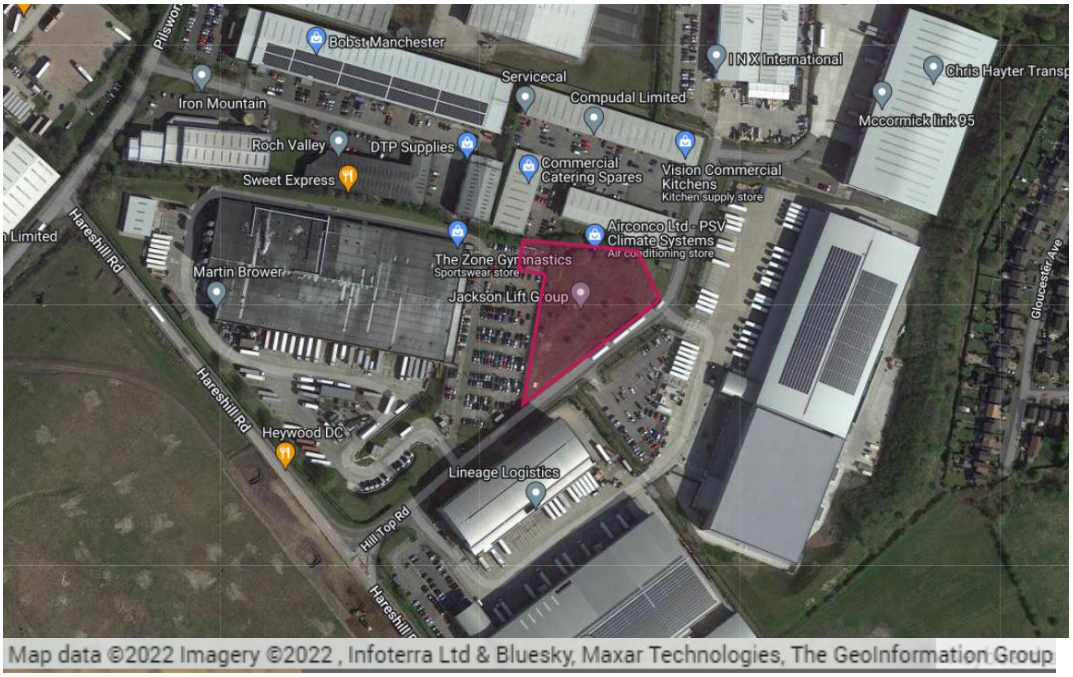


Figure 2 – Approximate extent of site ***[Google MyMaps]***

2.2 Local Highway Network

2.2.1 Hill Top Road is a purpose-built industrial road of approximately 400m in length, providing access to numerous sites for cars and HGVs. Street lighting, footways and double yellow lines are present on both sides of the carriageway. To the southwest, Hill Top Road joins Hareshill Road at what was a priority junction with central island arrangement and a right turn lane for vehicles approaching from the southeast.

2.2.2 However, construction of a new Link Road is underway and Hareshill Road is closed immediately to the southeast of the junction. At present, all vehicles are required to turn right out of, and left into, Hill Top Road with a diversion in place.

2.2.3 Regardless, HGVs were subject to restrictions prior to this, with signage and road markings present, as shown in **Figure 3**, below.

Figure 3 – HGV restricting signage and road markings [©2022 Google]

2.3 South Heywood Development

2.3.1 Planning permission was granted for application reference 16/01399/HYBR on the 31st March 2020. This application comprises "Part full/part outline planning application for the development of land at South Heywood, including the demolition of a number of existing on-site buildings and structures. Full consent sought for the construction of a new link road between Junction 19 of the M62 and Pilsworth Road, the widening of part of Pilsworth Road, together with associated junction improvements, landscaping, lighting and other works including the importation of material and engineering works in order to construct the link road. Outline consent (with all matters reserved for future approval except access) sought for a major mixed-use development comprising supporting residential uses comprising up to 1000 dwellings (Class C3); employment uses (Classes B2/B8) comprising up to

135,460m2 Gross Internal Area (GIA); a new primary school (Class D1); Class A1/A2/A3/A5 uses comprising up to 2500m2 GIA which includes no more than 499m2 of A1 uses; together with associated landscaping, open space and sports pitches, drainage, ecological enhancements, cycleway and footpath linkages, infrastructure and other works ancillary thereto."

2.3.2 The area to which this relates is shown in **Figure 4**, below, along with the location of the current application site.

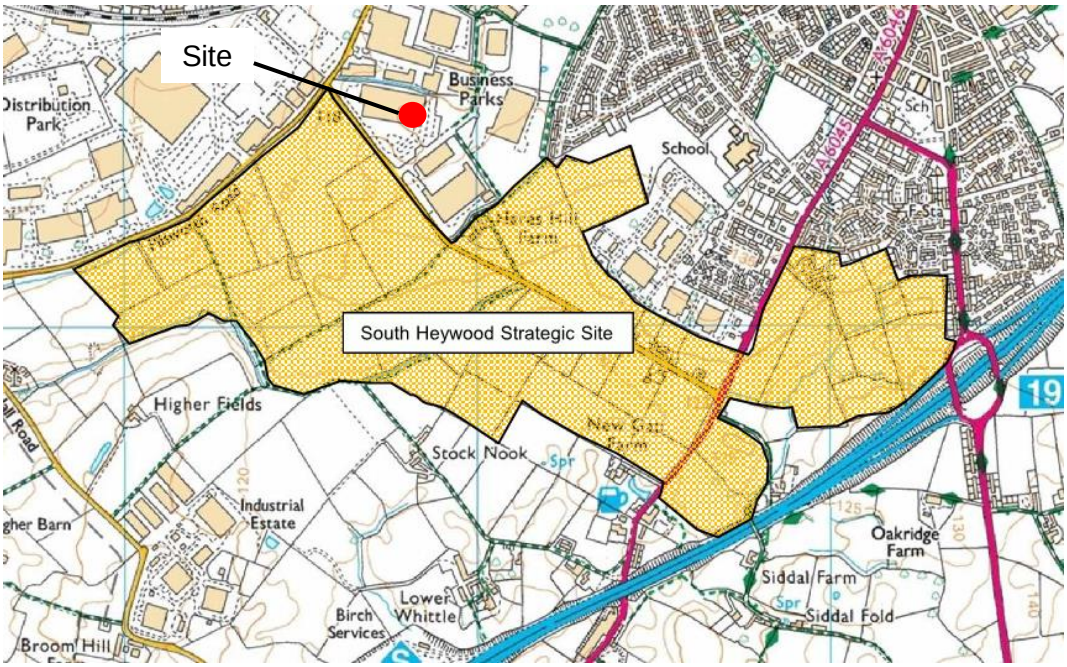


Figure 4 – Extract from Axis Framework Travel Plan ref 1962-01-TP01d Nov 2016

2.3.3 The link road is currently under construction and is to follow the alignment shown in **Figure 5**, below, again with the location of the current site highlighted.

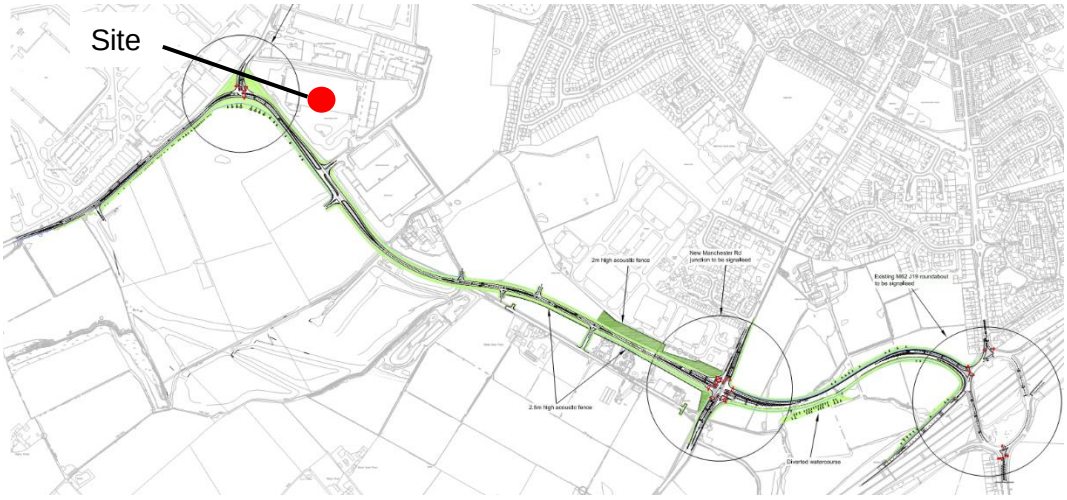


Figure 5 - Extract from Rochdale BC drawing A0/2001345/100/001

2.3.4 The link road is to include a new junction with Hill Top Road which, following the 27th July 2020 approval of application 20/00464/ANM for "non-material amendment to planning permission 16/01399/HYBR for changes to layout and alignment of sections of Link Road and conversion of junction connections from South Heywood Employment Zone and Hill Top Road to traffic-signal control", is to be signalised with toucan crossing points as generally shown in **Figure 6** overleaf.

