

BLOOR HOMES LIMITED

LAND SOUTH OF MADDOXFORD LANE

TRANSPORT ASSESSMENT

2501890_A-ACE-XX-XX-RP-C-0102

March 2026

HEAD OFFICE (LONDON): 3rd Floor, The Hallmark Building, 52-56 Leadenhall Street, London, EC3M 5JE **T** | 020 7680 4088

SUFFOLK: Suffolk Enterprise Centre, 44 Felaw Street, Ipswich, IP2 8SJ **T** | 01473 407 321

ESSEX: 1 - 2 Crescent Court, Billericay, Essex, CM12 9AQ **T** | 01277 657 677

NOTTINGHAM: Office 3, Garage Studios, 41-43 St Mary's Gate, Lace Market, Nottingham, NG1 1PU **T** | 0115 697 0940

KENT: Suite 10, Building 40, Churchill Business Centre, Kings Hill, Kent, ME19 4YU **T** | 01732 752 155

BRISTOL: Temple Studios, Temple Gate, Bristol, BS1 6QA **T** | 0117 456 4994

EDINBURGH: 4-5 Lochside Way Edinburgh EH12 9DT **T** | 0131 516 8111

MANCHESTER: Chancery Place, 50 Brown Street, Manchester, M2 2JG **T** | 020 7680 4088

Document Control Sheet

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft Issue	JE	PR	DRAFT	11.12.25
-	2 nd Draft Issue	JE	PR	DRAFT	19.12.25
-	3 rd Draft Issue	SS	JE	DRAFT	06.02.26
-	4 th Draft Issue	SS	JE	DRAFT	16.02.26
-	Final Issue	SS	JE JE	PR PR	23.03.26

Distribution

This report has been prepared for the exclusive use of Bloor Homes Limited. It should not be reproduced in whole or in part, or relied upon by third parties, without the express written authority of Ardent Consulting Engineers.

1. Introduction

- 1.1 This Transport Assessment (TA) has been produced by Ardent Consulting Engineers (ACE) on behalf of Bloor Homes Limited, in respect of a potential development at land to the south of Maddoxford Lane. The proposed development for the land south of Maddoxford Lane comprises demolition of existing buildings and the construction of up to 280 dwellings, provision of informal and formal open space, together with associated highways, landscape, earth works and level changes, foul and surface water drainage facilities, utilities provision and other associated and necessary infrastructure.
- 1.2 The outline planning application (with all matters reserved except for main access) for the proposed development scheme is to be submitted to Eastleigh Borough Council (EBC) as the Local Planning Authority. Hampshire County Council (HCC) is the local highway authority responsible for the roads in the surrounding area. A Land Use and Access Plan is included at **Appendix A**.

Background Information

- 1.3 A previous planning application for part of the site (Ref: F/19/85178) was submitted in March 2019 for the construction of 92 dwellings and a new vehicular access from Maddoxford Lane. This application was refused in November 2020, and the appeal was also subsequently dismissed in August 2021. The western section of this land is allocated in the Eastleigh Local Plan under Policy BO1 for the development of at least 30 residential dwellings.
- 1.4 The application site also includes land at Holly Tree Farm, where a planning application (Ref: O/22/92771) for the construction of 221 dwellings and a scout hall with a new access from Maddoxford Lane was submitted in April 2022. The application was refused in October 2022.
- 1.5 These planning applications have been reviewed to inform the methodologies for both the trip generation of the proposed site, and the distribution of vehicle trips. The methodologies used will be discussed in more detail later in this report.

1. No objection to providing access for all users (vehicles, pedestrians, and cyclists) via a new priority junction from Maddoxford Lane in principle, subject to showing that the junction can demonstrate safe access is achievable*.

- Vehicle Movement Tracking should demonstrate two-way movements for all anticipated vehicles (private, refuse, emergency) through designated access lanes. Details of the appropriate fire vehicle was provided.
- Details of how an emergency access would be secured to prevent access by all vehicles were requested.
- Visibility splays are required to be informed by up-to-date speed surveys in accordance with HCC TG3 guidance. Splay should extend unobstructed from a point 2.4m back at the access, reaching left/right to the nearside kerb and not mid-carriageway.
- Visibility splays must factor in embankment slopes on both sides.
- Access gradient should be evaluated in the TA to ensure it accommodates vehicle turns safely.

2. Pedestrian/cycle access was deemed to be appropriate in principle, however, HCC stated that an additional length of foot/cycleway should be provided to the

west. Within the internal layout, links to the west and via public rights of way should be considered.

3. The proposed trip rates and distribution are considered acceptable and appropriately robust. Committed developments as listed for the local vicinity are considered acceptable. It was also noted that an additional development of up to 2,400 dwellings at One Horton Heath (application ref: O/20/89498) should be considered within a future TA.
4. The proposed junction capacity modelling should cover the application year, the Local Plan horizon of 2036, and a period five years beyond the application date. Junction assessments using ARCADY and PICADY software are acceptable. The junctions listed in the TSN to form the study area were considered acceptable, however, it was requested to also review the Botley Road/Winchester Road/Snakemoor Lane/Bubb Lane roundabout.
5. Accident data has been requested to be obtained from detailed records provided by Hampshire Constabulary.
6. It was acknowledged the internal layout had not been shared at the time of the pre-application, however HCC stated that points to be consider are:
 - Visibility splays should conform to HCC standards, in line with TG3 set for a design speed of 20 mph, with unobstructed 2.4 x 25.0 metre visibility splays;
 - Vehicle tracking should be provided showing how all anticipated vehicles manoeuvring around the site, with adequate passing space provided (personal, refuse and emergency vehicles);
 - Refuse collection points should be shown where appropriate;
 - Indicative street lighting design would be useful;
 - Joined up pedestrian links should be clearly shown, along with (as outlined above) permeable links to the west through to the existing

Boorley Park site to reduce the need for elongated walks for residents;
and

- Confirmation as to whether the site will be put forward for adoption by HCC would also be requested

7. Correct parking standards at the time of preparation of the TSN have been referenced but consideration should be given if EBC draft standards come forward prior to applications being submitted. Following this, the then draft standards were adopted and therefore these are referenced within this TA.

8. The 'Walking, Cycling & Horse-Riding Assessment and Review' (WCHAR) is welcomed but it would be requested an extension of the analysis be provided to include the routes to the most local shops, being those in Boorley Green located on the corner of Winchester Road / Kingsman Drive, the most likely route to which would be along Maddoxford Lane and Winchester Road.

9. The submission of a Travel Plan is welcomed following appropriate details from HCC.

10. Developer contributions will be required to mitigate effects attributed towards the local highway network, calculated in accordance with the HCC Transport Contributions Policy.

1.7 Following both the preparation of the TSN and HCC's pre-application response, a review of levels was undertaken at the proposed access where an existing fuel main was laid underneath the location of the proposed access point. Following this review, the previous access location was no longer deemed to be feasible. An alternative access arrangement whereby the junction is located further to the east to avoid the fuel main has since been developed.

1.8 A meeting was held between ACE and HCC on 15th October 2025 to discuss the new access arrangements. At this meeting, HCC confirmed that there are no in principle concerns to the proposed updated access junctions, subject to some minor tweaks. These minor tweaks were incorporated into another iteration of the access designs.

1.9 The pre-application response and subsequent informal meeting on the access have been considered throughout and are referred to where relevant.

Policy and Guidance

1.10 This TA will be prepared in accordance with the following national and local policy / guidance documents:

- National Planning Policy Framework [NPPF] (MHCLG, December 2024, Amended February 2025);
- National Planning Practice Guidance [NPPG] (DCLG, 2014);
- Manual for Streets [MfS] (DfT, 2007);
- Manual for Streets [MfS2] – Wider Application of Principles (CIHT, 2010);
- Design Manual for Roads and Bridges [DMRB] (Highways Agency, 1992);
- Hampshire County Council Local Transport Plan 4 (2024);
- Hampshire County Council Technical Guidance Note TG2 - Alignment Design (2024);
- Hampshire Parking & Traffic Enforcement Policy & Operational Guidance (2023);
- Eastleigh Borough Local Plan 2016-2036 (2022);
- Eastleigh Borough Council Parking Standards Supplementary Planning Document (September 2025).

Report Structure

1.11 Following this introduction, the remainder of this report is structured as follows: -

- **Section 2.0** provides an overview of the existing site including its location, usage, access and the surrounding highway network and accessibility by various modes;

- **Section 3.0** provides indicative details of the development proposals and access arrangements;
- **Section 4.0** considers likely multi-modal trip generation associated with the proposals;
- **Section 5.0** outlines the distribution and assignment for the predicted level of development traffic, and provides a review of the off-site traffic impacts based on junction modelling;
- **Section 6.0** discusses opportunities for residents of the new development to travel by sustainable modes; and
- **Section 7.0** provides a summary and conclusion.

2. Existing Situation

Site Location

- 2.1 The site is located south of Maddoxford Lane, Boorley Green, within the Eastleigh District of Hampshire. The site, indicatively shown in red in **Figure 2.1**, currently comprises of farmland with existing farm buildings.



Figure 2.1: Aerial View of the Site (Source: Google Maps)

Existing Use

- 2.2 The application site comprises of an area of 14.3 hectares and is predominantly formed of agricultural land, as well as including a residential dwelling and mobile home to the north-east boundary and a commercial business relating to automobiles.

Surrounding Highway Network

- 2.3 At present there is no vehicular access point to the development, except for gated field access points at the western and eastern extents of the frontage onto Maddoxford Lane, however the farms to the northeast of the site have their own vehicular accesses off Maddoxford Lane. There was a temporary access created into the site for the installation of an Esso pipeline along the site's frontage with Maddoxford Lane; however, this has since been replanted with hedgerow.

- 8

March 2026

Survey Data

Survey Data

- ## Survey Data

Survey Data

Public Highway Boundary

2.13 Details of the highway boundary information in the vicinity of the site has been obtained from HCC and is contained in **Appendix F**.

Opportunities for Sustainable Travel

Local Amenities and Facilities

2.14 A number of facilities/amenities are located within Boorley Park and can be accessed by the off-road footway/cycleway on Maddoxford Lane, that in turn connects to the footways provided on Wallace Avenue.

2.15 The Chartered Institution of Highways and Transportation (CIHT) document 'Providing for Journeys on Foot' recommends suggested acceptable walking distances of between 500 metres (6 minutes, "Desirable") and 2km (25 minutes, "Preferred Maximum") for commuting and journeys to school.

2.16 Manual for Streets (MfS) identifies walkable neighbourhoods as being those typically characterised by having a range of facilities within an 800 metres (10 minute) walk distance, however not an upper limit, with walking offering the greatest potential to replace short car trips, particularly those under 2km. **Table 2.1** summarises some of the local amenities within a walking/cycling distance of the site, with distances taken from the proposed pedestrian crossing point.

Destination	Distance
Boorley Green Community Centre	400m
Boorley Park Primary School	500m
Boorley Green Sports Pavillion	500m
The Peartree Inn	850m
MacDonald Botley Park Hotel & Spa	1.2km
Chancellors Play Park	1.3km
Asda Express	1.5km
Curdrige Primary School	1.6km
Deer Park Secondary School	1.8km
Botley C of E Primary School	2.3km
Botley Surgery	2.4km
Botley Village Centre	2.4km

Table 2.1: Summary of Local Amenities

- 2.17 A primary school, community centre, sports pitches/green space and bus stops are located within the residential centre and can be accessed in an approximately 8-minute walk from the proposed site access.

Walking

- 2.18 Currently there is no footway provision that exists on either side of the road towards the northeast of the site. To the west opposite the proposed access there is footway provision that connects to the wider network, providing access to Boorley Green. The footway/cycleway is surfaced, street lit, has dropped kerbs and tactile paving to allow for preferred desire lines.

- 2.19 A Public Right of Way (PRoW), Footpath 026/3/1, leads south from Maddoxford Lane towards the village of Botley, connecting to the B3354 within the village. This provides a traffic-free route from the site to amenities within Botley. The route is currently temporarily closed due to the construction of the Botley Bypass but is scheduled to reopen in the summer of 2027.

- 2.20 In addition, another PRoW, Footpath 026/2/1, is located circa 400m east of the site frontage on Maddoxford Lane, leading north towards Winchester Road and Wallace Avenue.

Cycling

- 2.21 In regard to cycling, Local Transport Note 1/20 – Cycle Infrastructure Design (Department for Transport (DfT), July 2020) states at Paragraph 2.2.2 that:

"...Two out of every out of every three personal trips are less than five miles [circa 8 kilometres] in length – an achievable distance to cycle for most people, with many shorter journeys also suitable for walking."

- 2.22 As mentioned before the site does not currently have cycle connections but as part of the proposals the site will provide a cycleway that connects to the existing footway/cycleway routes.

2.23 **Figure 2.2** below shows the 20-minute cycle catchment area centred on the site and demonstrates that the surrounding area including Botley, Hedge End and Herald & Waterloo Industrial Estates, along with the associated amenities in these places can be reached within a comfortable cycling distance.

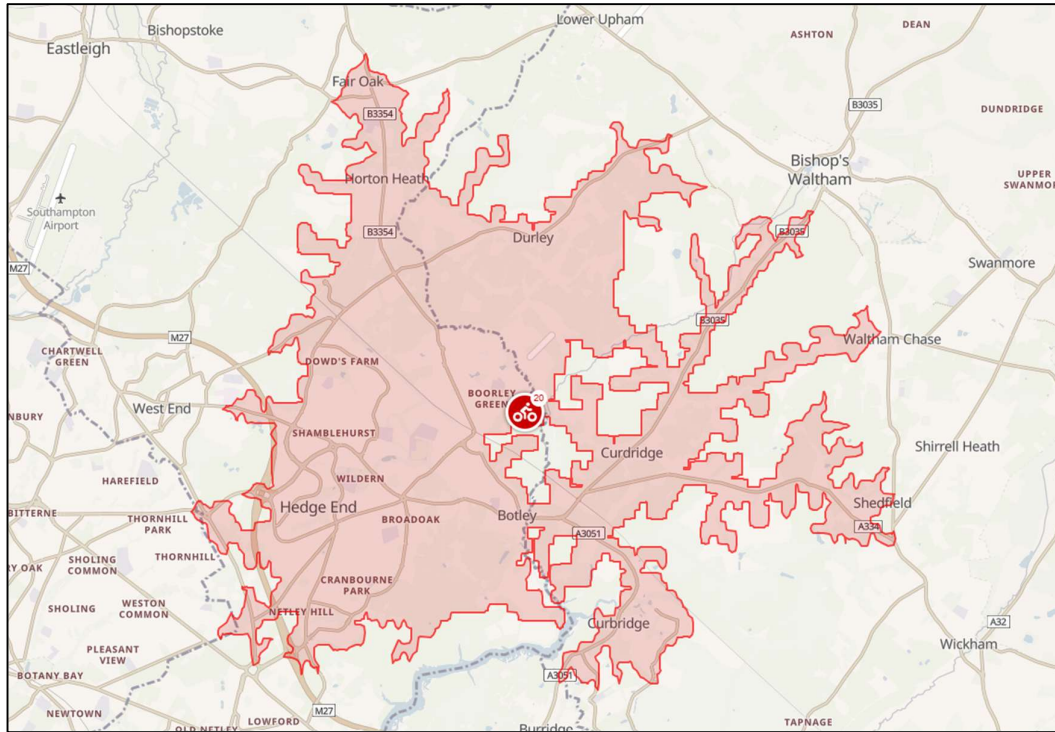


Figure 2.2: 20-Minute Cycle Catchment from the site (Source: CommuteTimeMap) **Catchment is taken from centre of the proposed site frontage*

2.24 EBC has prepared cycle maps with different grades of cycle accessibility by road. The maps show that Maddoxford Lane and Crows Nest Lane are both classified as 'Yellow Routes', which are recognised as routes with light traffic suitable for all cyclists, providing safe cycle access. The B335 is classed as a 'Dark Orange' route, which is recognised as a carriageway that is suitable for cyclists with moderate skills, also providing a safe route for more experienced cyclists. An extract from the map is included in **Figure 2.3**.

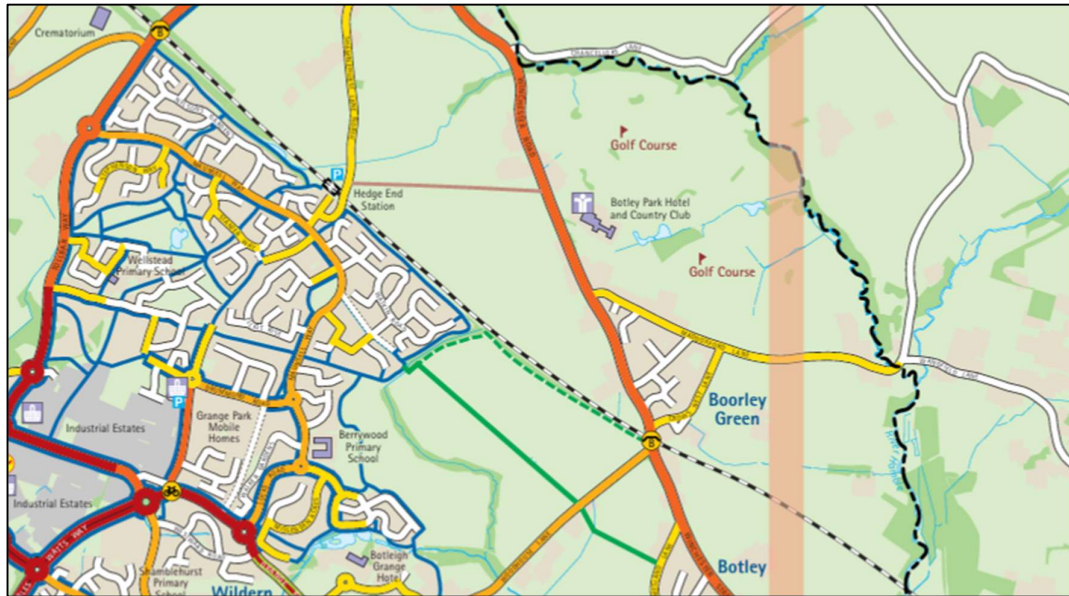


Figure 2.3: Extract from EBC Cycle Map

Public Transport

Bus

2.25 The nearest bus services are situated on Wallace Avenue approximately 350m walking distance to the west of the potential site access. Stops can be found on both sides of the road (Boorley Park Outside Primary School and Boorley Park Opposite Primary School) and benefit from a flag and pole arrangement with real-time service information. **Table 2.2** shows the available services from the nearest stops.

Number	Bus Route	Approximate Frequency In Either Direction		
		Mon-Fri	Saturday	Sunday
3	Southampton – Eastleigh (Operated by Bluestar)	Hourly	Hourly	80 mins
425	Barton Perevil College - Botley CofE Primary School - Eastleigh College - Cherbourg Primary School (Operated by Bluestar)	School Service	-	-
608	Boorley Park Primary School – Whiteley Primary School – Cornerstone Primary School – Botley Primary School - Barton Perevil College (Operated by Bluestar)	School Service	-	-

Table 2.2: Summary of Bus Times for the Closest Bus Stops to the Site

Rail

2.26 Botley railway station is circa 1.9km from the site and can be reached via cycle, bus or car. The station benefits from four cycle storage spaces and a 20-space car park. This station provides direct services to London Waterloo and Portsmouth Harbour. Intermediate stops include Woking, Basingstoke, Winchester and Fareham.

Summary

2.27 It is clear from the information above that the site is suitably located in relation to local services, with a variety of non-car travel modes available to facilitate residents' needs. The proximity of bus stops ensures future residents have access to additional educational, business and leisure facilities in the larger town of Hedge End and the city of Southampton. Other applications in the vicinity of the site or on the site itself have been in locations considered to be sustainable and it is therefore considered that this remains the case for the proposals subject of this TA.

2.28 On this basis, the site is located such that residents will have a genuine choice of travel modes, as stated in Paragraph 110 of the NPPF, and that offers the ability for sustainable modes to be prioritised, as per Paragraph 115.

Highway Safety

2.29 The National Planning Practice Guidance [NPPG] includes the online document ‘Travel Plans, transport assessments and statements in decision-taking’ (updated March 2014), which provides general advice on the scope of Transport Statements. This document states consideration should be given to “*an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area.*”

2.30 In light of the above information, a review of collision data provided on the CrashMap website (www.crashmap.co.uk) has been undertaken in the vicinity of the site, as well as throughout the study area for modelling work to determine if any clusters of collisions have been recorded within a three-year period covering 2022 to 2024 (inclusive). CrashMap provides a summary of collisions that have led to personal

2.33 While these collisions are unfortunate, given the level of traffic on these roads, particularly Winchester Road, the volume of collisions cannot be classified as an ongoing concern relating to the operation of the local highway network. Hence, it is reasonable to conclude that there are no significant ongoing highway safety issues within the area shown in **Figure 2.4**. Notwithstanding this, given the proximity to the site of this area, detailed PIC data was obtained for this junction such that accident patterns can be reviewed, with the information contained at **Appendix G** for reference.

2.34 **Figure 2.5** shows the recorded collisions at the Woodhouse Lane/Broad Oak/Kings Copse Avenue/Lower Northam Road/Grange Road Roundabout. This shows that four collisions leading to personal injury (0x fatal, 1x serious, 3x slight) were recorded on or near the junction, all on the junction or approach arms. Further to this, detailed PIC data was obtained for this junction such that accident patterns can be reviewed, with the information contained at **Appendix G** for reference.

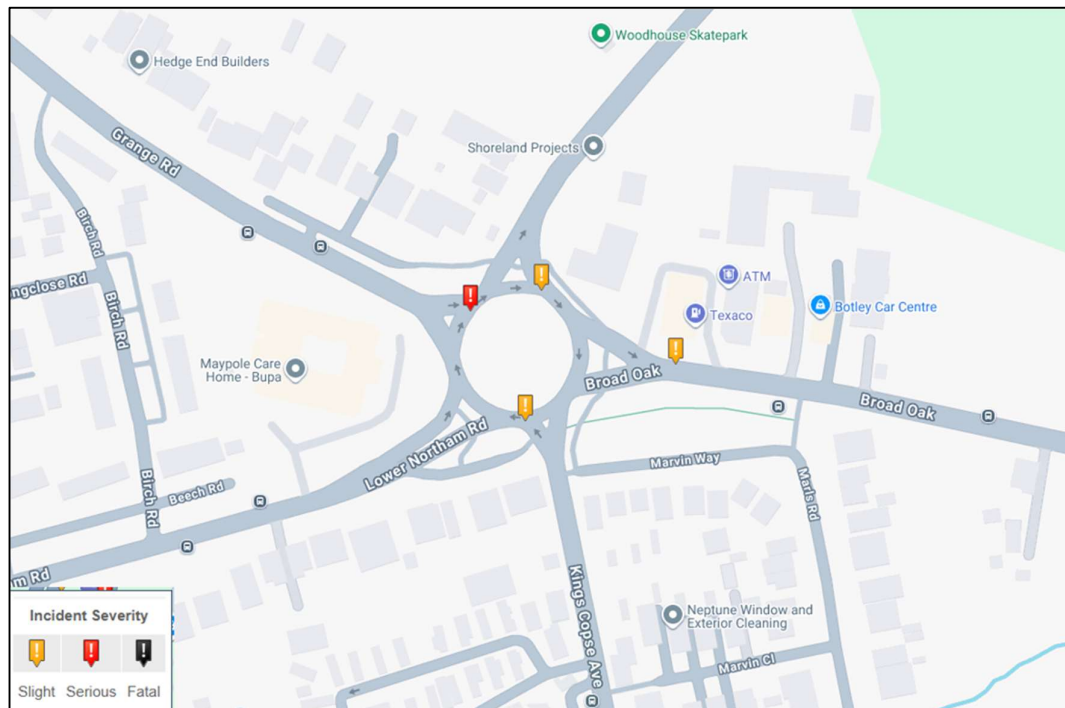


Figure 2.5: Collisions Recorded at Woodhouse Lane/Broad Oak/Kings Copse Avenue/Lower Northam Road/Grange Road Roundabout 2022-2024 Inclusive (Source: CrashMap)

2.35 **Figure 2.6** shows the recorded collisions at the Botley Road/Grange Road/Charles Watts Way/Wildern Road & Charles Watts Way/Tollbar Way/Turnpike Way Roundabouts. This shows that 11 collisions leading to personal injury (0x fatal, 2x

serious, 9x slight) were recorded on or near the junctions, with eight at the junction or approach arms of the Botley Road/Grange Road/Charles Watts Way/Wildern Road Roundabout and three at the junction or approach arms of the Charles Watts Way/Tollbar Way/Turnpike Way Roundabout. Further to this, detailed PIC data was obtained for this junction such that accident patterns can be reviewed, with the information contained at **Appendix G** for reference.

