



The Thomas Family & Bloor Homes Limited

# Land at Newlands Farm, Old Wokingham Road

## Transport Statement

December 2023



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## Transport Statement

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# CONTENTS

<b>1.</b>	<b>Introduction</b>	<b>4</b>
1.1	Overview	4
1.2	Pre-Application Discussions	5
1.3	Report Structure	7
<b>2.</b>	<b>Policy and Guidance</b>	<b>8</b>
2.1	Overview	8
2.2	National Policy	8
2.3	Local Policy	10
2.4	Summary	11
<b>3.</b>	<b>Existing Situation</b>	<b>12</b>
3.1	Overview	12
3.2	Local Highway Network	12
3.3	Pedestrian Accessibility	13
3.4	Cycle Accessibility	14
3.5	Bus Accessibility	14
3.6	Rail Accessibility	14
3.7	Personal Injury Collision (PIC)	15
<b>4.</b>	<b>Development Proposals</b>	<b>18</b>
4.1	Overview	18
4.2	Development Proposals	18
4.3	Site Access	18
4.4	Car Parking Provision and Layout	20
4.5	Cycle Parking Provision	21
4.6	Refuse and Servicing Arrangements	21
<b>5.</b>	<b>Trip Generation</b>	<b>22</b>
5.1	Overview	22
5.2	SANG Surveys	22
5.3	Trip Generation	23
5.4	PICADY Capacity Assessment of Site Access	24
<b>6.</b>	<b>Conclusions and Recommendations</b>	<b>27</b>
6.1	Overview	27
6.2	Conclusions	27
6.3	Recommendation	27

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## APPENDICES

APPENDIX A Proposed Site Layout

APPENDIX B ATC Survey Data

APPENDIX C Proposed Site Access Arrangement

APPENDIX D Proposed Site Access Swept Path Analysis

APPENDIX E Proposed Footpath along Old Wokingham Road

APPENDIX F Car Park Layout Swept Path Analysis

APPENDIX G PICADY Geometries

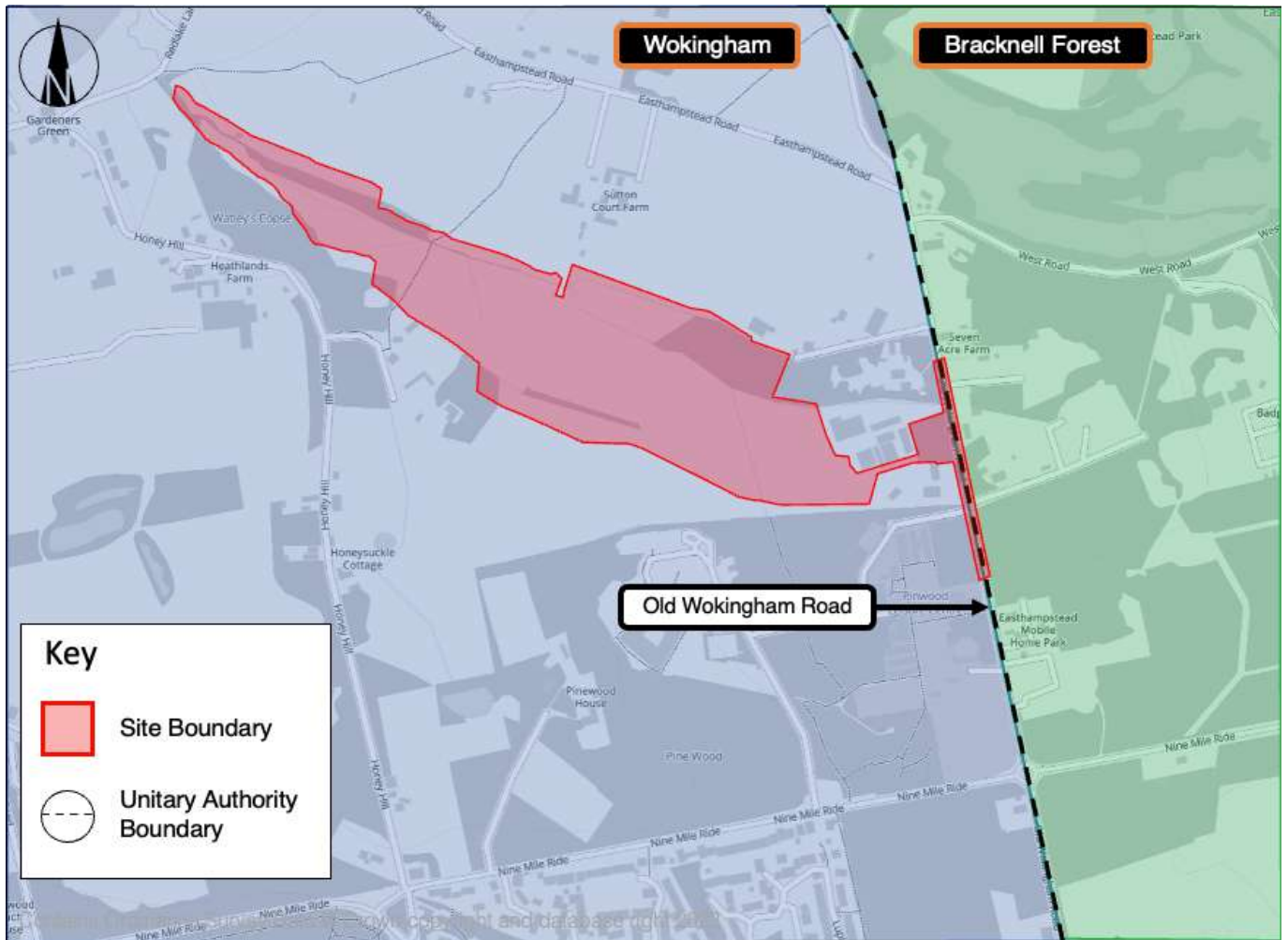
APPENDIX H PICADY Outputs

# 1. Introduction

## 1.1 Overview

- 1.1.1 This Transport Statement (TS) has been prepared by mode transport planning (mode) on behalf of The Thomas Family & Bloor Homes Limited, in relation to a proposed Suitable Alternative Natural Green Space (SANG) at Newlands Farm, Old Wokingham Road, Wokingham.
- 1.1.2 The development proposals are for the change of use of agricultural land to Class F2(c) Outdoor Sport or Recreation, for use as a publicly accessible open space as a SANG including access, car park and landscaping. The current outlined area comprises 16.38 hectares.
- 1.1.3 This TS has been prepared following pre-app advice received from the local planning authority, Wokingham Borough Council (WBC) in order to confirm their statement that the development proposals *“is unlikely that the level of traffic generated by the proposed development would have an adverse impact in the movement network”*.
- 1.1.4 The purpose of this report is to outline the development proposals in full including a detail of the proposed access arrangements and a review of the anticipated trip generation. Matters of car / cycle parking are also detailed.
- 1.1.5 The site is located off Old Wokingham Road, which acts as the border road between the Unitary Authorities of Wokingham Borough Council (WBC) and Bracknell Forest Council (BFC). This is demonstrated on **Figure 1.1**.

Figure 1.1 Unitary Authority Boundaries



## 1.2 Pre-Application Discussions

- 1.2.1 As demonstrated on **Figure 1.1**, Old Wokingham Road acts as the boundary between WBC and BFC. Primary site access is proposed from Old Wokingham Road, as such, pre-application discussions have been necessary with both WBC (for the overall development proposals) and BFC (for the highways and transport matters only).
- 1.2.2 The following section outlines the discussions undertaken with each authority with respect to transport and highways matters.

### Wokingham Borough Council (ref: EXC/230306)

- 1.2.3 Pre-application advice was sought from WBC (ref: EXC/230306) with a pre-application meeting held on 13<sup>th</sup> April 2023. A number of transport-related issues were discussed, including the impact on highways, the potential for sustainable travel, on-site parking, and access to the site.

1.2.4 A response letter was received on 9<sup>th</sup> May 2023, which stated that the proposed development is unlikely to have an adverse impact on the highway network and provided guidance on the requirements for sustainable travel, on-site parking, and access to the site. Key comments are provided below:

- With regards to pedestrian access WBC stated that *“The application should explore extension of the footpath along Old Wokingham Road and/or a connection through Pinewood in order to achieve satisfactory pedestrian access.”*
- With regard to parking provision WBC stated that *“The amount of parking should reflect the anticipated use of the site and the catchment size of the SANG. Appendix 3 recommends a ratio of one car parking space per hectare and 16 spaces are proposed. Nevertheless, evidence to support the level of parking should be provided.”*
- In terms of the car park layout, *“A lockable height barrier and gate would need to be provided at the car park entrance to prevent any incursions.”*

1.2.5 The development proposals have been progressed in line with the pre-app advice provided by WBC.

#### Bracknell Forest Council (ref: PRE/23/00086)

1.2.6 mode engaged in pre-application discussion with BFC by way of letter (ref: PRE/23/00086) to seek agreement upon the principle of the access arrangement. The initial pre-application letter was submitted on 5<sup>th</sup> December 2022 and included details of proposed site access arrangements and identified issues related to the ancient highway boundary on Old Wokingham Road.

1.2.7 A BFC highways response was received on 22<sup>nd</sup> May 2023 which included details of the proposed change in land use, site access, and parking. Further to this, a second pre-application letter was submitted on 28<sup>th</sup> July 2023 addressing the comments made in regard to junction access, right-turning traffic, ancient highway boundary on Old Wokingham Road, speed surveys and visibility splays, pedestrian facilities, parking, and traffic impact.

1.2.8 Following this, a site meeting with BFC was undertaken on 18<sup>th</sup> October 2023 to further address right-turning traffic, access to the site for both visitors and servicing, traffic impact, car parking, and pedestrian facilities. A formal response was then received on 6<sup>th</sup> November 2023.

1.2.9 The following items in relation to the proposed development were commented and / or agreed:

- A simple bell-mouth junction is agreed suitable for the site access to the proposed development, subject to swept path analysis of larger vehicles to maintain road safety along Old Wokingham Road.
- Right-turn lane design akin to the rest of Old Wokingham Road is advised with further PICADY modelling provided.
- 27 – 29 car parking spaces is sufficient for the proposed development.

- The improvement of pedestrian facilities on the western side of Old Wokingham Road to the south of the site should be considered.

## 1.3 Report Structure

1.3.1 The remainder of this TS is structured as follows:

### Chapter 2: Policy and Guidance

This chapter provides a review of the relevant National and Local Policy.

### Chapter 3: Existing Situation

This chapter considers the site in relation to surrounding transport conditions, accessibility to the site by sustainable modes of transport, as well as pedestrian and cycle infrastructure.

### Chapter 4: Development Proposals

This chapter details the development proposals in terms of change of use, outlines existing car parking, refuse strategy and service access.

### Chapter 5: Trip Generation

This chapter provides an estimation of trip generation, which considers the existing land use of the site compared with the trip generation potential of the proposed SANG.

### Chapter 6: Conclusions and Recommendation

This chapter summarises the headline conclusions of the TS before providing for an overall recommendation.



## 2. Policy and Guidance

### 2.1 Overview

- 2.1.1 This section considers the adopted National and Local policies relevant to the development proposals that have informed the preparation of this TS.
- 2.1.2 The application site is located mainly within the WBC administrative boundary with only the land where the access comes off Old Wokingham Road within the BFC administrative boundary and associated public highway.

### 2.2 National Policy

#### National Planning Policy Framework (NPPF)

- 2.2.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied. The NPPF was most recently revised in September 2023.
- 2.2.2 The NPPF presumes in favour of sustainable development and is a material consideration in planning decisions. Seventeen core land-use planning principles are put forward to underpin both plan-making and decision-taking, one of which is Policy 9, 'Promoting Sustainable Transport' which aims to actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable through limiting the need to travel and offering a genuine choice of transport modes.
- 2.2.3 Paragraph 114 of the NPPF states that when assessing specific site uses for development applications, it should be ensured that:
- *"Appropriate opportunities to promote sustainable transport modes can be - or have been - taken up, given the type of development and its location;*
  - *Safe and suitable access to the site can be achieved for all users;*
  - *The design of streets, parking areas and other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
  - *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.2.4 Paragraph 115 of the NPPF ultimately states the following for transport:

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

2.2.5 Paragraph 116 suggests that developments should be located and designed where practical to, among other things, give priority to pedestrian and cycle movements, have access to high quality public transport facilities, create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians and consider the needs of people with disabilities by all modes of transport.

2.2.6 Subsequent chapters of this TS demonstrate how the development proposals accord with the NPPF and the noted paragraphs above.

### National Planning Practice Guidance (NPPG)

2.2.7 The NPPG web-based source provides guidance that compliments the NPPF policies. The guidance aims to facilitate the development of a robust evidence base that will enable an assessment of the transport impacts of both existing and proposed development. The guidance can inform sustainable approaches to transport. A robust assessment will establish evidence that may be useful in:

- Improving the sustainability of transport provision;
- Enhancing the levels of accessibility;
- Create choice amongst different modes of transport;
- Improving health and well-being;
- Supporting economic vitality;
- Improving public understanding of the transport implications of development;
- Enabling other highway and transport authority’s/service providers to support and deliver the transport infrastructure that conforms to the Local Plan: and
- Support local shops and the high street.