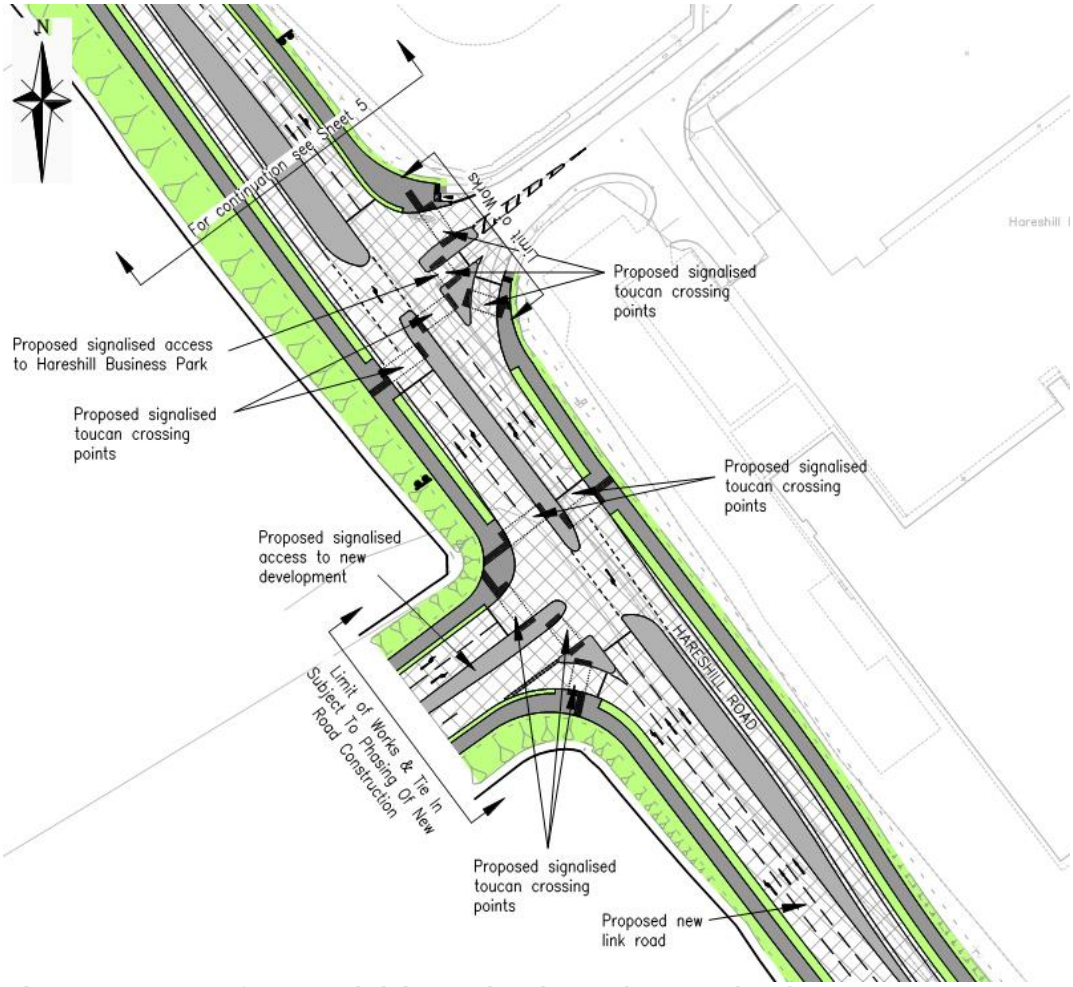


Figure 6 – Extract from Rochdale BC drawing A0/2001345/100/002 Rev B

2.3.5 Whilst this development has obvious impacts on the vehicular access to the application site, elements of the scheme will also have an impact on the accessibility of the site by active and public transport including:

- *"Segregated walk / cycle routes in parallel to the proposed new Link Road*
- *Improved walk cycle connections through the proposed residential areas […]*
- *enhancements to existing walking routes linking towards surrounding established local residential areas and Heywood Town Centre*
- *Package of public transport improvements to be agreed with TfGM and RBC and funded by developer contribution"*

2.4 Road Traffic Incident Assessment

2.4.1 It is normal practice to carry out an assessment of the road traffic collision data for the most recent five year period available in the vicinity of the site. **Figure 7**, below, is an extract from the Crashmap Pro database showing the location and severity of incidents recorded in the period from 2016 to 2020. However, the construction of the Link Road will significantly alter the operation of the highway network in the area.

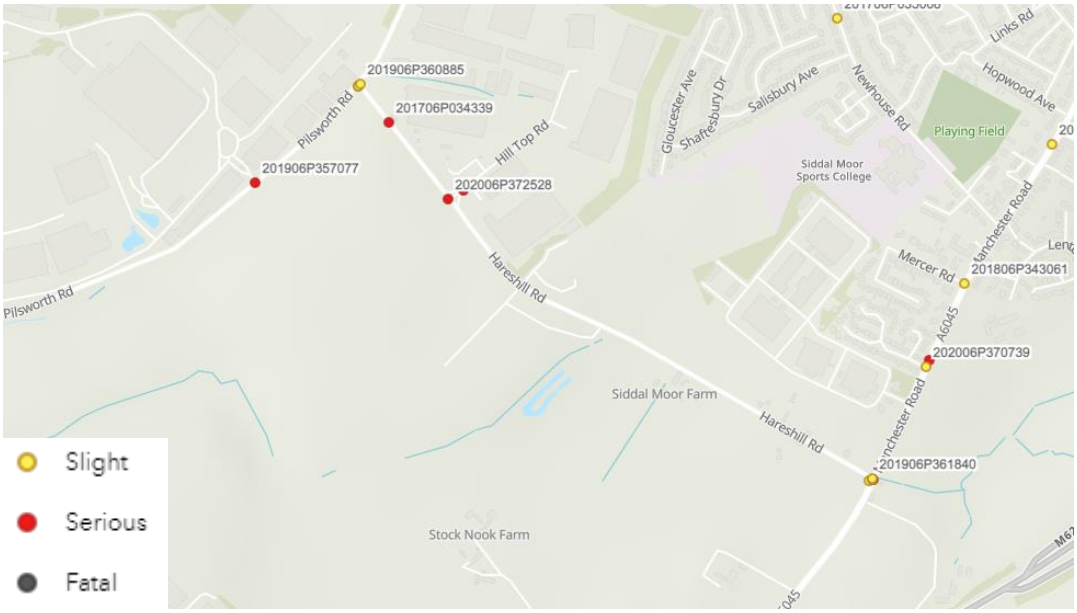


Figure 7 – Extract from Crashmap Pro

2.4.2 The Transport Assessment supporting planning application 16/01399/HYBR (Axis ref 1962-01-TA01b) investigated the accident history in the area at the time and concluded that the scheme "would provide some opportunities for delivering tangible highway safety benefits".

2.4.3 This includes the signalisation of a number of junctions (now including with Hill Top Road) and provision of segregated foot / cycleways and crossings.

2.4.4 The Link Road and associated junctions have been subject to road safety audits (RSAs) and, therefore, have been approved from a highway safety viewpoint with further RSAs to be carried out post-construction.

3 Development Proposals

3.1 The proposed development comprises the provision of 41 HGV parking spaces and 36 car parking spaces on land to the east of the existing unit and car park, as shown on the layout plan included at **Appendix A**. This is proposed in order to improve the efficiency of the operation of the business rather than to increase throughput. However, it is acknowledged that some additional vehicle movements may result.

3.2 The car parking is proposed to be an extension to the existing, with access and egress to remain via the main site access.

3.3 The HGV parking is to be accessed via a new access point from Hill Top Road, approximately 150m northeast of the main access. The location of this access has been chosen so as to avoid conflict with either of the accesses to the Lineage site opposite.

3.4 Within the HGV parking area a turning area is provided to allow vehicles to enter the area, manoeuvre and exit in a forward gear. **Drawing 300662-002**, included at **Appendix B**, demonstrates a 16.5m articulated vehicle accessing the area.

4 Accessibility by Sustainable Modes

4.1 Overview

4.1.1 This section includes an assessment of the accessibility of the site by sustainable modes of transport, to review the opportunities that exist for staff and visitors to travel by the following modes of transport:

- Active Travel – walking and cycling
- Public Transport – bus and rail

4.2 Active Travel

Walking

4.2.1 Walking is the most important mode of transport at the local level and can replace short car trips for journeys under 2km, which contribute to congestion and pollution, and the need for car parking.