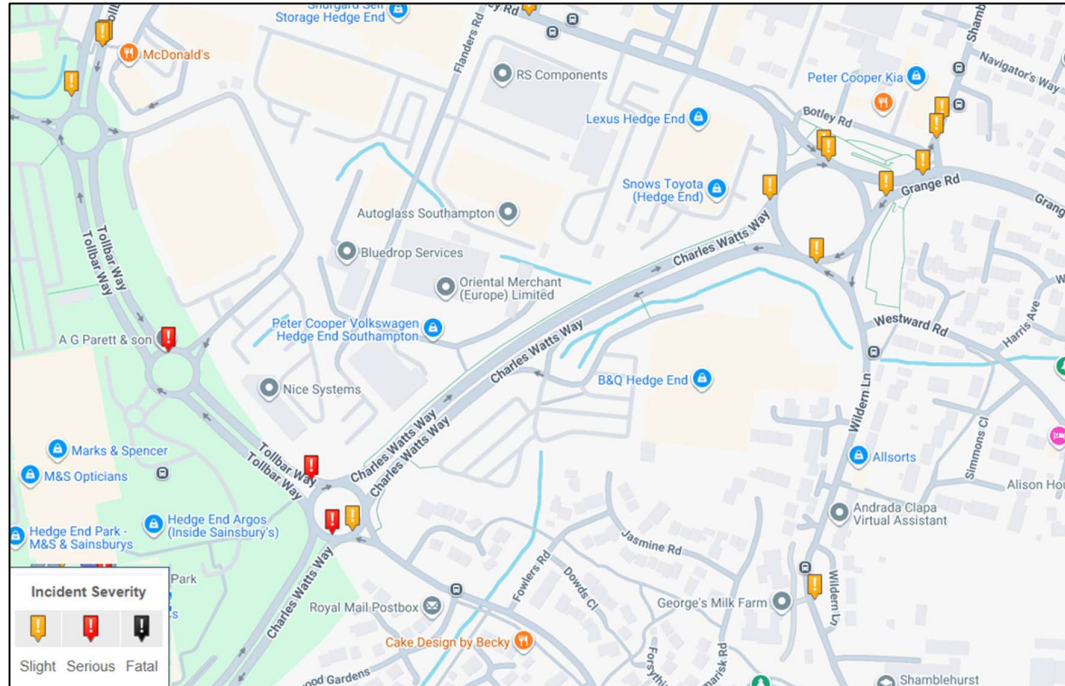


Figure 2.6: Collisions Recorded at Botley Road/Grange Road/Charles Watts Way/Wildern Road & Charles Watts Way/Tollbar Way/Turnpike Way Roundabouts 2022-2024 Inclusive (Source: CrashMap)

2.36 Each of the above three identified areas has therefore been explored in greater detail in the following paragraphs using data supplied by HCC Constabulary. The most recent five years of data have been sourced for each area, covering periods from 2020 to 2025. Within the below tables, double lines are provided in order to delineate between 3-year and 5-year PICs. Collisions in bold indicate that a pedestrian was involved, whilst collisions in italics indicate that a cyclist was involved.

Location 1 – Maddoxford Lane, Oatlands Road & Winchester Road

2.37 The five-year collision data from HCC Constabulary indicated three collisions within the study area, as summarised in **Table 2.3**.

Accident Reference	Day/ Date	Time	Weather/ Road Surface	Severity	Description
Ardent 1: 44210054323	12/02/2021	21:25	Darkness/ Frosty	Slight	V1 (Motorcycle) travelling east along Maddoxford Lane lost control on icy road surface and fell from vehicle. Causation Factor(s): slippery road due to weather
Ardent 2: 44220004956	05/01/2022	10:04	Daylight/ Dry	Serious	<i>V1 (Car) turned right onto Maddoxford Lane from Wallace Avenue and did not give way to V2 (Cycle), which was travelling west on Maddoxford Lane.</i> <i>Causation Factor(s): failed to look properly, poor turn or manoeuvre</i>
Ardent 3: 44240398423	16/09/2024	20:47	Streetlights/ Dry	Slight	V1 (Motorcycle) travelling south-east on Winchester Road when V2 (Car) pulled out from Crows Nest Lane and collided with nearside of V1. Rider of V1 stayed upright briefly before losing control and falling. Causation Factor(s): poor turn or manoeuvre, failed to look properly

Table 2.3: Location 1 PIC Analysis

2.38 The three collisions summarised in **Table 2.3** appear to be the result of driver error, with drivers colliding with others whilst turning or stopping, or poor weather conditions. From this information, there appear to be no notable causation factors which can be identified in relation to the highway layout.

Location 2 – Woodhouse Lane/Broad Oak/Kings Copse Avenue/Lower Northam Road/Grange Road Roundabout

2.39 The five-year collision data from HCC Constabulary indicated 11 collisions within the study area, as summarised in **Table 2.4**.

Accident Reference	Day/ Date	Time	Weather/ Road Surface	Severity	Description
Ardent 4: 44200308273	13/08/2020	13:20	Daylight/Dry	Slight	V1 (Car) travelling west along Grange Road towards roundabout. Driver mounted central island, confused pedals, depressed accelerator and collided with a tree Causation Factor(s): junction overshoot, loss of control
Ardent 5: 44200441312	14/11/2020	09:22	Daylight/ Damp	Serious	V1 (Car) travelling south from Botley Car Centre onto the A334. V2 (Car) travelling across V1's path and has collided with V1. Causation Factor(s): failed to look properly, failed to judge other person's path or speed, distraction in vehicle
Ardent 6: 44210211780	31/05/2021	16:55	Daylight/Dry	Slight	<i>V1 (Car) travelling around roundabout undertook V2 (Cycle) who had arm stuck out to signal exiting. V1 made contact with V2 causing rider to fall off.</i> Causation Factor(s): failed to signal/ misleading signal
Ardent 7: 44210248299	24/05/2021	13:11	Daylight/Dry	Serious	V1 (Van) travelling west along Grange Road, was stuck in traffic, pulled out to perform U-turn and struck V2 (Motorcycle) which was travelling east. Causation Factor(s): failed to signal/ misleading signal, failed to look properly
Ardent 8: 44210384769	24/09/2021	16:37	Daylight/Dry	Slight	V1 (Car) travelling south-west on Lower Northam Road and waiting at lights when struck by V2 (E-Scooter) failing to brake. Causation Factor(s): loss of control, defective brakes, failed to look properly
Ardent 9: 44210490949	07/12/2021	17:20	Streetlights / Wet	Slight	V1 (Car) leaving roundabout onto Woodhouse Lane collided with pedestrian crossing. Causation Factor(s): travelling too fast for conditions (V1), poor turn or manoeuvre (V1), failed to look properly (Ped), failed to judge vehicle's path or speed (Ped)

Ardent 10: 44220472435	21/11/2022	09:40	Daylight/ Wet	Slight	V1 (Moped) travelling east stopped to let uninvolved vehicle out of fuelling station and was hit from behind by V2 (Car) which failed to see V1. Causation Factor(s): none given
Ardent 11: 44230414317	10/10/2023	08:00	Daylight/Dry	Slight	V1 (Cycle) travelling east on Maypole roundabout. V2 (Car) travelling south from Woodhouse Lane entered roundabout and struck V1. Causation Factor(s): none given
Ardent 12: 44230484996	27/11/2023	08:20	Daylight/ Wet	Slight	V1 (Car) travelling north on Kings Copse Avenue misjudged path of V2 (Cycle), which was also travelling north on Kings Cross Avenue ahead, and collided with V2. Causation Factor(s): none given
Ardent 13: 44240344601	11/08/2024	09:15	Daylight/Dry	Serious	V1 (Cycle) travelling east on Lower Northam Road entered roundabout. V2 (Car) travelling east on Grange Road failed to give way. Rider of V2 takes evasive action, colliding with kerb and falling. Causation Factor(s): none given
Ardent 14: 44250067944	13/02/2025	07:10	Darkness/ Dry	Slight	V1 (Car) travelling eastbound was slowing down for roundabout, waiting for traffic to slow down. V2 (Cycle) entered carriageway to cross road and collided with V1. Causation Factor(s): cyclist entering road from pavement

Table 2.4: Location 2 PIC Analysis

2.40 The collisions summarised in **Table 2.4** appear to be the result of driver error, with drivers/riders colliding with others whilst turning or stopping. However, five of the 11 collisions involve cyclists and therefore opportunities to improve provision could be explored. There are elements of cycle lanes around the junction, however, these are typically quite short, with the exception of a route along the northern side of Grange Road. The potential to extend some cycle routes further away from the junction could be explored, as referred to in **Section 6.0** of this report.

Location 3 – Botley Road/Grange Road/Charles Watts Way/Wildern Road & Charles Watts Way/Tollbar Way/Turnpike Way Roundabouts

2.41 The five-year collision data from HCC Constabulary indicated 16 collisions within the study area, as summarised in **Table 2.5**.

Accident Reference	Day/ Date	Time	Weather/ Road Surface	Severity	Description
Ardent 15: 44200416135	26/10/2020	15:39	Daylight/Dry	Serious	V1 (Car) travelling south-east on Tollbar Way failed to stop in time and collided with rear of V2 (Car) in front, which was waiting to turn left at roundabout. Causation Factor(s): failed to look properly, careless/reckless/in a hurry
Ardent 16: 44200487598	18/12/2020	17:16	Darkness/ Dry	Slight	V1 (Car) travelling south-east on Tollbar Way failed to slow for traffic ahead and collided with rear of V2 (Car). Causation Factor(s): none given
Ardent 17: 44210001649	02/02/2021	16:00	Darkness/ Wet	Slight	V1 (Car) travelling south-west on Charles Watts Way entered nearside verge and overturned. Causation Factor(s): poor turn or manoeuvre, deposit on road
Ardent 18: 44210248299	07/05/2021	17:03	Daylight/Dry	Slight	V1 (Car) travelling north-west around Charles Watts Way roundabout had to stop due to a lorry pulling out onto the roundabout. V2 (Car) collided with rear of V1. Causation Factor(s): none given
Ardent 19: 44210402128	06/10/2021	23:48	Darkness/ Dry	Serious	V1 (Car) travelling north on Charles Watts Way lost control, collided with lamp post and ended up on grass bank. Causation Factor(s): careless/reckless/in a hurry
Ardent 20: 44210469482	22/11/2021	16:49	Streetlights /Dry	Slight	Pedestrian waved across Charles Watts Way by driver of V1 (Van). Driver of V2 (Car) does not see and collides with pedestrian. Causation Factor(s): crossed road masked by stationary vehicle

Ardent 21: 44210500705	14/12/2021	16:56	Streetlights/ Wet	Slight	V1 (Car) travelling north-east on A334 is shunted to the rear by V2 (Van). Parked V3 (Car) is also then hit by V4 (Motorcycle) avoiding collision. Causation Factor(s): following too close, failed to look properly, stationary or parked vehicle, inexperience with type of vehicle, slippery road due to weather
Ardent 22: 44220055229	08/02/2022	07:25	Daylight/Dry	Slight	V1 (Car) travelling round roundabout eastbound towards Botley and is struck by V2 (Van) which failed to adhere to red light. Causation Factor(s): None given
Ardent 23: 44220364007	06/09/2022	07:00	Daylight/ Wet	Slight	<i>V1 (Car) travelling north-east on Charles Watts Way entered roundabout without giving way and collided with V2 (Cycle) which was already on roundabout.</i> <i>Causation Factor(s): none given</i>
Ardent 24: 44230047966	04/02/2023	11:55	Daylight/Dry	Slight	V1 (Car) travelling north-west on Wildern Lane is rear ended by V2 (Car) which is also travelling north-west and failed to slow on approach to roundabout. Causation Factor(s): none given
Ardent 25: 44230048973	05/02/2023	11:10	Daylight/Dry	Serious	V1 (Motorcycle) travelling south-east entered Charles Watts Way roundabout from Tollbar Way, missed first exit, changed lanes to offside as passing third exit. V2 (Car) travelling north-west on roundabout collided with V1's offside. Causation Factor(s): failed to judge other person's path or speed, failed to look properly
Ardent 26: 44230479991	23/11/2023	16:11	Daylight/Dry	Slight	V1 (Car) travelling south-west on roundabout from Charles Watts Way merged from lane 1 to lane 2 and collided with offside wheel of V2 (Car) in lane 1. Causation Factor(s): failed to look properly, failed to judge other person's path or speed
Ardent 27: 44240233554	03/06/2024	17:30	Daylight/Dry	Slight	V1 (Motorcycle) travelling south-east on Botley Road stopped to give way at A334 Grange Road roundabout. V2 (Van) failed to stop and collided with rear of V1. Causation Factor(s): none given

Ardent 28: 44240291257	10/07/2024	08:35	Daylight/ Dry	Slight	V1 (Motorcycle) travelling east on Grange Road filtering past traffic collided with pedestrian who crossed from nearside. Pedestrian crossed whilst lights were green for traffic. Causation Factor(s): wrong use of pedestrian crossing facility
Ardent 29: 44240494794	13/11/2024	12:55	Daylight/Dry	Slight	V1 (Van) travelling east on Botley Road in lane 2 attempted to move into lane 1 without checking traffic to rear and collided with V2 (Car) travelling east along Botley Road. Causation Factor(s): failed to look properly

Table 2.5: Location 3 PIC Analysis

2.42 The three collisions summarised in **Table 2.5** appear to be the result of driver error, with drivers colliding with others whilst turning or stopping. There are two collisions involving pedestrians, however, in one of these the pedestrian was incorrectly using a crossing and in the other the pedestrian crossed on the signal of a driver before being struck by a different vehicle. From this information, there appear to be no notable causation factors which can be identified in relation to the carriageway layout.

Summary

2.43 Based on the above assessment, it can be concluded that the primary cause of incidents within the study area is driver error / misjudgement and unfortunate circumstance as opposed to potential issues with the existing highway network surrounding the site.

2.44 Furthermore, given the traffic nature of the road network, it can be considered that incidents over the previous five-year period are consistent but not frequent enough to cause any safety concerns within the existing infrastructure, especially when noting the volume of traffic passing through the junctions.

2.45 Notwithstanding this, improvements could be made, potentially to cycle infrastructure at Woodhouse Lane/Broad Oak/Kings Copse Avenue/Lower Northam Road/Grange Road Roundabout (Location 2).

Census Data

2.46 The TSN showed data that had been derived from the 2021 Census for the existing resident population of the area surrounding the site MSOA 'Eastleigh 010' and the use of this was agreed with HCC. **Table 2.6** shows the following proportions of multi-modal trips based upon the journey to work travel data:

Mode of Travel	2021 - Residential Population (excluding working at home and unemployed)*
Train	1%
Bus	1%
Taxi	0%
Motorcycle	1%
Car Driver	83%
Car Passenger	5%
Bicycle	2%
Pedestrian	5%
Other	1%
Total	100%

Table 2.6: Journey to Work Proportions (Source: Census Data)

*Errors due to rounding

2.47 The data set out in **Table 2.6** is used for analysis work within this TA, as agreed during pre-application discussions with HCC.

Committed Development

2.48 An initial review of the EBC planning portal highlighted applications within the authority that may need to be accounted for in the future assessment. These are set out in **Table 2.7**. Two developments (F/19/84937 and O/16/78389) have been built out and are located to the west of the site.

2.49 Within its pre-application response, HCC has identified that another development should be considered. This is planning application O/20/89498 for "*Phased mixed-use development comprising: up to 2,500 residential units in total; a primary Local Centre (and supporting secondary local centres) comprising mixed-use residential/retail/leisure/ community/employment/ day nursery/food establishment uses; office, commercial and industrial uses; a Primary School; public open space including formal sports facilities and informal provisions; relocation of solar panels;*

key infrastructure and utilities provision including new roads, footpaths and cycle paths and improvements to the existing road junction at Fir Tree Lane/Burnetts Lane; and ecological, landscape, site preparation and demolition works (All Matters Reserved Except Access)."

2.50 This application has been included within the committed developments assessed as part of this scheme and summarised in **Table 2.7**.

Development Name	Land Use	Description	Status	Application Ref	Inclusion in Assessment
Land to West of Woodhouse Lane	C3/F1/F2	Up to 605 residential dwellings, a local centre, pedestrian and cycle links, a pedestrian SINC crossing, drainage, public open space, landscaping and 7 Form Entry secondary school.	Under construction	O/18/83634	Yes
Land North and East of Winchester Street	C3	Erection of up to 375 no. dwellings, public open space, allotments, drainage, landscaping, other supporting infrastructure.	Under construction	O/18/83698	Yes
Land to the North and East of Boorley Green and North of Pylands Lane and East of Dodwell Lane	Mixed Use	Residential-led mixed use development comprising some 1,400 homes.	Completed	O/12/71514	No
Land to the North-West of Boorley Green	Mixed Use	Application for up to 680 residential units mixed use comprising of retail and/or community/healthcare use, land for two-form entry primary school, formal and informal open space and sports pitches.	Under Construction / Part Occupied	O/15/75953	Yes
Land South of Maddoxford Lane, Boorley Green	C3	Demolition of an existing residential dwelling and associated farm buildings and construction of a residential development of 73 dwellings.	Completed	F/19/84937	No
Crows Nest Lane, Botley	C3	Residential development of up to 50no. dwellings with green infrastructure, hard and soft landscape and associated infrastructure, including internal access roads, footpaths/cycle routes, play space and relocation of gas governor and creation of new access on to Maddoxford Lane.	Completed	O/16/78389	No

One Horton Heath	Mixed Use	Phased mixed-use development comprising: up to 2,500 residential units in total; a primary Local Centre (and supporting secondary local centres) comprising mixed-use residential/retail/leisure/community/employment/day nursery/food establishment uses; office, commercial and industrial uses; a Primary School; public open space including formal sports facilities and informal provisions; relocation of solar panels; key infrastructure and utilities provision including new roads, footpaths and cycle paths and improvements to the existing road junction at Fir Tree Lane/Burnetts Lane; and ecological, landscape, site preparation and demolition works (All Matters Reserved Except Access)	Under construction	O/20/89498	Yes
------------------	-----------	---	--------------------	------------	-----

Table 2.7: Details of Committed Development

2.51 The applications summarised in **Table 2.7** also include a number of schemes to improve pedestrian and cycle accessibility, with new high-quality footways and cycleways provided in the local area.

2.52 A further review since the TSN does not highlight any specific committed developments in the surrounding area that should be accounted for in the future assessment other than the additional development referred to by HCC in its pre-application feedback.

3. Development Proposals

- 3.1 The proposed development would comprise the construction of up to 280 dwellings, provision of informal and formal open space, together with associated highways, landscape, earth works and level changes, foul and surface water drainage facilities, utilities provision and other associated and necessary infrastructure.

Access

Geometry

- 3.2 Access is to be provided from Maddoxford Lane to the north of the site. The access is shown on **Drawing No. 2501890_A-ACE-XX-XX-DR-C-00101G**. While the access is in a different location to that proposed under the previously refused application on land to the south of Maddoxford Lane, the design principles have been informed by that scheme, which was agreed in access terms. The design of the access at the previous application was such that larger vehicles could gain access, with visibility based on speed survey data (see below).
- 3.3 HCC provided a pre-application response in September 2025, which stated that the Council was supportive in principle of the access proposals, subject to further review of aspects such as levels, swept path analysis and gradient.
- 3.4 Following both the preparation of the TSN and HCC's pre-application response, a review of levels was undertaken at the proposed access where an existing fuel main was laid underneath the location of the proposed access point. Following this review, the previous access location was no longer deemed to be feasible. An alternative access arrangement whereby the junction is located further to the east to avoid the fuel main was then developed. HCC has since confirmed that it is content with the new access location in principle.
- 3.5 The drawing shows that the access benefits from tapers to aid access for larger vehicles, with 8 metre kerb radii and a 5.5 metre access road width; however, this widens as the road approaches Maddoxford Lane. This is in accordance with the guidance set out in HCC's 'Technical Guidance Note TG2 - Alignment Design' (April 2024), which states that "*due to tracking limitations*" that "*in many cases it will be*

better to widen the carriageway width in the vicinity of the junction to accommodate the tracking whilst enabling tight junction corner radii to be used".

- 3.6 The junction design also includes a realignment of Maddoxford Lane itself, with the southern carriageway edge moved south to allow a continuous 5.5 metres width as the road passes the site. This will allow for more comfortable passage of two-way traffic, as well as easier turning manoeuvres to and from the site.
- 3.7 Street lighting is to be reviewed and can be covered by a condition attached to any successful future planning consent.

Capacity

- 3.8 The capacity of the site access junction has been assessed using industry-standard modelling software. This is covered in greater detail in **Section 5.0**; however, this shows that the site access is predicted to operate well within its theoretical capacity.

Vertical Geometry

- 3.9 The proposed access has been designed with a gradient of 1:40 for a length of 15 metres as per HCC guidance, which states that the maximum gradient of a dwell area on approach to a junction is 1:40 for a length of at least 15 metres and the maximum gradient for a road with a speed limit of 30mph or less is 1:10. The proposed access arrangement therefore accords with the guidance.

Visibility

- 3.10 To understand the required visibility splays for the proposed access, ATC surveys were undertaken in the vicinity of the site access on Maddoxford Lane recording vehicle speeds and traffic volumes in each direction. The surveys were undertaken between 5th and 11th June 2025, inclusive.
- 3.11 The derived 85th percentile weekday speeds are shown in **Table 3.1**, with the raw data provided at **Appendix C**.

Period Traffic Volume/Speed	Direction		
	Eastbound	Westbound	Two-Way
Average Weekday Vehicle Count (24-hrs)	1,260	1,311	2,571
Average 85 th ile Speed (mph / kph)	37.8 / 60.8	33.8 / 54.4	-
Adjusted Dry Weather Speed (mph / kph)	40.3 / 64.8	36.3 / 58.4	-

Table 3.1: ATC Summary – Maddoxford Lane, Main Site Access

- 3.12 The above indicates that traffic volumes equate to 2,571 two-way vehicles on the average weekday. The 85th percentile speeds were recorded as being 37.8mph for eastbound traffic and 33.8mph for westbound traffic.
- 3.13 During the surveys wet weather occurred and therefore adjustments to account for wet weather have been made.
- 3.14 Given the speeds recorded and the occurrence of wet weather on Maddoxford Lane, it is considered the application of the Design Manual for Roads and Bridges (DMRB) is appropriate. In accordance with DMRB parameters and applying the recorded traffic speeds results in required visibility splays (2 seconds driver reaction time and 0.25g deceleration rate) of 2.4 by 102.1 metres to the west (based on 37.8mph eastbound speed) and 2.4 by 60.0 metres to the south (based on 33.8mph westbound speed). The visibility calculations are included at **Appendix H**.
- 3.15 **Drawing No. 2501890_A-ACE-XX-XX-DR-C-00101G** illustrates that these splays are achievable and therefore appropriate visibility can be achieved in line with measured speeds on Maddoxford Lane. HCC also requested in its pre-application response that vertical geometry is reviewed with regard to visibility. **Drawing No. 2501890_A-ACE-XX-XX-DR-C-0501** shows that there are no vertical impediments to visibility of a height greater than 0.6 metres in height.

Emergency Access

- 3.16 There is no specific policy threshold for the delivery of an emergency access, rather best practice and experience/understanding that a larger site includes a greater risk that emergency access may be obstructed, especially if there is a long section of the

removed subject to a suitable internal layout.

system. Therefore, there is no requirement for an emergency access to be provided.

Stage 1 Road Safety Audit

with GG119. The designer's response will also be included and submitted to HCC in tandem with the planning application. Once this has been agreed and signed off by HCC, this will then be submitted as part of the live application at a later date.

Summary

works to meet national and local policy and be designed to a "*standard required to be adopted by the Highway Authority*". It has been summarised above that the access is designed in accordance with HCC's guidance and national standards.

to road users or have a significant detrimental impact on the operation or safety of the highway network". This is reinforced by the NPPF, which states at Paragraph 115 that it should be ensured that "*safe and suitable access to the site can be achieved for all users*". The access accommodates visibility splays in line with recorded speeds on Maddoxford Lane, in both the horizontal and vertical planes. Furthermore, a review of the collision records on the local highway network does not indicate any particular inherent safety issues.

2036, the development allows for "safe and convenient access to the highway network and make provision for access to, and by, other transport modes including

public transport and cycle and pedestrian routes as appropriate". It is also considered that the proposed access arrangement accord with national policy as set out in the NPPF.

Pedestrian and Cycle Access

3.22 As shown on **Drawing No. 2105890_A-ACE-XX-XX-DR-C-00101G**, a 3 metres wide shared footway/cycleway is provided to the south of Maddoxford Lane. The route is not shown immediately adjacent to the carriageway edge on Maddoxford Lane. For drainage reasons, an existing ditch on the southern carriageway edge is required to be retained. The ditch is not deep at circa 300mm and therefore no protective measures are proposed, although the footway/cycleway will be separated from the ditch by a new hedge in any case. Please note that the hedgerow will be set back behind the proposed visibility splays (see above section for details).

3.23 A crossing point is provided to the existing cycle connection to the north of Maddoxford Lane. No dedicated provision is proposed to the east of the main site access junction as it is considered that there are no desire lines in this direction.

3.24 Public Rights of Way running through the site will be maintained as part of the proposals. This accords with EBC Local Plan Policy DM13, points 3b and 3c, which state:

"Development proposals... will be required to incorporate and implement mitigation measures such as:

...

b) on-site pedestrian, cycle and public transport infrastructure

c) contributions towards relevant off-site sustainable transport infrastructure, public rights of way and service improvements where appropriate”

Parking

Car Parking

3.25 Parking will be provided in line with the EBC Parking Standards Supplementary Planning Document, which was adopted in September 2025. It is expected that the parking provision required on site by EBC will be based upon a finalised schedule of accommodation. The parking standards for residential dwellings are shown in **Table 3.2**.

Dwelling Type	Minimum Parking Provision Per Dwelling		
	With off-plot unallocated spaces	With off-plot allocated spaces	Individual/on-plot allocation
1 bed	0.75	1.00	1.00
2/3 bed	1.50	1.75	2.00
4+ bed	2.25	2.50	3.00

Table 3.2: EBC Car Parking Standards Supplementary Planning Document (2025)

3.26 The parking standards also provide optional guidance for flats or apartments. These are based on the fact that flats will often have lower car ownership levels. The flat/apartment standards are summarised in **Table 3.3**.

Dwelling Type	Minimum Parking Provision Per Dwelling	
	Allocated parking	Unallocated parking
1 bed	1.00	0.75
2 bed	1.25	1.00

Table 3.3: EBC Optional Flat/Apartment Parking Standards (2025)

3.27 Bloor Homes Limited will provide 100% of dwellings with active EV charging facilities in accordance with Part S of the Building Regulations. The facilities will be designed in accordance with HCC guidance on EV charging.

3.28 Visitor parking will also be provided in line with EBC's standards, which require a provision of 0.2 spaces per dwelling.