### Natural England

2.2.8 Natural England was established under the Natural Environment and Rural Communities Act 2006 (“NERC Act”). Its general purpose, set out in section 2(1) of the Act, is to:

*“ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.”*

2.2.9 According to Natural England's SANG quality guidance document, it states that all SANGs should conform to the following:

- *"For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANG and the SPA.*
- *Possible to complete a circular walk of 2.3-2.5km around the SANG.*
- *Car parks must be easily and safely accessible by car and should be clearly sign posted.*
- *The accessibility of the site must include access points appropriate for the visitor use the SANG is intended to cater for.*
- *The SANG must have a safe route of access on foot from the nearest car park and/or footpath/s.*
- *All SANG with car parks must have a circular walk which starts and finishes at the car park.*
- *SANG must be designed so that they are perceived to be safe by users; they must not have tree and scrub cover along parts of the walking routes.*
- *Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming to urban in feel.*
- *SANG must be perceived as semi-natural spaces with little intrusion of artificial structures, except in the immediate vicinity of car parks. Visually sensitive way-markers and some benches are acceptable."*

## 2.3 Local Policy

### Bracknell Forest Local Transport Plan

2.3.1 Bracknell Forest Council is required to produce a Local Transport Plan (LTP). The LTP will act as a mechanism to plan strategically the development of a transport system to meet the needs of Bracknell Forest and strengthen the Council's place-shaping role helping to deliver services to the local community. The LTP should be seen alongside the Sustainable Community Strategy (SCS) which sets out priorities for action by the council and its partner BFC. The strategy sets out policies that carry equal weight. The key policies include:

- Policy TP1 is focused on accessibility and seeks to ensure that new developments are accessible to sustainable modes of transportation.
- Policy TP8 promotes walking and cycling in new development by ensuring pedestrian and cyclist requirements are fully considered.
- The provision of parking in the Borough is detailed in Policy TP16, which states that new developments should provide adequate parking provision in all forms. This will be implemented through the Parking Strategy and Parking SPD.

### Wokingham Local Transport Plan

2.3.2 Wokingham Borough Council is required by the Transport Act 2000 to produce a Local Transport Plan (LTP). This is the third LTP for the borough, setting out a framework up to 2026.

2.3.3 The most relevant policies within the Wokingham Borough LTP are set out below:

- Policy AT1 encourages the integration of walking and cycling routes into leisure facilities
- Policy AT2 states that *“Improving access to public open space and country parks will help to encourage walking and cycling as a leisure activity”*
- Policy PT6 aims to enhance bus service provision to leisure opportunities
- Policy SCDM9 aims to *“suitably locate, price and enforce car parking to improve traffic management and promote more sustainable travel”*

2.3.4 Wokingham Borough Council also has Core Strategy Policies by way of the ‘Adopted Core Strategy Development Plan Document – January 2010’; the most relevant of which are listed below:

- Policy CP6 states that planning permission will be granted for schemes that:
  - Provide for sustainable forms of transport
  - Enhance facilities for pedestrians and cyclists
  - Provide appropriate vehicular parking
  - Do not cause highway problems

## 2.4 Summary

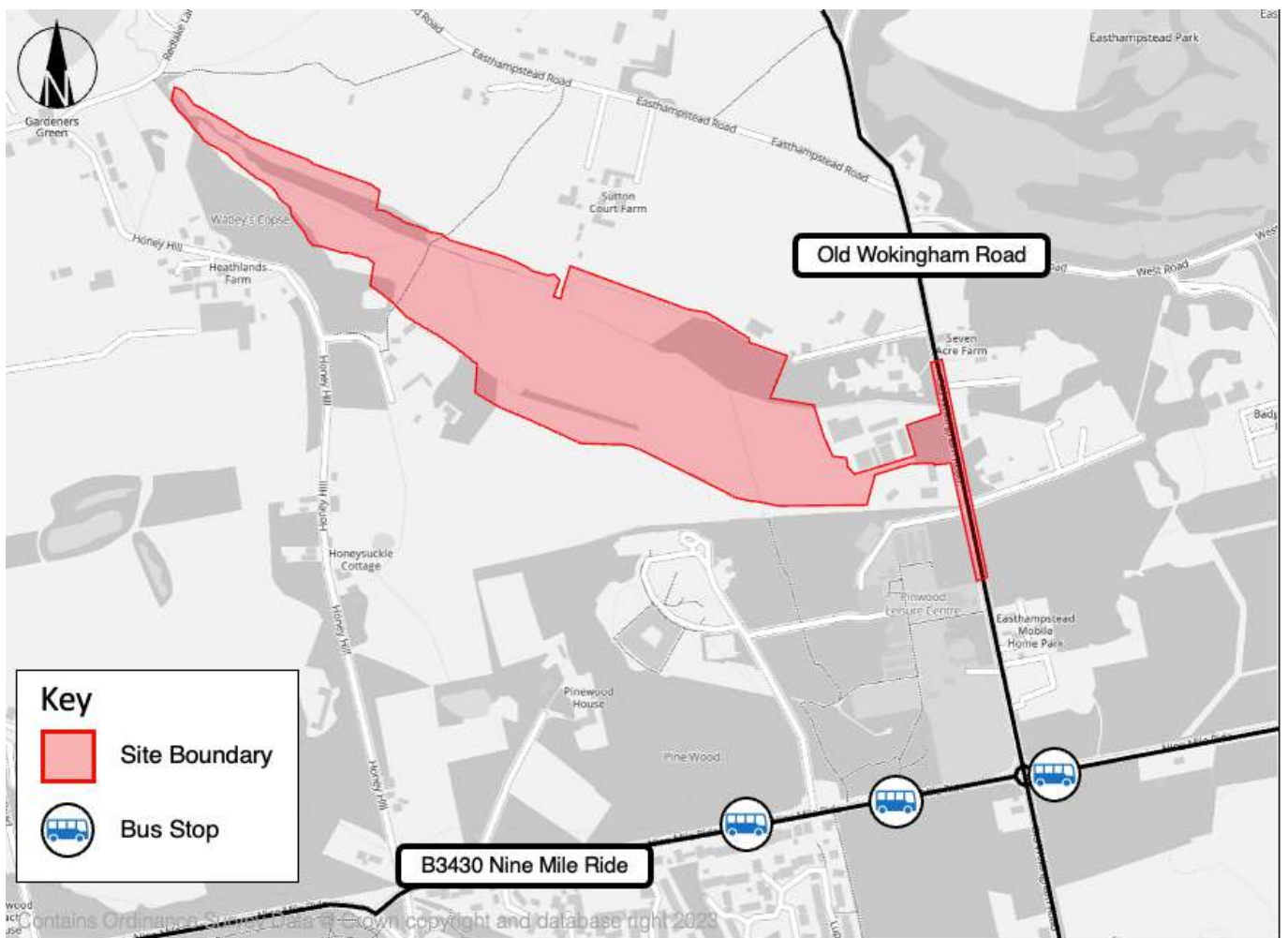
2.4.1 This development proposals are considered to be in accordance with the above National and Local policies, as demonstrated throughout the remainder of this TS.

### 3. Existing Situation

#### 3.1 Overview

- 3.1.1 The application site is located mainly within the WBC administrative boundary with only the land where the access comes off Old Wokingham Road within the BFC administrative boundary.
- 3.1.2 The application site in relation to the surrounding area is demonstrated on **Figure 3.1**.

Figure 3.1 Site Context Plan



#### 3.2 Local Highway Network

- 3.2.1 The site access point is located on the eastern boundary of the site on Old Wokingham Road, a two-way single-carriageway road which is subject to a 40mph speed limit. Old Wokingham Road provides access to a range of businesses including Pinewood Caravan Park, Pinewood Centre, and Pinewood Bar and Café.

- 3.2.2 Old Wokingham Road is designated 'ancient highway'. Whilst it is known to be highway maintainable at the public expense by BFC, it has no defined edge given its ancient highway status.
- 3.2.3 Generic advice has been received from BFC's Highway Adoption team, including with respect to the length of Old Wokingham Road being ancient highway. This has stated the following:
- 3.2.4 *"Old Wokingham Road...[is] ancient highway in that they predate modern Highway Acts and there are thus no "adoption plans" to define boundaries. Fronting properties extend to the centre of the road, the highway being a "way" dedicated to public use. A site inspection has not been carried out but as a general rule the boundary to an ancient highway such as this, is presumed to be the fence, hedge or wall of the adjoining properties, or if there is a ditch then the boundary would be the road side edge of the ditch."*
- 3.2.5 Given the presence of a ditch between the carriageway edge of Old Wokingham Road and the site boundary, it, therefore, stands to reason that the assumed edge of public highway will be the nearside edge of the ditch and that the ownership of the site, will in practice abut the highway at this point.
- 3.2.6 To the north of the site, Old Wokingham Road links to Easthampstead Road, providing access from Holme Green and Gardeners Green as well as West Road, providing access from Downshire Golf Complex.
- 3.2.7 At the north end, Old Wokingham Road becomes Peacock Lane. Peacock Lane is a two-way single-carriageway. Peacock Lane routes east towards Bracknell as well providing access to the A329(M). Peacock Lane also provides vehicular access to the site from Jennett's Park.
- 3.2.8 To the south of the site, Old Wokingham Road forms a 4-arm roundabout with the B3430 Nine Mile Ride. Nine Mile Ride provides access from the residential area of Ravenswood to the west, and Birch Hill to the East. Old Wokingham Road continues south, providing access to Crowthorne via the B3348.

### 3.3 Pedestrian Accessibility

- 3.3.1 National and local planning policy advocates that walking is an important mode of transport that provides the greatest potential to reduce car trips at a local level.
- 3.3.2 There is an informal footway on the west side of Old Wokingham Road between the Pinewood Centre and the site with a considerable level of pedestrian use.
- 3.3.3 A Public Right of Way (PRoW) FP WOKW8 intersects the site, providing a connection between Honey Hill and Easthampstead Road. Other PRoW in close proximity to the site include FP WOKW7 to the east which connects Redlake Lane to Easthampstead Road as well as FP WOKW6 to the north which connects Easthampstead Road to Old Wokingham Road leading to Bracknell FP 15.

3.3.4 It should be noted that Easthampstead Road and Honey Hill which connect these paths are rural lanes with infrequent pedestrian footpath provision.

### 3.4 Cycle Accessibility

3.4.1 Old Wokingham Road connects to a combined use pedestrian and cycle path at Pinewood Crossroads to the south, and Peacock Lane to the north.

3.4.2 Crowthorne, Wokingham, and Bracknell are key neighbouring areas within 6km of the application site, providing a realistic opportunity for residents of these areas to travel by bicycle to access the site.

3.4.3 Bracknell Rail Station is approximately 5.6km (equivalent to 19-minute cycle) and Wokingham is approximately 4.7km (equivalent to 15-minute cycle) from the site access point.

### 3.5 Bus Accessibility

3.5.1 The nearest bus stops to the site are located by the B3430 / Old Wokingham Road roundabout called 'Pinewood Crossroads', with two single-directional stops located around the junction. One bus stop is located to the south of the junction, with the other to the east.

3.5.2 The bus stops at Pinewood Crossroads will be approximately 500m from the site access point and will be accessible using existing footways on Old Wokingham Road.

3.5.3 Both bus stops at Pinewood Crossroads are provided with a flagpole and timetable information. The stops are served by Thames Valley Buses route 194, which operates between Bracknell Bus Station and Camberley Rail Station and routes 125A and 125B, which operate between Pinewood Crossroads and Wokingham Rail Station. It should be noted that the 125 routes are school buses and therefore not relevant to the site.

**Table 3.1 Summary of Thames Valley Bus Service Route 194**

Route Direction	Monday – Friday		Saturday		Sunday	
	Frequency	Operating Times	Frequency	Operating Times	Frequency	Operating Times
To Camberley	2 per hour (1 per hour after 6pm)	06:05-22:45	2 per hour (1 per hour after 6pm)	06:24-22:45	1 per hour	09:10-18:10
To Bracknell	2 per hour (1 per hour after 8pm)	06:31-22:09	2 per hour (1 per hour after 7pm)	07:31-22:09	1 per hour	09:23-18:23

### 3.6 Rail Accessibility

3.6.1 The nearest rail stations are Crowthorne and Wokingham, which in turn provide opportunities to travel to the site by rail from destinations further afield.

3.6.2 Crowthorne Rail Station is served by Great Western Railway, operating between Reading and Redhill.

**Table 3.2 Summary of Great Western Railway service through Crowthorne Rail Station**

Route Direction	Monday – Friday		Saturday		Sunday	
	Frequency	Operating Times	Frequency	Operating Times	Frequency	Operating Times
To Reading	1 per hour (2 per hour at peak times)	06:36-23:59	1 per hour	06:48-23:46	1 per hour	07:27-01:15
To Redhill	1 per hour (2 per hour at peak times)	05:15-23:50	1 per hour	06:36-23:48	1 per hour (Service ends at Guildford)	08:06-23:18

3.6.3 Wokingham Rail Station is served by Great Western Railway and South Western Railway

**Table 3.3 Summary of South Western Railway (SWR) and Great Western Railway (GWR) service through Wokingham Rail Station**

Route Direction	Monday – Friday		Saturday		Sunday	
	Frequency	Operating Times	Frequency	Operating Times	Frequency	Operating Times
To London Waterloo (SWR)	2 per hour	05:53-23:23	2 per hour	05:53-23:23	2 per hour	08:05-23:05
To Reading (SWR)	4 per hour	06:00-00:55	4 per hour	05:57-01:25	3 per hour	07:32-00:49
To Redhill (GWR)	2 per hour	04:43-22:43	2-3 per hour	04:41-22:53	2 per hour	06:11-23:12

### 3.7 Personal Injury Collision (PIC)

3.7.1 To allow for a review of the road safety record on Old Wokingham Road, the latest available five-year injury personal injury collision (PIC) data has been obtained from Crashmap Pro.

3.7.2 Analysis has been undertaken to identify any trends in the type or location of collisions on the local highway network within the vicinity of the application site in particular collisions along Old Wokingham Road. This data identifies that two PICs have been recorded on Old Wokingham Road near to the site. Both of these collisions were recorded as 'slight'.

3.7.3 The locations of the recorded PICs are demonstrated on [Figure 3.2](#).



Figure 3.2 PIC Locations



3.7.4 It should be noted that none of the recorded PICs occurred in close proximity to the site access and no clusters of collisions were identified.