4.2.2 Guidance on walking distances is provided within the IHT document 'Providing for Journeys on Foot' (2000) as summarised at **Figure 8**;

Guidelines for
PROVIDING FOR JOURNEYS ON FOOT

Table 3.2: Suggested Acceptable Walking Distance.

	Town centres (m)	Commuting/School Sight–seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred maximum	800	2000	1200

Figure 8 – Extract from Providing for Journeys on Foot – Walking Distances

4.2.3 **Figure 9** identifies 1km / 2km walking isolines from the site in order to illustrate the general extent of the surrounding area from which the site is considered to be accessible on foot.

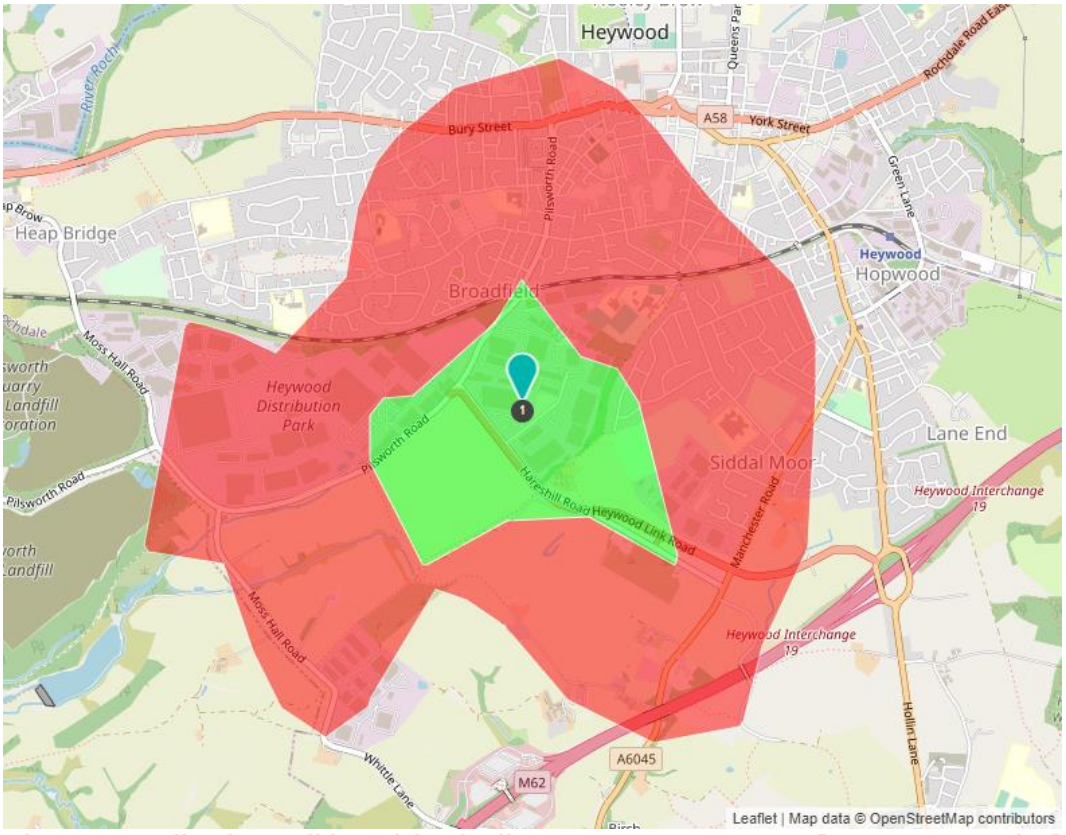


Figure 9 – Indicative walking 1/2km isolines ***[Openrouteservice]***

4.2.4 As the site is located within a well-established industrial area there are limited facilities and amenities within walking distance. However, the South Heywood Development includes a large residential element as well as commercial uses that will be located within walking distance.

4.2.5 Footways are present on both sides of Hill Top Road and its junction with the new Link Road is to be signalised with pedestrian crossings provided. Segregated cycle/footways are to be provided alongside the Link Road

Cycling

4.2.6 Like walking, cycling has an important part to play in reducing congestion, improving accessibility and reducing pollution. Cycling may also allow people without cars to reach destinations that they may otherwise be unable to reach. CIHT's Planning for Cycling (2014) states that:

"The majority of cycling trips are for short distances, with 80% being less than five miles and with 40% being less than two miles. However, the majority of trips by all modes are also short distances (67% are less than five miles, and 38% are less than two miles); therefore, the bicycle is a potential mode for many of these trips. Electric bicycles extend the range that can be cycled comfortably, and combined cycle-rail or cycle-bus journeys offer an alternative to car travel for many longer trips."

4.2.7 **Figure 10** illustrates an 8km (5 mile) cycling isoline from the site and provides a general indication of the site's accessibility by cycle from the surrounding areas.

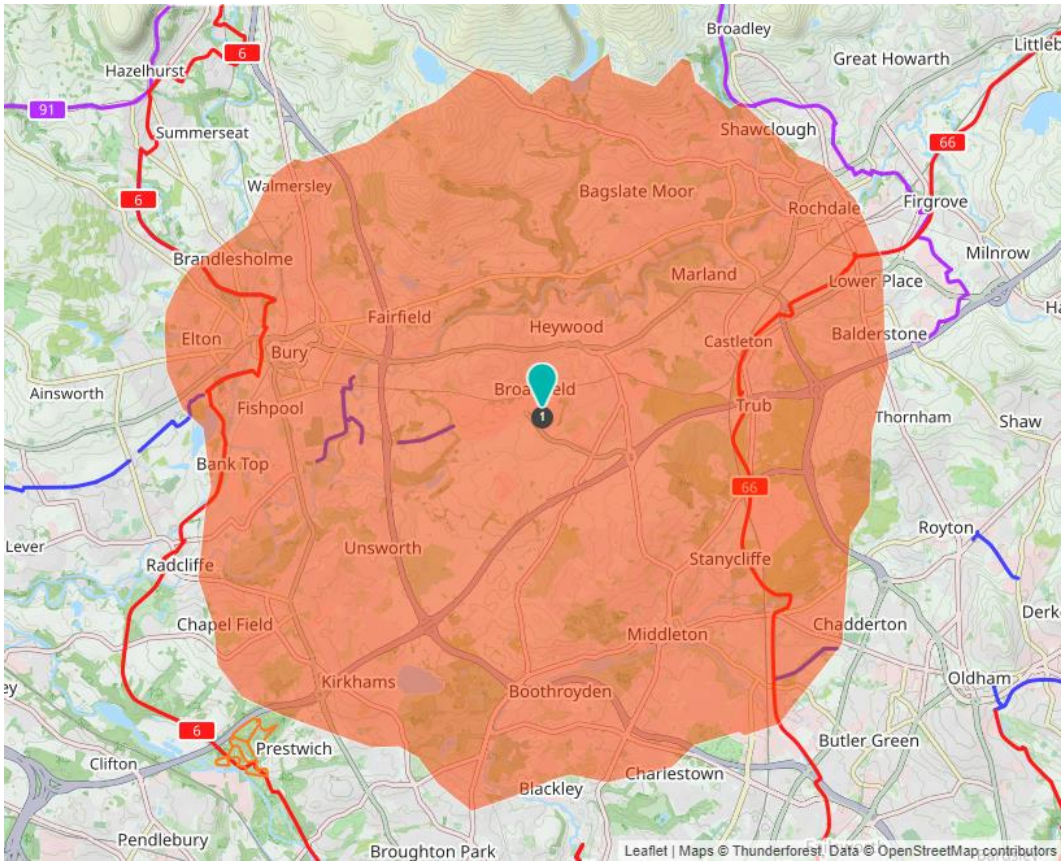


Figure 10 – Indicative cycling 8km isoline ***[Openrouteservice]***

4.2.8 Figure 10 indicates that various surrounding areas including Bury and Rochdale are within cycle distance of the site. However, the quality of the cycle network surrounding the site will influence cycle accessibility. **Figure 11** is an extract from the Transport for Greater Manchester (TfGM) cycle map for the Rochdale area.