Cycle Parking

3.29 The development will look to provide long and short stay cycle parking in accordance with the parking standards outlined within EBC's 'Parking Standards Supplementary Planning Document' (2025) document. The cycle parking minimum standards are as follows:

- 1 long-stay and 1 short-stay space per 1 bedroom dwelling;
- 2 long-stay and 1 short-stay spaces per 2 or 3 bedroom dwelling; and
- 3 long-stay and 2 short-stay spaces per 4+ bedroom dwelling.

3.30 Cycle parking should be located within an accessible, secure and covered location such as a garage or shed.

Servicing Arrangements

3.31 In line with the recommendations contained in the Manual for Streets, the site layout will be designed to accommodate a refuse collection vehicle parking at the kerbside adjacent to all dwellings, or manoeuvre to within 25 metres distance for refuse workers of any designated collection points and 30 metres distance for residents.

3.32 The site layout will include a suitable internal turning area or appropriate routing to accommodate the relevant refuse collection vehicles required to service the site, which could be tested using swept paths of typical vehicles at the detailed design stage.

3.33 The internal arrangement shall enable a Fire Tender to enter and exit the site in forward gear. As highlighted within the Building Regulation B5 (2010), the site layout shall be designed to achieve access for a fire tender within 45 metres of all parts of any residential building on site.

Walking, Cycling and Horse-Riding Assessment and Review

3.34 In accordance with the TSN and the pre-application response, a Walking, Cycling and Horse-Riding Assessment and Review (WCHAR) has been undertaken. A WCHAR

report has been prepared and is included at **Appendix I**. This has been undertaken in line with HCC's TG19 - Walking, Cycling and Horse-Riding Assessment and Review guidance.

3.35 The WCHAR study area was agreed with HCC through the pre-application process. The extent of the WCHAR is shown in **Figure 3.1** and covers the key desire lines from the development to local facilities and the local school. The area assessed covers five key routes, as follows:

1. Sports pavilion/community centre/primary school via the outside of the neighbouring development (light blue below)
2. Sports pavilion/community centre/primary school through the neighbouring development (yellow)
3. Shops at the junction between Winchester Road and Kingsman Drive – can't find these myself but were specifically requested by HCC as part of the pre-app (red)
4. Secondary school/sports centre via Crows Nest Lane (navy blue)
5. Secondary school/sports centre via Oatlands Road (purple)

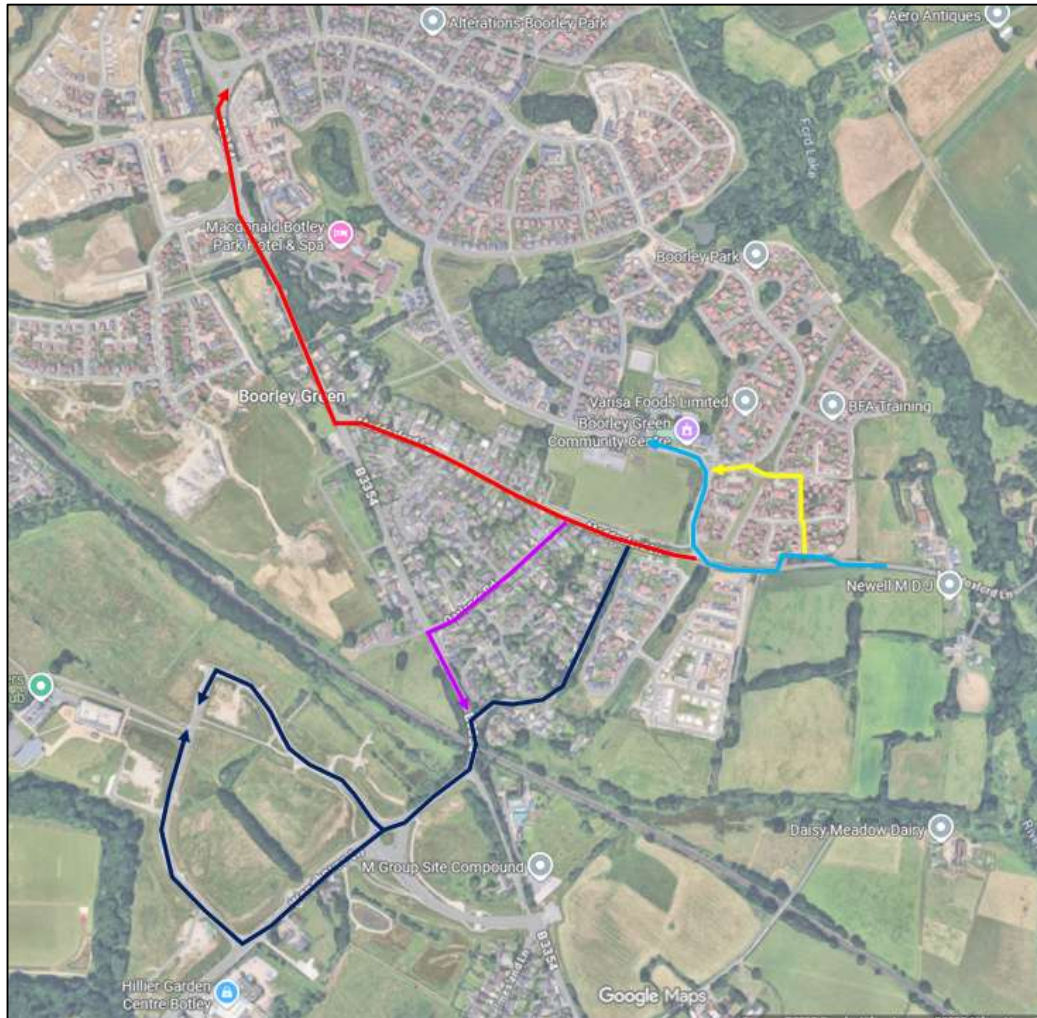


Figure 3.1: WCHAR Study Area (Source: Google Maps)

3.36 The WCHAR summarises the existing routes for pedestrians, cyclists and horse-riders in the vicinity of the site and provides opportunities for improvement based on a site visit undertaken on 21st October 2025. The key findings are:

- Due to recent developments, the quality of pedestrian and cyclist infrastructure in the surrounding area is largely of good quality;
- Existing cycle movements are low but cycling does occur within the study area;
- No horse-riders were observed;
- The site lacks an existing connection to the existing connection, so should connect to the existing route on the northern side of Maddoxford Lane. This is

- The assessed route least suitable for pedestrians and cyclists is Crows Nest Lane as this is a narrow single-track road with no pedestrian provision. It is considered that opportunities to provide improvements in this location are limited in scope by a lack of available land and public highway. Whilst this is the most direct route to Deer Park secondary school, it is considered that the already improved infrastructure leads pedestrians towards Oatlands Road, which offers a route along footways towards the school. Improvements on Crows Nest Lane can be explored in further detail as the planning application progresses.

3.37 In order to encourage travel by active and sustainable modes, such as walking, cycling and public transport, the planning application is supported by a Travel Plan (**ACE Report Ref 2501890_A-ACE-XX-XX-RP-C-0103**). This sets out the measures proposed to reduce single-occupancy vehicle use and encourage uptake of sustainable modes and targets for those reductions, as well as a monitoring and reporting strategy to ensure that targets are met. Policy DM13 of EBC's Local Plan states that "*on-site measures aimed at increasing uptake of non-car travel options (e.g. Travel Plans)*" are useful measures to mitigate the potential impact of a development, particularly traffic impacts.

4. Trip Generation and Future Year Assessment

Introduction

- 4.1 This section seeks to establish the level of weekday peak hour traffic movements generated by the proposed development applied to the local highway network. Whilst it is noted that the planning application is for *up to* 280 dwellings, so could in theory be below this threshold, the TA has considered the upper value of 280 dwellings for robustness.
- 4.2 HCC's pre-application response stated that the current methodology and approach are acceptable and deemed appropriately robust. For ease of reference, the methodology is reproduced within this section.
- 4.3 The total travel demand anticipated to be generated by the proposed development during the typical weekday network peak hours of 08:00-09:00 and 17:00-18:00 has been considered as at these times the network would typically be most sensitive to an increase in traffic.
- 4.4 It is noted that the existing site may generate some movements onto the local highway network, however it is considered that the movements would not be material and as such no analysis has been given as part of this TA.
- 4.5 Given the nature and scale of development proposals, the potential for junction capacity modelling has been considered in the following paragraphs.

Proposed Trip Generation

- 4.6 As noted above, the following methodology has been agreed with HCC through pre-application discussions and is repeated here for ease of reference.
- 4.7 The planning applications for the land south of Maddoxford Lane (Ref: F/19/85178) and land at Holly Tree Farm (Ref: O/22/92771) have been reviewed for the methodologies used to calculate trip generation. It should be noted that though these planning applications were refused, the trip rates presented in both cases were considered acceptable by HCC highway officers.

4.8 Both TAs presented vehicle trip rates that had been retrieved from the TRICS database. Both used the following parameters in line with the 'TRICS Good Practice' guidance in order of choice selection:

- Category '03 – Residential' and Subcategory 'A – Houses Privately Owned';
- Multi-Modal Surveys;
- Surveys from 2009 onwards;
- Sites in England and Wales, excluding Greater London;
- 50-400 dwellings;
- Surveys undertaken on Monday-Friday only; and
- Sites in 'Edge of Town' and 'Suburban Area' only

4.9 The resultant vehicle trip rates from both applications are presented in **Table 4.1**.

Application	AM			PM			Daily		
	In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
F/19/85178 Presented Trip Rates	0.13	0.37	0.50	0.34	0.16	0.50	2.25	2.29	4.54
O/22/92771 Presented Trip Rates	0.128	0.375	0.503	0.350	0.153	0.503	2.259	2.288	4.547

Table 4.1: Previously Accepted Vehicle Trip Rates

4.10 As shown in **Table 4.1**, the trip rates from the two previous planning applications are very comparable, with the trip rates from the Holly Tree Farm (Ref: O/22/92771) application being slightly higher. The trip rates are slightly different despite using the same parameters as outlined above, because the Holly Tree Farm trip rates were extracted from TRICS over two years after the land south of Maddoxford Lane trip rates, and therefore include additional surveyed sites.

4.11 In order to undertake a robust assessment, it is proposed that the trip rates from the Holly Tree Farm TA be used. The proposed vehicular trip generation using these trip rates is presented in **Table 4.2**. These trip rates have been applied to a development of 280 dwellings.

Vehicle Trip Generation	AM			PM			Daily		
	In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Proposed Development (280 dwellings)	36	105	141	98	43	141	633	641	1,273

Table 4.2: Proposed Development Vehicle Trip Generation

- 4.12 As shown in **Table 4.2**, when using the Holly Tree Farm trip rates, the proposed development at land at Maddoxford Farm is forecast to generate a total of 141 two-vehicle movements in the AM and PM peak hours.
- 4.13 The land south of Maddoxford Lane TA used 2011 Census Journey to Work data to calculate the multi modal person trips for the proposed development, using the total vehicle trips derived from TRICS as a basis for the car driver proportion of the trips.
- 4.14 As more recent Census data is available from 2021, this has been used to calculate the modal split of the Middle Super Level Output Area (MSOA) in which the site is located (Eastleigh 010). This is considered to be a more robust methodology, as the 2011 Census Journey to Work data for Eastleigh 010 MSOA shows a lower proportion of commuting trip being undertaken via car. The resultant multi modal person trips are set out in **Table 4.3**.

Mode	Share	AM			PM			Daily		
		In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Train	1%	0	1	2	1	1	2	8	8	15
Bus	1%	0	1	2	1	1	2	8	8	15
Taxi	0%	0	0	0	0	0	0	0	0	0
Motorcycle	1%	0	1	2	1	1	2	8	8	15
Car Driver	83%	36	105	141	98	43	141	633	641	1,273
Car Passenger	5%	2	6	8	6	3	8	38	39	77
Bicycle	2%	1	3	3	2	1	3	15	15	31
Pedestrian	5%	2	6	8	6	3	8	38	39	77
Other	1%	0	1	2	1	1	2	8	8	15
Total	100%	43	127	170	118	52	170	763	772	1,534

Table 4.3: Residential Dwellings Multi-modal Trips (any discrepancies are a result of rounding)

4.15 **Table 4.3** shows that the proposed development on land south of Maddoxford Lane is forecast to generate approximately 141 two-way total vehicle trips in both the AM and PM peak hours, and 170 two-way total person trips in both peak hours.

4.16 These vehicular movements shall be used as the basis for assessing off-site impact within the surrounding existing highway network as part of the TA. Similarly, these will be used for assessing increases in walking, cycling and public transport.

Distribution

4.17 With respect to traffic distribution, the methodologies presented in the Holly Tree Farm TA and the land south of Maddoxford Lane TA have been used within this TA to forecast the trip distribution and assignment for the site. As noted above, though these planning applications were refused, the distribution methodology presented in both cases was considered acceptable in principle by HCC highway officers. This methodology has again been deemed acceptable through pre-application discussions with HCC.

4.18 The following methodology has therefore been applied for this TA and noted down in choice selection order, with further details included at **Appendix J**.

- 2011 Census Dataset WU03UK 'Location of usual residence and place of work by method of travel to work' was obtained from the Nomis website.
- The 'Usual Residence' was set at MSOA 'Eastleigh 010'.
- All other MSOAs in Eastleigh, as well as all other local authority districts, were selected as the 'Place of Work'.
- The data was used to calculate the relative proportion of car trips to work to each of the surrounding areas. For simplicity, any areas with fewer than 4 car trips were omitted from the calculations as they were considered statistically insignificant.
- The likely vehicle route (or routes) to each area were identified using Google Maps route planning tools, and the proportion of car trips using each key route was subsequently calculated using the data.

4.19 The above details were used to create an indicative traffic distribution model for arrivals and departures respectively, which is reflected in the traffic flow diagrams shown at **Appendix E**. The peak hour vehicle trips shown in **Table 4.3** were assigned to the network based on this model. The assigned development traffic flows are also shown in **Appendix E**.

4.20 Within this model, the Botley Bypass was considered. This has been done by assuming that any traffic that would be heading east on the A334 or A3051 would route via the Botley Bypass, rather than Wingfield Lane, as it will most likely result in a quicker journey time and an easier driving experience than using the narrow country road.

4.21 In addition, noting comments on the previous Holly Tree Farm application, it has been assumed that 25% of the traffic that routes south of the site towards Woodhouse Lane would route via Oatlands Road and 75% of the traffic would route via the Maddoxford Lane/B3354 Winchester Road junction.

Future Year Assessment

4.22 Best practice guidance suggests that the impact of the proposed traffic increases on the local road network should be considered at a Design Year of at least five years after the planning application is registered. As such, this would result in an

factors calculated on information taken from the TEMPro database.

modelled to align with the EBC draft Local Plan period.

assessed for capacity in the following traffic flow scenarios:

- i. 2025 Observed;
- ii. 2030 Future Baseline;
- iii. 2030 Future + Committed Development;
- iv. 2030 Future + Committed + Proposed Development;
- v. 2036 Future Baseline;
- vi. 2036 Future + Committed Development; and
- vii. 2036 Future + Committed + Proposed Development.

5. Off-Site Impact

Future Study Area

5.1 Following the pre-application response with HCC, the following eleven junctions were agreed to be reviewed as part of the planning application. The modelling for junctions is considered a robust study area as it is based on a potential development of 280 dwellings. The eleven junctions considered are below:

1. Maddoxford Lane / Site Access;
2. Maddoxford Lane / Wallace Avenue;
3. Maddoxford Lane / Oatlands Road;
4. Maddoxford Lane / Winchester Road;
5. Winchester Road / Oatlands Road;
6. Woodhouse Lane / Botley Bypass / Deer Park Avenue;
7. Woodhouse Lane / Broad Oak / Kings Copse Avenue / Lower Northam Road / Grange Road;
8. Grange Road / Locke Road;
9. Grange Road / Wildern Lane / Charles Watts Way / Botley Road;
10. Charles Watts Way / Tollbar Way / Turnpike Way; and
11. Winchester Road / Bubb Lane / Botley Road / Snakemoor Lane.

Junction Capacity Assessment

5.2 The pre-application has suggested that JUNCTIONS software (PICADY and ARCADY) be used to assess junction capacity. PICADY provides a measure of the capacity of

simple and ghost island priority-controlled junctions, whereas ARCADY provides a measure of the capacity of non-signalised roundabout junctions.

- 5.3 PICADY calculates the Ratio of Flow to Capacity (RFC), which is used to measure the predicted flow of vehicles against the junction's capacity (based on its geometry). Typically, a value of 0.85 or less is seen to represent a practical degree of reserve capacity. Arms at a junction with an RFC greater than 0.85 are likely to experience congestion and delay. Values that exceed 1.0 RFC value indicate where an arm is at or over full capacity.
- 5.4 Geometries for off-site junctions have been measured by utilising OS mapping (or topographical survey data where available) and AutoCAD software. The parameters of the junctions are measured in line with best practice guidance provided with the software.
- 5.5 All off-site junctions have been tested using the 2030 Future Year, 2036 Future Year and Development Case flows to understand the change in operation between the scenarios.
- 5.6 To establish whether the proposed junctions would operate satisfactorily, PICADY models have been created for each junction. The result of each junction is summarised below, and a full copies of the output data are contained in **Appendix K**.

Junction 1 – Maddoxford Lane / Site Access

- 5.7 To establish whether the proposed access junction with Horsham Road would operate satisfactorily in terms of capacity, a PICADY model was created, with results of this assessment summarised in **Table 5.1**. They demonstrate that the proposed access junction would operate satisfactorily in both the 2030 and 2036 Design Years with the proposed development in place and committed development flows considered.
- 5.8 The site access would operate a maximum RFC of 0.18 in both peak hours, with 1 queuing vehicle (0.3 vehicles on results but rounded to next whole vehicle) and a maximum delay of 9.03 seconds per queuing vehicle on the right turn from the site in the evening peak hour.

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Set ID	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	Proposed Site Access - 2030 + Com + Dev									
Stream B-C	D7	0.2	6.42	0.16	1.89	D8	0.1	5.93	0.07	2.06
Stream B-A		0.0	8.57	0.02			0.0	8.97	0.01	
Stream C-AB		0.1	5.36	0.07			0.3	6.58	0.18	
	Proposed Site Access - 2036 + Com + Dev									
Stream B-C	D13	0.2	6.44	0.16	1.85	D14	0.1	5.95	0.07	2.02
Stream B-A		0.0	8.63	0.02			0.0	9.03	0.01	
Stream C-AB		0.1	5.34	0.07			0.3	6.57	0.18	

Table 5.1: PICADY Summary Results for Site Access/Maddoxford Lane

Junction 2 – Maddoxford Lane / Wallace Avenue

5.9 To establish whether the Maddoxford Lane / Wallace Avenue junction would operate satisfactorily in terms of capacity, a PICADY model was created, with results of this assessment summarised in **Table 5.2**. They demonstrate that the junction would operate satisfactorily in both the 2030 and 2036 Design Years with the proposed development in place and committed development flows considered.

5.10 The junction would operate a maximum RFC of 0.44 in the AM peak hour in the 2036 + Committed Development + Development scenario, with 1 queuing vehicle (0.9 vehicles on results but rounded to next whole vehicle) and a maximum delay of 15.6 seconds per queuing vehicle on the right turn from Maddoxford Lane (West) to Maddoxford Lane (East).

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future Year							
Stream B-C	0.2	8.14	0.20	6.64	0.4	8.46	0.27	5.49
Stream B-A	0.5	12.61	0.32		0.4	11.44	0.28	
Stream C-AB	0.8	9.62	0.40		0.2	7.56	0.18	
	Existing Junction - 2030 + Com							
Stream B-C	0.2	8.30	0.20	6.76	0.4	8.52	0.27	5.49
Stream B-A	0.5	12.89	0.34		0.4	11.52	0.29	
Stream C-AB	0.8	9.64	0.41		0.2	7.57	0.18	
	Existing Junction - 2030 + Com + Dev							
Stream B-C	0.3	9.38	0.22	6.93	0.5	11.59	0.34	7.79
Stream B-A	0.7	14.84	0.42		1.0	15.83	0.50	
Stream C-AB	0.8	10.34	0.42		0.2	7.74	0.19	
	Existing Junction - 2036 Future Year							
Stream B-C	0.3	8.35	0.21	6.86	0.4	8.70	0.28	5.62
Stream B-A	0.5	13.11	0.34		0.4	11.78	0.30	
Stream C-AB	0.8	9.89	0.42		0.3	7.65	0.19	
	Existing Junction - 2036 + Com							
Stream B-C	0.3	8.52	0.21	6.99	0.4	8.76	0.29	5.64
Stream B-A	0.5	13.42	0.35		0.4	11.86	0.30	
Stream C-AB	0.8	9.91	0.42		0.3	7.66	0.19	
	Existing Junction - 2036 + Com + Dev							
Stream B-C	0.3	9.70	0.23	7.24	0.5	12.14	0.36	8.12
Stream B-A	0.8	15.60	0.44		1.0	16.64	0.52	
Stream C-AB	0.9	10.66	0.44		0.3	7.84	0.20	

Table 5.2: PICADY Summary Results for Maddoxford Lane / Wallace Avenue

Junction 3 – Maddoxford Lane / Oatlands Road

5.11 To establish whether the Maddoxford Lane / Oatlands Road junction would operate satisfactorily in terms of capacity, a PICADY model was created, with results of this assessment summarised in **Table 5.3**. They demonstrate that the junction would operate satisfactorily in both the 2030 and 2036 Design Years with the proposed development in place and committed development flows considered.

5.12 The junction would operate a maximum RFC of 0.42 in the PM peak hour in the 2036 + Committed Development + Development scenario, with 1 queuing vehicle (0.7 vehicles on results but rounded to next whole vehicle) and a maximum delay of 13.9 seconds per queuing vehicle on the Oatlands Road arm.

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future Year							
Stream B-AC	0.4	10.86	0.29	2.98	0.5	11.61	0.34	4.30
Stream C-AB	0.0	5.40	0.01		0.0	5.23	0.00	
	Existing Junction - 2030 + Com							
Stream B-AC	0.4	10.91	0.29	2.94	0.5	11.67	0.34	4.25
Stream C-AB	0.0	5.36	0.01		0.0	5.23	0.00	
	Existing Junction - 2030 + Com + Dev							
Stream B-AC	0.5	12.20	0.33	2.71	0.7	13.47	0.40	4.17
Stream C-AB	0.0	5.42	0.01		0.0	5.03	0.00	
	Existing Junction - 2036 Future Year							
Stream B-AC	0.4	11.12	0.30	3.06	0.6	11.93	0.36	4.42
Stream C-AB	0.0	5.41	0.02		0.0	5.23	0.00	
	Existing Junction - 2036 + Com							
Stream B-AC	0.4	11.18	0.30	3.02	0.6	11.99	0.36	4.38
Stream C-AB	0.0	5.38	0.02		0.0	5.23	0.00	
	Existing Junction - 2036 + Com + Dev							
Stream B-AC	0.5	12.53	0.34	2.81	0.7	13.90	0.42	4.34
Stream C-AB	0.0	5.44	0.02		0.0	5.03	0.00	

Table 5.3: PICADY Summary Results for Maddoxford Lane / Oatlands Road

Junction 4 – Maddoxford Lane / Winchester Road

5.13 To establish whether the Maddoxford Lane / Winchester Road junction would operate satisfactorily in terms of capacity, a PICADY model was created, with results of this assessment summarised in **Table 5.4**. They demonstrate that the junction would operate satisfactorily in both the 2030 and 2036 Design Years with the proposed development in place and committed development flows considered.

5.14 The junction would operate a maximum RFC of 0.56 in the AM peak hour in the 2036 + Committed Development + Development scenario, with 2 queuing vehicles (1.2 vehicles on results but rounded to next whole vehicle) and a maximum delay of 24.46 seconds per queuing vehicle on the Maddoxford Lane arm.

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future Year							
Stream B-AC	0.3	12.04	0.24	1.20	0.3	11.99	0.26	1.50
Stream C-AB	0.1	5.02	0.04		0.1	4.84	0.05	
	Existing Junction - 2030 + Com							
Stream B-AC	0.5	17.51	0.32	1.25	0.5	15.05	0.32	1.53
Stream C-AB	0.1	4.63	0.05		0.1	4.63	0.06	
	Existing Junction - 2030 + Com + Dev							
Stream B-AC	1.1	22.54	0.53	2.81	0.7	17.48	0.42	2.56
Stream C-AB	0.3	4.76	0.12		0.5	5.16	0.22	
	Existing Junction - 2036 Future Year							
Stream B-AC	0.3	12.55	0.25	1.25	0.4	12.42	0.28	1.55
Stream C-AB	0.1	4.97	0.04		0.1	4.79	0.06	
	Existing Junction - 2036 + Com							
Stream B-AC	0.5	18.63	0.34	1.34	0.5	15.73	0.34	1.61
Stream C-AB	0.1	4.59	0.06		0.1	4.59	0.07	
	Existing Junction - 2036 + Com + Dev							
Stream B-AC	1.2	24.46	0.56	2.99	0.8	18.44	0.44	2.64
Stream C-AB	0.3	4.62	0.13		0.6	5.07	0.22	

Table 5.4: PICADY Summary Results for Maddoxford Lane / Winchester Road

Junction 5 – Winchester Road / Oatlands Road

5.15 To establish whether the Winchester Road / Oatlands Road junction would operate satisfactorily in terms of capacity, a PICADY model was created, with results of this assessment summarised in **Table 5.5**. They demonstrate that the junction would operate satisfactorily in both the 2030 and 2036 Design Years with the proposed development in place and committed development flows considered.

5.16 The junction would operate a maximum RFC of 0.62 in both peak hours in the 2036 + Committed Development + Development scenario, on the Oatlands Road arm in the morning peak and on the right turn from Winchester Road in the evening peak. A maximum of 3 queuing vehicles (2.8 vehicles on results but rounded to next whole vehicle) are recorded on the Winchester Road arm and a maximum delay of 22.18 seconds per queuing vehicle is calculated on the Oatlands Road arm.