3.7.5 A collision between two cars was recorded near the staggered junction between Old Wokingham Road and the entrances to East Hampstead Cottages and The Kingdom Hall of Jehovah's Witnesses. This collision occurred on a dry road surface during daylight hours. The data indicates that both cars were travelling north when the car in front had to wait to turn left, and the second car collided with the back of the waiting car. This resulted in slight injuries to the driver.

3.7.6 The other collision was recorded on Old Wokingham Road, to the south of the site access point. This occurred on a dry road surface during daylight hours and involved a front-to-back collision due to the car in front being held up on the road. This resulted in slight injuries to the driver.

3.7.7 From this review, no significant collision clusters or trends have been observed along Old Wokingham Road in the vicinity of the proposed site access point.



3.7.8 With regard to the pre-application consultations with BFC and the site access arrangement, BFC raised the potential issue if right-turning traffic into the site and that any access arrangement would need to cater for right-turning traffic in order to maintain road safety. The PIC data detailed above indicates that none of the PICs involved vehicles making right turns off Old Wokingham Road.

## 4. Development Proposals

### 4.1 Overview

4.1.1 This chapter details the development proposals including multi-modal access arrangements, car and cycle parking provision and refuse and servicing arrangements.

### 4.2 Development Proposals

4.2.1 The application site will be converted from agricultural use to class F2 c) outdoor sport or recreation, for use as a Suitable Alternative Natural Greenspace (SANG). The site comprises 16.38 hectares and primary vehicular access will be via Old Wokingham Road. The SANG will provide a circular walking route of 2.3km along with secondary routes across the site. The SANG will also comprise existing woodland, wet woodland, trees & vegetation along with proposed areas of flowering grassland, trees, scrub, proposed deciduous woodland, wet woodland and wetlands.

4.2.2 The site layout plan is provided in [Appendix A](#).

### 4.3 Site Access

#### Vehicular Access

4.3.1 The site is proposed to be accessed from Old Wokingham Road in the form of a simple priority junction. This is on the basis that the proposed SANG will be expected to generate relatively modest vehicle movements and be generally spread throughout the day (this is detailed further with evidence in [Chapter 5](#)). It is proposed that the existing gated farm access into the site be upgraded to a simple priority T-junction. This will retain the existing alignment and road markings of Old Wokingham Road, including an informal central strip, albeit with a right turn arrow introduced as to be consistent with similar arrangements elsewhere on Old Wokingham Road.

4.3.2 As detailed earlier in this TS, given the location of the proposed site access on Old Wokingham Road, within BFC, advice has been sought from BFC highways with regard to the principle of the proposed access arrangement for both vehicles and pedestrians.

4.3.3 Seven-day Automatic Traffic Count (ATC) surveys have been undertaken on either side of the proposed site access on Old Wokingham Road commencing on Monday 27<sup>th</sup> June 2022. Full ATC data is provided in [Appendix B](#).

4.3.4 The ATC surveys have identified the 85<sup>th</sup> percentile speeds of 38.2mph in the northbound direction and 42.7mph in the southbound direction. On this basis, the visibility splays have been calculated in line with DMRB design criteria.

- 4.3.5 It is proposed that the access be upgraded so as to maximise achievable visibility splays whilst having the least impact on existing trees. This has been discussed with a tree consultant and with the benefit of a tree survey to conclude which trees can be removed appropriately. The proposed access arrangements including the visibility splays are demonstrated on [mode drawing J32-6699-PS-002](#) in [Appendix C](#).
- 4.3.6 A formalised 5.5m two-way access road is proposed into the site which will lead to the car park. A turning head is proposed for larger vehicles which is detailed later in this chapter. The largest vehicle expected to access the site regularly will be a refuse vehicle. A swept path analysis has been undertaken to demonstrate that larger vehicles are able to access the site. This is demonstrated on [mode drawing J32-6699-AT-A02](#) within [Appendix D](#).
- 4.3.7 The design of the proposed site access has been safeguarded in the event that a maintenance vehicle will need access to the site. As such, a swept path analysis of a tractor with a trailer has been undertaken which is demonstrated on [mode drawing J32-6699-AT-A06](#) within [Appendix D](#).
- 4.3.8 To further demonstrate the suitability of the access arrangement a Junctions 9 PICADY model has been prepared to demonstrate the ongoing suitability of the access arrangement in capacity terms. This is detailed further in [Chapter 5](#).

### Pedestrian Access

- 4.3.9 With regard to pedestrian access BFC have requested as part of their pre-app response the need to provide more convenient access from the local areas into the site. As such, a new pedestrian connection is proposed from the site to the south along the western side of the carriageway along Old Wokingham Road. This has been designed to connect the site to Pinewood Centre approximately 180m south of the site. Dropped kerbs and tactile paving is proposed across the existing access to the Kingdom Hall of Jehovah's Witnesses. The proposed pedestrian footpath is shown on [mode drawing J32-6699-PS-003](#) in [Appendix E](#).
- 4.3.10 Within the access road, a 2m-wide pedestrian footpath is provided along the southern side of the access road with dropped kerbs and tactile paving also provided as a crossing point.
- 4.3.11 Pedestrians access is also provided via the existing PRow FP WOKW8 which provides a connection into the site from Honey Hill and Easthampstead Road. Existing footbridges at these access points are to be replaced as part of the development proposals.
- 4.3.12 Within the access road, there will also be two agriculture access points, one for cattle and one for agriculture machinery. Gated access is proposed and this is shown on the site layout plan in [Appendix A](#). The gates will be controlled by the landowner and will be carefully managed to ensure that any movement of cattle or machinery is to be taken outside of identified peak hours when traffic movement is low and that appropriate safety measures are implemented such as temporary signage.

## 4.4 Car Parking Provision and Layout

- 4.4.1 Natural England provides guidance for parking standards for proposed SANGs as a minimum of 1 car park space per hectare. This would equate to 16-17 spaces based on 16.38 hectares of the site.
- 4.4.2 Despite the above, pre-application discussions with BFC and WBC identified the need to provide sufficient car park provision to cater for the anticipated demand for the site, as well as ensure no overflowing back onto Old Wokingham Road.
- 4.4.3 In order to ensure the proposed SANG provides appropriate car parking provision in line with other SANG sites in the local area, a review of nearby SANG sites has been undertaken. The following SANG sites have been reviewed:
- Buckler’s Forest, Woodcote Green, Crowthorne, RG45 6HZ
  - Rook’s Nest Wood, Barkham Ride, Finchampstead, Wokingham, RG40 4EU
  - Peacock Meadows and Big Wood, Swift Fields, Jennett’s Park, Bracknell, RG12 8DS
  - Keephatch Meadows, Binfield Road, Wokingham RG40 5PR
  - Popes Meadows, St Mark’s Road, Popeswood, Bracknell, RG42 4AN
- 4.4.4 A summary of the SANG car parks is provided in **Table 4.1**.

**Table 4.1 Summary of Car Parks Surveyed**

SANG Site	Size (Ha)	No. Car Parking Spaces	Average Space per Ha
Buckler’s Forest	42	33	0.79
Rooks Nest Wood	18.3	24	1.31
Keephatch Meadows	9	18	2.00
Peacock Meadows	36	22	0.61
Pope Meadow	5.2	24	4.62
<i>Average</i>		<i>24</i>	<i>1.86</i>

- 4.4.5 **Table 4.1** indicates that there is no identifiable correlation between size of the SANG and the number of car park spaces provided. Overall, the provision is between 18 to 33 spaces. It should be noted that Buckler’s Forest is much larger in area than the proposed development.
- 4.4.6 A total of 27 car parking spaces are proposed as part of the development. This provision is in line with what was deemed acceptable by WBC and BFC highways officers as part of pre-application discussions.

- 4.4.7 A trip generation assessment has also been undertaken as informed by surveys of the above SANG sites to ensure that the proposed parking provision is suitable for the site through undertaking surveys at the local SANG sites. This is detailed in [Chapter 5](#).
- 4.4.8 A height restriction will be in place at the entrance to the on-site car park to prevent access for large vehicles. The car park will be clearly signposted and accessible as per Natural England SANG guidelines.
- 4.4.9 A swept path analysis has been undertaken of the car park and this is provided in [Appendix F](#).

## 4.5 Cycle Parking Provision

- 4.5.1 The development proposals are not expected to attract many cyclists due to their nature. Nevertheless, 4 cycle parking spaces in the form of 2 Sheffield stands will be located close to the car park should cyclists wish to visit the site.

## 4.6 Refuse and Servicing Arrangements

- 4.6.1 Access for refuse and servicing vehicles will be via the main vehicular access point on Old Wokingham Road. Due to the proposed height restriction barrier, large vehicles will not be able to access the car park. A turning head will therefore be provided on the access road for use by refuse, servicing, and maintenance vehicles to allow larger vehicles to turn around before exiting the site in a forward gear.
- 4.6.2 The proposed access arrangement can accommodate the swept paths of a refuse vehicle, as demonstrated on [mode drawing J32-6699-AT-A04](#) in [Appendix F](#). It should be noted that should refuse servicing (or any maintenance) be required of the SANG then this will take place outside of the typical visiting times, and therefore a refuse vehicle will not be expected to compete for road space with other vehicles on the access road itself.

## 5. Trip Generation

### 5.1 Overview

5.1.1 This chapter details the anticipated trip generation of the proposed new SANG. In order to obtain an estimated number of trips, surveys of nearby SANGs have been undertaken to quantify the associated trip generation across the range of SANGs and by virtue also providing for their calculated car parking accumulation.

### 5.2 SANG Surveys

5.2.1 A review of parking capacity and SANG trips at local SANG sites has been undertaken in the form of classified video count surveys at the entrance to the car parks of the SANG sites detailed in [Table 4.1](#).

5.2.2 The video counts involved the following analysis and output:

- A neutral weekday, Thursday 10<sup>th</sup> August, and a weekend day, Saturday 12<sup>th</sup> August, during the summer.
- Classified inbound and outbound movements at the car park accesses over a 24-hour period.
- A spot count of the number of cars parked at the beginning and end of the time period.

5.2.3 A summary of the analysis of the video count surveys is provided in [Table 5.1](#).

Table 5.1 Summary of Car Park Survey Data

SANG Site	Weekday Peak Hour	Max. Two-way Flow (Weekday)	Max. Car Park Accumulation (%)	Weekday Peak Hour	Max. Two-way Flow (Weekday)	Max. Car Park Accumulation (%)
Bucklers Forest	16:00 - 17:00; 18:00 - 19:00	29	13 (39%)	10:00 - 11:00	59	27 (82%)
Rooks Nest Wood	12:00 - 13:00	14	7 (29%)	09:00 - 10:00	20	10 (42%)
Keephatch Meadows	09:00 - 10:00; 16:00 - 17:00	15	7 (39%)	09:00 - 10:00	18	10 (56%)
Peacock Meadows	10:00 - 11:00; 17:00 - 18:00	21	7 (32%)	14:00 - 15:00	18	8 (36%)
Pope Meadow	17:00 - 18:00	19	8 (33%)	13:00 - 14:00	19	6 (25%)
Average			8 (35%)			12 (48%)

5.2.4 The survey results indicate that as expected, the SANG car parks are busier during the weekend, with Buckler's Forest SANG having a maximum car park accumulation of 82%. However, it should be noted that the other sites surveyed had a much lower maximum car park accumulation of a range between 25% and 56%. Overall, the average maximum car park accumulation was 48%

5.2.5 **Table 5.1** also indicates that the SANG sites have different peak hours on weekdays and weekends.

### 5.3 Trip Generation

5.3.1 The surveys have been analysed for the inbound and outbound vehicle trips during the identified peak hours to calculate the average two-way trips across the peak hours. As noted earlier, there appears to be no correlation between the size of the SANG and car park use (with the exception of Buckler's Forest, however, it has already been noted that this is a much larger site).

5.3.2 As such, an average of the trips at each site has been undertaken in order to estimate the anticipated trip generation at the proposed SANG.

5.3.3 The anticipated trip generation during the peak weekday hours is summarised in **Table 5.2**. The peak hours, as identified by the SANG surveys set out in **Table 5.1** have been used to identify the maximum two-way trips across the day.



**Table 5.2 Weekday Proposed Development Vehicular Trips**

Time Period	Inbound	Outbound	Two-way
08:00 – 09:00	6	6	12
09:00 – 10:00	7	6	13
16:00 – 17:00	8	6	13
17:00 – 18:00	8	7	15

5.3.4 The anticipated trip generation during the peak weekday hours is summarised in **Table 5.3**. The peak hours, as identified by the SANG surveys set out in **Table 5.1** have been used to identify the maximum two-way trips across the day.

**Table 5.3 Weekend Proposed Development Vehicular Trips**

Time Period	Inbound	Outbound	Two-way
09:00 – 10:00	10	7	18
10:00 – 11:00	11	12	22
13:00 - 14:00	6	6	12
14:00 - 15:00	9	8	17

5.3.5 The above tables indicate the peak hour across the week would be 10:00 – 11:00 on a weekend where there would 22 two-way vehicle trips at the site. In order to ensure that the proposed site access can suitably accommodate these movements, a modelling assessment has been undertaken of the site access / Old Wokingham Road junction.

## 5.4 PICADY Capacity Assessment of Site Access

5.4.1 A capacity assessment has been undertaken to demonstrate that there would be no queuing along Old Wokingham Road for vehicles waiting to turn right into the site.

5.4.2 In undertaking a capacity assessment with and without development, the Transport Research Laboratory (TRL)’s Junctions 9 modelling software package has been utilised to prepare ‘PICADY’ models of the existing and proposed access arrangement.

5.4.3 The basis of the PICADY model for the proposed site access / Old Wokingham Road junction is the measured geometries of this junction, as per the Junctions 9 User Guide. For reference, the measured geometries are shown on **mode drawing J32-6699-SK-003**, provided in **Appendix G**.