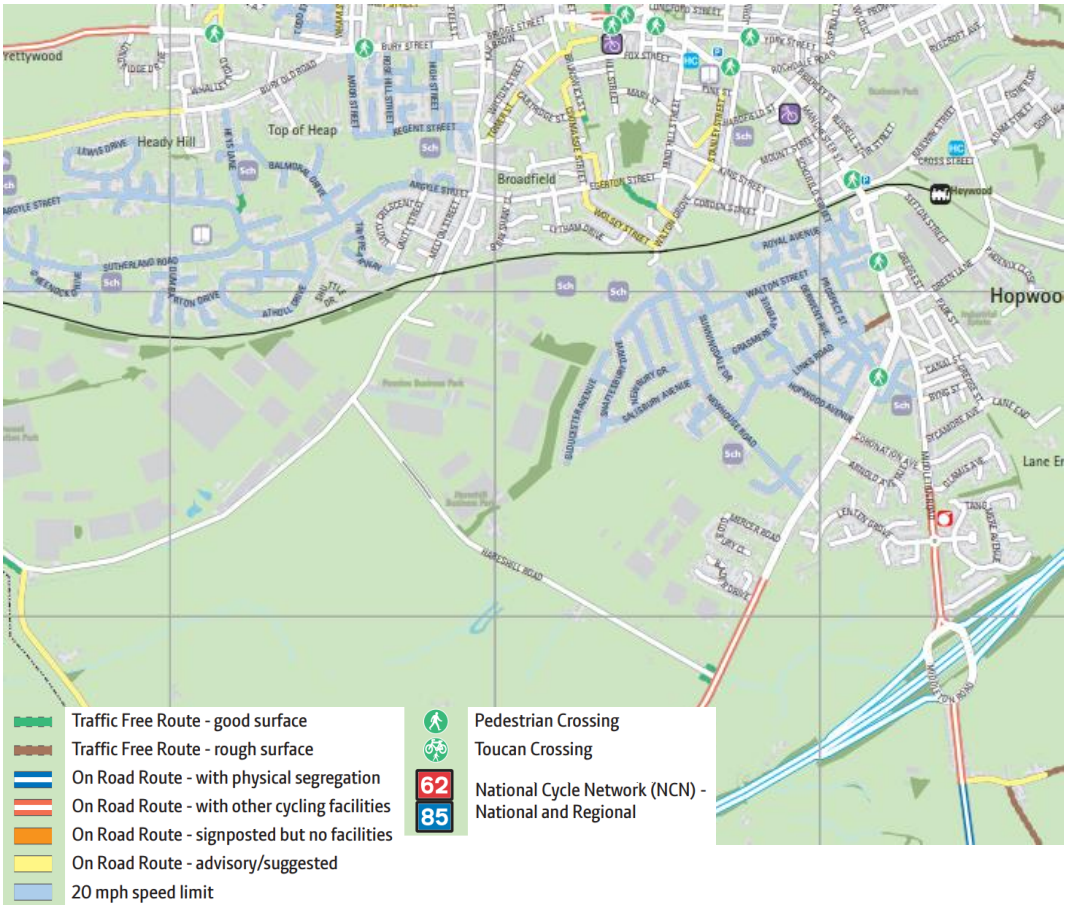


Figure 11 – Extract from TfGM Cycle Map for the Rochdale area

4.2.9 At present, there are limited cycle facilities in the vicinity of the site. However, segregated cycle/footways are to be provided alongside the new Link Road which will link to cycle corridor improvement works between Heywood and Middleton that are being delivered by RBC. Toucan crossings will also be provided at signalised junctions along the Link Road.

4.3 Public Transport

Bus

4.3.1 The nearest bus stops to the site that provide public services are located on Argyle Street at a distance of approximately 1.3-1.4km.

4.3.2 'Local Link' is also available in the area which provides a shared minibus that can be booked for journeys within the service area. The Heywood Local Link service area is shown in **Figure 12**, below.

Figure 12 – Heywood Local Link Service Area [TfGM]

4.3.3 However, as part of the South Heywood Development, a "package of public transport improvements to be agreed with TfGM and RBC and funded by developer contribution" is to be provided. Although details are not yet available, it is understood that a Public Transport Strategy is to be developed with TfGM and RBC. Options being considered are believed to include diversion of existing services and upgrading of bus stops.

Rail

4.3.4 The closest public railway station to the site is Castleton Station located at a cycling distance of approximately 5.6km, as shown in **Figure 13**. The station is on the line between Clitheroe and Rochdale with hourly services in each direction. Facilities are limited however the station provides 10 CCTV-covered cycle storage spaces and ticket machines.

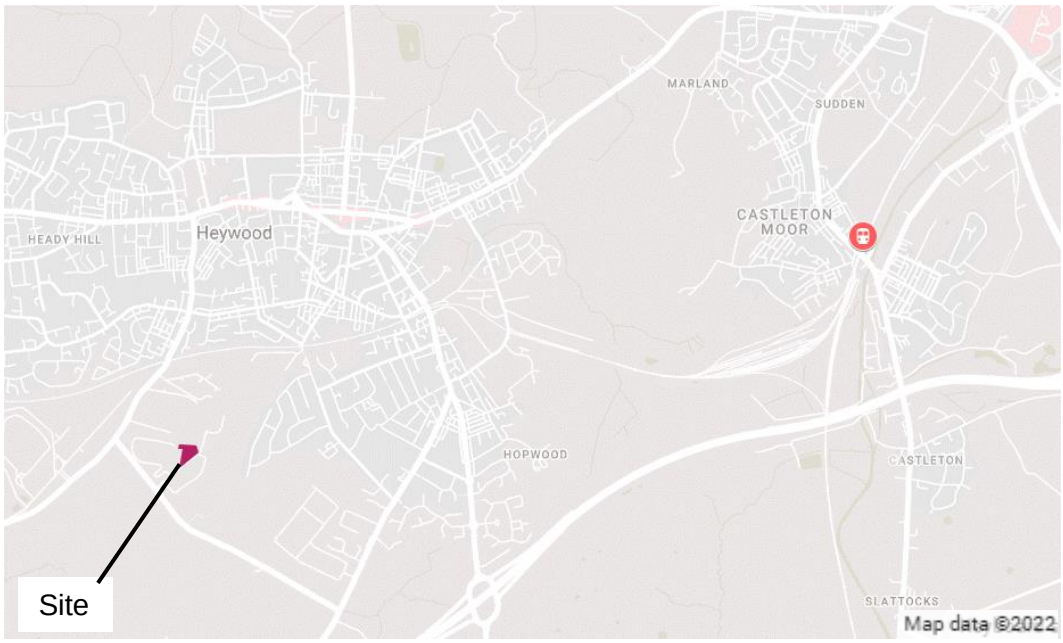


Figure 13 – Location of train station ***[GoogleMyMaps]***

4.4 Accessibility Summary

4.4.1 At present, opportunities to access the site by sustainable modes are limited. However, the South Heywood Development including the new Link Road is to provide improvements to the walking, cycling and bus facilities in the area.

5 Trip Generation Assessment

5.1 Although the development proposes 41 HGV parking spaces and 36 car parking spaces it is not anticipated that it will give rise to that number of additional vehicles but rather improve the efficiency of the operation of the site.

5.2 Nevertheless, in order to provide a robust assessment, the calculations within this section have been made based on 77 parking spaces.

5.3 The TRICS v7.8.4 database has been used to derive average vehicular trip rates for the use category of the site. The search parameters set out in **Table 1** have been used and the full outputs are included at **Appendix C**.

Land Use	Trip Rate Selection Criteria
Employment	Land Use Category: 'Industrial Unit'; Number of parking spaces: 4-147; The regions of Greater London and Ireland were excluded; Saturday and Sunday surveys were excluded; and, Industrial zone suburban area and edge of town sites were used

Table 1 – TRICS search parameters

5.4 The data has been interrogated in order to predict the number of goods vehicle and car movements that could be generated by the proposals. **Tables 2** and **3** show the number of movements predicted over the course of a day.