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future Year							
Stream B-AC	0.8	13.38	0.46	3.80	0.3	8.83	0.22	3.04
Stream C-AB	0.9	6.82	0.35		1.1	7.34	0.41	
	Existing Junction - 2030 + Com							
Stream B-AC	1.1	17.26	0.53	3.92	0.3	9.77	0.23	3.06
Stream C-AB	1.7	7.37	0.46		1.7	7.85	0.49	
	Existing Junction - 2030 + Com + Dev							
Stream B-AC	1.4	20.93	0.60	4.72	0.3	10.24	0.26	3.82
Stream C-AB	2.1	8.17	0.52		2.5	9.26	0.58	
	Existing Junction - 2036 Future Year							
Stream B-AC	0.9	14.09	0.48	4.00	0.3	9.03	0.23	3.17
Stream C-AB	1.0	6.99	0.37		1.3	7.55	0.44	
	Existing Junction - 2036 + Com							
Stream B-AC	1.2	18.45	0.55	4.25	0.3	10.00	0.24	3.28
Stream C-AB	1.9	7.75	0.49		1.9	8.28	0.52	
	Existing Junction - 2036 + Com + Dev							
Stream B-AC	1.6	22.18	0.62	5.09	0.4	10.50	0.27	4.20
Stream C-AB	2.4	8.71	0.55		2.8	10.02	0.62	

Table 5.5: PICADY Summary Results for Maddoxford Lane / Winchester Road

Junction 6 – Woodhouse Lane / Botley Bypass / Deer Park Avenue

5.17 To establish whether the Woodhouse Lane / Botley Bypass / Deer Park Avenue junction would operate satisfactorily in terms of capacity, an ARCADY model was created, with results of this assessment summarised in **Table 5.6**. They demonstrate that the junction would operate satisfactorily in both the 2030 and 2036 future year baseline scenarios.

5.18 On the basis of the above, the best reflection of future year junction performance before the development traffic is added are the 2030 and 2036 Baseline + Committed Development scenarios, which includes traffic proposed to travel to and from the Botley Bypass.

5.19 It should be noted that the junction has been set up such that left turning traffic from the Botley Bypass to Woodhouse Lane South follows the left-turn bypass that is contained within the roundabout design. This means that vehicles do not need to enter the roundabout itself when making that manoeuvre. These have therefore been

discounted from the flows. Furthermore, to avoid double counting and given Deer Park Lane forms an access to a committed development site, the survey data has been discounted here and instead the committed development flows on this arm have instead been uplifted using TEMPro factors.

- 5.20 In these scenarios, the junction is shown to be over the 0.85 free-flow threshold on the Woodhouse Lane North arm in the morning peak hour. In these scenarios, the junction operates within capacity on all arms in the evening peak hour.
- 5.21 The addition of development traffic then increases RFCs, queues and delays somewhat, with a maximum RFC of 1.01 calculated on the Woodhouse Lane North arm in the 2036 AM peak hour with development. In all other scenarios when committed development traffic and/or development traffic are included in the morning peak hour, the RFC on this arm is between 0.85 and 1, with the RFC on all other arms less than 0.85.
- 5.22 It should also be noted that, within Junctions 10 software, once the 0.85 free-flow threshold of a junction has been breached RFCs, queues and delays increase exponentially. It is not therefore considered that the impact of the development alone on the junction is severe, as stated within the NPPF.
- 5.23 It should be noted that, in line with latest guidance including the NPPF, development assessment should be moving towards a 'Decide and Provide' approach, through which vision-led objectives are taken account of. In this instance, this would include the potential to mitigate vehicular impact through modal shift towards sustainable modes. As summarised in **Section 2.0**, the site is well located to access a range of nearby amenities, reducing the need for future residents to travel by the private car. It can therefore be considered that the results in **Table 5.6** represent a worst-case scenario.
- 5.24 Notwithstanding the above, if mitigation works are considered to be required at the junction. It is anticipated that these will likely be designed as part of the developments which are expected to have a greater impact on the junction. The proposals subject of this TA (and other nearby schemes) may be subject to a contribution to mitigation works at the junction but this should be in line with the

scale of impact, as per the NPPF tests and Policy DM13 of the EBC Local Plan 2016-2036.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2030 Future Year							
1 - Botley Bypass	0.1	2.37	0.11	2.80	0.1	2.14	0.09	2.08
2 - Woodhouse Lane S	0.2	1.45	0.16		0.2	1.42	0.18	
3 - Deer Park Avenue	0.2	3.97	0.14		0.0	3.55	0.03	
4 - Woodhouse Lane N	0.8	3.47	0.43		0.4	2.66	0.29	
	2030 + Com							
1 - Botley Bypass	0.2	2.78	0.17	11.85	0.4	2.96	0.30	6.54
2 - Woodhouse Lane S	1.1	2.57	0.52		1.1	2.79	0.53	
3 - Deer Park Avenue	1.8	20.09	0.65		0.6	14.65	0.40	
4 - Woodhouse Lane N	6.9	25.14	0.88		3.5	12.39	0.78	
	2030 + Com + Dev							
1 - Botley Bypass	0.2	2.91	0.18	19.61	0.5	3.01	0.31	7.27
2 - Woodhouse Lane S	1.2	2.70	0.53		1.3	2.96	0.56	
3 - Deer Park Avenue	2.0	21.96	0.67		0.8	17.70	0.44	
4 - Woodhouse Lane N	13.6	46.23	0.95		4.0	14.00	0.81	
	2036 Future Year							
1 - Botley Bypass	0.1	2.41	0.12	2.87	0.1	2.14	0.09	2.11
2 - Woodhouse Lane S	0.2	1.48	0.16		0.2	1.43	0.19	
3 - Deer Park Avenue	0.2	4.05	0.15		0.0	3.61	0.03	
4 - Woodhouse Lane N	0.8	3.59	0.45		0.4	2.71	0.30	
	2036 + Com							
1 - Botley Bypass	0.2	2.87	0.18	17.53	0.5	3.04	0.31	7.92
2 - Woodhouse Lane S	1.2	2.77	0.54		1.2	2.96	0.55	
3 - Deer Park Avenue	2.4	26.50	0.72		0.8	17.86	0.46	
4 - Woodhouse Lane N	11.2	40.10	0.94		4.6	15.84	0.83	
	2036 + Com + Dev							
1 - Botley Bypass	0.2	2.96	0.18	32.06	0.5	3.10	0.32	9.08
2 - Woodhouse Lane S	1.3	2.83	0.55		1.4	3.15	0.58	
3 - Deer Park Avenue	2.7	29.78	0.74		1.0	22.59	0.51	
4 - Woodhouse Lane N	26.4	80.23	1.01		5.5	18.47	0.85	

Table 5.6: ARCADY Summary Results for Woodhouse Lane / Botley Bypass / Deer Park Avenue

Junction 7 – Woodhouse Lane / Broad Oak / Kings Copse Avenue / Lower Northam Road / Grange Road

5.25 To establish whether the Woodhouse Lane / Broad Oak / Kings Copse Avenue / Lower Northam Road / Grange Road junction would operate satisfactorily in terms of capacity, an ARCADY model was created, with results of this assessment summarised in **Table 5.7**, which indicates that the junction does exceed the 0.85 threshold on the Kings Copse Avenue arm during the AM peak in 2036, both with and without development traffic included. However, the RFC remains below the theoretical

capacity of 1 and therefore it is considered that the increases are not severe as stated in the NPPF.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future							
1 - Broad Oak	1.3	4.98	0.56	7.92	1.2	4.75	0.55	6.29
2 - Kings Copse Avenue	2.6	12.28	0.72		0.8	5.35	0.43	
3 - Lower Northam Road	1.8	13.08	0.64		1.1	7.20	0.52	
4 - Grange Road	1.2	5.93	0.55		2.2	8.11	0.68	
5 - Woodhouse Lane	0.7	4.92	0.42		0.8	5.55	0.45	
	Existing Junction - 2030 + Com							
1 - Broad Oak	1.7	6.45	0.62	11.45	1.3	5.16	0.57	7.75
2 - Kings Copse Avenue	4.9	21.87	0.84		1.0	6.34	0.51	
3 - Lower Northam Road	2.4	17.44	0.71		1.7	9.57	0.62	
4 - Grange Road	1.5	6.73	0.59		2.9	10.67	0.74	
5 - Woodhouse Lane	1.6	7.38	0.62		1.1	6.45	0.52	
	Existing Junction - 2030 + Com + Dev							
1 - Broad Oak	1.9	6.98	0.64	13.81	1.4	5.31	0.57	8.61
2 - Kings Copse Avenue	6.2	27.47	0.87		1.1	6.66	0.53	
3 - Lower Northam Road	2.8	20.34	0.74		1.8	10.14	0.64	
4 - Grange Road	2.0	9.21	0.67		3.7	12.87	0.79	
5 - Woodhouse Lane	2.0	8.52	0.67		1.2	6.81	0.55	
	Existing Junction - 2036 Future							
1 - Broad Oak	1.5	5.45	0.59	9.48	1.4	5.20	0.58	7.05
2 - Kings Copse Avenue	3.5	15.96	0.78		0.9	5.78	0.46	
3 - Lower Northam Road	2.3	16.25	0.70		1.3	8.00	0.56	
4 - Grange Road	1.4	6.55	0.58		2.7	9.49	0.73	
5 - Woodhouse Lane	0.8	5.27	0.45		0.9	6.02	0.48	
	Existing Junction - 2036 + Com							
1 - Broad Oak	2.0	7.27	0.66	15.56	1.6	5.98	0.60	7.52
2 - Kings Copse Avenue	8.0	34.85	0.90		0.5	4.90	0.35	
3 - Lower Northam Road	3.3	23.37	0.77		1.5	8.32	0.59	
4 - Grange Road	1.7	7.51	0.62		2.7	9.63	0.72	
5 - Woodhouse Lane	1.9	8.20	0.65		1.3	7.22	0.56	
	Existing Junction - 2036 + Com + Dev							
1 - Broad Oak	2.2	7.96	0.68	19.35	1.6	5.87	0.61	10.27
2 - Kings Copse Avenue	11.1	47.75	0.94		1.3	7.34	0.56	
3 - Lower Northam Road	4.0	28.33	0.81		2.1	11.77	0.68	
4 - Grange Road	1.8	7.82	0.64		4.9	16.64	0.83	
5 - Woodhouse Lane	2.4	9.70	0.70		1.4	7.61	0.59	

Table 5.7: ARCADY Summary Results for Woodhouse Lane / Broad Oak / Kings Copse Avenue / Lower Northam Road / Grange Road

Junction 8 – Grange Road / Locke Road

5.26 To establish whether the Grange Road / Locke Road junction would operate satisfactorily in terms of capacity, an ARCADY model was created, with results of this assessment summarised in **Table 5.8**, which indicates that the junction does slightly exceed the 0.85 threshold on the Grange Road West arm during the PM peak in 2036, both with and without development traffic included. However, the RFC remains below the theoretical capacity of 1 and predicted increases in levels of queueing and

delay (2.1 vehicles/6.77 seconds) are not considered especially high. It is therefore considered that the increases are not severe as stated in the NPPF.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future							
1 - Grange Road E	1.7	5.31	0.62	6.93	0.8	3.39	0.44	9.65
2 - Grange Road W	1.6	7.93	0.62		4.1	15.65	0.81	
3 - Locke Road	1.2	9.36	0.55		0.6	7.63	0.37	
	Existing Junction - 2030 + Com							
1 - Grange Road E	1.9	5.64	0.65	7.32	0.8	3.43	0.45	9.75
2 - Grange Road W	1.8	8.52	0.64		4.2	15.90	0.81	
3 - Locke Road	1.2	9.71	0.55		0.6	7.73	0.38	
	Existing Junction - 2030 + Com + Dev							
1 - Grange Road E	2.1	6.14	0.68	7.71	0.9	3.48	0.46	11.85
2 - Grange Road W	1.9	8.87	0.66		5.5	20.04	0.85	
3 - Locke Road	1.3	9.98	0.56		0.6	8.23	0.39	
	Existing Junction - 2036 Future							
1 - Grange Road E	1.9	5.80	0.65	7.62	0.9	3.52	0.46	11.74
2 - Grange Road W	1.9	8.71	0.65		5.4	19.85	0.85	
3 - Locke Road	1.4	10.41	0.58		0.7	8.20	0.40	
	Existing Junction - 2036 + Com							
1 - Grange Road E	2.2	6.25	0.68	8.12	0.9	3.57	0.47	11.89
2 - Grange Road W	2.1	9.41	0.67		5.5	20.24	0.85	
3 - Locke Road	1.4	10.83	0.59		0.7	8.31	0.40	
	Existing Junction - 2036 + Com + Dev							
1 - Grange Road E	2.5	6.81	0.71	8.57	0.9	3.65	0.48	15.27
2 - Grange Road W	2.2	9.86	0.69		7.6	27.01	0.89	
3 - Locke Road	1.5	11.18	0.60		0.7	8.88	0.42	

Table 5.8: ARCADY Summary Results for Grange Road / Locke Road

Junction 9 – Grange Road / Wildern Lane / Charles Watts Way / Botley Road

5.27 To establish whether the Grange Road / Wildern Lane / Charles Watts Way / Botley Road junction would operate satisfactorily in terms of capacity, an ARCADY model was created, with results of this assessment summarised in **Table 5.9**, which indicates that the junction operates within capacity in all scenarios in the PM peak, with a maximum recorded RFC of 0.63, and in all 2030 scenarios in the AM peak.

5.28 In the AM peak hour, the junction is approaching its theoretical capacity in the 2036 without development scenario, reaching an RFC of 0.84. The addition of development traffic then slightly raises the RFC to 0.87. The associated increases in queuing and delay are 1.2 vehicles and 2.62 seconds, which are considered to be largely negligible. An additional 60 vehicles are anticipated to pass through the junction as a result of the proposed development, equating to one vehicle per minute. This is well within typical daily fluctuations and therefore the increases are not considered to be severe as stated in the NPPF

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future							
1 - Grange Road	3.4	8.79	0.77	6.04	1.1	4.35	0.53	4.38
2 - Wildern Lane	0.8	5.87	0.45		0.4	3.84	0.31	
3 - Charles Watts Way	0.6	2.67	0.35		1.3	3.66	0.57	
4 - Botley Road	0.9	4.38	0.46		1.2	6.06	0.54	
	Existing Junction - 2030 + Com							
1 - Grange Road	4.1	10.29	0.80	6.81	1.3	4.76	0.57	4.69
2 - Wildern Lane	0.9	6.27	0.47		0.5	3.96	0.31	
3 - Charles Watts Way	0.6	2.83	0.38		1.4	3.83	0.58	
4 - Botley Road	1.0	4.74	0.49		1.4	6.52	0.57	
	Existing Junction - 2030 + Com + Dev							
1 - Grange Road	4.9	11.92	0.83	7.59	1.4	4.87	0.58	4.87
2 - Wildern Lane	0.9	6.55	0.48		0.5	4.00	0.32	
3 - Charles Watts Way	0.7	2.87	0.39		1.5	4.01	0.60	
4 - Botley Road	1.0	4.80	0.50		1.4	6.86	0.59	
	Existing Junction - 2036 Future							
1 - Grange Road	4.3	10.66	0.81	6.97	1.3	4.65	0.56	4.75
2 - Wildern Lane	0.9	6.41	0.48		0.5	4.02	0.33	
3 - Charles Watts Way	0.6	2.79	0.37		1.5	3.98	0.60	
4 - Botley Road	1.0	4.63	0.49		1.4	6.76	0.58	
	Existing Junction - 2036 + Com							
1 - Grange Road	5.4	12.92	0.84	8.08	1.5	5.12	0.60	5.12
2 - Wildern Lane	1.0	6.88	0.50		0.5	4.14	0.33	
3 - Charles Watts Way	0.7	2.99	0.41		1.6	4.19	0.61	
4 - Botley Road	1.1	5.07	0.52		1.6	7.31	0.61	
	Existing Junction - 2036 + Com + Dev							
1 - Grange Road	6.6	15.54	0.87	9.30	1.6	5.28	0.61	5.34
2 - Wildern Lane	1.1	7.23	0.51		0.5	4.19	0.33	
3 - Charles Watts Way	0.7	3.01	0.41		1.7	4.40	0.63	
4 - Botley Road	1.1	5.14	0.53		1.7	7.75	0.63	

Table 5.9: ARCADY Summary Results for Grange Road / Wildern Lane / Charles Watts Way / Botley Road

Junction 10 – Charles Watts Way / Tollbar Way / Turnpike Way

5.29 To establish whether the Charles Watts Way / Tollbar Way / Turnpike Way junction would operate satisfactorily in terms of capacity, an ARCADY model was created, with results of this assessment summarised in **Table 5.10**, which indicates that the junction does slightly exceed the 0.85 threshold on the Charles Watts Way West arm during the majority of scenarios, including the 2030 future baseline without committed development or proposed development flows. However, the RFCs all remain below the theoretical capacity of 1 and predicted increases in RFC remain small with the addition of development traffic. It is therefore considered that the increases are not severe as stated in the NPPF.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Junction - 2030 Future							
1 - Charles Watts Way	1.7	5.56	0.61	4.68	0.7	3.27	0.40	7.94
2 - Turnpike Way	0.7	9.43	0.43		0.2	4.04	0.14	
3 - Charles Watts Way	1.1	3.72	0.52		5.9	11.70	0.86	
4 - Tollbar Way	0.8	3.23	0.43		1.0	4.27	0.49	
	Existing Junction - 2030 + Com							
1 - Charles Watts Way	3.2	10.46	0.76	8.58	0.8	4.09	0.45	8.89
2 - Turnpike Way	2.6	32.51	0.73		1.3	9.85	0.57	
3 - Charles Watts Way	1.9	5.03	0.65		5.9	11.75	0.86	
4 - Tollbar Way	1.8	5.12	0.64		2.2	6.91	0.68	
	Existing Junction - 2030 + Com + Dev							
1 - Charles Watts Way	3.8	11.89	0.79	9.72	0.9	4.18	0.46	9.81
2 - Turnpike Way	3.3	41.78	0.79		1.3	10.16	0.57	
3 - Charles Watts Way	2.0	5.13	0.66		6.9	13.42	0.88	
4 - Tollbar Way	1.8	5.20	0.64		2.3	7.35	0.70	
	Existing Junction - 2036 Future							
1 - Charles Watts Way	2.0	6.25	0.65	5.19	0.7	3.44	0.42	10.57
2 - Turnpike Way	0.9	11.19	0.48		0.2	4.21	0.14	
3 - Charles Watts Way	1.3	3.97	0.55		8.5	16.43	0.90	
4 - Tollbar Way	0.9	3.42	0.46		1.1	4.70	0.53	
	Existing Junction - 2036 + Com							
1 - Charles Watts Way	4.2	13.20	0.81	11.89	1.0	4.60	0.48	12.79
2 - Turnpike Way	5.0	62.74	0.87		1.4	10.91	0.59	
3 - Charles Watts Way	2.2	5.47	0.68		9.9	19.17	0.90	
4 - Tollbar Way	2.0	5.61	0.67		2.7	8.34	0.72	
	Existing Junction - 2036 + Com + Dev							
1 - Charles Watts Way	5.1	15.53	0.84	14.67	1.0	4.45	0.49	13.21
2 - Turnpike Way	7.6	91.05	0.93		1.5	11.29	0.60	
3 - Charles Watts Way	2.2	5.58	0.68		10.4	19.81	0.92	
4 - Tollbar Way	2.0	5.71	0.67		2.8	8.71	0.74	

Table 5.10: ARCADY Summary Results for Charles Watts Way / Tollbar Way / Turnpike Way

Junction 11 – Winchester Road / Bubb Lane / Botley Road / Snakemoor Lane

- 5.30 To establish whether the Woodhouse Lane / Botley Bypass / Deer Park Avenue junction would operate satisfactorily in terms of capacity, an ARCADY model was created, with results of this assessment summarised in **Table 5.11**. They demonstrate that the junction would operate satisfactorily in both the 2030 and 2036 future year baseline scenarios, however, these scenarios are simply based on TEMPro growth factors and do not fully account for the significant committed development flows, which are expected to pass through the junction (684 movements in the AM peak and 525 in the PM peak).
- 5.31 On the basis of the above, the best reflection of future year junction performance before the development traffic is added are the 2030 and 2036 Baseline + Committed Development scenarios. In these scenarios, the junction is shown to be over the 0.85 free-flow threshold on both the Winchester Road and Botley Road arms in the AM peak, and the Bubb Lane and Botley Road arms in the PM peak. In the AM peak hour in both 2030 and 2036, the junction is shown to be over its theoretical capacity (i.e. an RFC greater than 1) on the Winchester Road arm, whilst in the PM peak the Botley Road arm operates over its theoretical capacity.
- 5.32 The addition of development traffic then increases RFCs slightly, with a maximum RFC increase of 0.03 calculated on the Botley Road arm in the 2036 peak hour once development traffic is included (1.08 to 1.11). This reflects the relatively modest increases in traffic expected at the junction as a result of the proposed development of 27 vehicles in both peak hours, equating to one additional vehicle roughly every 2 minutes on average. This equates to an increase in traffic flow of approximately 1% in both peak hours, which would be well within typical daily fluctuations. It is not therefore considered that the impact of the development alone on the junction is severe, as stated within the NPPF.
- 5.33 Notwithstanding the above, it is considered that mitigation works are likely to be required at the junction. It is anticipated that these will likely be designed as part of the developments which are expected to have a greater impact on the junction. Other nearby developments which have an impact on the junction may then be required to contribute to the works. The proposals subject of this TA may be subject to a contribution to mitigation works at the junction, but this should be in line with

the scale of impact, as per the NPPF tests and Policy DM13 of the EBC Local Plan 2016-2036.

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Junction - 2030 Future									
1 - Snakemoor Lane	D1	0.5	6.26	0.34	A	D2	1.3	10.93	0.57	B
2 - Winchester Road		2.1	10.18	0.67	B		1.4	8.27	0.58	A
3 - Bubb Lane		1.3	7.77	0.57	A		2.0	9.52	0.67	A
4 - Botley Road		1.7	11.03	0.63	B		2.4	13.95	0.71	B
	Existing Junction - 2030 + Com									
1 - Snakemoor Lane	D3	0.7	8.71	0.42	A	D4	2.8	24.29	0.75	C
2 - Winchester Road		70.2	191.95	1.11	F		2.8	13.47	0.74	B
3 - Bubb Lane		2.4	12.65	0.71	B		7.5	29.29	0.90	D
4 - Botley Road		7.6	36.72	0.90	E		28.8	116.66	1.04	F
	Existing Junction - 2030 + Com + Dev									
1 - Snakemoor Lane	D5	0.7	8.80	0.42	A	D6	2.9	24.81	0.75	C
2 - Winchester Road		80.8	217.38	1.13	F		2.9	13.76	0.75	B
3 - Bubb Lane		2.5	12.87	0.71	B		7.7	30.41	0.90	D
4 - Botley Road		8.1	38.85	0.91	E		36.5	140.84	1.06	F
	Existing Junction - 2036 Future									
1 - Snakemoor Lane	D7	0.6	6.58	0.36	A	D8	1.4	11.48	0.59	B
2 - Winchester Road		2.4	11.45	0.71	B		1.5	9.00	0.61	A
3 - Bubb Lane		1.5	8.39	0.60	A		2.3	10.59	0.70	B
4 - Botley Road		2.0	12.29	0.66	B		3.1	17.25	0.76	C
	Existing Junction - 2036 + Com									
1 - Snakemoor Lane	D9	0.8	9.30	0.44	A	D10	3.3	27.55	0.78	D
2 - Winchester Road		89.2	247.70	1.15	F		3.2	15.22	0.77	C
3 - Bubb Lane		2.7	13.68	0.73	B		10.3	39.36	0.93	E
4 - Botley Road		10.5	49.31	0.93	E		42.4	160.74	1.08	F
	Existing Junction - 2036 + Com + Dev									
1 - Snakemoor Lane	D11	0.8	9.39	0.45	A	D12	3.3	27.90	0.78	D
2 - Winchester Road		100.2	289.37	1.17	F		3.3	15.56	0.77	C
3 - Bubb Lane		2.7	13.94	0.73	B		10.8	41.12	0.93	E
4 - Botley Road		11.4	52.57	0.94	F		51.5	189.06	1.11	F

Table 5.11: ARCADY Summary Results Winchester Road / Bubb Lane / Botley Road / Snakemoor Lane

Junction Capacity Assessment Summary

5.34 The above results of capacity assessment modelling indicate that several developments in the study area would operate within the 0.85 threshold and the majority will operate within the overall theoretical RFC capacity of 1, both with and without development, and in the 2030 and 2036 cases. Where this is not the case,

the increases in RFC, queueing and delay are typically minimal as a result of development traffic at all junctions. This indicates that the proposals will not have a severe impact on the surrounding highway network.

5.35 Notwithstanding this, there is the potential for the development to contribute towards possible mitigation measures at affected junctions, as long as the contributions sought are fair and reasonable in scale and kind to the level of impact anticipated and necessary to make the development acceptable in planning terms, in line with paragraph 58 of the NPPF and Policy DM13 of the EBC Local Plan 2016-2036.

Link Flow Analysis

5.36 Following a meeting with the HEWEB, it was outlined that the capacity of the road rather than a junction was queried by a councillor. Accordingly, the capacity of this road has been derived using guidance set out in *TA 79/99 Traffic Capacity of Urban Roads*, as described below. Whilst this guidance has now been withdrawn, it is still considered to provide a good indication of the capacity of certain road types.

5.37 Maddoxford Lane to both the east and west of the access, up to its junction with Winchester Road is smaller than all road types provided and therefore has been defined as the smallest road type of a 6.1m wide "UAP3" road according to TA 79/99. Table 2 of TA 79/99 shows that a 6.1m wide single carriageway of this type would be expected to have a capacity of 900 vehicles per hour in the peak direction of flow, assuming a 60:40 directional split. This gives a two-way link capacity of 1,500 vehicles.