5.4.4 The baseline and net development turning movements at the site access have been applied in the existing arrangement PICADY model, with development turning movements applied in the proposed arrangement PICADY model. The PICADY models provide outputs for all turning movement scenarios in the form of Ratio of Flow to Capacity (RFC), mean-maximum queuing (in passenger car units, PCUs) and maximum delay (seconds), as per each conflict in priority between turning movements.

5.4.5 A summary of the PICADY outputs for baseline with net development trips turning movement on weekdays and weekends applied in the PICADY models is provided in **Table 5.4**. Full PICADY matrices and outputs are provided in **Appendix H**.

**Table 5.4 Baseline and Net Development Trips PICADY Outputs – Proposed Site Access / Old Wokingham Road Junction**

Arm / Movement	Weekday				Weekend			
	RFC	MMQ	Delay	LOS	RFC	MMQ	Delay	LOS
AM (08:00 – 09:00)								
Site Access to OWR (N)	0.01	0.0	9.87	A	-	-	-	-
Site Access to OWR (S)	0.02	0.0	25.03	D	-	-	-	-
OWR (N) to Site Access	0.01	0.0	9.72	A	-	-	-	-
AM (09:00 – 10:00)								
Site Access to OWR (N)	0.01	0.0	7.66	A	0.01	0.0	6.89	A
Site Access to OWR (S)	0.01	0.0	12.78	B	0.01	0.0	10.21	B
OWR (N) to Site Access	0.01	0.0	7.57	A	0.01	0.0	6.82	A
AM (10:00 – 11:00)								
Site Access to OWR (N)	-	-	-	-	0.01	0.0	7.12	A
Site Access to OWR (S)	-	-	-	-	0.06	0.1	13.14	B
OWR (N) to Site Access	-	-	-	-	0.01	0.0	7.23	A
PM (13:00 – 14:00)								
Site Access to OWR (N)	-	-	-	-	0.01	0.0	6.69	A
Site Access to OWR (S)	-	-	-	-	0.01	0.0	13.51	B
OWR (N) to Site Access	-	-	-	-	0.01	0.0	7.32	A
PM (14:00 – 15:00)								
Site Access to OWR (N)	-	-	-	-	0.01	0.0	6.53	A
Site Access to OWR (S)	-	-	-	-	0.02	0.0	12.64	B
OWR (N) to Site Access	-	-	-	-	0.01	0.0	7.16	A
PM (16:00 – 17:00)								
Site Access to OWR (N)	0.01	0.0	7.65	A	-	-	-	-

Site Access to OWR (S)	0.02	0.0	20.80	C	-	-	-	-
OWR (N) to Site Access	0.01	0.0	8.38	A	-	-	-	-
PM (17:00 – 18:00)								
Site Access to OWR (N)	0.01	0.0	8.13	A	-	-	-	-
Site Access to OWR (S)	0.03	0.0	22.37	C	-	-	-	-
OWR (N) to Site Access	0.01	0.0	8.39	A	-	-	-	-

5.4.6 **Table 5.4** demonstrates that the proposed site access / Old Wokingham junction will continue to provide for spare capacity in terms of RFC, with negligible queuing and delay.

5.4.7 On the above basis, the proposed site access / Old Wokingham Road junction is considered to be suitable in terms of accommodating the calculated net increase in vehicle movements and right-turning traffic into the proposed development. No adverse impacts are expected in this regard.

## 6. Conclusions and Recommendations

### 6.1 Overview

6.1.1 This TS has confirmed that all transport matters relating to the proposed SANG accessed off Old Wokingham Road, Wokingham, have been considered.

### 6.2 Conclusions

6.2.1 The following conclusions are drawn in relation to the contents of this TS:

- A suitable site masterplan and access strategy is put forward which accords with local planning policy and pre-application discussions with WBC and BFC officers. This includes a suitable access arrangement onto Old Wokingham Road, including for pedestrian connections, which would allow a high degree of permeability throughout the site.
- Surveys of SANGs in the local vicinity have been undertaken to ensure that parking provision is in line with what has provided at similar sites. The surveys have also been analysed to obtain an anticipated trip generation at the proposed SANG to ensure that the car park provision is sufficient for the anticipated trip generation.
- A junction capacity analysis at the site access with Old Wokingham Road has demonstrated that the development proposals will not be expected to give rise to any adverse capacity impacts on Old Wokingham Road or any significant queuing for vehicles turning right into the proposed site access.
- Furthermore, analysis of Personal Injury Collision data within the assessment scope demonstrates that the development proposals will not be expected to have any adverse impact on highway safety.

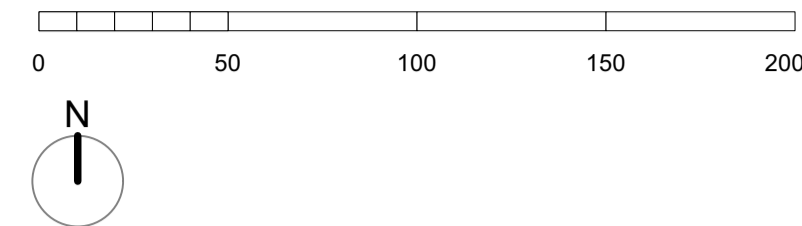
### 6.3 Recommendation

6.3.1 On the above basis, it is recommended that the proposed SANG development is considered appropriate with no notable transport impacts resulting from the development proposals.

# APPENDICES

# APPENDIX A

## Proposed Site Layout



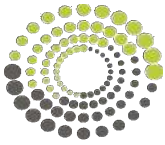
**KEY**

Site Boundary (16.37 ha)	Close Board Fence
Main site vehicular access point	Post and wire with stock proof fence
Existing trees	Car Park Fence Gates
Existing Wet woodland within site	Pedestrian path East
Wet woodland planting	Paving across track
Dry woodland scrub planting	Agriculture access
Flower rich grassland - dry seed mix	Mown Grass path
Flower rich grassland - wet seed mix	Areas of Existing vegetation to be removed (refer to Arbicultural Survey)
Dry Woodland tree planting	
Wet Woodland tree planting	
Ponds with wetland planting (see typical detail for excavation)	
Scrapes with wet grass seed (see typical detail for excavation)	
Carpark (see detailed proposal)	
View corridor	
Floodzone	
Spoil area	
Bund removal	
Boardwalk path route - 2m wide	
Self-binding gravel / hoggin 2m wide with 1m wide mown edges	
Mown grass paths 1.5m wide	
Existing track	
Existing footbridges replaced	
Proposed new footbridges	
Public Right Of Way (PROW)	
Existing Contours	

# APPENDIX B

## ATC Survey Data





# ATC SUMMARY REPORT

<b>PROJECT</b>	31053 Old Wokingham Road
<b>LOCATION</b>	31053-001 - Old Wokingham Road
<b>LOC. DESC.</b>	Old Wokingham Road
<b>START DATE</b>	Mon 27 Jun, 2022
<b>END DATE</b>	Sun 03 Jul, 2022
<b>SPEED LIMIT</b>	40mph
<b>SURVEY TYPE</b>	7-day ATC, 15min periods, 6 veh. classes

## OVERVIEW

A 7-day automatic traffic count on Old Wokingham Road, commencing Mon 27 Jun 2022, recorded a total of 104,665 vehicles. The posted speed limit of 40mph was exceeded by 11.2% of vehicles, and the seasonally adjusted, combined AADT value is 15,301 (see Equipment & Methodology below).

### COMBINED

<b>Total recorded volume</b>	<b>104,665</b>
<b>Avg daily volume (based on 7 days)</b>	<b>14,952.1</b>
<b>Average daily speed (7 days)</b>	<b>34.3mph</b>
<b>Average daily 85%ile (7 days)</b>	<b>39.1mph</b>
<b>AADT (annual average daily traffic)</b>	<b>15,301</b>

Avg weekday volume (Mon-Fri, 24hrs)	15,735.0
Avg weekday speed (Mon-Fri, 24hrs)	33.9mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	13,074.8
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	33.3mph

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data. Speeding vehicles are defined as those travelling 41mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

### NORTHBOUND ↑

<b>Total recorded volume</b>	<b>54,051</b>
<b>Avg daily volume (based on 7 days)</b>	<b>7,721.6</b>
<b>Average daily speed (7 days)</b>	<b>34.7mph</b>
<b>Average daily 85%ile (7 days)</b>	<b>39.4mph</b>
<b>% of vehicles exceeding 40mph</b>	<b>12.4%</b>

Avg weekday volume (Mon-Fri, 24hrs)	8,065.8
Avg weekday speed (Mon-Fri, 24hrs)	34.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	6,815.0
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	33.7mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	38.4mph

### SOUTHBOUND ↓

<b>Total recorded volume</b>	<b>50,614</b>
<b>Avg daily volume (based on 7 days)</b>	<b>7,230.6</b>
<b>Average daily speed (7 days)</b>	<b>33.9mph</b>
<b>Average daily 85%ile (7 days)</b>	<b>38.7mph</b>
<b>% of vehicles exceeding 40mph</b>	<b>10.0%</b>

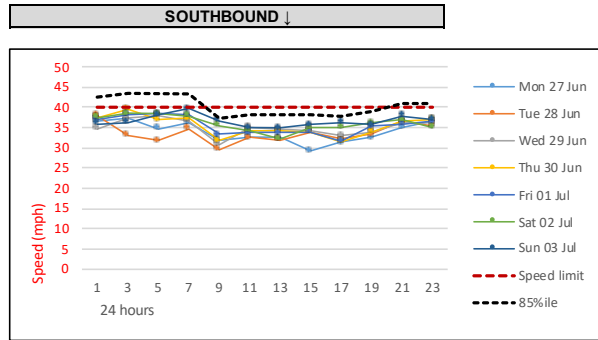
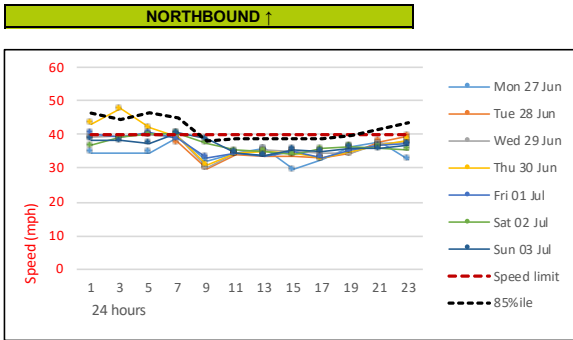
Avg weekday volume (Mon-Fri, 24hrs)	7,669.2
Avg weekday speed (Mon-Fri, 24hrs)	33.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	6,259.8
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	32.8mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	37.4mph

## SITE LOCATION



<b>Location</b>	Old Wokingham Road
<b>Lat, lng.</b>	51°23'27.10"N, 0°47'42.88"W
<b>Project &amp; site</b>	31053-001
<b>PSL</b>	40mph
<b>Bus route</b>	No
<b>Direction 1</b>	Northbound↑
<b>Direction 2</b>	Southbound↓

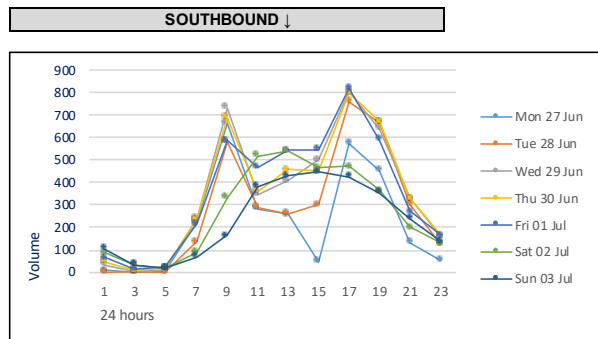
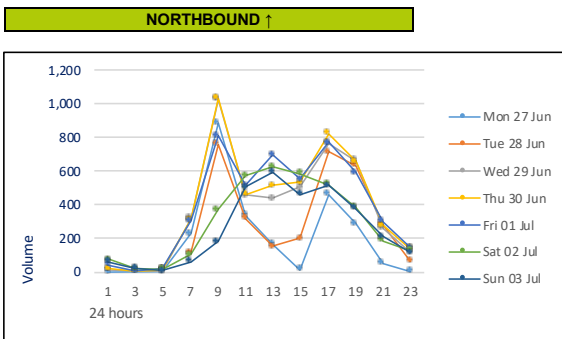
# DAILY SPEEDS



Average daily speeds (solid thin colours) and 85%ile (dashed black) compared against 40mph posted speed limit (dashed red). The 85%ile is the speed at which 85% of all vehicles are observed to travel under free flowing conditions. A minimum of ten vehicles per speed bin is required for this calculation, hence the overnight low-volume 85%ile values may be zero.

The peak average northbound daytime speed was 40.9mph at 07:00 on Sun 03 Jul, whilst the peak average southbound speed was 39.6mph at 07:00 on Sun 03 Jul (based on 15min averages between 0700 & 1900).