Time period	Arrivals	Departures	2-way
05:00-05:30	0	0	0
05:30-06:00	0	0	0
06:00-06:30	1	0	1
06:30-07:00	1	0	1
07:00-07:30	1	0	1
07:30-08:00	1	1	2
08:00-08:30	1	1	2
08:30-09:00	2	1	3
09:00-09:30	2	1	3
09:30-10:00	3	2	5
10:00-10:30	2	1	3
10:30-11:00	2	1	3
11:00-11:30	1	1	2
11:30-12:00	1	1	2
12:00-12:30	3	2	5
12:30-13:00	1	1	2
13:00-13:30	1	1	2
13:30-14:00	1	0	1
14:00-14:30	0	1	1
14:30-15:00	0	1	1
15:00-15:30	1	1	2
15:30-16:00	0	1	1
16:00-16:30	1	1	2
16:30-17:00	0	0	0
17:00-17:30	0	0	0
17:30-18:00	0	0	0
18:00-18:30	0	0	0
18:30-19:00	0	0	0
19:00-19:30	0	3	3
19:30-20:00	0	3	3
20:00-20:30	0	1	1
20:30-21:00	0	2	2

Table 2 – Goods vehicle movements

Time period	Arrivals	Departures	2-way
05:00-05:30	0	0	0
05:30-06:00	3	0	3
06:00-06:30	1	0	1
06:30-07:00	4	1	5
07:00-07:30	4	1	5
07:30-08:00	9	1	10
08:00-08:30	7	1	8
08:30-09:00	7	1	8
09:00-09:30	4	1	5
09:30-10:00	2	2	4
10:00-10:30	2	2	4
10:30-11:00	1	2	3
11:00-11:30	1	2	3
11:30-12:00	1	2	3
12:00-12:30	1	2	3
12:30-13:00	2	3	5
13:00-13:30	4	4	8
13:30-14:00	2	2	4
14:00-14:30	2	2	4
14:30-15:00	1	3	4
15:00-15:30	1	3	4
15:30-16:00	1	3	4
16:00-16:30	1	5	6
16:30-17:00	0	5	5
17:00-17:30	2	8	10
17:30-18:00	3	5	8
18:00-18:30	2	5	7
18:30-19:00	1	2	3
19:00-19:30	6	0	6
19:30-20:00	1	2	3
20:00-20:30	1	0	1
20:30-21:00	2	0	2

Table 3 – Car movements

5.5 As can be seen, the movements that could be expected to be generated during the traditional network peak hours of 8:00-9:00 and 17:00-18:00, as well as an inter-peak of 13:00-14:00, are as shown in **Table 4**, below.

	Time period	Arrivals	Departures	2-way
Goods vehicles	AM Peak	3	2	5
	Inter Peak	2	1	3
	PM Peak	0	0	0
Cars	AM Peak	14	2	16
	Inter Peak	6	6	12
	PM Peak	5	13	18

Table 4 – Predicted peak hour movements

5.6 This equates to an additional vehicle movement every 2.9-3.3 minutes during the AM and PM peak hours and every 4 minutes in the inter-peak. In the context of the surrounding area, and the forthcoming South Heywood Development, this is negligible and unlikely to be discernible.

6 Traffic Impact Assessment

6.1 The Transport Statement (Focus ref J000058-TS01e) submitted to support planning application 20/00464/ANM, which included the signalisation of the Link Road / Hill Top Road junction, provides a junction capacity assessment of the junction using LinSig software.

6.2 The junction was modelled in two scenarios:

- *2038 future year South Heywood Link Road and full South Heywood Development: Core scenario*
- *2038 future year South Heywood Link Road and full South Heywood Development: Sensitivity scenario (including reassignment of local employment zone trips from Access I to the South Heywood Employment Zone access served by the proposed linked signal junction (Access H))*

6.3 In both scenarios the junction was determined to have a practical reserve capacity (PRC) of 20.5%, 39.5% and 15.7% in the AM, Inter and PM peaks respectively, whilst the maximum degree of saturation (DoS) for any individual link is 77.8% (Link Road northbound approach during the PM peak period). This level of operation lies comfortably below the critical value of 90% DoS with significant PRC.

6.4 Given the available capacity, it is not considered that the addition of 21, 15 and 18 vehicle movements within the AM, inter and PM peaks, respectively, would have a discernible impact on the operation of the junction.

6.5 With regards the wider highway network, the number of vehicle movements predicted to be generated by the development is negligible in comparison to those associated with the South Heywood Development and, as such, unlikely to have any noticeable impact on the operation of the network.

7 Summary and Conclusions

7.1 Sanderson Associates (Consulting Engineers) Ltd has been appointed to prepare a Transport Assessment to support the application for additional parking areas at Martin Brower Logistics, Hill Top Road, Heywood.

7.2 The proposed development comprises the provision of 41 HGV parking spaces and 36 car parking spaces on land to the east of the existing unit and car park.

7.3 The accessibility of the site by sustainable modes is currently limited however, adjacent to the site a new Link Road that is part of a wider mixed-use South Heywood Development is under construction. The development includes a signalised junction with Hill Top Road, segregated cycle/footways and public transport improvements.

7.4 The Link Road and associated junctions have been subjected to Road Safety Audits as part of the design process and, therefore, have been approved from a highway safety viewpoint with further RSAs to be carried out post-construction.

7.5 The development is proposed in order to improve the efficiency of the operation of the business rather than to increase throughput. However, it is acknowledged that some additional vehicle movements may result. As such, in order to provide a robust assessment, a trip generation assessment has been undertaken based on 77 parking spaces. Total peak hour movements are predicted to be 21, 15 and 18 in the AM, inter and PM respectively. This equates to an additional vehicle movement every 2.9-3.3 minutes during the AM and PM peak hours and every 4 minutes in the inter-peak. In the context of the surrounding area, and the forthcoming South Heywood Development, this is negligible and unlikely to be discernible.

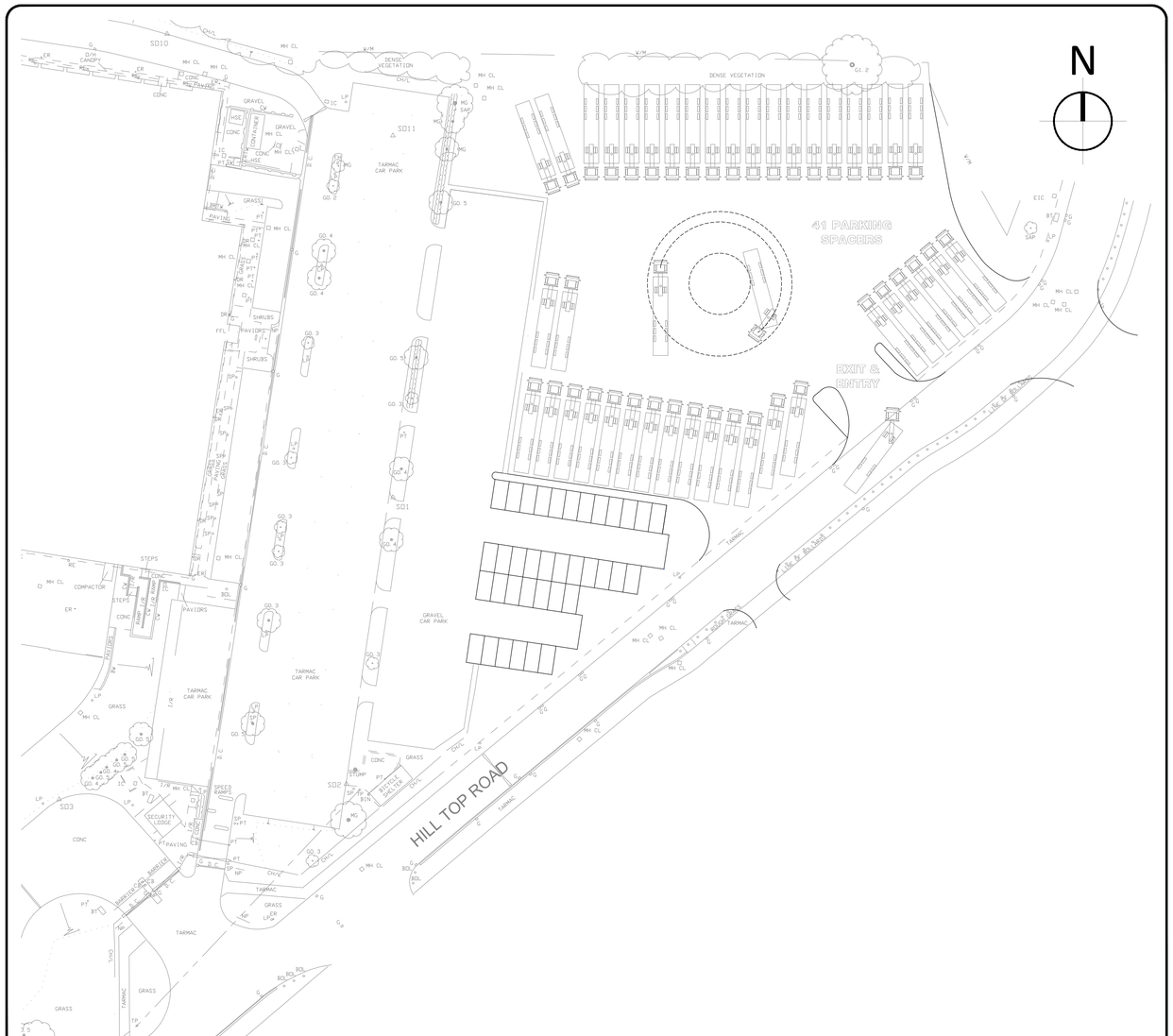
7.6 The junction of Hill Top Road with the new Link Road was modelled as part of application 20/00464/ANM, which included the signalisation of the junction. The assessment was undertaken in a future year of 2038 and showed significant

capacity remained. Therefore, it is not considered that the potential development traffic generations would have a discernible impact on the operation of the junction, or indeed the wider highway network.