5.38 During a meeting with Hedge End, West End & Botley (HEWEB), it was raised that the scheme should seek to avoid traffic heading east from the site. The distribution (set out in **Section 4.0**) does assume that some traffic would route east, however, the vast majority is anticipated to route to the west. However, if considered appropriate contributions can be put forward to provide traffic calming to the east to further deter people from going this way unless absolutely necessary. This would help to improve the link flow to the east.

5.39 **Table 5.12** sets out the predicted absolute and percentage increase in two-way link flows on the local highway network within the study area in the weekday AM and PM peak hours in the 2030 assessment year. For each link we have also identified its capacity derived from Table 2 of TA 79/99.

Link	Capacity (two-way flow, vehs/hour)	Weekday AM Peak Hour (08:00-09:00)			Weekday PM Peak Hour (17:00-18:00)		
		Base	With Dev't	Change	Base	With Dev't	Change
Maddoxford Ln (E of access)	1500 (6.1m UAP3)	316 21%	327 22%	+11 3.5%	317 21%	328 22%	+11 3.5%
Maddoxford Ln (W of access)	1500 (6.1m UAP3)	316 21%	446 30%	+130 41.1%	317 21%	447 30%	+130 41.0%

Table 5.12: Predicted change in on links within study area, Assessment Year (2030)

5.40 **Table 5.12** shows that all links within the study area are expected to operate within capacity with the predicted Base and Development Case flows in the weekday peak hours. It shows that the predicted percentage increase in traffic is greatest on Maddoxford Lane to the west of the access.

6. Opportunities for Sustainable Travel

Introduction

- 6.1 To reiterate the policy context set out in **Section 1.0**, the NPPF states at Paragraph 10, *"so that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development"*. Part of this requirement for sustainable development means ensuring that there are good opportunities for travel to and from the site by non-car modes.
- 6.2 Of particular importance is Paragraph 110 of the NPPF which states that *"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"*.
- 6.3 As discussed earlier, Paragraph 115 also notes the following relating to sustainability.
- "...it should be ensured that:*
- a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;*
 - b) safe and suitable access to the site can be achieved for all users; ..."*
- 6.4 Policy DM13 from the EBC Local Plan 2016-2036 requires that developments give consideration to all transport users, including cyclists, pedestrians and public transport users. This will be supported through contributions towards sustainable transport improvements where appropriate.
- 6.5 Accordingly, this section seeks to ensure that the proposals comply with the relevant paragraphs of local policy and the NPPF discussed above.

Pedestrian Travel

- 6.6 **Table 4.3** shows that the proposed development is predicted to result in a daily increase of 77 two-way pedestrian trips, including approximately eight in both morning and evening peak hours. It is anticipated that the vast majority of these trips would be to and from local facilities in the area.
- 6.7 In addition, it is noted that the proposals could generate up to 15 daily bus trips, which in turn are likely to generate additional pedestrian trips, leading to an overall total of 92 two-way pedestrian trips throughout the day.
- 6.8 The internal layout will accommodate extensive footways throughout the site, as well as shared surface arrangements on sections that serve fewer dwellings and in the north of the site.
- 6.9 As shown on **Drawing No. 2501890_A-ACE-XX-XX-DR-C-00101G**, the site access includes a section of shared 3 metre wide footway/cycleway, which then forms a connection to the existing footway/cycleway network on the northern side of Maddoxford Lane via an uncontrolled crossing.
- 6.10 Beyond this connection, there is an extensive network of footways on local roads, leading to amenities, bus stops and the railway station, meaning that pedestrians are segregated from traffic. On this basis, it is considered that the existing pedestrian infrastructure in the vicinity of the site would be suitable to accommodate the predicted increase of movements associated with the development. The location of the site and the surrounding pedestrian infrastructure will help to encourage active travel to and from the development.

Cycle Travel

- 6.11 The proposed development is anticipated to generate up to 31 two-way cycle trips throughout the day. There are also 15 daily rail trips estimated, and it is assumed that some rail journeys will form part of linked trips with cycling. As outlined in **Section 2.0**, there are on- and off-street cycle routes in the vicinity of the site, including on the northern side of Maddoxford Lane. A number of local amenities are a comfortable cycle from the site, thus providing a viable alternative to the private car on its own.

or as part of a linked journey via public transport. The new shared route, leading from the site access will provide a direct link from the site to the existing provision.

6.12 Cycling will be further encouraged through the provision of “hard measures” such as safe and secure cycle parking facilities, and “soft measures” such as marketing, promotion and awareness. Further detail on the measures proposed is included within the Travel Plan prepared as part of the application submission (**ACE Report Ref. 2501890_A-ACE-XX-XX-RP-C-0103**).

Bus Travel

6.13 In respect of bus journeys, the trip generation calculations demonstrate that the proposed residential development would result in an increase of 15 daily trips and two in each of the peak hours. As discussed in **Section 2.0**, there is an hourly service leading towards Eastleigh in one direction and Southampton in the other. This will enable future residents to access amenities further afield from the site without making use of the private car.

Rail Travel

6.14 The above details show that the residential development would generate demand for 15 daily two-way trips by train during a weekday, with around two trips in each of the peak hours. As discussed in **Section 2.0**, the nearest train station is Botley, which is circa 1.9km from the site, and can be reached via cycle, bus or car. The station offers a number of direct services to London Waterloo and Portsmouth Harbour. Intermediate stops include Woking, Basingstoke, Winchester and Fareham. It is therefore considered that rail travel provides a viable alternative for leisure and commuting journey purposes than the private car.

Sustainable Travel Summary

6.15 The above information outlines that there is a wide range of opportunities to travel to / from the site by sustainable modes, and that the proposals are actively seeking to improve the active travel on-site and within the surrounding area. As summarised in **Section 3.0**, the site is also supported by a Travel Plan (**ACE Report Ref.**

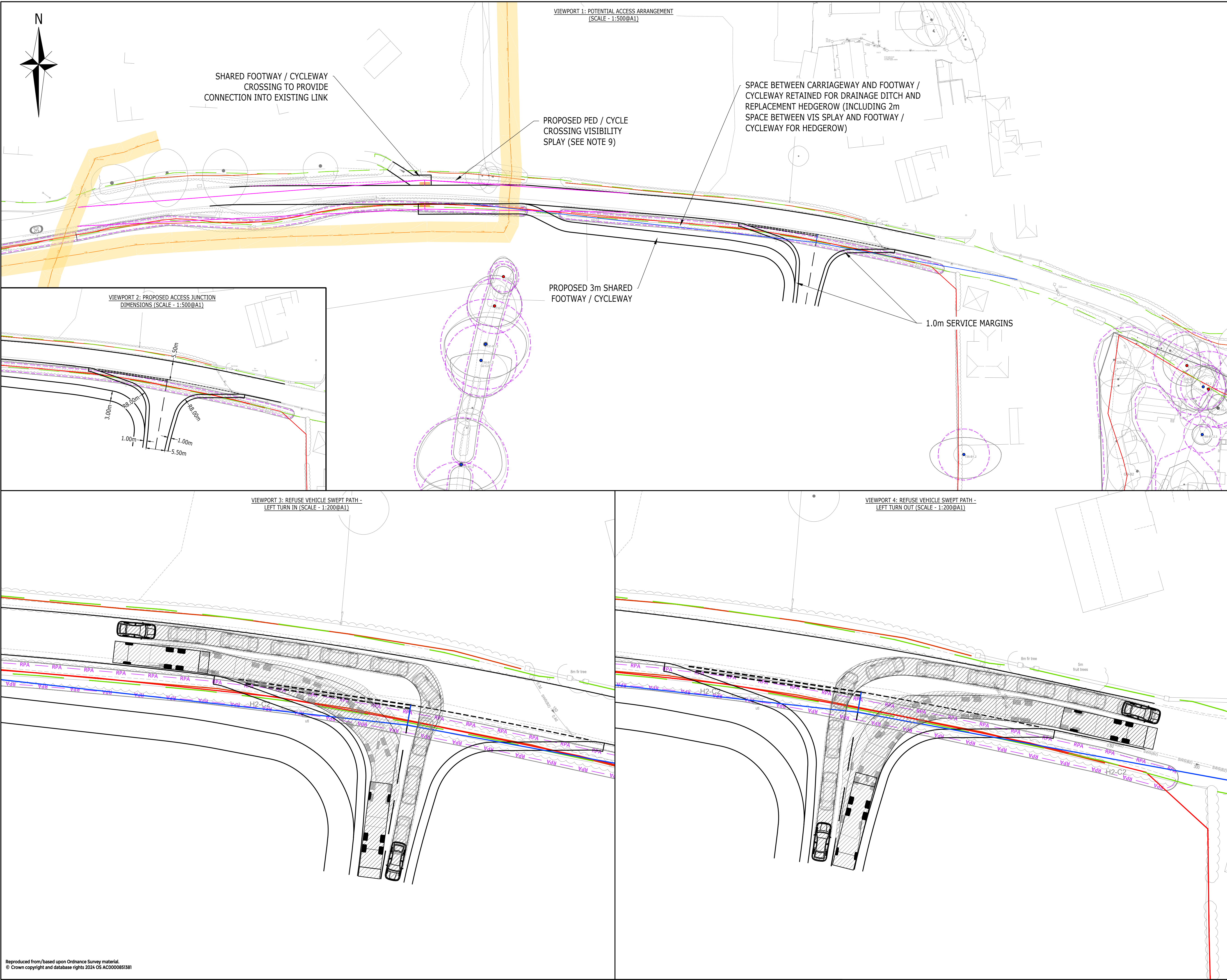
2501890_A-ACE-XX-XX-RP-C-0103), which will help to encourage the uptake of sustainable modes.

6.16 At the heart of the NPPF is a presumption in favour of sustainable development, and it is considered that the proposals offer ample opportunity for travel for non-car modes for future residents, as well as providing contributions towards infrastructure improvements which enhance opportunities for existing residents in the local area. This approach is also compatible with the goals of the EBC Local Plan 2016-2036, notably Policy DM13.

7. Summary and Conclusion

- 7.1 This TA has been produced on behalf of Bloor Homes Limited in respect of emerging proposals for a residential development on land south of Maddoxford Lane.
- 7.2 The proposals comprise the construction of up to 280 dwellings, provision of informal and formal open space, together with associated highways, landscape, earth works and level changes, foul and surface water drainage facilities, utilities provision and other associated and necessary infrastructure.
- 7.3 The outline planning application for the proposed scheme (with all matters reserved except main point of access) is submitted to EBC as the Local Planning Authority. HCC is the local highway authority responsible for the roads in the surrounding area.
- 7.4 The access proposals have been agreed in principle with the local highway authority through pre-application discussions. They are considered to provide safe and suitable access for all users in accordance with NPPF. Connections which have been informed by the WCHAR assessment and influenced by the need for sustainable and active travel, ensuring the development offers genuine transport modes for all users of the site.
- 7.5 Servicing and emergency vehicle access has been accommodated within the layout in line with MfS recommendations and includes suitable turning areas for larger vehicles.
- 7.6 Parking for both vehicles and cycles will be provided in accordance with EBC policy.
- 7.7 Capacity assessments were undertaken at the site access and a number of local junctions, with the study area agreed with HCC. It was concluded that the development would not have a 'severe' impact on any junctions in accordance with Paragraph 116 of the NPPF.
- 7.8 Having fully considered highways/ transport matters, it is considered that planning permission for the proposed development should be granted.

Drawings



NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT SPECIFICATION, INC. RISK ASSESSMENTS AND ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.
- DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METRES UNLESS OTHERWISE STATED.
- ALL DIMENSIONS, LEVELS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PRIOR PERMISSION FROM THE ENGINEER.
- ANY WORKS OUTSIDE RED SITE BOUNDARY ARE FOR INFORMATION PURPOSES ONLY. UNLESS SPECIFICALLY NOTED, ALL WORKS OUTSIDE THE SITE BOUNDARY WILL BE UNDERTAKEN BY OTHERS UNDER A SEPARATE CONTRACT.
- SUBJECT TO FURTHER DISCUSSION WITH HCC.
- SUBJECT TO CAPACITY ASSESSMENT.
- VISIBILITY BASED ON MEASURED SPEEDS RECORDED BY AUTOMATIC TRAFFIC COUNTER BY INNOWISE BETWEEN THURSDAY 5TH JUNE AND WEDNESDAY 11TH JUNE 2025. CALCULATIONS BASED ON MIS / DMBS AS FOLLOWS:

102.1m JUNCTION VISIBILITY SPLAY TO THE WEST BASED ON 85%ILE EASTBOUND SPEEDS OF 37.8mph (≈ 64.8kph)

60.0m JUNCTION VISIBILITY SPLAY TO THE EAST BASED ON 85%ILE WESTBOUND SPEEDS OF 33.8mph (≈ 58.4kph)
- TOPOGRAPHICAL SURVEY BASED ON INFORMATION RECEIVED FROM ENCOMPASS GEOSPATIAL DATED JUNE 2025 (DRAWING REF. 01MX02D/REV E).
- TREE SURVEY BASED ON INFORMATION RECEIVED FROM ARBO-ECO CONSULTANCY DATED 24.04.2025 (DRAWING REF. MB25403-01-01 REV A).
- SUBJECT TO LEVELS, TREE AND UTILITIES REVIEWS.
- HIGHWAY BOUNDARY INDICATIVELY PLOTTED BASED ON OS MAPPING IN LINE WITH INFORMATION RECEIVED FROM HCC.
- SITE BOUNDARY INFORMATION INDICATIVELY PLOTTED AND SUBJECT TO CONFIRMATION FROM ARCHITECT.
- SUBJECT TO SIGNAGE REVIEW.
- PEDESTRIAN AND CYCLE CONNECTIONS TO BE REVIEWED IN FURTHER DETAIL AS LAYOUT PROGRESSES.

KEY:

- INDICATIVE SITE BOUNDARY
- HIGHWAY BOUNDARY (SEE NOTE 13)
- TREE SURVEY ROOT PROTECTION AREA
- HEDGEROW STEMLINE
- JUNCTION VISIBILITY SPLAYS (SEE NOTE 9)
- PEDESTRIAN / CYCLIST VISIBILITY SPLAYS (SEE NOTE 9)
- TANGENTIAL PEDESTRIAN / CYCLIST VISIBILITY SPLAYS
- EXISTING FUEL MAIN
- EXISTING GAS PIPE EASEMENT

VEHICLES USED:

Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall length	11.100m
Overall body height	1.100m
Max Body Ground Clearance	0.350m
Link to Rock Step	4.000m
Kerb to Kerb Turning Radius	9.000m

Skoda Octavia

Overall length	4.572m
Overall width	1.800m
Overall body height	1.488m
Max Body Ground Clearance	0.275m
Link to Rock Step	4.100m
Kerb to Kerb Turning Radius	2.100m

C	UPDATED TO REFLECT CLIENT COMMENTS	SL	JE	PR	19.12.25
F	EMERGENCY ACCESS REMOVED	SL	SL	PR	12.11.25
E	REVISED ACCESS LOCATION SHOWN	SL	SL	PR	23.10.25
D	UPDATED TO REFLECT CLIENT COMMENTS	JE	JE	PR	06.08.25
C	UPDATED TO REFLECT LATEST TOPO	JE	JE	PR	01.07.25
B	UPDATED TO REFLECT SPEED SURVEY DATA	JE	JE	PR	20.06.25
A	UPDATED TO REFLECT ARBORICULTURAL ADVICE	JE	JE	PR	28.05.25
Rev	Description	Drn	Chk	App	Date
Purpose: PRELIMINARY		Status: -			

ARDENT CONSULTING ENGINEERS

AN EMPLOYEE OWNED COMPANY

Third Floor
The Hallmark Building
52-56 Leadenhall Street
London
EC3M 5JE

Tel: 020 7680 4088
Web: www.ardent-ce.co.uk
E-mail: enquiries@ardent-ce.co.uk

worksafe consultant

SSIP SURVEILLANCE IN PROGRESS

BUREAU VERITAS CERTIFIED

Client

BLOOR HOMES

Project Title:

LAND SOUTH OF MADDOXFORD LANE

Drawing Title:

PROPOSED ACCESS ARRANGEMENT

Drawn by	Checked by	Approved by	Revision
SL	JE	PR	G
Scale	Date		
AS SHOWN	MAY 2025		
Drawing Number			
2105890_A-ACE-XX-XX-DR-C-0101			



NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT SPECIFICATION, INC. RISK ASSESSMENTS AND ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.
- DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METRES UNLESS OTHERWISE STATED.
- ALL DIMENSIONS, LEVELS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PRIOR PERMISSION FROM THE ENGINEER.
- SUBJECT TO FURTHER DISCUSSION WITH HCC.
- VISIBILITY BASED ON MEASURED SPEEDS RECORDED BY AUTOMATIC TRAFFIC COUNTER BY INNOWISE BETWEEN THURSDAY 5TH JUNE AND WEDNESDAY 11TH JUNE 2025. CALCULATIONS BASED ON MFS / DMRB AS FOLLOWS.

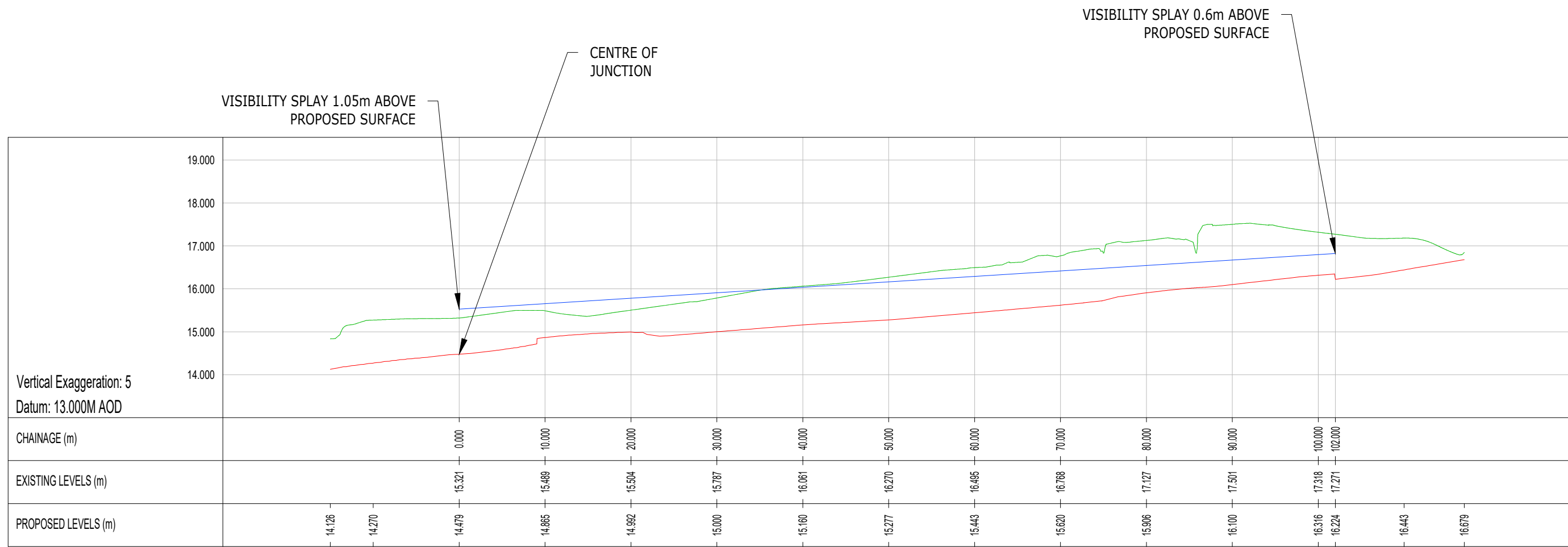
102.1m JUNCTION VISIBILITY SPLAY TO THE WEST BASED ON 85%ILE EASTBOUND SPEEDS OF 37.8mph (≈ 64.8kph)

60.0m JUNCTION VISIBILITY SPLAY TO THE EAST BASED ON 85%ILE WESTBOUND SPEEDS OF 33.8mph (≈ 58.4kph)
- TOPOGRAPHICAL SURVEY BASED ON INFORMATION RECEIVED FROM ENCOMPASS GEOSPATIAL DATED JUNE 2025 (DRAWING REF. 01MX02D/REV E).
- HIGHWAY BOUNDARY INDICATIVELY PLOTTED BASED ON OS MAPPING IN LINE WITH INFORMATION RECEIVED FROM HCC.
- SUBJECT TO SIGNAGE REVIEW.

VIEWPORT 2: WESTERN VISIBILITY SPLAY LONGSECTION

KEY

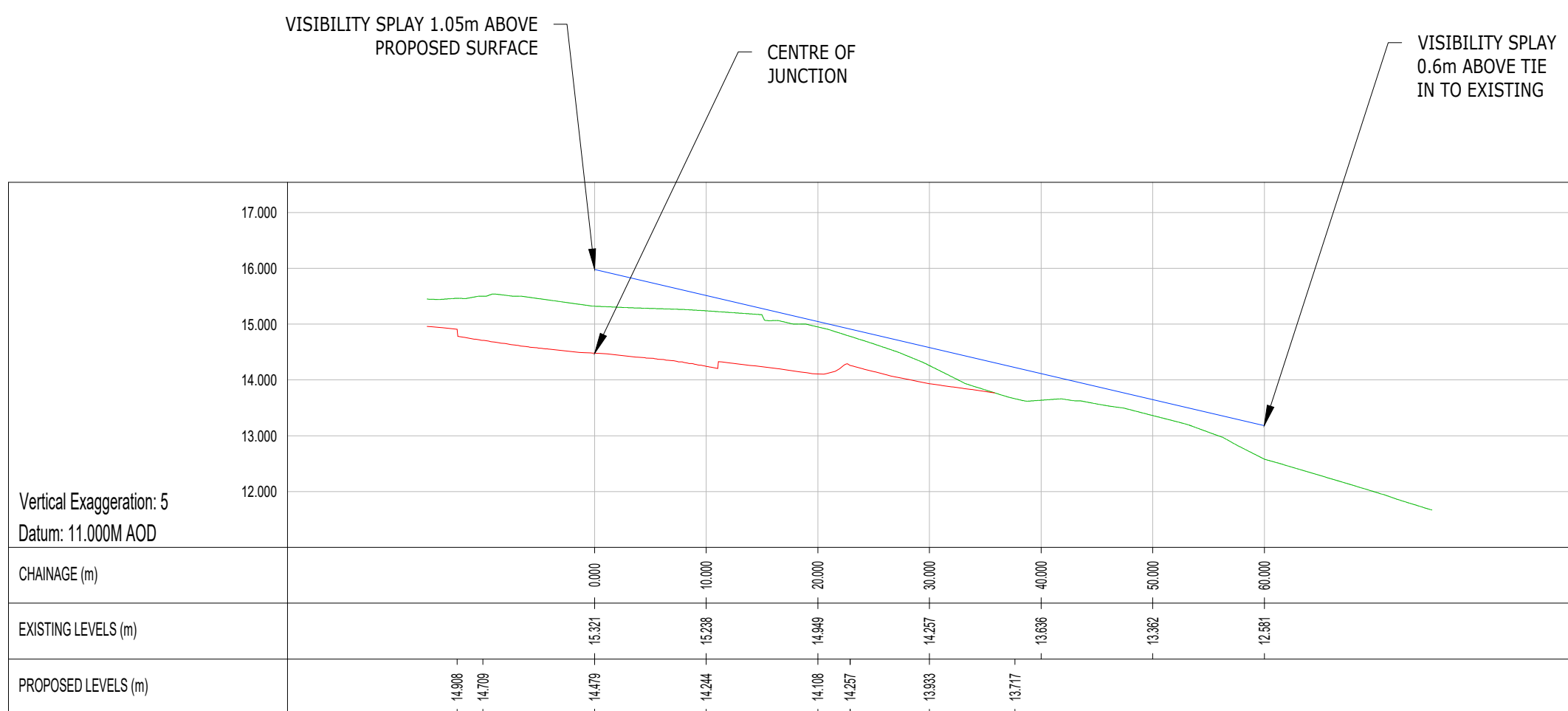
- EXISTING GROUND PROFILE
- PROPOSED GROUND SURFACE
- VISIBILITY SPLAY



VIEWPORT 3: EASTERN VISIBILITY SPLAY LONGSECTION

KEY

- EXISTING GROUND PROFILE
- PROPOSED GROUND SURFACE
- VISIBILITY SPLAY



A	FIRST ISSUE	JTM	TR	AW	12.12.25
Rev	Description	Drn	Chk	App	Date
Purpose:		Status:			
FOR PLANNING		NOT YET APPROVED			

ARDENT CONSULTING ENGINEERS
AN EMPLOYEE OWNED COMPANY

Third Floor
The Hallmark Building
52-56 Leadenhall Street
London
EC3M 5JE

Tel: 020 7680 4088
Web: www.ardent-ce.co.uk
E-mail: enquiries@ardent-ce.co.uk

worksafe consultant
www.smasid.com
SSIP
BRIEFING CERTIFICATE

Client

BLOOR HOMES

Project Title:

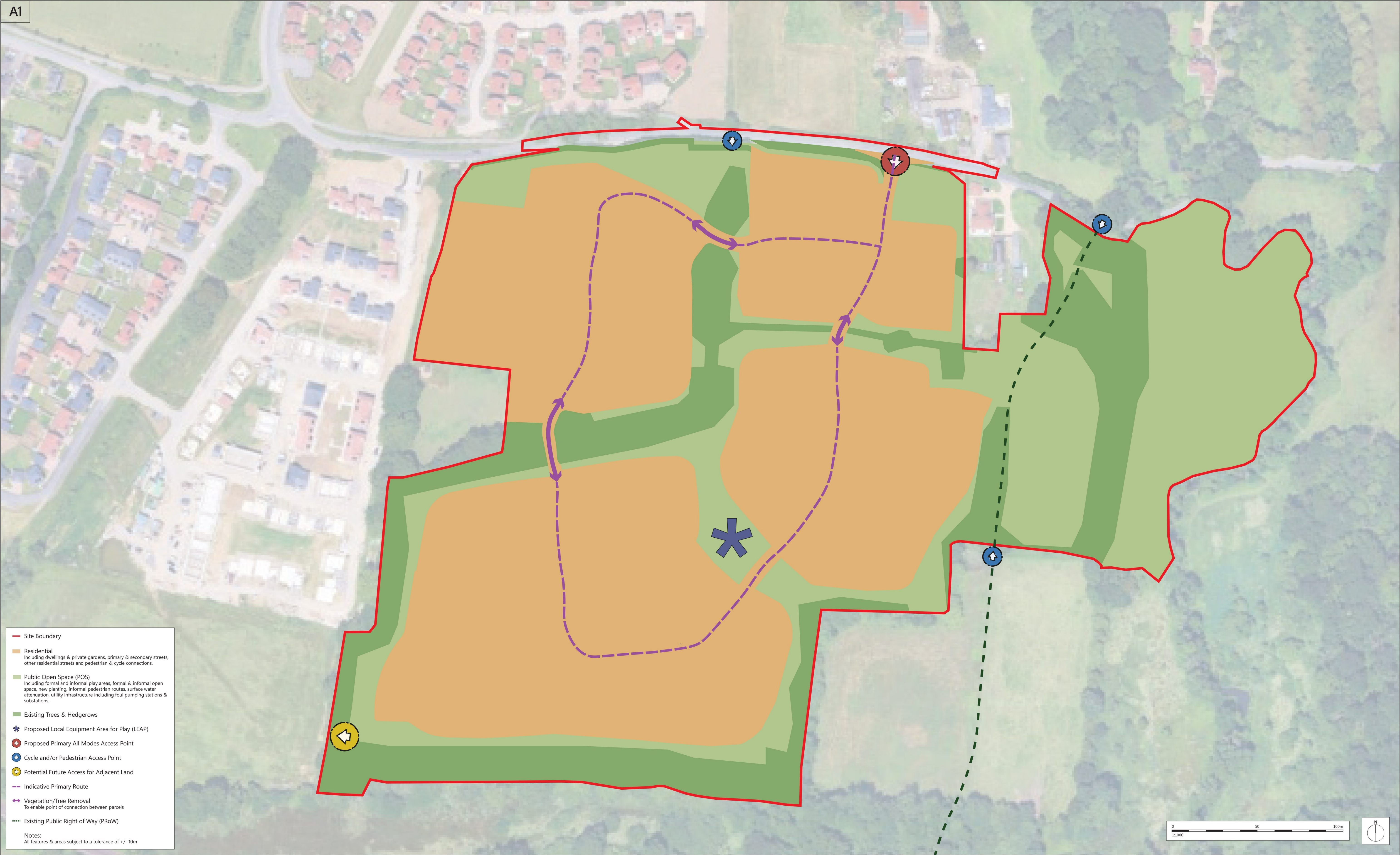
LAND SOUTH OF MADDOXFORD LANE

Drawing Title:

**PROPOSED DEVELOPMENT
ACCESS VERTICAL VISIBILITY PLAN**

Drawn by	Checked by	Approved by	Revision
JTM	TR	AW	P1
Scale	Date		
AS SHOWN	DEC 2025		
Drawing Number			
2105890_A-ACE-XX-XX-DR-C-0501			

Appendix A
Land Use and Access Plan



Site Boundary

Residential
Including dwellings & private gardens, primary & secondary streets,
other residential streets and pedestrian & cycle connections.