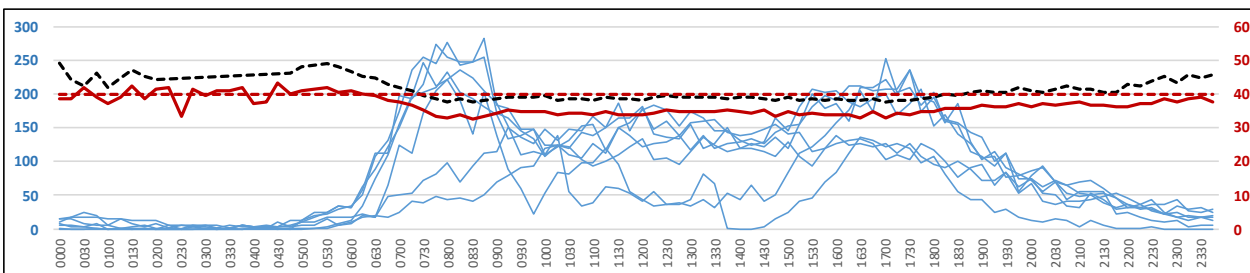
# HOURLY VOLUMES



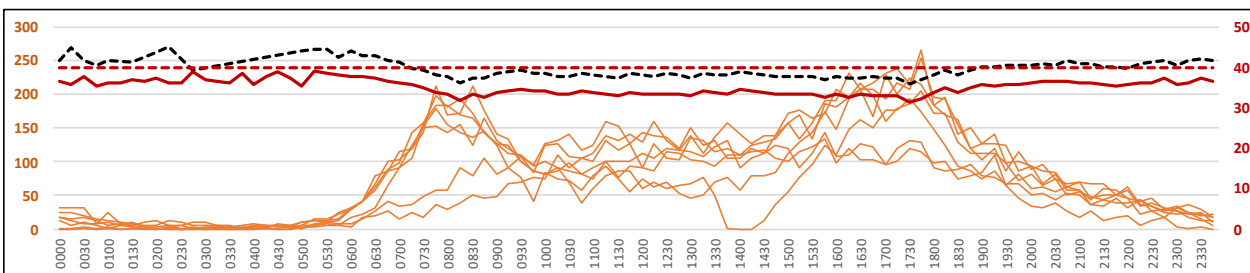
↑ Hourly northbound traffic volumes over each 24hr period for 7 days from all available data.

Hourly southbound traffic volumes over each 24hr period for 7 days from all available data. ↓

# 15min VOL & SPEED



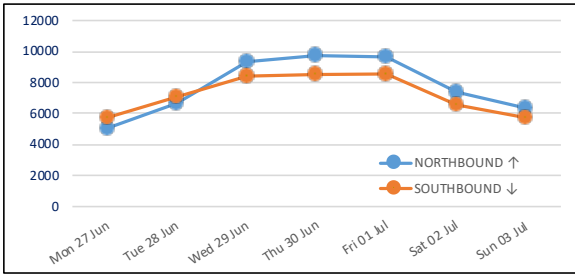
↑ 15min daily northbound flows (blue), against the average speed (red) and 85%ile (dotted black) for each 15min period over the 7-day period.



15min daily southbound flows (orange), against the average weekly speed (red) and 85%ile (dotted black) for each 15min period over the 7-day period. ↓

# DAILY VOLUMES

## NORTH & SOUTHBOUND



Total 24hr northbound (blue) and southbound (orange) traffic volumes over 7 consecutive days from all available data.

Unusually, the lowest volumes were NOT recorded on a Sunday but on the Monday, whilst the highest was on the Thursday.

# 7-DAY AVERAGE CLASSES

## NORTHBOUND 7-DAY AVG ↑

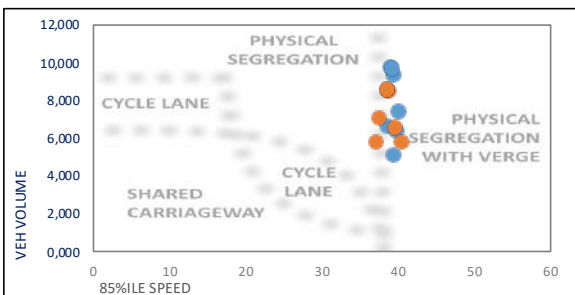
TIME	MOTOR CYCLES	CARS / LGV	OGV1	OGV2	PSV	TOTAL
0000	0.1	32.7	0.4	0.0	0.0	33.3
0100	0.0	15.9	0.4	0.0	0.0	16.3
0200	0.0	9.1	0.6	0.0	0.0	9.7
0300	0.0	8.1	0.1	0.0	0.0	8.3
0400	0.0	11.7	0.3	0.0	0.0	12.0
0500	0.9	50.7	2.3	0.1	0.3	54.3
0600	1.1	203.3	4.0	0.3	0.3	209.0
0700	4.0	611.4	9.0	2.6	0.0	627.0
0800	5.0	703.9	10.6	4.3	0.4	724.1
0900	3.3	500.4	8.6	2.3	0.9	515.4
1000	2.4	437.6	11.3	2.1	0.6	454.0
1100	3.3	466.3	12.6	1.6	0.7	484.4
1200	3.0	440.6	10.1	1.9	0.9	456.4
1300	3.7	436.0	10.1	2.0	0.4	452.3
1400	3.0	393.6	8.1	2.6	0.7	408.0
1500	3.7	510.6	9.4	3.0	0.6	527.3
1600	4.6	635.4	8.1	4.0	0.6	652.7
1700	5.6	649.6	8.7	4.0	0.7	668.6
1800	4.3	501.9	6.0	2.0	0.1	514.3
1900	4.4	316.6	2.6	0.7	0.1	324.4
2000	4.3	219.4	1.1	0.4	0.0	225.3
2100	1.4	167.7	0.4	0.3	0.1	170.0
2200	1.0	102.0	0.7	0.0	0.1	103.9
2300	0.3	69.9	0.1	0.3	0.0	70.6
12hr TTL	45.9	6287.1	112.7	32.3	6.6	6484.6
24hr TTL	59.4	7494.3	125.9	34.4	7.6	7721.6
1%	97%	2%	0%	0%		

## SOUTHBOUND 7-DAY AVG ↓

TIME	MOTOR CYCLES	CARS / LGV	OGV1	OGV2	PSV	TOTAL
0000	0.1	49.9	0.0	0.1	0.0	50.1
0100	0.0	22.6	0.0	0.0	0.0	22.6
0200	0.0	14.4	0.3	0.0	0.0	14.7
0300	0.0	11.4	0.1	0.0	0.0	11.6
0400	0.0	15.0	0.4	0.0	0.0	15.4
0500	0.0	37.4	1.9	0.0	0.0	39.3
0600	0.9	167.4	4.6	0.6	0.4	173.9
0700	2.9	426.4	8.3	2.4	0.4	440.4
0800	3.1	521.0	7.7	4.3	0.3	536.4
0900	2.7	380.3	10.0	3.1	0.3	396.4
1000	1.4	366.9	7.4	3.1	0.4	379.3
1100	3.6	405.9	7.0	2.7	0.1	419.3
1200	2.7	400.1	7.1	2.6	0.6	413.1
1300	4.1	402.3	6.0	1.0	0.0	413.4
1400	3.7	383.7	4.0	2.3	0.6	394.3
1500	4.1	535.6	5.4	2.6	0.0	547.7
1600	4.7	650.0	5.6	3.4	0.1	663.9
1700	5.6	709.4	4.3	3.1	0.3	722.7
1800	6.9	522.6	2.1	1.7	1.0	534.3
1900	3.9	375.1	1.0	1.3	0.0	381.3
2000	3.4	253.9	1.0	0.3	0.1	258.7
2100	2.0	183.7	1.3	0.9	0.1	188.0
2200	1.4	132.4	0.6	0.1	0.3	134.9
2300	0.9	77.1	0.9	0.0	0.0	78.9
12hr TTL	45.6	5704.1	75.0	32.4	4.1	5861.3
24hr TTL	58.1	7044.6	87.0	35.7	5.1	7230.6
1%	97%	1%	0%	0%		

Average daily northbound and southbound volumes by class (condensed to the AQMA scheme), including 12hr totals for 0700-1900 and overall average percentages. Calculated from all available data over 7 days.

# CYCLE PROVISION



The diagram compares total daily traffic flow (vertical axis) against the average daily 85%ile speed (horizontal axis) to demonstrate cyclist and vulnerable user considerations.

The guidelines are based on the Sustrans Design Manual (Apr 2014); Understanding User Needs, part 2.

Valid 85%iles are required to plot the graph.

# METHODOLOGY

## Equipment & methodology

Automatic traffic counts are undertaken using a pair of pneumatic tubes installed securely across the carriageway, one metre apart, recording air pulses to determine vehicle speed, class and volume. The ATC equipment generally remains in place for a consecutive seven day period, and the data analysed post-survey.

In queuing conditions, the accuracy of ATC recording equipment will reduce as follows:

- 20 – 30mph: potential reduction of 9% accuracy in volume values
- 10 – 20mph: potential reduction of 26% accuracy in volume values
- 00 – 10mph: potential reduction of 39% accuracy in volume values

These figures are based on multiple ATC results compared against accepted reference values from resilient manual counts.

AADTs are calculated using the seasonal COBA methodology; DMRB Vol. 13, Pt 4:

## Weather & environmental

Inclement conditions during winter months or outbreaks of unseasonable weather may affect survey data collection. This can result in distorted traffic flows or unusable data and should be considered prior to survey approval. Although forecast checks are made prior to the survey commencing, A-T-R cannot be held responsible for the forecast accuracy.

CLASS	ABBREV.	DESCRIPTION	LENGTH	COBA
1	MC	Motorcycle	SHORT Up to 5.5m	N/A
2	SV	Cars, taxis, 4WD, vans	MEDIUM 5.5m to 14.5m	CAR & LGV
3	SVT	Class 2 plus trailer		OGV1 & PSV
4	TB2	2 axle truck / bus		OGV1
5	TB3	3 axle truck / bus		OGV2
6	T4	4 axle truck		
7	ART3	3 axle articulated		
8	ART4	4 axle articulated		
9	ART5	5 axle articulated		
10	ART6	6+ axle articulated	LONG 11.5m to 19.0m	

## Equipment damage & failure

Although checked intermittently the equipment remains unmanned for much of the duration of the survey, and can potentially be interfered with, vandalised, damaged or stolen and A-T-R cannot be held responsible for any periods where data has not been captured.

The equipment is located in accordance with the details provided by the client and A-T-R cannot be held responsible for the accuracy of the data or loss of equipment due to theft and vandalism.

## Roadworks & events

Where possible, roadworks checks are made 7 days before the survey commences. Additionally, influencing major local events are also monitored, covering the immediate vicinity of the surveys and any routes likely to affect the outcome of the survey.

## Vehicle classifications

Vehicles recorded by the ATC are placed into one of ten classes based on axle spacing and pattern. This scheme is based on the AustRoad 94 algorithm and modified for UK traffic, referred to as ARX. The table on the left aligns the ARX classifications with the COBA Chapter 8 (Vol 13, Sec 1) classifications.

Under adverse conditions the accuracy of ATC classifications will deteriorate and an appropriate link count should be used for validation.

## Disclaimer

Although every attempt is made to achieve accuracy, A-T-R may not be held liable for errors of fact or interpretation.

Generated 16 Nov 2023 v6.0

31053-001 Old Wokingham Road. Old Wokingham Road (N). Sum

# DIR 1

PROJECT 31053 Old Wokingham Road  
 SITE 31053-001  
 LOCATION OLD WOKINGHAM ROAD  
 DIRECTION **NORTHBOUND** ↑  
 PSL 40mph

TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING DTD SPEEDING DTD % SPEEDING

ALL VEHICLES

Moycles Cars, taxis, 4WD LGV OGV1 OGV2 PSV

0 - 10 mph 10 - 15 mph 15 - 20 mph 20 - 25 mph 25 - 30 mph 30 - 35 mph 35 - 40 mph 40 - 45 mph 45 - 50 mph 50 - 60 mph 60 - 70 mph 70 - 80 mph 80 - 90 mph 90 - 100 mph AVG SPD 85%ile > 40mph % > 40mph