7.7 As such, the development could not be predicted to have an unacceptable impact on highway safety and the cumulative impacts on the road network would not be severe. Therefore, the proposed development should be supported on transportation grounds.

APPENDIX A

Site Layout Plan



01 Proposed HGV Layout

003 SCALE 1:500

THE LAYOUT IS SUBJECT TO PLANNING AND HIGHWAYS APPROVAL

rev	notes	date
1.0	First Issue	23/03/22

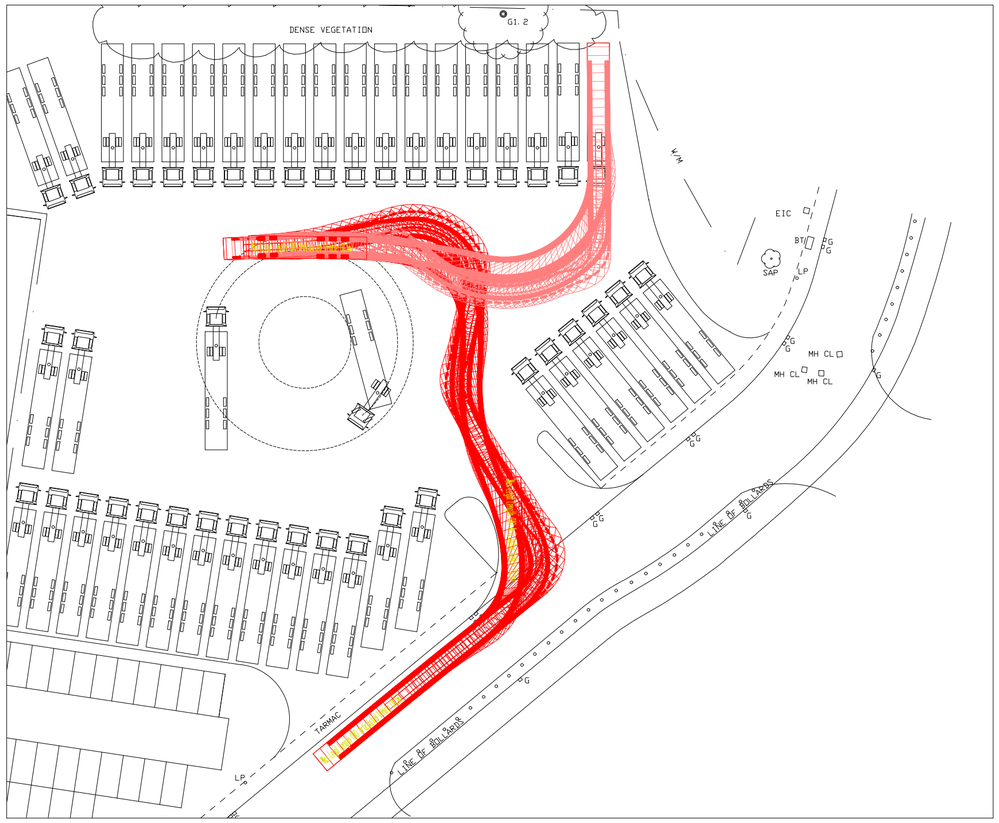
Meller,
The Lace Mill,
42 - 44 Derby Road,
Draycott, Derby,
DE72 3NJ
Tel: 01509 670036
Website: www.mellerltd.co.uk

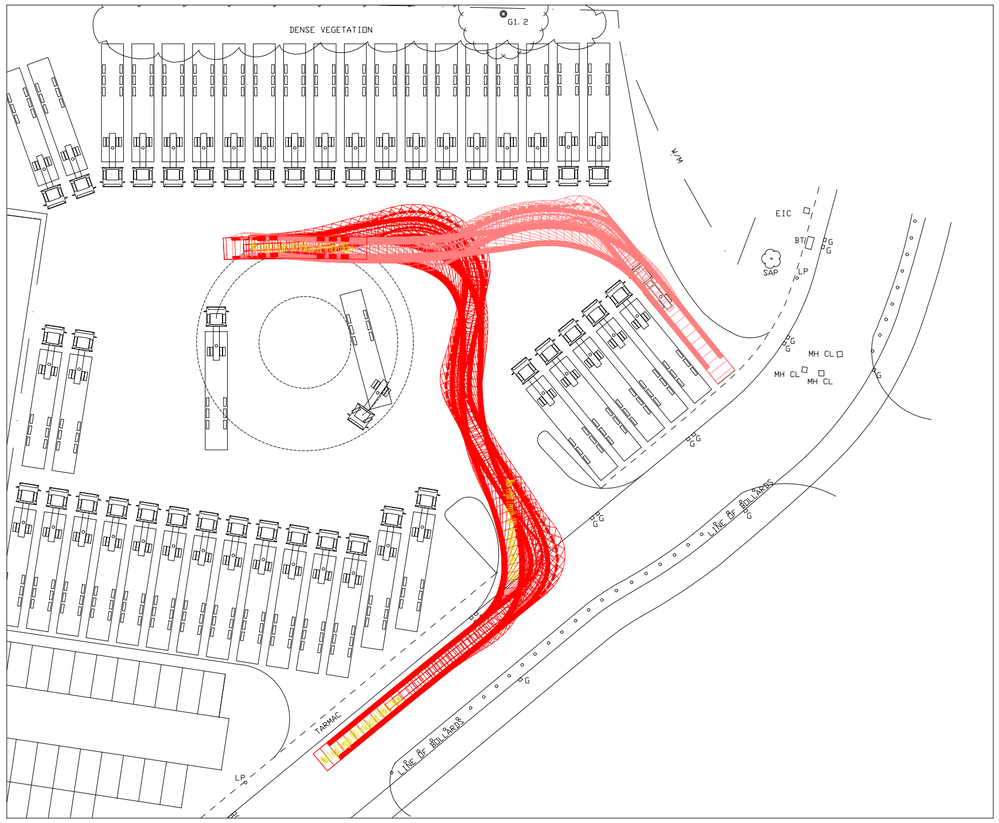
client: Martin Brower		created: Nov 2021	
project: Support Services		Drawn by: MC	Checked by: MRC
title: Prop. Car and HGV Parking Layout		scale: A1 As Noted	

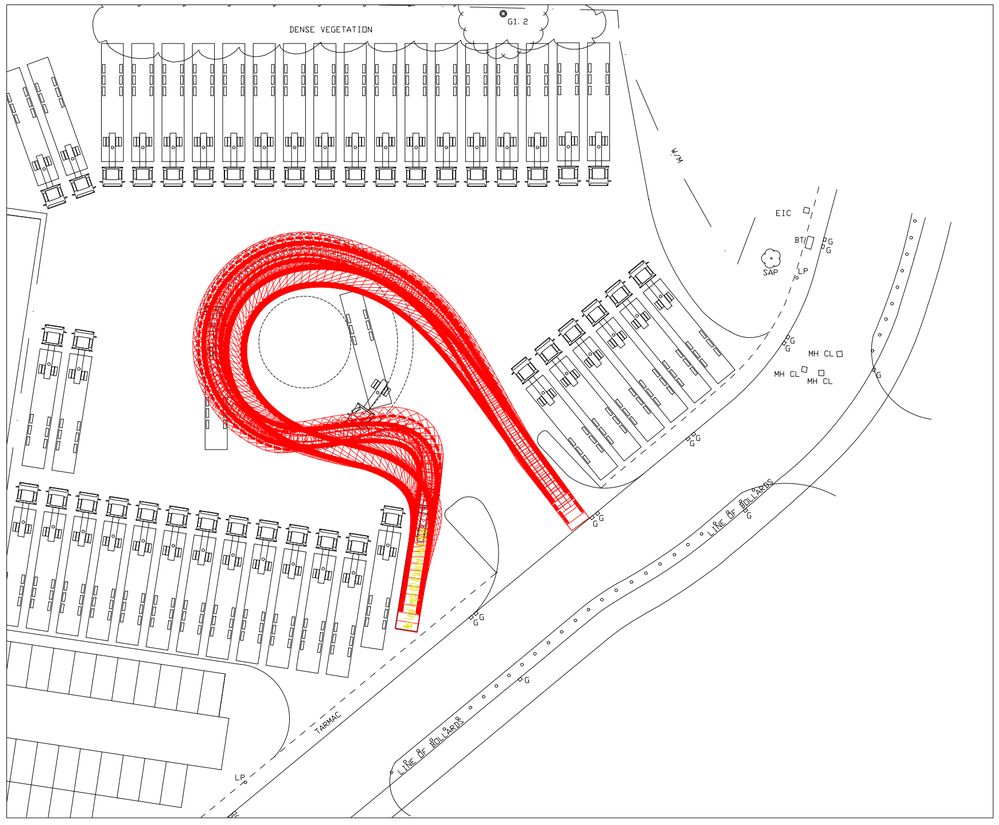
job N°	drawing N°	rev	status
200901	003	1.0	Planning