Public Open Space (POS)
Including formal and informal play areas, formal & informal open
space, new planting, informal pedestrian routes, surface water
attenuation, utility infrastructure including foul pumping stations &
substations.

Existing Trees & Hedgerows

Proposed Local Equipment Area for Play (LEAP)

Proposed Primary All Modes Access Point

Cycle and/or Pedestrian Access Point

Potential Future Access for Adjacent Land

Indicative Primary Route

Vegetation/Tree Removal
To enable point of connection between parcels

Existing Public Right of Way (PROW)

Notes:
All features & areas subject to a tolerance of +/- 10m

Romsey T: 01794 367703
Portishead T: 01275 407000
London T: 01794 367703

www.thrivearchitects.co.uk

This drawing is the copyright of Thrive Architects Ltd ©. All rights reserved. Ordnance Survey Data © Crown. Copyright. All rights reserved. Licence No. 100007359. Permission is granted to scale from this drawing for the purposes of Local Authority Planning Applications only. For all other purposes DO NOT scale from this drawing. Contractors, Sub-Contractors and suppliers are to check all relevant dimensions and levels of the site and building before commencing any shop drawings or building work. Any discrepancies should be recorded to the Architect. Where applicable this drawing is to be read in conjunction with the Consultants' drawings / Clients' Construction Specification.

Rev	Description	Date	Au	Ch
P1	Preliminary issue	04.11.25	GR/NR	GR
P2	Revised parcels and design changes	13.11.25	GR/NR	GR
P3	Revised parcels	17.11.25	GR/NR	GR
P4	Revised parcels & key	04.12.25	D8/GR	GR
P5	Revised key & primary route	05.12.25	D8/GR	GR
P6	Revised primary route	05.12.25	D8/GR	GR
P7	Adjusted aerial	10.12.25	D8/GR	GR
P8	Revised Information	18.02.26	GR/Al	GR

Project	Land South of Maddoxford Lane, Boorley Green				
Drawing	Land Use and Access Plan				
Client	Bloor Homes Limited				
Job no.	BLOO240103		Date	18.02.26	
Dwg no.	LUP-01		Rev.	P8	
Author	DB/GR	Checked	GR	Scale	1:1000@A1
Status	PRELIMINARY			Office	Romsey
Client ref.	-				

The logo for thrive. architects features the word "thrive." in a white, lowercase, sans-serif font with a period, set against a solid orange square background. Below the square, the word "architects" is written in a smaller, orange, lowercase, sans-serif font.



Appendix B
HCC Pre-Application Response

Paul Rynton
Ardent Consulting Engineers
Third Floor
The Hallmark Building
52-56 Leadenhall Street
London
EC3M 5JE

Hampshire 2050
The Castle
Winchester, Hampshire SO23 8UL
Telephone 0300 555 1375
Fax 01962 847055
www.hants.gov.uk

Enquiries to	Matt Grantham	My reference	057743
Direct Line	N/A	Your reference	Pre-App Land South of Maddoxford Lane
Date	16 September 2025	Email	matt.grantham@hants.gov.uk

For attention of Paul Rynton

Dear Sirs

Re: Land South of Maddoxford Lane

Pre-App Advice - Development for the land south of Maddoxford Lane seeks to provide circa 260 residential dwellings.

Thank you for providing HCC Highways with the opportunity to provide input, via the pre-application process, into the proposed development of circa 260 dwellings on land South of Maddoxford Lane, Boorley Green in the Borough of Eastleigh.

To date, you have provided a Pre-Application Highways Transport Scoping Note (TSN) (August 2025) which outlines the proposals, and primarily requests a 'Review of the Transport Scoping Note to get views on access and confirmation of study area / parameters for future assessment'.

Following a full review of the information provided, the following comments are made:

ACCESS:

VEHICLES:

It is proposed that two vehicle access points will be provided for the site.

The main access into the site for all users (vehicles, pedestrians and cyclists) will be via a new priority junction access point taken from Maddoxford lane; and the second access which is also taken from Maddoxford Lane will be restricted to Emergency Vehicle Only use.

This arrangement is shown in principle via Drawing CMP_01 Rev P6, which is included within the submitted TSN at Appendix A – Concept Layout.

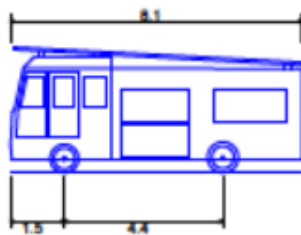
Further more detailed drawings have also been submitted within the TSN, which show:

- Junction dimensions, visibility splays and tracking movements for an appropriately sized refuse vehicle at the main entrance to the site (Drawing 2105890_A-ACE-XX-XX-DR-C-0101 Rev D); and
- Junction dimensions, visibility splays and tracking movements for a Fire Tender vehicle at the main entrance to the site (Drawing 2501890_A-ACE-XX-XX-DR-C-0102 Rev D)

Whilst these drawings are generally acceptable in principle, it should be noted by the applicants that:

- All moves tracking for vehicles anticipated to be entering and exiting the site, inclusive of two-way movements through the access in designated lanes for personal, refuse and emergency vehicles should be provided. Tracking should also be continued from the site access to Wallace Avenue to the west, demonstrating that the carriageway has adequate width for the passing of any two vehicles at any one time;
- The Fire Tender utilised in the tracking drawings is below the Hampshire standard at 7.334 x 2.286m, and this will need to be amended to the appropriately sized vehicle accordingly – 8.1 x 2.55m.

Fire Tender Tracking



HCC Fire Appliance (To be Used)

Overall Length	8.100m
Overall Width	2.550m
Overall Body Height	3.498m
Min Body Ground Clearance	0.383m
Max Track Width	2.400m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.750m

- How the emergency access will be retained as such, and not utilised by all vehicle traffic will need to be formalised in a future TA. Whilst it is noted at 5.8 of the TSN that lockable bollards are to be utilised, note of consultation with emergency services to ensure these meet their approval should also be provided.

- Visibility splay requirements should be informed (as outlined in the TSN at Section 5.3) by up to date speed surveys in accordance to HCC TG3 guidance <https://documents.hants.gov.uk/transport/TG3TechnicalGuidanceNote-StoppingSightDistancesandVisibilitySplays.pdf>. These splays should be taken from a central point of the proposed access set back 2.4 metres, with unobstructed splays stretching left and right to an end point touching the nearside kerb. Drawings should also show the full visibility splay length, and not just a portion of the splay length with annotated measurements;
- Visibility splays should also take into account the gradients of the raised embankment both left and right of the proposed access, given that it is understood that the field height is higher than the existing carriageway;
- The gradient of the access into the site will also need to be fully discussed in a future TA, demonstrating how it is appropriate for vehicles turning in and out of the site; and
- The provision of street lighting across the frontage of the site will need to be investigated, linking into the existing provision to the west to both highlight the site and its vehicle access points, as well as provided safety in order to fully promote sustainable travel to and from the site.

It is also noted that at the present time, the frontage of the development on Maddoxford Lane is subject to a National Speed 60mph limit, which changes to a 30mph limit approximately 20 metres to the west of the proposed access.

It may be prudent to investigate the changing of this, extending the site into a 30mph limit accordingly, given the change in characteristics that the development may have on Maddoxford Lane, depending on how visible the development may be from the highway.

Finally, the submission of a Stage 1 Road Safety Audit and Designers Response as part of a future TA, as outlined in Section 5.13 of the TSN, will be welcomed. This can also be utilised for the S278 process that will be required to implement the access junctions should planning be permitted.

PEDESTRIANS AND CYCLISTS:

With regard to the foot / cycleway provision proposed, again this would be acceptable in principle, with a route from the main access junction linking up with the existing provision on the northern side of Maddoxford Lane with appropriate matching widths provided. However, consideration of an additional length of foot / cycleway from the emergency access, heading west, should also be provided if this access were to be open for use by pedestrians and cyclists.

Finally, whilst it is acknowledged that no finalised internal site layout has been provided at this stage, it would be anticipated that this would provide

permeable links from the site to the west into the adjacent housing developments.

To the north, whilst there are two access points available, further links inclusive of the Public Right of Way shown on plans should be retained as shown. These should be available for linking into land north of Maddoxford Lane, should sites in this area come forward in future years – i.e. to the Maddoxford Farm area.

TRIP GENERATION & DISTRIBUTION:

Proposed trip rates have been outlined within the TSN, with consideration of previous applications that have come forward in recent times in the local vicinity. The trip rates proposed (as outlined in Tables 4.1 and 4.2) are acceptable and are deemed appropriately robust.

Committed developments are also listed for the local vicinity at Table 2.2 of the TSN, and these largely cover developments that are likely to have an impact in the local vicinity of the proposed site. However, whilst located approximately 3km to the north west of the site, it would also be requested that the One Horton Heath development also be included within the future Transport Assessment, given its quantum (2,400 dwellings and public amenities) and that there are junctions to be assessed that both developments will be utilising.

As outlined in the TSN, any unbuilt / unoccupied dwellings within these quantum's will also need to be added to any transport analysis work that is undertaken in a future TA. Figures will of course vary, and there is also potential that further development comes forward in the interim period.

In terms of distribution, the analysis and predicted results shown for this within the TSN are acceptable.

It would however be requested that a visual representation of the predicted distributions is provided to enable easier analysis, i.e. stick diagrams showing predicted development flows, existing flows, and combined flows. It would also be useful if these could show the % increases anticipated (existing to overall) again for ease of reference.

CAPACITY ASSESSMENTS:

As outlined, assuming an application comes forward at some point in 2025, then modelling for this year, and also the future year of 2036 (the EBC draft Local Plan period) should be provided. It would however be requested that a post 5 year application period is also modelled.

It is suggested within the TSN that the following junctions are modelled, given the additional level of vehicle flow anticipated to pass through accordingly, and this is acceptable:

1. Maddoxford Lane/Site Access

2. Maddoxford Lane/Wallace Avenue
3. Maddoxford Lane/Oatlands Road
4. Maddoxford Lane/Winchester Road
5. Oatlands Road/Winchester Road
6. Woodhouse Lane/Deer Park Avenue roundabout
7. Maypole Roundabout
8. A334/Locke Road roundabout
9. A334/Botley Road roundabout
10. A334/Tollbar Way roundabout

It would however be requested that the following junction is also modelled in addition to those outlined above:

12. Botley Road/Winchester Road/Snakemoor Lane/Bubb Lane roundabout.

Finally, in regard to the modelling software to be utilised, the utilisation of standard 'Junctions' software (ARCADY/PICADY) would be acceptable in this instance.

ACCIDENT DATA:

It is noted that 'CrashMap' accident data has been provided as part of the TSN for initial consideration. Whilst this data is useful and provides an element of detail, it would be requested that any future Transport Assessment utilises accident data provided by Hampshire Constabulary, which will also include full descriptive and analysis information. This data should be for a minimum of 5 years previous, and can be requested via the following email address:

Collision.records@hampshire.pnn.police.uk

INTERNAL SITE LAYOUT:

Whilst at this stage an internal site layout has not been provided, points to consider in the evolution of this would be:

- Visibility splays should conform to HCC standards, in line with TG3, set for a design speed of 20 mph, with unobstructed 2.4 x 25.0 metre visibility splays;
- Vehicle tracking should be provided showing how all anticipated vehicles manoeuvring around the site, with adequate passing space provided (personal, refuse and emergency vehicles);
- Refuge collection points should be shown where appropriate;

- Indicative street lighting design would be useful;
- Joined up pedestrian links should be clearly shown, along with (as outlined above) permeable links to the housing developments to the west, as well as to the north in order to reduce the need for elongated walks for residents; and
- Confirmation as to whether the site will be put forward for adoption by HCC would also be requested.

PARKING:

Whilst the quantum of parking will primarily be for the EBC Case Officer to assess, it is noted that reference to the correct parking standards is made within the TSN, being the EBC Parking Standards (2009), with further consideration to their draft standards should these come forward prior to the application being submitted.

Vehicle parking spaces should be fully shown on plans, with an additional 0.3m added to widths adjacent to vertical obstructions (walls / landscaping) recommended for ease of access. Any parallel bays utilised should also have an appropriate step out strip capable of providing access for wheelchair users.

Cycle parking sheds should also be shown on plans for plots without garages.

WCHAR:

It is proposed that a 'Walking, Cycling & Horse-Riding Assessment and Review (WCHAR) will be provided as part of the TA to be submitted. This would be welcomed, highlighting any missing elements of highway infrastructure.

However, given the size of the development proposal, it would be requested that the area of analysis (shown at figure 5.1) is extended to also include routes to the most local shops, being those in Boorley Green located on the corner of Winchester Road / Kingsman Drive, the most likely route to which would be along Maddoxford Lane and Winchester Road.

TRAVEL PLAN:

The submission of a Travel Plan is welcomed, and appropriate details in terms of the expected development of this can be found via the following web address -

<https://www.hants.gov.uk/transport/developers/travelplans/assessment>

It would be requested that the TP fully outlines how it will engage with the existing TP's in the local area, enabling full benefits to be realised by the future residents of the proposed development.

DEVELOPER CONTRIBUTIONS:

Developer contributions or implementation of highway works will likely be required to mitigate against the effects of development on the local highway

network, and these will be calculated based on the specific demands arising from the development.

Whilst justification will be provided for the contributions should the development proposals be permitted, it is likely at this stage that the contributions will go towards:

- Public Transport subsidisation and infrastructure improvements in the local area; and
- Pedestrian and cycle improvements in the local area.

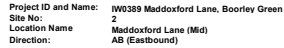
In addition to this, there may also be a request for a contribution towards Traffic Regulation Orders associated with the site. Details of this can be provided once the internal layout is known, along with confirmation as to whether the internal site roads and footways are to be put forward for adoption.

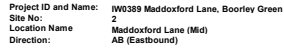
I trust that the above is useful and clarifies what is agreed, and what additional or updated information will be required as part of a future Transport Assessment to be submitted should the proposed development proceed to application. However, should you require any further information, please feel free to contact me.

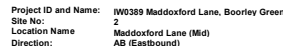
Yours faithfully,

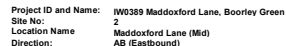
Matt Grantham
Principal Transport Planner - Highway Development Planning
Hampshire 2050

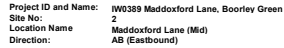
Appendix C
ATC – Survey Data

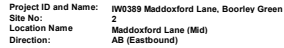
[illegible]

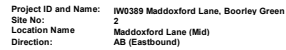


[illegible]

[illegible]

[illegible]



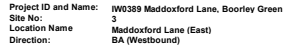
[illegible]

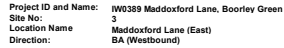
05 June 2025

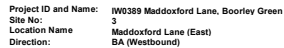
[illegible]

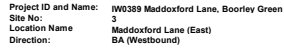


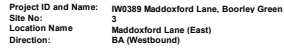
07-19	1184	1045	6	111	1	1	0	2	0	0	0	0	9	9	29.2	33.9	0	8	3	20	171	512	335	104	25	3	3	0	0	0	0	0	470
06-22	1327	1178	6	118	1	1	0	2	0	0	0	0	11	10	29.3	34.1	0	8	3	24	188	552	394	124	27	4	3	0	0	0	0	0	552
06-00	1354	1204	6	119	1	1	0	2	0	0	0	0	11	10	29.3	34.1	0	8	3	24	190	561	405	128	28	4	3	0	0	0	0	0	568
00-00	1365	1211	6	123	1	1	0	2	0	0	0	0	11	10	29.4	34.2	0	8	3	24	190	566	406	130	29	4	3	0	0	0	0	0	574





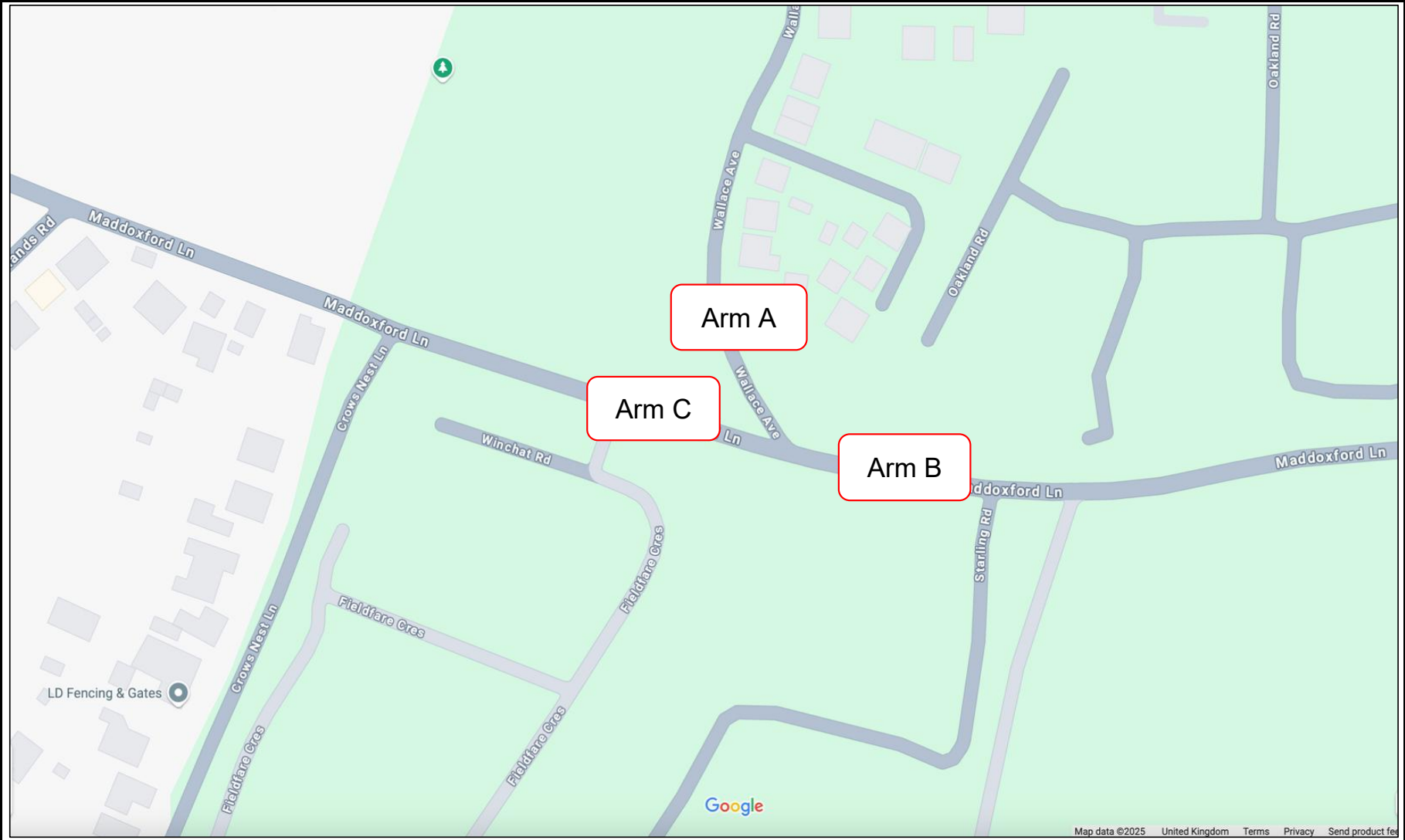






Appendix D
Turning Counts – Survey Data

Job ID	Project Name	Site Location	Google Coordinates	Survey Date	Survey Day	Survey Timings	Weather AM	Weather PM
IW0405	Maddoxford Lane, Botley	Maddoxford Lane / Wallace Avenue	50.926889, -1.272925	24/06/2025	Tuesday	0730-0930 and 1630-1830hrs	Dry	Sunny Intervals