DAY 1	TOTAL	CLS 1	CLS 2	CLS 3	CLS 4	CLS 5	CLS 6	TIME	SPD1	SPD2	SPD3	SPD4	SPD5	SPD6	SPD7	SPD8	SPD9	SPD10	SPD11	SPD12	SPD13	SPD14	SPD15	AVG	85%ile	PSL	PSL%	ACPD	ACPD%	DTD	DTD%	
0000	1	0	1	0	0	0	0	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30.8	-	0	0.0	0	0.0		
0015	0	0	0	0	0	0	0	0015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0030	0	0	0	0	0	0	0	0030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0045	2	0	1	1	0	0	0	0045	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	36.7	-	0	0.0	0	0.0		
0100	0	0	0	0	0	0	0	0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0115	0	0	0	0	0	0	0	0115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0130	0	0	0	0	0	0	0	0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0145	0	0	0	0	0	0	0	0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0200	0	0	0	0	0	0	0	0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0215	0	0	0	0	0	0	0	0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0230	0	0	0	0	0	0	0	0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0245	0	0	0	0	0	0	0	0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0300	0	0	0	0	0	0	0	0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0315	0	0	0	0	0	0	0	0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0330	0	0	0	0	0	0	0	0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0345	0	0	0	0	0	0	0	0345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0400	1	0	1	0	0	0	0	0400	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	35.7	-	0	0.0	0	0.0		
0415	2	0	1	1	0	0	0	0415	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	34.5	-	0	0.0	0	0.0		
0430	0	0	0	0	0	0	0	0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0		
0445	1	0	1	0	0	0	0	0445	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	34.2	-	0	0.0	0	0.0		
0500	1	0	1	0	0	0	0	0500	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	34.2	-	0	0.0	0	0.0		
0515	2	0	2	0	0	0	0	0515	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	46.3	-	2	100.0	1	50.0		
0530	3	0	3	0	0	0	0	0530	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	44.5	-	2	66.7	1	33.3		
0545	8	0	6	2	0	0	0	0545	0	0	0	3	3	4	1	0	0	0	0	0	0	0	0	0	36.2	-	1	12.5	0	0.0		
0600	12	0	10	2	0	0	0	0600	0	0	0	0	0	3	5	3	1	0	0	0	0	0	0	0	0	43.1	48.2	9	75.0	4	33.3	
0615	34	1	27	5	1	0	0	0615	1	0	0	0	3	10	12	4	4	0	0	0	0	0	0	0	0	40.8	49.5	20	58.8	8	23.5	
0630	74	1	52	20	1	0	0	0630	0	0	0	0	5	42	22	3	2	0	0	0	0	0	0	0	0	39.7	43.3	27	36.5	3	4.1	
0645	110	0	84	25	1	0	0	0645	0	0	0	2	20	49	26	2	2	0	0	0	0	0	0	0	0	36.1	43.7	26	32.7	7	5.4	
0700	153	0	124	30	1	0	0	0700	0	0	0	0	7	65	36	18	2	0	0	0	0	0	0	0	0	35.8	45.0	27	34.3	10	7.2	
0715	199	1	165	30	3	0	0	0715	0	0	0	2	6	65	36	38	2	0	0	0	0	0	0	0	0	0	36.3	40.7	40	20.1	0	0.0
0730	247	2	204	39	1	1	0	0730	0	1	1	15	40	103	75	11	0	1	0	0	0	0	0	0	0	0	32.9	37.4	12	4.9	1	0.4
0745	212	3	177	25	5	2	0	0745	2	2	11	4	28	101	58	6	0	0	0	0	0	0	0	0	0	0	32.1	37.0	6	2.8	0	0.0
0800	221	0	190	24	7	0	0	0800	1	0	9	7	46	104	47	7	0	0	0	0	0	0	0	0	0	0	31.8	36.4	7	3.2	0	0.0
0815	235	1	197	34	2	1	0	0815	0	1	4	6	31	118	67	8	0	0	0	0	0	0	0	0	0	0	33.0	37.1	8	3.4	0	0.0
0830	224	2	190	30	2	0	0	0830	1	2	4	13	48	96	55	4	1	0	0	0	0	0	0	0	0	0	31.9	37.0	5	2.2	1	0.4
0845	206	0	165	36	4	1	0	0845	0	1	7	8	36	90	56	8	0	0	0	0	0	0	0	0	0	0	32.4	37.1	8	3.9	0	0.0
0900	186	0	155	28	2	1	0	0900	0	2	2	11	20	86	51	12	2	0	0	0	0	0	0	0	0	0	33.3	37.5	14	7.5	2	1.1
0915	152	0	122	22	6	2	0	0915	0	0	2	13	21	43	56	14	1	2	0	0	0	0	0	0	0	0	33.8	36.9	17	11.2	3	2.0
0930	111	0	91	22	2	0	0	0930	0	0	0	0	9	42	37	19	3	1	0	0	0	0	0	0	0	0	34.0	40.1	8	14.3	1	1.8
0945	111	0	91	22	2	0	0	0945	0	0	0	1	13	43	40	15	2	1	0	0	0	0	0	0	0	0	35.3	40.2	18	15.7	2	1.7
1000	111	1	85	16	9	0	0	1000	0	0	0	1	14	52	29	14	1	0	0	0	0	0	0	0	0	0	34.6	39.8	15	13.5	0	0.0
1015	138	0	108	25	5	0	0	1015	0	0	0	0	13	70	40	12	3	0	0	0	0	0	0	0	0	0	34.7	38.3	15	10.9	2	1.4
1030	56	0	40	12	3	0	0	1030	1	0	1	0	7	22	17	7	0	0	0	0	0	0	0	0	0	0	34.3	40.1	8	14.3	1	1.8
1045	35	0	28	7	0	0	0	1045	0	0	0	0	6	7	8	9	5	0	0	0	0	0	0	0	0	0	32.6	39.1	5	14.3	0	0.0
1100	39	0	22	14	3	0	0	1100	0	0	0	0	7	5	15	9	3	0	0	0	0	0	0	0	0	0	32.2	39.4	3	7.7	0	0.0
1115	63	0	46	15	2	0	0	1115	0	0	0	0	4	19	25	11	3	1	0	0	0	0	0	0	0	0	37.0	42.6	15	23.8	3	4.8
1130	60	1	40	18	1	0	0	1130	0	1	0	1	6	20	20	10	1	1	0	0	0	0	0	0	0	0	35.3	40.9	12	20.0	2	3.3
1145	54	0	39	12	3	0	0	1145	0	0	0	1	13	11	20	7	0	0	0	0	0	0	0	0	0	0	33.3	39.5	7	13.0	0	0.0
1200	41	0	31	9	1	0	0	1200	1	0	1	0	0	14	17	7	1	0	0	0	0	0	0	0	0	0	35.2	40.7	8	19.5	0	0.0
1215	56	1	41	14	0	0	0	1215	1	0	1	0	4	31	12	7	0	0	0	0	0	0	0	0	0	0	34.0	38.5	7	12.5	0	0.0
1230	37	0	28	8	1	0	0	1230	0	0	0	1	0	4	18	12	2	0	0	0	0	0	0	0	0	0	38.8	42.1	14	37.8	2	5.4
1245	36	0	25	11	0	0	0	1245	0	0	0	1	4	6	14	10	1	0	0	0	0	0	0	0	0	0	36.7	42.0	11	30.6	1	2.8
1300	43	0	30	12	1	0	0	1300	0	0	0	0	9	42	37	19	3	1	0	0	0	0	0	0	0	0	36.6	41.0	11	25.6	0	0.0
1315	82	0	59	18	5	0																										





# DIR 1

PROJECT 31053 Old Wokingham Road  
 SITE 31053-001  
 LOCATION OLD WOKINGHAM ROAD  
 DIRECTION NORTHBOUND ↑  
 PSL 40mph

DAY 4	ALL VEHICLES	Moycles Cars, taxis, 4WD	LGV	OGV1	OGV2	PSV	0 - 10 mph	10 - 15 mph	15 - 20 mph	20 - 25 mph	25 - 30 mph	30 - 35 mph	35 - 40 mph	40 - 45 mph	45 - 50 mph	50 - 60 mph	60 - 70 mph	70 - 80 mph	80 - 90 mph	90 mph+	AVG SPD	85%ile	PSL SPEEDING > 40mph	PSL % SPEEDING % > 40mph	ACPO SPEEDING	ACPO % SPEEDING	DIT SPEEDING	DIT % SPEEDING		
																													Total	Cl1
0000	7	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40.6	-	5	71.4	1	14.3	0	0.0	
0015	5	0	4	1	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	40.9	-	3	60.0	0	0.0	0	0.0	
0030	3	0	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	62.2	-	3	100.0	2	66.7	2	66.7	
0045	8	0	6	2	0	0	0	0	0	0	3	0	4	1	0	0	0	0	0	0	0	39.6	-	5	62.5	0	0.0	0	0.0	
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0	0	0.0	
0115	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	44.1	-	1	100.0	0	0.0	0	0.0	
0130	2	0	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	47.3	-	2	100.0	2	100.0	0	0.0	
0145	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	35.8	-	0	0.0	0	0.0	0	0.0	
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0	0	0.0	
0215	5	0	1	3	1	0	0	0	0	0	0	1	0	1	0	1	2	0	0	0	0	45.7	-	3	60.0	3	60.0	2	40.0	
0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0	0	0.0	
0245	3	0	2	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	51.2	-	3	100.0	2	66.7	1	33.3	
0300	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	43.3	-	1	100.0	0	0.0	0	0.0	
0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0.0	0	0.0	0	0.0	
0330	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	39.0	-	0	0.0	0	0.0	0	0.0	
0345	5	0	4	0	1	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	46.1	-	4	80.0	2	40.0	1	20.0	
0400	4	0	2	2	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	42.0	-	3	75.0	0	0.0	0	0.0	
0415	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	41.9	-	1	100.0	0	0.0	0	0.0	
0430	10	0	8	2	0	0	0	0	0	0	0	1	4	3	1	1	0	0	0	0	0	40.9	-	5	50.0	2	20.0	0	0.0	
0445	4	0	4	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	45.0	-	4	100.0	1	25.0	0	0.0	
0500	11	0	6	3	0	0	0	0	0	0	0	4	3	4	0	0	0	0	0	0	0	42.7	47.4	7	63.6	2	18.2	0	0.0	
0515	18	0	15	2	1	0	0	0	0	0	2	9	4	2	1	0	0	0	0	0	0	40.3	46.5	7	38.9	3	16.7	0	0.0	
0530	26	0	19	5	2	0	0	0	0	0	5	7	6	5	3	0	0	0	0	0	0	41.8	49.8	14	53.9	8	30.8	0	0.0	
0545	34	2	25	5	2	0	0	0	0	0	1	14	7	6	7	0	0	0	0	0	0	42.6	52.9	18	52.9	9	26.5	3	8.6	
0600	33	0	20	12	1	0	0	0	0	1	2	11	10	6	2	1	0	0	0	0	0	41.8	46.3	19	57.6	6	18.2	1	3.0	
0615	58	1	47	7	3	0	0	0	0	0	5	24	22	5	1	1	0	0	0	0	0	40.3	44.3	29	50.0	5	8.6	1	1.7	
0630	113	1	94	15	2	0	1	0	0	0	11	66	26	9	1	0	0	0	0	0	0	39.0	42.5	36	31.9	7	6.2	1	0.9	
0645	113	0	93	17	3	0	0	0	0	0	11	24	57	27	2	2	0	0	0	0	0	38.4	42.4	31	27.4	3	2.7	0	0.0	
0700	198	1	152	27	1	0	0	0	0	1	2	11	66	32	26	3	0	0	0	0	0	35.5	40.3	31	15.7	1	0.5	0	0.0	
0715	193	0	154	38	1	0	0	0	0	0	6	69	88	16	4	1	0	0	0	0	0	35.6	39.2	21	10.9	3	1.6	0	0.0	
0730	215	0	183	26	5	1	0	0	0	0	6	3	16	93	78	17	0	0	0	0	0	35.0	38.9	19	8.8	2	0.9	2	0.9	
0745	273	2	231	29	7	4	0	0	0	0	7	48	144	68	6	0	0	0	0	0	0	33.0	36.7	6	2.2	0	0.0	0	0.0	
0800	254	4	225	23	2	0	0	0	0	0	2	7	46	144	43	10	1	0	0	0	0	32.4	36.0	11	4.3	1	0.4	0	0.0	
0815	248	0	219	25	3	1	0	0	0	1	14	14	28	29	4	0	0	0	0	0	0	30.1	26.8	3	3	2	0.2	0	0.0	
0830	247	1	215	29	2	0	0	0	0	0	2	4	6	23	50	104	50	8	0	0	0	31.0	36.2	8	3.2	0	0.0	0	0.0	
0845	283	2	237	30	8	4	2	0	0	0	8	24	16	47	127	54	7	0	0	0	0	30.4	35.9	7	2.5	0	0.0	0	0.0	
0900	185	3	156	22	2	1	1	0	0	0	1	0	3	12	27	76	58	7	0	0	0	32.9	37.5	8	4.3	1	0.5	1	0.5	
0915	179	5	140	22	9	3	0	0	0	0	3	9	24	64	65	13	1	0	0	0	0	33.7	38.9	14	7.8	1	0.6	0	0.0	
0930	148	1	118	25	3	0	1	0	0	0	1	14	28	29	4	0	0	0	0	0	0	35.0	38.4	11	10.0	2	1.8	0	0.0	
0945	149	1	120	21	7	0	0	0	0	0	0	0	6	15	71	45	9	3	0	0	0	34.0	38.0	12	8.1	3	2.0	0	0.0	
1000	125	0	101	18	6	0	0	0	0	0	0	3	12	52	52	6	0	0	0	0	0	34.5	38.6	6	4.8	0	0.0	0	0.0	
1015	124	2	106	12	3	1	0	0	0	0	2	1	1	16	53	37	9	2	3	0	0	34.2	38.9	14	11.3	5	4.0	0	0.0	
1030	110	1	82	20	5	0	0	0	0	0	0	0	1	9	47	42	3	2	0	0	0	35.0	38.4	11	10.0	2	1.8	0	0.0	
1045	106	0	84	18	4	0	0	0	0	0	2	4	2	13	37	36	10	1	1	0	0	33.7	39.0	12	11.3	1	0.9	0	0.0	
1100	127	1	111	11	3	0	0	0	0	0	1	1	2	21	55	35	10	2	0	0	0	33.7	38.7	12	9.4	2	1.6	0	0.0	
1115	113	0	86	18	8	0	0	0	0	0	0	0	0	5	57	38	13	2	0	0	0	35.4	39.9	15	13.3	1	0.9	0	0.0	
1130	151	0	120	22	9	0	0	0	0	0	0	0	2	26	78	38	6	1	0	0	0	33.4	36.8	7	4.6	1	0.7	0	0.0	
1145	140	1	116	16	8	0	0	0	0	0	0	0	1	37	57	17	0	0	0	0	0	35.1	39.9	11	7.7	0	0.0	0	0.0	
1200	123	1	100	17	5	0	0	0	0	0	0	0	2	6	57	45	10	3	0	0	0	35.3	39.5	13	10.6	2	1.6	0	0.0	
1215	126	0	110	12	4	0	0	0	0	0	0	0	5	9	40	50	20	1	1	0	0	35.6	40.5	22	17.5	1	0.8	0	0.0	
1230	130	0	104	20	4	2	0	0	0	0	0	0	8	16	49	46	9	2	0	0	0	34.1	38.6	11	8.5	1	0.8	0	0.0	
1245	138	0	109	21	6	1	1	0	0	0	0	0	1	17	57	50	11	2	0	0	0	34.5	38.9	13	9.4	2	1.4	0	0.0	
1300	119	1	94	18	4	0	1	0	0	0	0	0	1	7	23	54	33	10	3	0	0	34.4	38.3	13	11.0	2	1.7	0	0.0	
1315	139	0	119	17	3	0	0	0	0	0	0	0	5	11	65	47	9	2	0	0	0	34.6	39.1	11	7.9	1	0.7	0	0.0	
1330	119	1	92	18	4	4	0	0	0	0	0	0	0	10	53	46	9	0	0	0	0	34.6	38.1	9	7.6	0	0.0	0	0.0	
1345	128	0	103	17	6	1	1	0	0	0	0	0	2	17	51	53	5	0	0	0	0	34.1	38.7	5	3.9	0	0.0	0	0.0	
1400	130	0																												











DIR 2

TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING DIT SPEEDING DIT % SPEEDING

PROJECT 31053 Old Wokingham Road
SITE 31053-001
LOCATION OLD WOKINGHAM ROAD
DIRECTION SOUTHBOUND
PSL 40mph

Table with columns for DAY 2, ALL VEHICLES, vehicle types (Mocyles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), speed bins (0-10 mph to 90+ mph), and performance metrics (AVG SPD, 85%ile, PSL SPEEDING, etc.). Rows represent time intervals from 0000 to 00-00.



TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+

AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING DTD SPEEDING DTD % SPEEDING

PROJECT 31053 Old Wokingham Road
SITE 31053-001
LOCATION OLD WOKINGHAM ROAD
DIRECTION SOUTHBOUND
PSL 40mph

Table with columns for ALL VEHICLES (Motorcycles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), 0-10 mph, 10-15 mph, 15-20 mph, 20-25 mph, 25-30 mph, 30-35 mph, 35-40 mph, 40-45 mph, 45-50 mph, 50-60 mph, 60-70 mph, 70-80 mph, 80-90 mph, 90-100 mph, AVG SPD, 85%ile, > 40mph, % > 40mph. Includes a detailed data grid for various vehicle types and speeds.





DIR 2

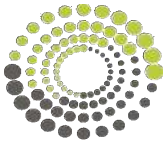
TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING DTT SPEEDING DTT % SPEEDING

PROJECT 31053 Old Wokingham Road
LOCATION 31053-001
DIRECTION OLD WOKINGHAM ROAD
PSL SOUTHBOUND ↓
40mph

Table with columns for ALL VEHICLES (Mocyles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), TIME, and various speed bins (0-10 mph to 90+ mph). Rows include vehicle counts and metrics like Mean, Vpp, JPSL, and PSL for each time bin.





# ATC SUMMARY REPORT

<b>PROJECT</b>	31053 Old Wokingham Road
<b>LOCATION</b>	31053-002 - Old Wokingham Road
<b>LOC. DESC.</b>	Old Wokingham Road
<b>START DATE</b>	Mon 27 Jun, 2022
<b>END DATE</b>	Sun 03 Jul, 2022
<b>SPEED LIMIT</b>	40mph
<b>SURVEY TYPE</b>	7-day ATC, 15min periods, 6 veh. classes

## OVERVIEW

A 7-day automatic traffic count on Old Wokingham Road, commencing Mon 27 Jun 2022, recorded a total of 117,594 vehicles. The posted speed limit of 40mph was exceeded by 31.4% of vehicles, and the seasonally adjusted, combined AADT value is 17,125 (see Equipment & Methodology below).

### COMBINED

<b>Total recorded volume</b>	<b>117,594</b>
<b>Avg daily volume (based on 7 days)</b>	16,799.1
<b>Average daily speed (7 days)</b>	36.7mph
<b>Average daily 85%ile (7 days)</b>	42.9mph
<b>AADT (annual average daily traffic)</b>	17,125

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data. Speeding vehicles are defined as those travelling 41mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

Avg weekday volume (Mon-Fri, 24hrs)	18,225.4
Avg weekday speed (Mon-Fri, 24hrs)	36.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	14,938.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	35.9mph

### NORTHBOUND ↑

<b>Total recorded volume</b>	<b>59,949</b>
Avg daily volume (based on 7 days)	8,564.1
Average daily speed (7 days)	37.9mph
Average daily 85%ile (7 days)	43.0mph
% of vehicles exceeding 40mph	32.7%

Avg weekday volume (Mon-Fri, 24hrs)	9,322.4
Avg weekday speed (Mon-Fri, 24hrs)	37.6mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	7,792.0
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	37.0mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	41.9mph

### SOUTHBOUND ↓

<b>Total recorded volume</b>	<b>57,645</b>
Avg daily volume (based on 7 days)	8,235.0
Average daily speed (7 days)	35.6mph
Average daily 85%ile (7 days)	42.7mph
% of vehicles exceeding 40mph	30.1%

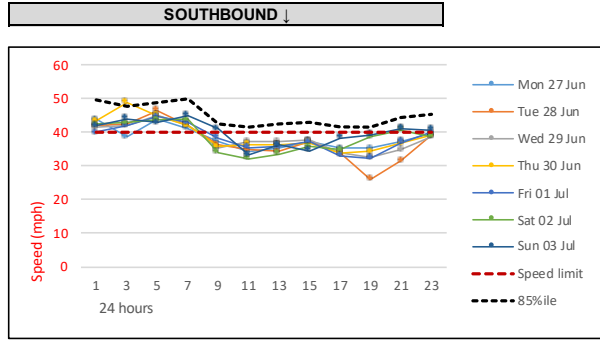
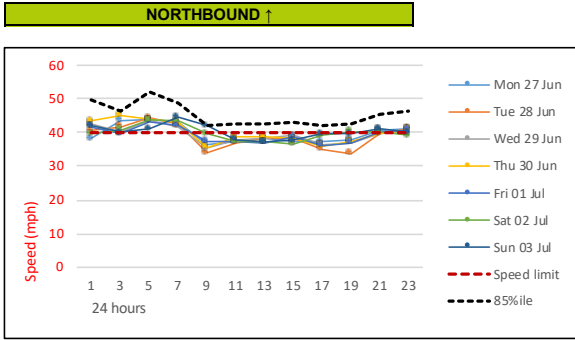
Avg weekday volume (Mon-Fri, 24hrs)	8,903.0
Avg weekday speed (Mon-Fri, 24hrs)	35.2mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	7,146.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	34.8mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	41.7mph

## SITE LOCATION



<b>Location</b>	Old Wokingham Road
<b>Lat, lng.</b>	51°23'13.44"N, 0°47'38.17"W
<b>Project &amp; site</b>	31053-002
<b>PSL</b>	40mph
<b>Bus route</b>	No
<b>Direction 1</b>	Northbound↑
<b>Direction 2</b>	Southbound↓

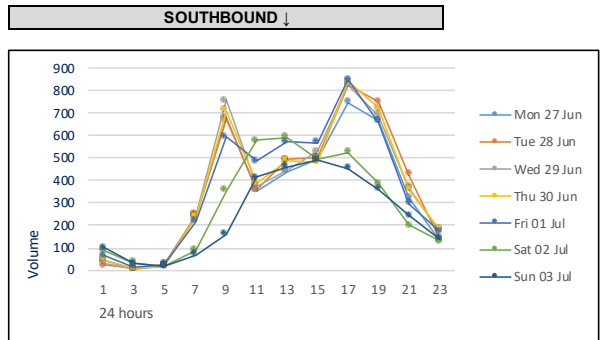
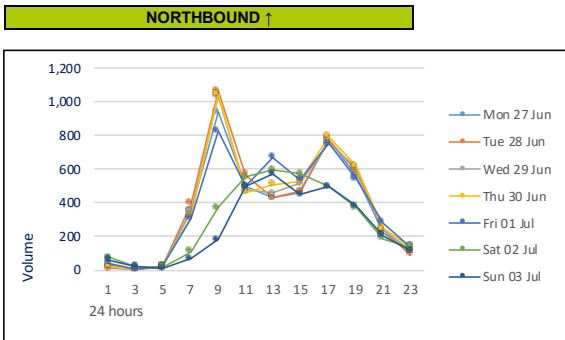
# DAILY SPEEDS



Average daily speeds (solid thin colours) and 85%ile (dashed black) compared against 40mph posted speed limit (dashed red). The 85%ile is the speed at which 85% of all vehicles are observed to travel under free flowing conditions. A minimum of ten vehicles per speed bin is required for this calculation, hence the overnight low-volume 85%ile values may be zero.

The peak average northbound daytime speed was 43.1mph at 08:00 on Sun 03 Jul, whilst the peak average southbound speed was 43.4mph at 07:30 on Sun 03 Jul (based on 15min averages between 0700 & 1900).

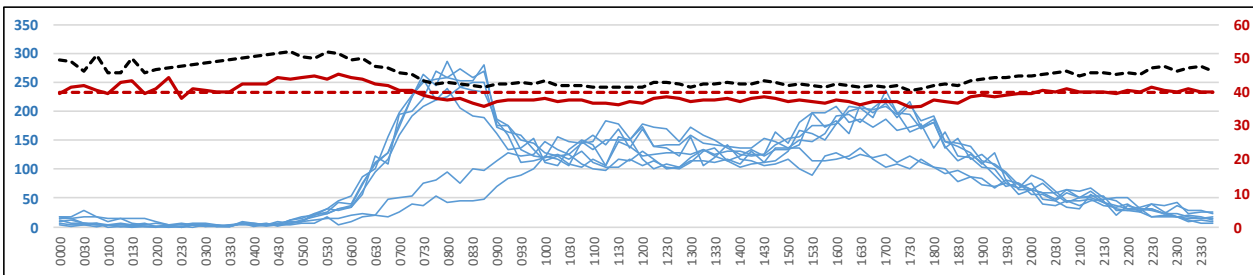
# HOURLY VOLUMES



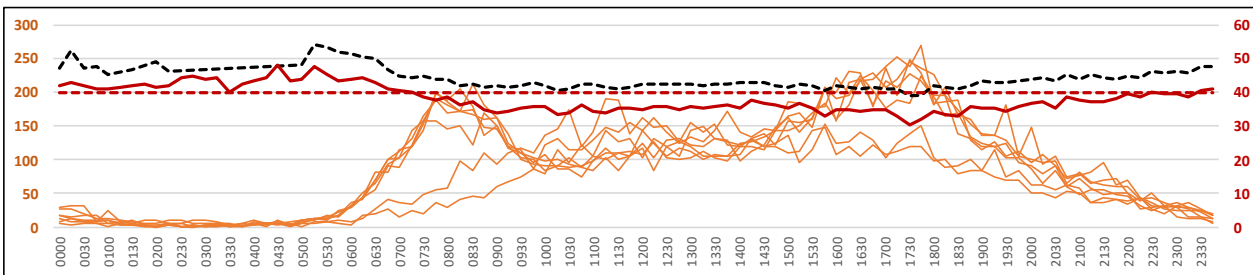
↑ Hourly northbound traffic volumes over each 24hr period for 7 days from all available data.

Hourly southbound traffic volumes over each 24hr period for 7 days from all available data. ↓

# 15min VOL & SPEED



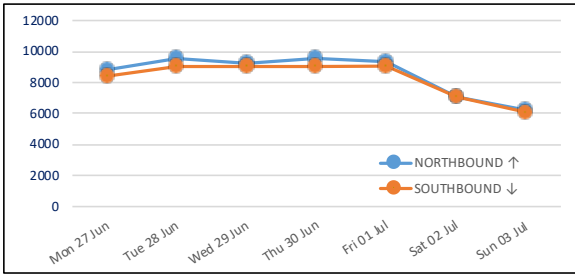
↑ 15min daily northbound flows (blue), against the average speed (red) and 85%ile (dotted black) for each 15min period over the 7-day period.



15min daily southbound flows (orange), against the average weekly speed (red) and 85%ile (dotted black) for each 15min period over the 7-day period. ↓

# DAILY VOLUMES

## NORTH & SOUTHBOUND



Total 24hr northbound (blue) and southbound (orange) traffic volumes over 7 consecutive days from all available data.

As can be expected, the lowest volumes were recorded on the Sunday, whilst the highest was on the Thursday.

# 7-DAY AVERAGE CLASSES

## NORTHBOUND 7-DAY AVG ↑

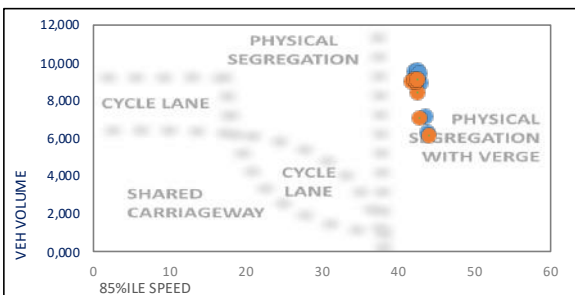
TIME	MOTOR CYCLES	CARS / LGV	OGV1	OGV2	PSV	TOTAL
0000	0.3	40.4	0.6	0.0	0.0	41.3
0100	0.1	21.1	0.6	0.0	0.0	21.9
0200	0.0	11.3	0.7	0.0	0.0	12.0
0300	0.0	13.9	0.6	0.0	0.0	14.4
0400	0.1	20.3	0.7	0.3	0.0	21.4
0500	1.7	77.1	3.6	0.4	0.6	83.4
0600	1.9	265.0	5.3	1.3	0.6	274.0
0700	5.0	667.6	10.7	3.4	0.0	686.7
0800	5.1	758.6	11.4	5.0	0.7	780.9
0900	3.6	535.3	13.3	3.4	0.7	556.3
1000	3.3	486.1	14.3	3.4	0.9	508.0
1100	3.0	520.3	16.4	2.1	1.4	543.3
1200	4.3	500.0	15.0	3.0	1.4	523.7
1300	5.9	502.9	14.7	3.7	0.9	528.0
1400	2.6	486.4	12.7	2.9	1.0	505.6
1500	5.4	573.0	15.1	2.4	0.6	596.6
1600	4.4	673.4	11.0	3.1	0.7	692.7
1700	6.0	660.9	9.4	4.0	1.0	681.3
1800	4.0	513.4	6.3	2.4	0.3	526.4
1900	3.0	343.9	3.1	1.3	0.1	351.4
2000	1.9	228.3	1.7	0.3	0.1	232.3
2100	1.1	181.4	0.4	0.4	0.3	183.7
2200	1.4	119.1	0.9	0.1	0.1	121.7
2300	1.1	75.6	0.1	0.3	0.0	77.1
12hr TTL	52.6	6877.9	150.4	39.0	9.6	7129.4
24hr TTL	65.3	8275.3	168.7	43.4	11.4	8564.1
	1%	97%	2%	1%	0%	