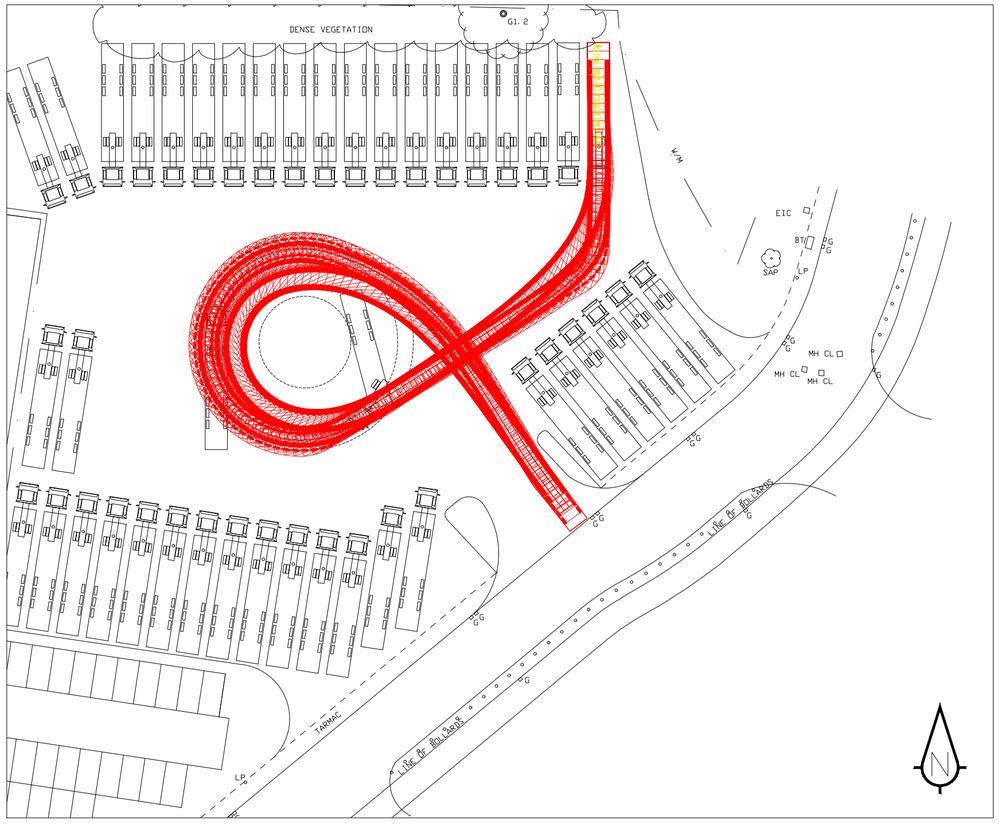
APPENDIX B

Drawing 300662-002 Swept Path Analysis

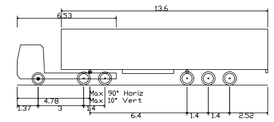








- Sanderson Associates (Consulting Engineers) Ltd ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.
- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.
- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Rev	Amendment	Drawn	Date	Checked

sanderson associates (consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
F 01924 844081 www.sandersonassociates.co.uk

Client

Meller Ltd

Project Title

Martin Brower,
Hill Top Road,
Heywood, Rochdale

Drawing Title

Swept Path Analysis

Scale	1:500	Drawn By	CP
Drawing Size	A2	Checked By	KS
Date	March 2022	Approved By	KS

Drawing Number	Rev
300662-002	-

FILE REF:

APPENDIX C

TRICS Data

Calculation Reference: AUDIT-109307-220316-0325

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BD	BEDFORDSHIRE	1 days
	HC	HAMPSHIRE	1 days
03	SOUTH WEST		
	BR	BRISTOL CITY	1 days
	DV	DEVON	1 days
	GS	GLOUCESTERSHIRE	1 days
04	EAST ANGLIA		
	NF	NORFOLK	2 days
	SF	SUFFOLK	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
08	NORTH WEST		
	LC	LANCASHIRE	2 days
09	NORTH		
	CB	CUMBRIA	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	SR	STIRLING	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: Parking spaces
Actual Range: 4 to 147 (units:)
Range Selected by User: 4 to 400 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 30/06/21

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	1 days
Tuesday	4 days
Thursday	7 days
Friday	2 days

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

Selected survey types:

Manual count	14 days
Directional ATC Count	0 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 undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	9

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:

Industrial Zone	14

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, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known	14 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®.

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	3 days
15,001 to 20,000	1 days
20,001 to 25,000	3 days
25,001 to 50,000	4 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	1 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	7 days
250,001 to 500,000	3 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	11 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:

No	14 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	14 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 BD-02-C-01 PUMPS, MOTORS & FANS BEDFORDSHIRE
POSTLEY ROAD
BEDFORD
KEMPSTON
Edge of Town
Industrial Zone
Total Parking spaces: 30
Survey date: THURSDAY *15/10/20* *Survey Type: MANUAL*

2 BR-02-C-02 STAINLESS FITTINGS BRISTOL CITY
SOUTH LIBERTY LANE
BRISTOL

Edge of Town
Industrial Zone
Total Parking spaces: 41
Survey date: TUESDAY *22/09/15* *Survey Type: MANUAL*

3 CB-02-C-01 DOMINO'S PIZZA CUMBRIA
COWPER ROAD
PENRITH
GILWILLY IND. ESTATE
Edge of Town
Industrial Zone
Total Parking spaces: 48
Survey date: TUESDAY *10/06/14* *Survey Type: MANUAL*

4 CF-02-C-02 BAKERY CARDIFF
MAES-Y-COED ROAD
CARDIFF

Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Parking spaces: 147
Survey date: THURSDAY *06/10/16* *Survey Type: MANUAL*

5 DV-02-C-02 ENERGY RECOVERY FACILITY DEVON
GRACE ROAD SOUTH
EXETER
MARSH BARTON TRAD. EST.
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Parking spaces: 42
Survey date: THURSDAY *06/07/17* *Survey Type: MANUAL*

6 GS-02-C-02 MARINE ENGINE PRODUCTION GLOUCESTERSHIRE
DAVY WAY
GLOUCESTER
HARDWICKE
Edge of Town
Industrial Zone
Total Parking spaces: 31
Survey date: FRIDAY *23/04/21* *Survey Type: MANUAL*

7 HC-02-C-01 ENGINEERING COMPANY HAMPSHIRE
JAYS CLOSE
BASINGSTOKE

Edge of Town
Industrial Zone
Total Parking spaces: 124
Survey date: THURSDAY *16/06/16* *Survey Type: MANUAL*

8 LC-02-C-03 TIMBER SUPPLIES LANCASHIRE
GOLDEN HILL LANE
LEYLAND

Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Parking spaces: 4
Survey date: TUESDAY *06/11/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 LC-02-C-04 POWDER COATINGS LANCASHIRE
CHORLEY ROAD
BLACKPOOL
LITTLE CARLETON
Edge of Town
Industrial Zone
Total Parking spaces: 10
Survey date: THURSDAY 20/06/19 Survey Type: MANUAL

10 NF-02-C-03 SHEET METAL CONTRACTOR NORFOLK
ELVIN WAY
NORWICH
HELLESDON
Edge of Town
Industrial Zone
Total Parking spaces: 10
Survey date: THURSDAY 07/11/19 Survey Type: MANUAL

11 NF-02-C-04 EXHIBITION DESIGN & MANUF. NORFOLK
FLETCHER WAY
NORWICH
UPPER HELLESDON
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Parking spaces: 7
Survey date: THURSDAY 14/11/19 Survey Type: MANUAL

12 SF-02-C-01 JOINERY SUFFOLK
ANSON ROAD
IPSWICH
MARTLESHAM HEATH
Edge of Town
Industrial Zone
Total Parking spaces: 14
Survey date: FRIDAY 12/07/13 Survey Type: MANUAL

13 SR-02-C-01 SPECIALIST MODEL MAKING STIRLING
BORROWMEADOW ROAD
STIRLING

Edge of Town
Industrial Zone
Total Parking spaces: 33
Survey date: MONDAY 16/06/14 Survey Type: MANUAL

14 WM-02-C-04 FOUNDRY WEST MIDLANDS
STOURVALE ROAD
STOURBRIDGE
LYE
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Parking spaces: 40
Survey date: TUESDAY 21/11/17 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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CH-02-C-02	Off site parking not included in count
CH-02-C-04	Off site parking not included in count
DS-02-C-02	Off site parking not included in count
LC-02-C-05	Off site parking not included in count
NR-02-C-02	Off site parking not included in count
TV-02-C-02	Off site parking not included in count
VG-02-C-01	Off site parking not included in count
WY-02-C-02	Off site parking not included in count