Survey Date: 24/06/2025

A - 6-12 months intervals													A - 6-12 months intervals																				
TIME PERIOD	Cap		Lev	OCC1	OCC2	PERCENTAGE	BAC	PAC	Total	RGR1	TIME PERIOD		Cap	Lev	OCC1	OCC2	PERCENTAGE	BAC	PAC	Total	RGR1	TIME PERIOD		Cap	Lev	OCC1	OCC2	PERCENTAGE	BAC	PAC	Total	RGR1	
	2017	2018									2017	2018										2017	2018										2017
10/01/2017 - 09/30/2018	0	0	0	0	0	0	0	0	0	0	10/01/2017 - 09/30/2018	0	0	0	0	0	0	0	0	0	0	10/01/2017 - 09/30/2018	0	0	0	0	0	0	0	0	0	0	0
10/01/2018 - 09/30/2019	0	0	0	0	0	0	0	0	0	0	10/01/2018 - 09/30/2019	0	0	0	0	0	0	0	0	0	0	10/01/2018 - 09/30/2019	0	0	0	0	0	0	0	0	0	0	0
10/01/2019 - 09/30/2020	0	0	0	0	0	0	0	0	0	0	10/01/2019 - 09/30/2020	0	0	0	0	0	0	0	0	0	0	10/01/2019 - 09/30/2020	0	0	0	0	0	0	0	0	0	0	0
10/01/2020 - 09/30/2021	0	0	0	0	0	0	0	0	0	0	10/01/2020 - 09/30/2021	0	0	0	0	0	0	0	0	0	0	10/01/2020 - 09/30/2021	0	0	0	0	0	0	0	0	0	0	0
10/01/2021 - 09/30/2022	0	0	0	0	0	0	0	0	0	0	10/01/2021 - 09/30/2022	0	0	0	0	0	0	0	0	0	0	10/01/2021 - 09/30/2022	0	0	0	0	0	0	0	0	0	0	0
10/01/2022 - 09/30/2023	0	0	0	0	0	0	0	0	0	0	10/01/2022 - 09/30/2023	0	0	0	0	0	0	0	0	0	0	10/01/2022 - 09/30/2023	0	0	0	0	0	0	0	0	0	0	0
10/01/2023 - 09/30/2024	0	0	0	0	0	0	0	0	0	0	10/01/2023 - 09/30/2024	0	0	0	0	0	0	0	0	0	0	10/01/2023 - 09/30/2024	0	0	0	0	0	0	0	0	0	0	0
10/01/2024 - 09/30/2025	0	0	0	0	0	0	0	0	0	0	10/01/2024 - 09/30/2025	0	0	0	0	0	0	0	0	0	0	10/01/2024 - 09/30/2025	0	0	0	0	0	0	0	0	0	0	0
10/01/2025 - 09/30/2026	0	0	0	0	0	0	0	0	0	0	10/01/2025 - 09/30/2026	0	0	0	0	0	0	0	0	0	0	10/01/2025 - 09/30/2026	0	0	0	0	0	0	0	0	0	0	0
10/01/2026 - 09/30/2027	0	0	0	0	0	0	0	0	0	0	10/01/2026 - 09/30/2027	0	0	0	0	0	0	0	0	0	0	10/01/2026 - 09/30/2027	0	0	0	0	0	0	0	0	0	0	0
10/01/2027 - 09/30/2028	0	0	0	0	0	0	0	0	0	0	10/01/2027 - 09/30/2028	0	0	0	0	0	0	0	0	0	0	10/01/2027 - 09/30/2028	0	0	0	0	0	0	0	0	0	0	0
10/01/2028 - 09/30/2029	0	0	0	0	0	0	0	0	0	0	10/01/2028 - 09/30/2029	0	0	0	0	0	0	0	0	0	0	10/01/2028 - 09/30/2029	0	0	0	0	0	0	0	0	0	0	0
10/01/2029 - 09/30/2030	0	0	0	0	0	0	0	0	0	0	10/01/2029 - 09/30/2030	0	0	0	0	0	0	0	0	0	0	10/01/2029 - 09/30/2030	0	0	0	0	0	0	0	0	0	0	0
10/01/2030 - 09/30/2031	0	0	0	0	0	0	0	0	0	0	10/01/2030 - 09/30/2031	0	0	0	0	0	0	0	0	0	0	10/01/2030 - 09/30/2031	0	0	0	0	0	0	0	0	0	0	0
10/01/2031 - 09/30/2032	0	0	0	0	0	0	0	0	0	0	10/01/2031 - 09/30/2032	0	0	0	0	0	0	0	0	0	0	10/01/2031 - 09/30/2032	0	0	0	0	0	0	0	0	0	0	0
10/01/2032 - 09/30/2033	0	0	0	0	0	0	0	0	0	0	10/01/2032 - 09/30/2033	0	0	0	0	0	0	0	0	0	0	10/01/2032 - 09/30/2033	0	0	0	0	0	0	0	0	0	0	0
10/01/2033 - 09/30/2034	0	0	0	0	0	0	0	0	0	0	10/01/2033 - 09/30/2034	0	0	0	0	0	0	0	0	0	0	10/01/2033 - 09/30/2034	0	0	0	0	0	0	0	0	0	0	0
10/01/2034 - 09/30/2035	0	0	0	0	0	0	0	0	0	0	10/01/2034 - 09/30/2035	0	0	0	0	0	0	0	0	0	0	10/01/2034 - 09/30/2035	0	0	0	0	0	0	0	0	0	0	0
10/01/2035 - 09/30/2036	0	0	0	0	0	0	0	0	0	0	10/01/2035 - 09/30/2036	0	0	0	0	0	0	0	0	0	0	10/01/2035 - 09/30/2036	0	0	0	0	0	0	0	0	0	0	0
10/01/2036 - 09/30/2037	0	0	0	0	0	0	0	0	0	0	10/01/2036 - 09/30/2037	0	0	0	0	0	0	0	0	0	0	10/01/2036 - 09/30/2037	0	0	0	0	0	0	0	0	0	0	0
10/01/2037 - 09/30/2038	0	0	0	0	0	0	0	0	0	0	10/01/2037 - 09/30/2038	0	0	0	0	0	0	0	0	0	0	10/01/2037 - 09/30/2038	0	0	0	0	0	0	0	0	0	0	0
10/01/2038 - 09/30/2039	0	0	0	0	0	0	0	0	0	0	10/01/2038 - 09/30/2039	0	0	0	0	0	0	0	0	0	0	10/01/2038 - 09/30/2039	0	0	0	0	0	0	0	0	0	0	0
10/01/2039 - 09/30/2040	0	0	0	0	0	0	0	0	0	0	10/01/2039 - 09/30/2040	0	0	0	0	0	0	0	0	0	0	10/01/2039 - 09/30/2040	0	0	0	0	0	0	0	0	0	0	0
10/01/2040 - 09/30/2041	0	0	0	0	0	0	0	0	0	0	10/01/2040 - 09/30/2041	0	0	0	0	0	0	0	0	0	0	10/01/2040 - 09/30/2041	0	0	0	0	0	0	0	0	0	0	0
10/01/2041 - 09/30/2042	0	0	0	0	0	0	0	0	0	0	10/01/2041 - 09/30/2042	0	0	0	0	0	0	0	0	0	0	10/01/2041 - 09/30/2042	0	0	0	0	0	0	0	0	0	0	0
10/01/2042 - 09/30/2043	0	0	0	0	0	0	0	0	0	0	10/01/2042 - 09/30/2043	0	0	0	0	0	0	0	0	0	0	10/01/2042 - 09/30/2043	0	0	0	0	0	0	0	0	0	0	0
10/01/2043 - 09/30/2044	0	0	0	0	0	0	0	0	0	0	10/01/2043 - 09/30/2044	0	0	0	0	0	0	0	0	0	0	10/01/2043 - 09/30/2044	0	0	0	0	0	0	0	0	0	0	0
10/01/2044 - 09/30/2045	0	0	0	0	0	0	0	0	0	0	10/01/2044 - 09/30/2045	0	0	0	0	0	0	0	0	0	0	10/01/2044 - 09/30/2045	0	0	0	0	0	0	0	0	0	0	0
10/01/2045 - 09/30/2046	0	0	0	0	0	0	0	0	0	0	10/01/2045 - 09/30/2046	0	0	0	0	0	0	0	0	0	0	10/01/2045 - 09/30/2046	0	0	0	0	0	0	0	0	0	0	0
10/01/2046 - 09/30/2047	0	0	0	0	0	0	0	0	0	0	10/01/2046 - 09/30/2047	0	0	0	0	0	0	0	0	0	0	10/01/2046 - 09/30/2047	0	0	0	0	0	0	0	0	0	0	0
10/01/2047 - 09/30/2048	0	0	0	0	0	0	0	0	0	0	10/01/2047 - 09/30/2048	0	0	0	0	0	0	0	0	0	0	10/01/2047 - 09/30/2048	0	0	0	0	0	0	0	0	0	0	0
10/01/2048 - 09/30/2049	0	0	0	0	0	0	0	0	0	0	10/01/2048 - 09/30/2049	0	0	0	0	0	0	0	0	0	0	10/01/2048 - 09/30/2049	0	0	0	0	0	0	0	0	0	0	0
10/01/2049 - 09/30/2050	0	0	0	0	0	0	0	0	0	0	10/01/2049 - 09/30/2050	0	0	0	0	0	0	0	0	0	0	10/01/2049 - 09/30/2050	0	0	0	0	0	0	0	0	0	0	0
10/01/2050 - 09/30/2051	0	0	0	0	0	0	0	0	0	0	10/01/2050 - 09/30/2051	0	0	0	0	0	0	0	0	0	0	10/01/2050 - 09/30/2051	0	0	0	0	0	0	0	0	0	0	0
10/01/2051 - 09/30/2052	0	0	0	0	0	0	0	0	0	0	10/01/2051 - 09/30/2052	0	0	0	0	0	0	0	0	0	0	10/01/2051 - 09/30/2052	0	0	0	0	0	0	0	0	0	0	0
10/01/2052 - 09/30/2053	0	0	0	0	0	0	0	0	0	0	10/01/2052 - 09/30/2053	0	0	0	0	0	0	0	0	0	0	10/01/2052 - 09/30/2053	0	0	0	0	0	0	0	0	0	0	0
10/01/2053 - 09/30/2054	0	0	0	0	0	0	0	0	0	0	10/01/2053 - 09/30/2054	0	0	0	0	0	0	0	0	0	0	10/01/2053 - 09/30/2054	0	0	0	0	0	0	0	0	0	0	0
10/01/2054 - 09/30/2055	0	0	0	0	0	0	0	0	0	0	10/01/2054 - 09/30/2055	0	0	0	0	0	0	0	0	0	0	10/01/2054 - 09/30/2055	0	0	0	0	0	0	0	0	0	0	0
10/01/2055 - 09/30/2056	0	0	0	0	0	0	0	0	0	0	10/01/2055 - 09/30/2056	0	0	0	0	0	0	0	0	0	0	10/01/2055 - 09/30/2056	0	0	0	0	0	0	0	0	0	0	0
10/01/2056 - 09/30/2057	0	0	0	0	0	0	0	0	0	0	10/01/2056 - 09/30/2057	0	0	0	0	0	0	0	0	0	0	10/01/2056 - 09/30/2057	0	0	0	0	0	0	0	0	0	0	0
10/01/2057 - 09/30/2058	0	0	0	0	0	0	0	0	0	0	10/01/2057 - 09/30/2058	0	0	0	0	0	0	0	0	0	0	10/01/2057 - 09/30/2058	0	0	0	0	0	0	0	0	0	0	0
10/01/2058 - 09/30/2059	0	0	0	0	0	0	0	0	0	0	10/01/2058 - 09/30/2059	0	0	0	0	0	0	0	0	0	0	10/01/2058 - 09/30/2059	0	0	0	0	0	0	0	0	0	0	0
10/01/2059 - 09/30/2060	0	0	0	0	0	0	0	0	0	0	10/01/2059 - 09/30/2060	0	0	0	0	0	0	0	0	0	0	10/01/2059 - 09/30/2060	0	0	0	0	0	0	0	0	0	0	0
10/01/2060 - 09/30/2061	0	0	0	0	0	0	0	0	0	0	10/01/2060 - 09/30/2061	0	0	0	0	0	0	0	0	0	0	10/01/2060 - 09/30/2061	0	0	0	0	0	0	0	0	0	0	0
10/01/2061 - 09/30/2062																																	

[illegible]

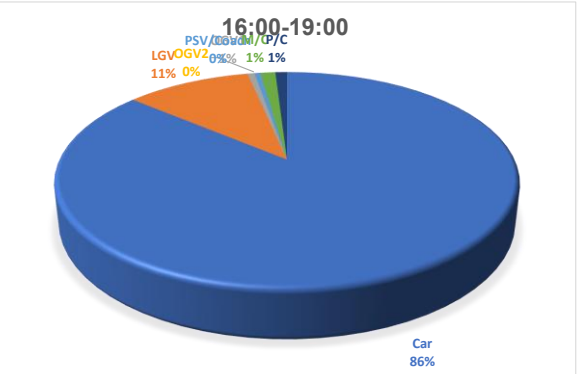
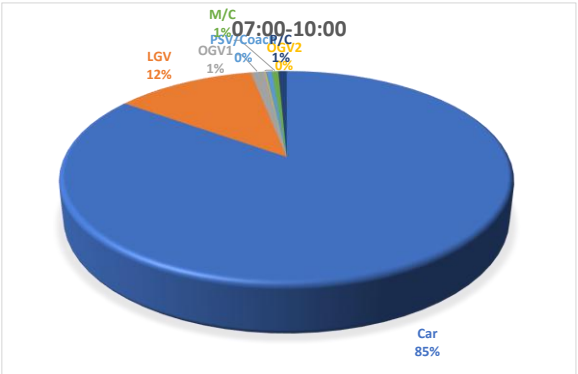
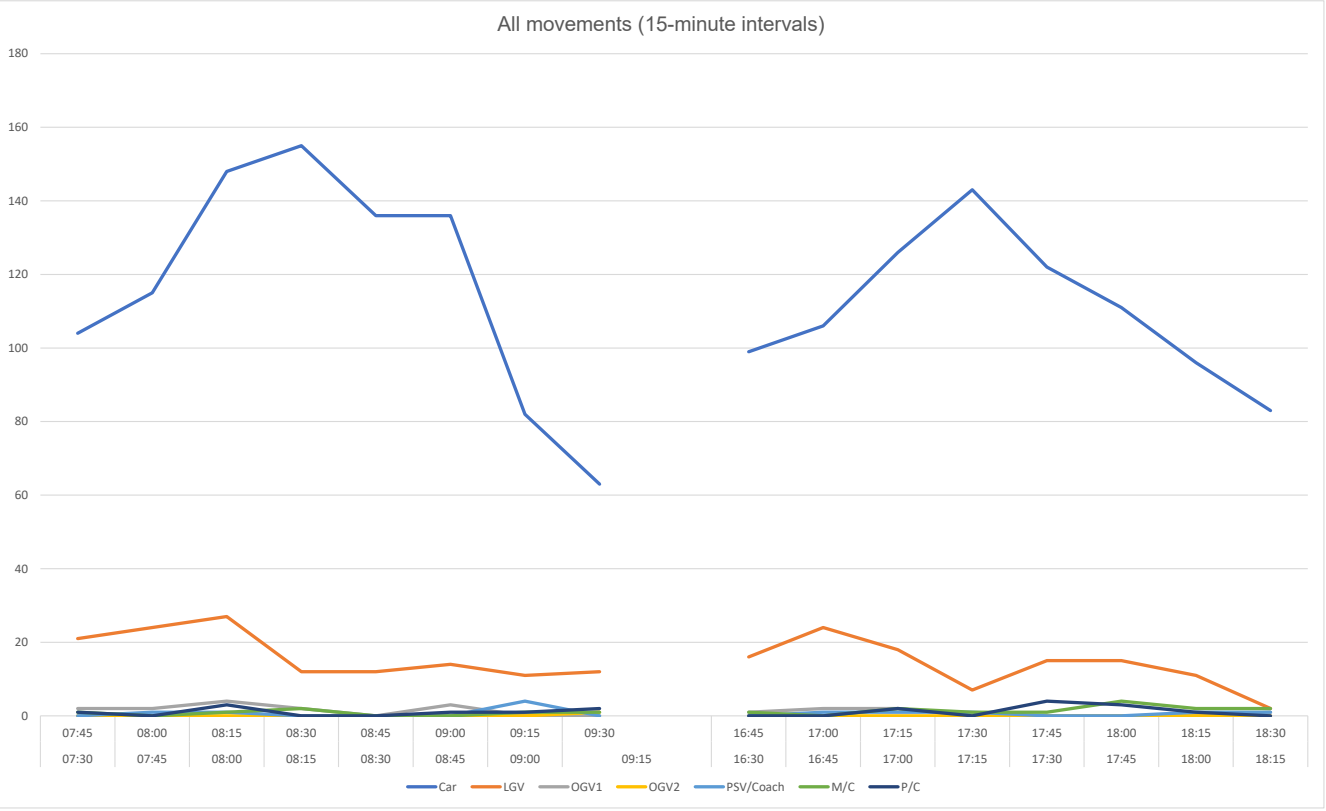
[illegible]

Ann A - Easy (10-minute responses)										Ann B - Easy (10-minute responses)										Ann C - Easy (10-minute responses)										Ann D - Easy (10-minute responses)										
Year	Age	Sex	Lat	Long	DDY1	DDY2	PERIOD	MO	Pc	Year	Age	Sex	Lat	Long	DDY1	DDY2	PERIOD	MO	Pc	Year	Age	Sex	Lat	Long	DDY1	DDY2	PERIOD	MO	Pc	Year	Age	Sex	Lat	Long	DDY1	DDY2	PERIOD	MO	Pc	
2010	10.0	M	1	1	1	1	1	1	1	2010	10.0	M	1	1	1	1	1	1	1	1	2010	10.0	M	1	1	1	1	1	1	1	2010	10.0	M	1	1	1	1	1	1	1
2011	10.1	M	1	1	1	1	1	1	1	2011	10.1	M	1	1	1	1	1	1	1	1	2011	10.1	M	1	1	1	1	1	1	1	2011	10.1	M	1	1	1	1	1	1	1
2012	10.2	M	1	1	1	1	1	1	1	2012	10.2	M	1	1	1	1	1	1	1	1	2012	10.2	M	1	1	1	1	1	1	1	2012	10.2	M	1	1	1	1	1	1	1
2013	10.3	M	1	1	1	1	1	1	1	2013	10.3	M	1	1	1	1	1	1	1	1	2013	10.3	M	1	1	1	1	1	1	1	2013	10.3	M	1	1	1	1	1	1	1
2014	10.4	M	1	1	1	1	1	1	1	2014	10.4	M	1	1	1	1	1	1	1	1	2014	10.4	M	1	1	1	1	1	1	1	2014	10.4	M	1	1	1	1	1	1	1
2015	10.5	M	1	1	1	1	1	1	1	2015	10.5	M	1	1	1	1	1	1	1	1	2015	10.5	M	1	1	1	1	1	1	1	2015	10.5	M	1	1	1	1	1	1	1
2016	10.6	M	1	1	1	1	1	1	1	2016	10.6	M	1	1	1	1	1	1	1	1	2016	10.6	M	1	1	1	1	1	1	1	2016	10.6	M	1	1	1	1	1	1	1
2017	10.7	M	1	1	1	1	1	1	1	2017	10.7	M	1	1	1	1	1	1	1	1	2017	10.7	M	1	1	1	1	1	1	1	2017	10.7	M	1	1	1	1	1	1	1
2018	10.8	M	1	1	1	1	1	1	1	2018	10.8	M	1	1	1	1	1	1	1	1	2018	10.8	M	1	1	1	1	1	1	1	2018	10.8	M	1	1	1	1	1	1	1
2019	10.9	M	1	1	1	1	1	1	1	2019	10.9	M	1	1	1	1	1	1	1	1	2019	10.9	M	1	1	1	1	1	1	1	2019	10.9	M	1	1	1	1	1	1	1
2020	11.0	M	1	1	1	1	1	1	1	2020	11.0	M	1	1	1	1	1	1	1	1	2020	11.0	M	1	1	1	1	1	1	1	2020	11.0	M	1	1	1	1	1	1	1
2021	11.1	M	1	1	1	1	1	1	1	2021	11.1	M	1	1	1	1	1	1	1	1	2021	11.1	M	1	1	1	1	1	1	1	2021	11.1	M	1	1	1	1	1	1	1
2022	11.2	M	1	1	1	1	1	1	1	2022	11.2	M	1	1	1	1	1	1	1	1	2022	11.2	M	1	1	1	1	1	1	1	2022	11.2	M	1	1	1	1	1	1	1
2023	11.3	M	1	1	1	1	1	1	1	2023	11.3	M	1	1	1	1	1	1	1	1	2023	11.3	M	1	1	1	1	1	1	1	2023	11.3	M	1	1	1	1	1	1	1
2024	11.4	M	1	1	1	1	1	1	1	2024	11.4	M	1	1	1	1	1	1	1	1	2024	11.4	M	1	1	1	1	1	1	1	2024	11.4	M	1	1	1	1	1	1	1
2025	11.5	M	1	1	1	1	1	1	1	2025	11.5	M	1	1	1	1	1	1	1	1	2025	11.5	M	1	1	1	1	1	1	1	2025	11.5	M	1	1	1	1	1	1	1
2026	11.6	M	1	1	1	1	1	1	1	2026	11.6	M	1	1	1	1	1	1	1	1	2026	11.6	M	1	1	1	1	1	1	1	2026	11.6	M	1	1	1	1	1	1	1
2027	11.7	M	1	1	1	1	1	1	1	2027	11.7	M	1	1	1	1	1	1	1	1	2027	11.7	M	1	1	1	1	1	1	1	2027	11.7	M	1	1	1	1	1	1	1
2028	11.8	M	1	1	1	1	1	1	1	2028	11.8	M	1	1	1	1	1	1	1	1	2028	11.8	M	1	1	1	1	1	1	1	2028	11.8	M	1	1	1	1	1	1	1
2029	11.9	M	1	1	1	1	1	1	1	2029	11.9	M	1	1	1	1	1	1	1	1	2029	11.9	M	1	1	1	1	1	1	1	2029	11.9	M	1	1	1	1	1	1	1
2030	12.0	M	1	1	1	1	1	1	1	2030	12.0	M	1	1	1	1	1	1	1	1	2030	12.0	M	1	1	1	1	1	1	1	2030	12.0	M	1	1	1	1	1	1	1
2031	12.1	M	1	1	1	1	1	1	1	2031	12.1	M	1	1	1	1	1	1	1	1	2031	12.1	M	1	1	1	1	1	1	1	2031	12.1	M	1	1	1	1	1	1	1
2032	12.2	M	1	1	1	1	1	1	1	2032	12.2	M	1	1	1	1	1	1	1	1	2032	12.2	M	1	1	1	1	1	1	1	2032	12.2	M	1	1	1	1	1	1	1
2033	12.3	M	1	1	1	1	1	1	1	2033	12.3	M	1	1	1	1	1	1	1	1	2033	12.3	M	1	1	1	1	1	1	1	2033	12.3	M	1	1	1	1	1	1	1
2034	12.4	M	1	1	1	1	1	1	1	2034	12.4	M	1	1	1	1	1	1	1	1	2034	12.4	M	1	1	1	1	1	1	1	2034	12.4	M	1	1	1	1	1	1	1
2035	12.5	M	1	1	1	1	1	1	1	2035	12.5	M	1	1	1	1	1	1	1	1	2035	12.5	M	1	1	1	1	1	1	1	2035	12.5	M	1	1	1	1	1	1	1
2036	12.6	M	1	1	1	1	1	1	1	2036	12.6	M	1	1	1	1	1	1	1	1	2036	12.6	M	1	1	1	1	1	1	1	2036	12.6	M	1	1	1	1	1	1	1
2037	12.7	M	1	1	1	1	1	1	1	2037	12.7	M	1	1	1	1	1	1	1	1	2037	12.7	M	1	1	1	1	1	1	1	2037	12.7	M	1	1	1	1	1	1	1
2038	12.8	M	1	1	1	1	1	1	1	2038	12.8	M	1	1	1	1	1	1	1	1	2038	12.8	M	1	1	1	1	1	1	1	2038	12.8	M	1	1	1	1	1	1	1
2039	12.9	M	1	1	1	1	1	1	1	2039	12.9	M	1	1	1	1	1	1	1	1	2039	12.9	M	1	1	1	1	1	1	1	2039	12.9	M	1	1	1	1	1	1	1
2040	13.0	M	1	1	1	1	1	1	1	2040	13.0	M	1	1	1	1	1	1	1	1	2040	13.0	M	1	1	1	1	1	1	1	2040	13.0	M	1	1	1	1	1	1	1
2041	13.1	M	1	1	1	1	1	1	1	2041	13.1	M	1	1	1	1	1	1	1	1	2041	13.1	M	1	1	1	1	1	1	1	2041	13.1	M	1	1	1	1	1	1	1
2042	13.2	M	1	1	1	1	1	1	1	2042	13.2	M	1	1	1	1	1	1	1	1	2042	13.2	M	1	1	1	1	1	1	1	2042	13.2	M	1	1	1	1	1	1	1
2043	13.3	M	1	1	1	1	1	1	1	2043	13.3	M	1	1	1	1	1	1	1	1	2043	13.3	M	1	1	1	1	1	1	1	2043	13.3	M	1	1	1	1	1	1	1
2044	13.4	M	1	1	1	1	1	1	1	2044	13.4	M	1	1	1	1	1	1	1	1	2044	13.4	M	1	1	1	1	1	1	1	2044	13.4	M	1	1	1	1	1	1	1
2045	13.5	M	1	1	1	1	1	1	1	2045	13.5	M	1	1	1	1	1	1	1	1	2045	13.5	M	1	1	1	1	1	1	1	2045	13.5	M	1	1	1	1	1	1	1
2046	13.6	M	1	1	1	1	1	1	1	2046	13.6	M	1	1	1	1	1	1	1	1	2046	13.6	M	1	1	1	1	1	1	1	2046	13.6	M	1	1	1	1	1	1	1
2047	13.7	M	1	1	1	1	1	1	1	2047	13.7	M	1	1	1	1	1	1	1	1	2047	13.7	M	1	1	1	1	1	1	1	2047	13.7	M	1	1	1	1	1	1	1
2048	13.8	M	1	1	1	1	1	1	1	2048	13.8	M	1	1	1	1	1	1	1	1	2048	13.8	M	1	1	1	1	1	1	1	2048	13.8	M	1	1	1	1	1	1	1
2049	13.9	M	1	1	1	1	1	1	1	2049	13.9	M	1	1	1	1	1	1	1	1	2049	13.9	M	1	1	1	1	1	1	1	2049	13.9	M	1	1	1	1	1	1	1
2050	14.0	M	1	1	1	1	1	1	1	2050	14.0	M	1	1	1	1	1	1	1	1	2050	14.0	M	1	1	1	1	1	1	1	2050	14.0	M	1	1	1	1	1	1	1
2051	14.1	M	1	1	1	1	1	1	1	2051	14.1	M	1	1	1	1	1	1	1	1	2051	14.1	M	1	1	1	1	1	1	1	2051	14.1	M	1	1	1	1	1	1	1
2052	14.2	M	1	1	1	1	1	1	1	2052	14.2	M	1	1	1	1	1	1	1	1	2052	14.2	M	1	1	1	1	1	1	1	2052	14.2	M	1	1	1	1	1	1	1
2053	14.3	M	1	1	1	1	1	1	1	2053	14.3	M	1	1	1	1	1	1	1	1	2053	14.3	M	1	1	1	1	1	1	1	2053	14.3	M	1	1	1	1	1	1	1
2054	14.4	M	1	1	1	1	1	1	1	2054	14.4	M	1	1	1	1	1	1	1	1	2054	14.4	M																	



Project ID and Name: W0007 Marshfield Lane, Boleyn
Job/Job Name: Marshfield Lane Traffic Survey
Survey Date: 24/06/2025
Survey Time: 10:00am

Time Interval		All Approaches (15-minute intervals)										Total	PDF
Start	End	East	West	South	North	East	West	South	North	East	West	Total	PDF
07:30	07:45	120	20	2	2	1	1	1	1	1	1	126	12.6
07:45	08:00	115	20	2	2	1	1	1	1	1	1	123	12.3
08:00	08:15	110	20	2	2	1	1	1	1	1	1	118	11.8
08:15	08:30	105	20	2	2	1	1	1	1	1	1	112	11.2
08:30	08:45	100	20	2	2	1	1	1	1	1	1	107	10.7
08:45	09:00	95	20	2	2	1	1	1	1	1	1	103	10.3
09:00	09:15	90	20	2	2	1	1	1	1	1	1	98	9.8
09:15	09:30	85	20	2	2	1	1	1	1	1	1	93	9.3
09:30	09:45	80	20	2	2	1	1	1	1	1	1	88	8.8
09:45	10:00	75	20	2	2	1	1	1	1	1	1	83	8.3
10:00	10:15	70	20	2	2	1	1	1	1	1	1	78	7.8
10:15	10:30	65	20	2	2	1	1	1	1	1	1	73	7.3
10:30	10:45	60	20	2	2	1	1	1	1	1	1	68	6.8
10:45	11:00	55	20	2	2	1	1	1	1	1	1	63	6.3
11:00	11:15	50	20	2	2	1	1	1	1	1	1	58	5.8
11:15	11:30	45	20	2	2	1	1	1	1	1	1	53	5.3
11:30	11:45	40	20	2	2	1	1	1	1	1	1	48	4.8
11:45	12:00	35	20	2	2	1	1	1	1	1	1	43	4.3
12:00	12:15	30	20	2	2	1	1	1	1	1	1	38	3.8
12:15	12:30	25	20	2	2	1	1	1	1	1	1	33	3.3
12:30	12:45	20	20	2	2	1	1	1	1	1	1	28	2.8
12:45	13:00	15	20	2	2	1	1	1	1	1	1	23	2.3
13:00	13:15	10	20	2	2	1	1	1	1	1	1	18	1.8
13:15	13:30	5	20	2	2	1	1	1	1	1	1	13	1.3
13:30	13:45	0	20	2	2	1	1	1	1	1	1	8	0.8
13:45	14:00	0	20	2	2	1	1	1	1	1	1	3	0.3
14:00	14:15	0	20	2	2	1	1	1	1	1	1	0	0
14:15	14:30	0	20	2	2	1	1	1	1	1	1	0	0
14:30	14:45	0	20	2	2	1	1	1	1	1	1	0	0
14:45	15:00	0	20	2	2	1	1	1	1	1	1	0	0
15:00	15:15	0	20	2	2	1	1	1	1	1	1	0	0
15:15	15:30	0	20	2	2	1	1	1	1	1	1	0	0
15:30	15:45	0	20	2	2	1	1	1	1	1	1	0	0
15:45	16:00	0	20	2	2	1	1	1	1	1	1	0	0
16:00	16:15	0	20	2	2	1	1	1	1	1	1	0	0
16:15	16:30	0	20	2	2	1	1	1	1	1	1	0	0
16:30	16:45	0	20	2	2	1	1	1	1	1	1	0	0
16:45	17:00	0	20	2	2	1	1	1	1	1	1	0	0
17:00	17:15	0	20	2	2	1	1	1	1	1	1	0	0
17:15	17:30	0	20	2	2	1	1	1	1	1	1	0	0
17:30	17:45	0	20	2	2	1	1	1	1	1	1	0	0
17:45	18:00	0	20	2	2	1	1	1	1	1	1	0	0
18:00	18:15	0	20	2	2	1	1	1	1	1	1	0	0
18:15	18:30	0	20	2	2	1	1	1	1	1	1	0	0
18:30	18:45	0	20	2	2	1	1	1	1	1	1	0	0
18:45	19:00	0	20	2	2	1	1	1	1	1	1	0	0
19:00	19:15	0	20	2	2	1	1	1	1	1	1	0	0
19:15	19:30	0	20	2	2	1	1	1	1	1	1	0	0
19:30	19:45	0	20	2	2	1	1	1	1	1	1	0	0
19:45	20:00	0	20	2	2	1	1	1	1	1	1	0	0
20:00	20:15	0	20	2	2	1	1	1	1	1	1	0	0
20:15	20:30	0	20	2	2	1	1	1	1	1	1	0	0
20:30	20:45	0	20	2	2	1	1	1	1	1	1	0	0
20:45	21:00	0	20	2	2	1	1	1	1	1	1	0	0
21:00	21:15	0	20	2	2	1	1	1	1	1	1	0	0
21:15	21:30	0	20	2	2	1	1	1	1	1	1	0	0
21:30	21:45	0	20	2	2	1	1	1	1	1	1	0	0
21:45	22:00	0	20	2	2	1	1	1	1	1	1	0	0
22:00	22:15	0	20	2	2	1	1	1	1	1	1	0	0
22:15	22:30	0	20	2	2	1	1	1	1	1	1	0	0
22:30	22:45	0	20	2	2	1	1	1	1	1	1	0	0
22:45	23:00	0	20	2	2	1	1	1	1	1	1	0	0
23:00	23:15	0	20	2	2	1	1	1	1	1	1	0	0
23:15	23:30	0	20	2	2	1	1	1	1	1	1	0	0
23:30	23:45	0	20	2	2	1	1	1	1	1	1	0	0
23:45	00:00	0	20	2	2	1	1	1	1	1	1	0	0
00:00	00:15	0	20	2	2	1	1	1	1	1	1	0	0
00:15	00:30	0	20	2	2	1	1	1	1	1	1	0	0
00:30	00:45	0	20	2	2	1	1	1	1	1	1	0	0
00:45	01:00	0	20	2	2	1	1	1	1	1	1	0	0
01:00	01:15	0	20	2	2	1	1	1	1	1	1	0	0
01:15	01:30	0	20	2	2	1	1	1	1	1	1	0	0
01:30	01:45	0	20	2	2	1	1	1	1	1	1	0	0
01:45	02:00	0	20	2	2	1	1	1	1	1	1	0	0
02:00	02:15	0	20	2	2	1	1	1	1	1	1	0	0
02:15	02:30	0	20	2	2	1	1	1	1	1	1	0	0
02:30	02:45	0	20	2	2	1	1	1	1	1	1	0	0
02:45	03:00	0	20	2	2	1	1	1	1	1	1	0	0
03:00	03:15	0	20	2	2	1	1	1	1	1	1	0	0
03:15	03:30	0	20	2	2	1	1	1	1	1	1	0	0
03:30	03:45	0	20	2	2	1	1	1	1	1	1	0	0
03:45	04:00	0	20	2	2	1	1	1	1	1	1	0	0
04:00	04:15	0	20	2	2	1	1	1	1	1	1	0	0
04:15	04:30	0	20	2	2	1	1	1	1	1	1	0	0
04:30	04:45	0	20	2	2	1	1	1	1	1	1	0	0
04:45	05:00	0	20	2	2	1	1	1	1	1	1	0	0
05:00	05:15	0	20	2	2	1	1	1	1	1	1	0	0
05:15	05:30	0	20	2	2	1	1	1	1	1	1	0	0
05:30	05:45	0	20	2	2	1	1	1	1	1	1	0	0
05:45	06:00	0	20	2	2	1	1	1	1	1	1	0	0
06:00	06:15	0	20	2	2	1	1	1	1	1	1	0	0
06:15	06:30	0	20	2	2	1	1	1	1	1	1	0	0
06:30	06:45	0	20	2	2	1	1	1	1	1	1	0	0
06:45	07:00	0	20	2	2	1	1	1	1	1	1	0	0
07:00	07:15	0	20	2	2	1	1	1	1	1	1	0	0
07:15	07:30	0	20	2	2	1	1	1	1	1	1	0	0
07:30	07:45	0	20	2	2	1	1	1	1	1	1	0	0
07:45	08:00	0	20	2	2	1	1	1	1	1	1	0	0
08:00	08:15	0	20	2	2	1	1	1	1	1	1	0	0
08:15	08:30	0	20	2	2	1	1	1	1	1	1	0	0
08:30	08:45	0	20	2	2	1	1	1	1	1	1	0	0
08:45	09:00	0	20	2	2	1	1	1	1	1	1	0	0
09:00	09:15	0	20	2	2	1	1	1	1	1	1	0	0
09:15	09:30	0	20	2	2	1	1	1	1	1	1	0	0
09:30	09:45	0	20	2	2	1	1	1	1	1	1	0	0
09:45	10:00	0	20	2	2	1	1	1	1	1	1	0	0
10:00	10:15	0	20	2	2	1	1	1	1	1	1	0	0
10:15	10:30	0	20	2	2	1	1	1	1	1	1	0	0
10:30	10:45	0	20	2	2	1	1	1	1	1	1	0	0
10:45	11:00	0	20	2	2	1	1	1	1	1	1	0	0
11:00	11:15	0	20	2	2	1	1	1	1	1	1	0	0
11:15	11:30	0	20	2	2	1	1	1	1	1	1	0	0
11:30	11:45	0	20	2	2	1	1	1	1	1	1	0	0
11:45	12:00	0	20	2	2	1	1	1	1	1	1	0	0
12:00	12:15	0	20	2	2	1	1	1	1	1	1	0	0
12:15	12:30	0	20	2	2	1	1	1	1	1	1	0	0
12:30	12:45	0	20	2	2	1	1	1	1	1	1	0	0
12:45	13:00	0	20	2	2	1	1	1	1	1	1	0	0
13:00	13:15	0	20	2	2	1	1	1	1	1	1	0	0
13:15	13:30	0	20	2	2	1	1	1	1	1	1	0	0
13:30	13:45	0	20	2	2	1	1	1	1	1	1	0	0
13:45	14:00	0	20	2	2	1	1	1	1	1	1	0	0
14:00	14:15	0	20	2	2	1	1						





Project ID and Name: IW0405 Maddoxford Lane, Botley
 Junction name: Maddoxford Lane / Wallace Avenue

Survey Date: 24/06/2025
 Survey Day: Tuesday

Peak Hour (AM)									
Time Interval		Car	LGV	OGV1	OGV2	PSV/Coach	M/C	P/C	PCU
08:00	08:15	148	27	4	0	1	1	3	184
08:15	08:30	155	12	2	0	0	2	0	171
08:30	08:45	136	12	0	0	0	0	0	148
08:45	09:00	136	14	3	0	0	0	1	154
									154.7

Peak Hour (PM)									
Time Interval		Car	LGV	OGV1	OGV2	PSV/Coach	M/C	P/C	PCU
16:45	17:00	106	24	2	0	1	0	0	133
17:00	17:15	126	18	2	0	1	2	2	151
17:15	17:30	143	7	0	0	1	1	0	152
17:30	17:45	122	15	0	0	0	1	4	142
									138.2

Maximum 15-minute Vehicle Junction Flow:					
AM Peak	from:	08:00	until:	08:15	total flow: 184
PM Peak	from:	17:15	until:	17:30	total flow: 152

Maximum Hourly Vehicle Junction Flow:					
AM Peak	from:	08:00	until:	09:00	total flow: 657
PM Peak	from:	16:45	until:	17:45	total flow: 578



Project ID and Name: IW0405 Maddoxford Lane, Botley
Junction name: Maddoxford Lane / Wallace Avenue

Survey Date: 24/06/2025
Survey Day: Tuesday

15-minute Junction Flow

Time interval starting: 07:30:00

Select the time from the drop-down in cell C11 to show the 15-minute data for that period

Vehicles			
	A	B	C
A	0	25	37
B	6	0	20
C	22	19	0

PCU			
	A	B	C
A	0	25	36.7
B	6	0	20
C	22.5	18.4	0

Hourly Junction Flow

Time interval starting: 07:45:00

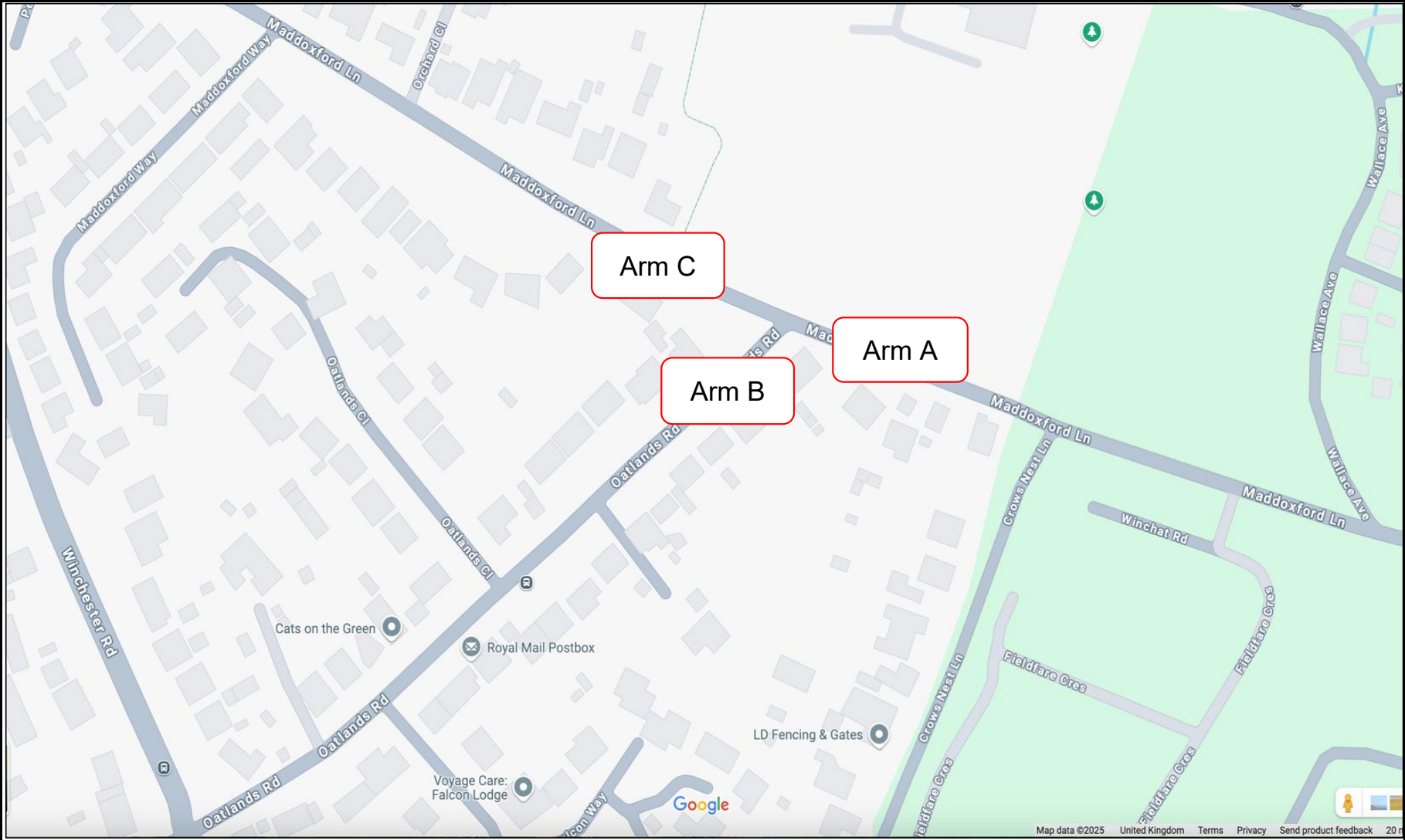
Select the time from the drop-down in cell C24 to show the hourly data for that period

Vehicles			
	A	B	C
A	0	111	172
B	59	0	97
C	72	134	0

PCU			
	A	B	C
A	0	111	169.2
B	61.5	0	97.7
C	73	134.4	0

Car	1
LGV	1
OGV1	1.5
OGV2	2.3
PSV	2
M/C	0.4
P/C	0.2

Job ID	Project Name	Site Location	Google Coordinates	Survey Date	Survey Day	Survey Timings	Weather AM	Weather PM
IW0405	Maddoxford Lane, Botley	Maddoxford Lane / Oatlands Road	50.927552, -1.276056	24/06/2025	Tuesday	0730-0930 and 1630-1830hrs	Dry	Sunny Intervals



[illegible]

[illegible]

C-8 (8-coupled) scenario										C-9 (9-coupled) scenario										C-10 (10-coupled) scenario									
Test scenario	Car	Loaf	DOY1	DOY2	Pathway	MR	Pc	Total	PdR	Test scenario	Car	Loaf	DOY1	DOY2	Pathway	MR	Pc	Total	PdR	Test scenario	Car	Loaf	DOY1	DOY2	Pathway	MR	Pc	Total	PdR
10-01	10-01	0	0	0	0	0	0	0	0	10-01	10-01	0	0	0	0	0	0	0	0	10-01	10-01	0	0	0	0	0	0	0	0
10-02	10-02	0	0	0	0	0	0	0	0	10-02	10-02	0	0	0	0	0	0	0	0	10-02	10-02	0	0	0	0	0	0	0	0
10-03	10-03	0	0	0	0	0	0	0	0	10-03	10-03	0	0	0	0	0	0	0	0	10-03	10-03	0	0	0	0	0	0	0	0
10-04	10-04	0	0	0	0	0	0	0	0	10-04	10-04	0	0	0	0	0	0	0	0	10-04	10-04	0	0	0	0	0	0	0	0
10-05	10-05	0	0	0	0	0	0	0	0	10-05	10-05	0	0	0	0	0	0	0	0	10-05	10-05	0	0	0	0	0	0	0	0
10-06	10-06	0	0	0	0	0	0	0	0	10-06	10-06	0	0	0	0	0	0	0	0	10-06	10-06	0	0	0	0	0	0	0	0
10-07	10-07	0	0	0	0	0	0	0	0	10-07	10-07	0	0	0	0	0	0	0	0	10-07	10-07	0	0	0	0	0	0	0	0
10-08	10-08	0	0	0	0	0	0	0	0	10-08	10-08	0	0	0	0	0	0	0	0	10-08	10-08	0	0	0	0	0	0	0	0
10-09	10-09	0	0	0	0	0	0	0	0	10-09	10-09	0	0	0	0	0	0	0	0	10-09	10-09	0	0	0	0	0	0	0	0
10-10	10-10	0	0	0	0	0	0	0	0	10-10	10-10	0	0	0	0	0	0	0	0	10-10	10-10	0	0	0	0	0	0	0	0
10-11	10-11	0	0	0	0	0	0	0	0	10-11	10-11	0	0	0	0	0	0	0	0	10-11	10-11	0	0	0	0	0	0	0	0
10-12	10-12	0	0	0	0	0	0	0	0	10-12	10-12	0	0	0	0	0	0	0	0	10-12	10-12	0	0	0	0	0	0	0	0
10-13	10-13	0	0	0	0	0	0	0	0	10-13	10-13	0	0	0	0	0	0	0	0	10-13	10-13	0	0	0	0	0	0	0	0
10-14	10-14	0	0	0	0	0	0	0	0	10-14	10-14	0	0	0	0	0	0	0	0	10-14	10-14	0	0	0	0	0	0	0	0
10-15	10-15	0	0	0	0	0	0	0	0	10-15	10-15	0	0	0	0	0	0	0	0	10-15	10-15	0	0	0	0	0	0	0	0
10-16	10-16	0	0	0	0	0	0	0	0	10-16	10-16	0	0	0	0	0	0	0	0	10-16	10-16	0	0	0	0	0	0	0	0
10-17	10-17	0	0	0	0	0	0	0	0	10-17	10-17	0	0	0	0	0	0	0	0	10-17	10-17	0	0	0	0	0	0	0	0
10-18	10-18	0	0	0	0	0	0	0	0	10-18	10-18	0	0	0	0	0	0	0	0	10-18	10-18	0	0	0	0	0	0	0	0
10-19	10-19	0	0	0	0	0	0	0	0	10-19	10-19	0	0	0	0	0	0	0	0	10-19	10-19	0	0	0	0	0	0	0	0
10-20	10-20	0	0	0	0	0	0	0	0	10-20	10-20	0	0	0	0	0	0	0	0	10-20	10-20	0	0	0	0	0	0	0	0
10-21	10-21	0	0	0	0	0	0	0	0	10-21	10-21	0	0	0	0	0	0	0	0	10-21	10-21	0	0	0	0	0	0	0	0
10-22	10-22	0	0	0	0	0	0	0	0	10-22	10-22	0	0	0	0	0	0	0	0	10-22	10-22	0	0	0	0	0	0	0	0
10-23	10-23	0	0	0	0	0	0	0	0	10-23	10-23	0	0	0	0	0	0	0	0	10-23	10-23	0	0	0	0	0	0	0	0
10-24	10-24	0	0	0	0	0	0	0	0	10-24	10-24	0	0	0	0	0	0	0	0	10-24	10-24	0	0	0	0	0	0	0	0
10-25	10-25	0	0	0	0	0	0	0	0	10-25	10-25	0	0	0	0	0	0	0	0	10-25	10-25	0	0	0	0	0	0	0	0
10-26	10-26	0	0	0	0	0	0	0	0	10-26	10-26	0	0	0	0	0	0	0	0	10-26	10-26	0	0	0	0	0	0	0	0
10-27	10-27	0	0	0	0	0	0	0	0	10-27	10-27	0	0	0	0	0	0	0	0	10-27	10-27	0	0	0	0	0	0	0	0
10-28	10-28	0	0	0	0	0	0	0	0	10-28	10-28	0	0	0	0	0	0	0	0	10-28	10-28	0	0	0	0	0	0	0	0
10-29	10-29	0	0	0	0	0	0	0	0	10-29	10-29	0	0	0	0	0	0	0	0	10-29	10-29	0	0	0	0	0	0	0	0
10-30	10-30	0	0	0	0	0	0	0	0	10-30	10-30	0	0	0	0	0	0	0	0	10-30	10-30	0	0	0	0	0	0	0	0
10-31	10-31	0	0	0	0	0	0	0	0	10-31	10-31	0	0	0	0	0	0	0	0	10-31	10-31	0	0	0	0	0	0	0	0
10-32	10-32	0	0	0	0	0	0	0	0	10-32	10-32	0	0	0	0	0	0	0	0	10-32	10-32	0	0	0	0	0	0	0	0
10-33	10-33	0	0	0	0	0	0	0	0	10-33	10-33	0	0	0	0	0	0	0	0	10-33	10-33	0	0	0	0	0	0	0	0
10-34	10-34	0	0	0	0	0	0	0	0	10-34	10-34	0	0	0	0	0	0	0	0	10-34	10-34	0	0	0	0	0	0	0	0
10-35	10-35	0	0	0	0	0	0	0	0	10-35	10-35	0	0	0	0	0	0	0	0	10-35	10-35	0	0	0	0	0	0	0	0
10-36	10-36	0	0	0	0	0	0	0	0	10-36	10-36	0	0	0	0	0	0	0	0	10-36	10-36	0	0	0	0	0	0	0	0
10-37	10-37	0	0	0	0	0	0	0	0	10-37	10-37	0	0	0	0	0	0	0	0	10-37	10-37	0	0	0	0	0	0	0	0
10-38	10-38	0	0	0	0	0	0	0	0	10-38	10-38	0	0	0	0	0	0	0	0	10-38	10-38	0	0	0	0	0	0	0	0
10-39	10-39	0	0	0	0	0	0	0	0	10-39	10-39	0	0	0	0	0	0	0	0	10-39	10-39	0	0	0	0	0	0	0	0
10-40	10-40	0	0	0	0	0	0	0	0	10-40	10-40	0	0	0	0	0	0	0	0	10-40	10-40	0	0	0	0	0	0	0	0
10-41	10-41	0	0	0	0	0	0	0	0	10-41	10-41	0	0	0	0	0	0	0	0	10-41	10-41	0	0	0	0	0	0	0	0
10-42	10-42	0	0	0	0	0	0	0	0	10-42	10-42	0	0	0	0	0	0	0	0	10-42	10-42	0	0	0	0	0	0	0	0
10-43	10-43	0	0	0	0	0	0	0	0	10-43	10-43	0	0	0	0	0	0	0	0	10-43	10-43	0	0	0	0	0	0	0	0
10-44	10-44	0	0	0	0	0	0	0	0	10-44	10-44	0	0	0	0	0	0	0	0	10-44	10-44	0	0	0	0	0	0	0	0
10-45	10-45	0	0	0	0	0	0	0	0	10-45	10-45	0	0	0	0	0	0	0	0	10-45	10-45	0	0	0	0	0	0	0	0
10-46	10-46	0	0	0	0	0	0	0	0	10-46	10-46	0	0	0	0	0	0	0	0	10-46	10-46	0	0	0	0	0	0	0	0
10-47	10-47	0	0	0	0	0	0	0	0	10-47	10-47	0	0	0	0	0	0	0	0	10-47	10-47	0	0	0	0	0	0	0	0
10-48	10-48	0	0	0	0	0	0	0	0	10-48	10-48	0	0	0	0	0	0	0	0	10-48	10-48	0	0	0	0	0	0	0	0
10-49	10-49	0	0	0	0	0	0	0	0	10-49	10-49	0	0	0	0	0	0	0	0	10-49	10-49	0	0	0	0	0	0	0	0
10-50	10-50	0	0	0	0	0	0	0	0	10-50	10-50	0	0	0	0	0	0	0	0	10-50	10-50	0	0	0	0	0	0	0	0
10-51	10-51	0	0	0	0	0	0	0	0	10-51	10-51	0	0	0	0	0	0	0	0	10-51	10-51	0	0	0	0	0	0	0	0
10-52	10-52	0	0	0	0	0	0	0	0	10-52	10-52	0	0	0	0	0	0	0	0	10-52	10-52	0	0	0	0	0	0	0	0
10-53	10-53	0	0	0	0	0	0	0	0	10-53	10-53	0	0	0	0	0	0	0	0	10-53	10-53	0	0	0	0	0	0	0	0
10-54	10-54	0	0	0	0	0	0	0	0	10-54	10-54	0	0	0	0	0	0	0	0	10-54	10-54	0	0	0	0	0	0	0	0
10-55	10-55	0	0	0	0	0	0	0	0	10-55	10-55	0	0	0	0	0	0	0	0	10-55	10-55	0	0	0	0	0	0	0	0
10-56	10-56	0	0	0	0	0	0	0	0	10-56	10-56	0	0	0	0	0	0	0	0	10-56	10-56	0	0	0	0	0	0	0	0
10-57	10-57	0	0	0	0	0	0	0	0	10-57	10-57	0	0	0	0	0	0	0	0	10-57	10-57	0	0	0	0	0	0	0	0
10-58	10-58	0	0	0	0	0	0	0	0	10-58	10-58	0	0	0	0	0	0	0	0	10-58	10-58	0	0	0	0	0	0	0	0
10-59	10-59	0	0	0	0	0</																							

[illegible]