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
TOTAL VEHICLES
Calculation factor: 1 PARKING SPACES
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	2	39	0.000	2	39	0.000	2	39	0.000
05:30 - 06:00	2	39	0.038	2	39	0.000	2	39	0.038
06:00 - 06:30	3	36	0.018	3	36	0.028	3	36	0.046
06:30 - 07:00	4	36	0.127	4	36	0.014	4	36	0.141
07:00 - 07:30	14	42	0.088	14	42	0.014	14	42	0.102
07:30 - 08:00	14	42	0.112	14	42	0.022	14	42	0.134
08:00 - 08:30	14	42	0.110	14	42	0.021	14	42	0.131
08:30 - 09:00	14	42	0.134	14	42	0.038	14	42	0.172
09:00 - 09:30	14	42	0.083	14	42	0.036	14	42	0.119
09:30 - 10:00	14	42	0.088	14	42	0.065	14	42	0.153
10:00 - 10:30	14	42	0.077	14	42	0.053	14	42	0.130
10:30 - 11:00	14	42	0.069	14	42	0.062	14	42	0.131
11:00 - 11:30	14	42	0.048	14	42	0.059	14	42	0.107
11:30 - 12:00	14	42	0.043	14	42	0.057	14	42	0.100
12:00 - 12:30	14	42	0.074	14	42	0.062	14	42	0.136
12:30 - 13:00	14	42	0.052	14	42	0.071	14	42	0.123
13:00 - 13:30	14	42	0.079	14	42	0.079	14	42	0.158
13:30 - 14:00	14	42	0.038	14	42	0.041	14	42	0.079
14:00 - 14:30	14	42	0.041	14	42	0.048	14	42	0.089
14:30 - 15:00	14	42	0.028	14	42	0.050	14	42	0.078
15:00 - 15:30	14	42	0.038	14	42	0.062	14	42	0.100
15:30 - 16:00	14	42	0.022	14	42	0.072	14	42	0.094
16:00 - 16:30	14	42	0.029	14	42	0.074	14	42	0.103
16:30 - 17:00	14	42	0.007	14	42	0.084	14	42	0.091
17:00 - 17:30	14	42	0.034	14	42	0.112	14	42	0.146
17:30 - 18:00	14	42	0.041	14	42	0.059	14	42	0.100
18:00 - 18:30	14	42	0.024	14	42	0.067	14	42	0.091
18:30 - 19:00	13	42	0.013	13	42	0.029	13	42	0.042
19:00 - 19:30	2	39	0.077	2	39	0.038	2	39	0.115
19:30 - 20:00	2	39	0.013	2	39	0.064	2	39	0.077
20:00 - 20:30	2	39	0.013	2	39	0.013	2	39	0.026
20:30 - 21:00	2	39	0.026	2	39	0.038	2	39	0.064
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.684			1.532			3.216

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.*

Parameter summary

Trip rate parameter range selected:	4 - 147 (units:)
Survey date date range:	01/01/13 - 30/06/21
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	8

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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
OGVS
Calculation factor: 1 PARKING SPACES
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	2	39	0.000	2	39	0.000	2	39	0.000
05:30 - 06:00	2	39	0.000	2	39	0.000	2	39	0.000
06:00 - 06:30	3	36	0.009	3	36	0.000	3	36	0.009
06:30 - 07:00	4	36	0.007	4	36	0.000	4	36	0.007
07:00 - 07:30	14	42	0.009	14	42	0.003	14	42	0.012
07:30 - 08:00	14	42	0.007	14	42	0.010	14	42	0.017
08:00 - 08:30	14	42	0.012	14	42	0.007	14	42	0.019
08:30 - 09:00	14	42	0.024	14	42	0.010	14	42	0.034
09:00 - 09:30	14	42	0.021	14	42	0.010	14	42	0.031
09:30 - 10:00	14	42	0.040	14	42	0.026	14	42	0.066
10:00 - 10:30	14	42	0.029	14	42	0.010	14	42	0.039
10:30 - 11:00	14	42	0.024	14	42	0.014	14	42	0.038
11:00 - 11:30	14	42	0.017	14	42	0.014	14	42	0.031
11:30 - 12:00	14	42	0.015	14	42	0.014	14	42	0.029
12:00 - 12:30	14	42	0.033	14	42	0.021	14	42	0.054
12:30 - 13:00	14	42	0.012	14	42	0.019	14	42	0.031
13:00 - 13:30	14	42	0.019	14	42	0.012	14	42	0.031
13:30 - 14:00	14	42	0.009	14	42	0.005	14	42	0.014
14:00 - 14:30	14	42	0.005	14	42	0.009	14	42	0.014
14:30 - 15:00	14	42	0.005	14	42	0.007	14	42	0.012
15:00 - 15:30	14	42	0.009	14	42	0.009	14	42	0.018
15:30 - 16:00	14	42	0.003	14	42	0.009	14	42	0.012
16:00 - 16:30	14	42	0.012	14	42	0.007	14	42	0.019
16:30 - 17:00	14	42	0.000	14	42	0.005	14	42	0.005
17:00 - 17:30	14	42	0.002	14	42	0.002	14	42	0.004
17:30 - 18:00	14	42	0.003	14	42	0.002	14	42	0.005
18:00 - 18:30	14	42	0.000	14	42	0.000	14	42	0.000
18:30 - 19:00	14	42	0.000	14	42	0.002	14	42	0.002
19:00 - 19:30	2	39	0.000	2	39	0.038	2	39	0.038
19:30 - 20:00	2	39	0.000	2	39	0.038	2	39	0.038
20:00 - 20:30	2	39	0.000	2	39	0.013	2	39	0.013
20:30 - 21:00	2	39	0.000	2	39	0.026	2	39	0.026
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.326			0.342			0.668

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.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
CARS
Calculation factor: 1 PARKING SPACES
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate	No. Days	Ave. PARKING	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	2	39	0.000	2	39	0.000	2	39	0.000
05:30 - 06:00	2	39	0.038	2	39	0.000	2	39	0.038
06:00 - 06:30	3	36	0.009	3	36	0.000	3	36	0.009
06:30 - 07:00	4	36	0.056	4	36	0.007	4	36	0.063
07:00 - 07:30	14	42	0.048	14	42	0.009	14	42	0.057
07:30 - 08:00	14	42	0.115	14	42	0.010	14	42	0.125
08:00 - 08:30	14	42	0.088	14	42	0.007	14	42	0.095
08:30 - 09:00	14	42	0.096	14	42	0.010	14	42	0.106
09:00 - 09:30	14	42	0.053	14	42	0.014	14	42	0.067
09:30 - 10:00	14	42	0.031	14	42	0.031	14	42	0.062
10:00 - 10:30	14	42	0.031	14	42	0.029	14	42	0.060
10:30 - 11:00	14	42	0.017	14	42	0.022	14	42	0.039
11:00 - 11:30	14	42	0.015	14	42	0.028	14	42	0.043
11:30 - 12:00	14	42	0.015	14	42	0.028	14	42	0.043
12:00 - 12:30	14	42	0.017	14	42	0.028	14	42	0.045
12:30 - 13:00	14	42	0.022	14	42	0.036	14	42	0.058
13:00 - 13:30	14	42	0.048	14	42	0.048	14	42	0.096
13:30 - 14:00	14	42	0.024	14	42	0.029	14	42	0.053
14:00 - 14:30	14	42	0.028	14	42	0.024	14	42	0.052
14:30 - 15:00	14	42	0.015	14	42	0.034	14	42	0.049
15:00 - 15:30	14	42	0.015	14	42	0.033	14	42	0.048
15:30 - 16:00	14	42	0.009	14	42	0.033	14	42	0.042
16:00 - 16:30	14	42	0.009	14	42	0.065	14	42	0.074
16:30 - 17:00	14	42	0.003	14	42	0.067	14	42	0.070
17:00 - 17:30	14	42	0.028	14	42	0.098	14	42	0.126
17:30 - 18:00	14	42	0.038	14	42	0.059	14	42	0.097
18:00 - 18:30	14	42	0.022	14	42	0.069	14	42	0.091
18:30 - 19:00	14	42	0.010	14	42	0.022	14	42	0.032
19:00 - 19:30	2	39	0.077	2	39	0.000	2	39	0.077
19:30 - 20:00	2	39	0.013	2	39	0.026	2	39	0.039
20:00 - 20:30	2	39	0.013	2	39	0.000	2	39	0.013
20:30 - 21:00	2	39	0.026	2	39	0.000	2	39	0.026
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.029			0.866			1.895

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.*