## SOUTHBOUND 7-DAY AVG ↓

TIME	MOTOR CYCLES	CARS / LGV	OGV1	OGV2	PSV	TOTAL
0000	0.1	58.0	0.3	0.1	0.0	58.6
0100	0.0	26.4	0.4	0.1	0.0	27.0
0200	0.0	16.1	0.4	0.0	0.0	16.6
0300	0.0	14.7	0.1	0.0	0.0	14.9
0400	0.1	20.6	0.9	0.0	0.0	21.6
0500	0.0	43.6	2.9	0.0	0.1	46.6
0600	1.0	182.9	8.0	1.1	0.3	193.3
0700	3.3	428.1	13.7	4.6	0.4	450.1
0800	4.1	538.4	13.6	3.0	0.7	559.9
0900	6.0	424.7	14.9	3.4	0.3	449.3
1000	4.1	399.6	12.3	5.1	0.9	422.0
1100	4.4	466.3	12.3	2.6	0.1	485.7
1200	7.6	474.4	12.7	3.7	0.4	498.9
1300	7.1	477.1	11.1	3.4	0.0	498.9
1400	7.6	489.3	8.4	3.1	0.7	509.1
1500	5.4	612.7	12.0	3.9	0.0	634.0
1600	5.6	702.7	9.3	5.4	0.3	723.3
1700	6.0	757.7	6.6	7.6	0.6	778.4
1800	9.1	586.3	4.0	4.0	0.9	604.3
1900	7.7	432.6	2.0	1.6	0.0	443.9
2000	10.3	302.0	2.1	2.9	0.3	317.6
2100	4.7	231.3	2.1	0.4	0.0	238.6
2200	2.0	150.9	0.6	0.3	0.3	154.0
2300	0.9	86.4	1.4	0.0	0.0	88.7
12hr TTL	70.4	6357.4	130.9	49.9	5.3	6613.9
24hr TTL	97.3	7922.9	152.1	56.4	6.3	8235.0
	1%	96%	2%	1%	0%	

Average daily northbound and southbound volumes by class (condensed to the AQMA scheme), including 12hr totals for 0700-1900 and overall average percentages. Calculated from all available data over 7 days.

# CYCLE PROVISION



The diagram compares total daily traffic flow (vertical axis) against the average daily 85%ile speed (horizontal axis) to demonstrate cyclist and vulnerable user considerations.

The guidelines are based on the Sustrans Design Manual (Apr 2014); Understanding User Needs, part 2.

Valid 85%iles are required to plot the graph.

# METHODOLOGY

## Equipment & methodology

Automatic traffic counts are undertaken using a pair of pneumatic tubes installed securely across the carriageway, one metre apart, recording air pulses to determine vehicle speed, class and volume. The ATC equipment generally remains in place for a consecutive seven day period, and the data analysed post-survey.

In queuing conditions, the accuracy of ATC recording equipment will reduce as follows:

- 20 – 30mph: potential reduction of 9% accuracy in volume values
- 10 – 20mph: potential reduction of 26% accuracy in volume values
- 00 – 10mph: potential reduction of 39% accuracy in volume values

These figures are based on multiple ATC results compared against accepted reference values from resilient manual counts.

AADTs are calculated using the seasonal COBA methodology; DMRB Vol. 13, Pt 4:

## Weather & environmental

Inclement conditions during winter months or outbreaks of unseasonable weather may affect survey data collection. This can result in distorted traffic flows or unusable data and should be considered prior to survey approval. Although forecast checks are made prior to the survey commencing, A-T-R cannot be held responsible for the forecast accuracy.

CLASS	ABBREV.	DESCRIPTION	LENGTH	COBA
1	MC	Motorcycle	SHORT Up to 5.5m	N/A
2	SV	Cars, taxis, 4WD, vans	MEDIUM 5.5m to 14.5m	CAR & LGV
3	SVT	Class 2 plus trailer		OGV1 & PSV
4	TB2	2 axle truck / bus		OGV1
5	TB3	3 axle truck / bus		OGV2
6	T4	4 axle truck		
7	ART3	3 axle articulated		
8	ART4	4 axle articulated		
9	ART5	5 axle articulated		
10	ART6	6+ axle articulated	LONG 11.5m to 19.0m	

## Equipment damage & failure

Although checked intermittently the equipment remains unmanned for much of the duration of the survey, and can potentially be interfered with, vandalised, damaged or stolen and A-T-R cannot be held responsible for any periods where data has not been captured.

The equipment is located in accordance with the details provided by the client and A-T-R cannot be held responsible for the accuracy of the data or loss of equipment due to theft and vandalism.

## Roadworks & events

Where possible, roadworks checks are made 7 days before the survey commences. Additionally, influencing major local events are also monitored, covering the immediate vicinity of the surveys and any routes likely to affect the outcome of the survey.

## Vehicle classifications

Vehicles recorded by the ATC are placed into one of ten classes based on axle spacing and pattern. This scheme is based on the AustRoad 94 algorithm and modified for UK traffic, referred to as ARX. The table on the left aligns the ARX classifications with the COBA Chapter 8 (Vol 13, Sec 1) classifications.

Under adverse conditions the accuracy of ATC classifications will deteriorate and an appropriate link count should be used for validation.

## Disclaimer

Although every attempt is made to achieve accuracy, A-T-R may not be held liable for errors of fact or interpretation.

Generated 16 Nov 2023 v6.0

31053-002 Old Wokingham Road. Old Wokingham Road (S). Sum











DIR 1

PROJECT 31053 Old Wokingham Road
SITE 31053-002
LOCATION OLD WOKINGHAM ROAD
DIRECTION NORTHBOUND ↑
PSL 40mph

Table with columns: DAY 5, ALL VEHICLES (Mocycles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), TIME (0-10mph to 90mph+), and various speed metrics (AVG SPD, 85%ile, PSL SPEEDING, etc.). Rows represent time intervals from 00:00 to 00:00.

DIR 1

TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPO SPEEDING ACPO % SPEEDING D/T SPEEDING D/T % SPEEDING

PROJECT 31053 Old Wokingham Road
SITE 31053-002
LOCATION OLD WOKINGHAM ROAD
DIRECTION NORTHBOUND ↑
PSL 40mph

Table with columns: DAY 6, ALL VEHICLES (Moycles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), TIME, and various speed categories (0-10 mph to 90+ mph, AVG SPD, 85%ile, PSL SPEEDING, etc.). Rows represent individual vehicle counts and metrics for each time interval.

PROJECT 31053 Old Wokingham Road
SITE 31053-002
LOCATION OLD WOKINGHAM ROAD
DIRECTION NORTHBOUND ↑
PSL 40mph

TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING DTD SPEEDING DTD % SPEEDING

ALL VEHICLES

Motorcycles Cars, taxis, 4WD LGV OGV1 OGV2 PSV

0 - 10 mph 10 - 15 mph 15 - 20 mph 20 - 25 mph 25 - 30 mph 30 - 35 mph 35 - 40 mph 40 - 45 mph 45 - 50 mph 50 - 60 mph 60 - 70 mph 70 - 80 mph 80 - 90 mph 90 - 100 mph AVG SPD 85%ile > 40mph % > 40mph

Table with columns: DAY 7, Time, Total, Class 1-6, Fix1, Time [-], Vbin 0-90, Mean, Vpp, JPSL 40, JPSL 85, ACPD, ACPD %, DTD, DTD %. Rows include vehicle IDs from 0000 to 0600.





- TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

- TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPO SPEEDING ACPO % SPEEDING DT SPEEDING DT % SPEEDING

PROJECT 31053 Old Wokingham Road
SITE 31053-002
LOCATION OLD WOKINGHAM ROAD
DIRECTION SOUTHBOUND
PSL 40mph

Table with columns for ALL VEHICLES (Mocycles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), time intervals (0-10 mph to 90+ mph), and performance metrics (AVG SPD, 85%ile, PSL SPEEDING, etc.). Rows include vehicle IDs and counts for various time bins.



DIR 2

TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING D/T SPEEDING D/T % SPEEDING

PROJECT 31053 Old Wokingham Road 31053-002
LOCATION OLD WOKINGHAM ROAD
DIRECTION SOUTHBOUND ↓
PSL 40mph

Table with columns for ALL VEHICLES (Moycles, Cars, taxis, 4WD, LGV, OGV1, OGV2, PSV), speed ranges (0-10 mph to 90+ mph), and various metrics (Total, C1s, C2s, C3s, C4s, C5s, C6s, Fix1, Time, Vbin, Mean, Vpp, JPSL, PSL, ACPD, ACPD%, D/T, D/T%). Includes a date header 'Thu 30 Jun DAY 4'.



DIR 2

TOTAL CLASS 1 CLASS 2 CLASS 3 CLASS 4 CLASS 5 CLASS 6

PROJECT 31053 Old Wokingham Road
SITE 31053-002
LOCATION OLD WOKINGHAM ROAD
DIRECTION SOUTHBOUND
PSL 40mph

TIME 0-10mph 10-15mph 15-20mph 20-25mph 25-30mph 30-35mph 35-40mph 40-45mph 45-50mph 50-60mph 60-70mph 70-80mph 80-90mph 90mph+ AVG SPD 85%ile PSL SPEEDING PSL % SPEEDING ACPD SPEEDING ACPD % SPEEDING DIT SPEEDING DIT % SPEEDING

ALL VEHICLES
Mocycles
Cars, taxis, 4WD
LGV
OGV1
OGV2
PSV

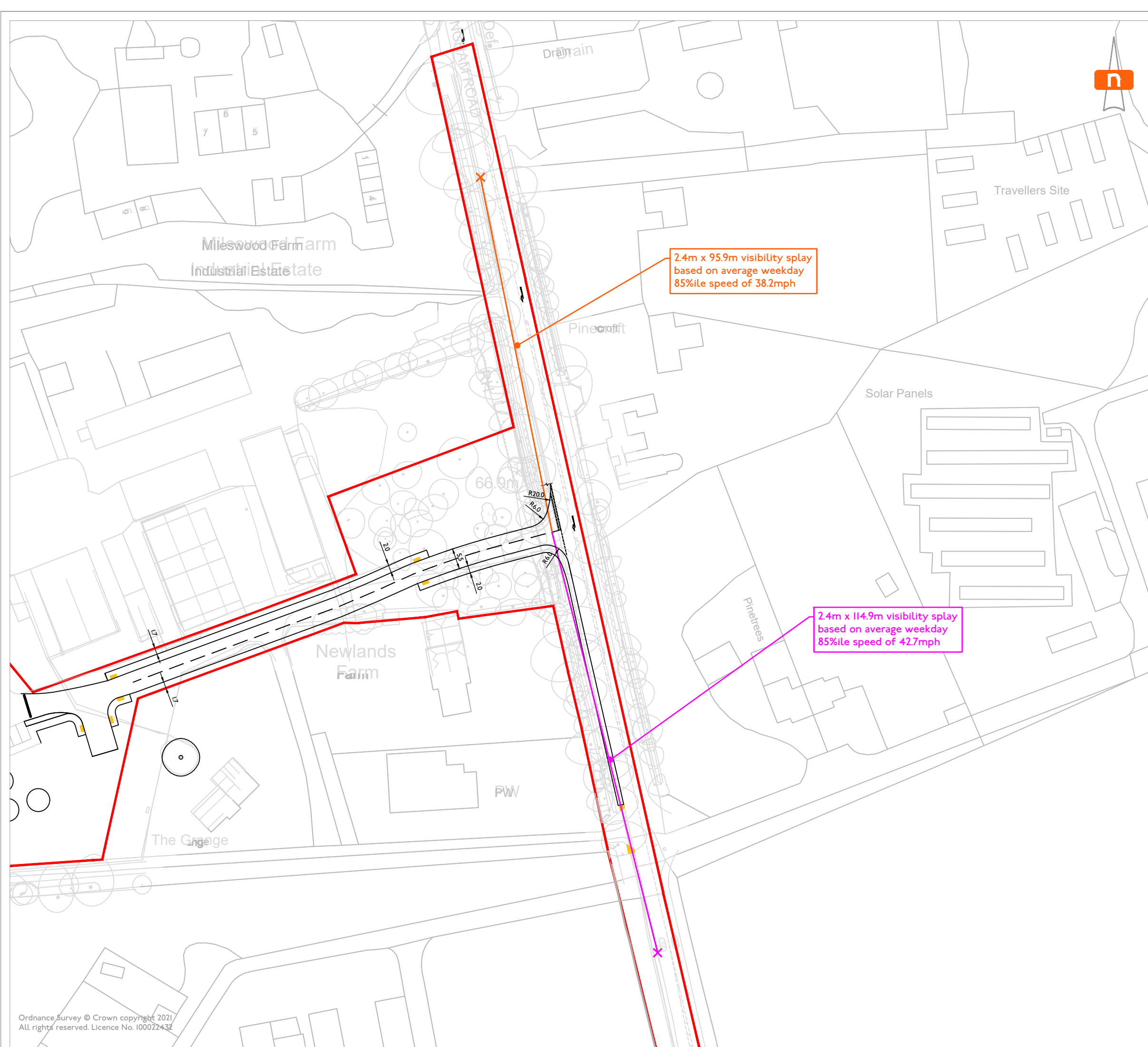
0 - 10 mph
10 - 15 mph
15 - 20 mph
20 - 25 mph
25 - 30 mph
30 - 35 mph
35 - 40 mph
40 - 45 mph
45 - 50 mph
50 - 60 mph
60 - 70 mph
70 - 80 mph
80 - 90 mph
90 - 100 mph
AVG SPD
85%ile
> 40mph
% > 40mph

Table with columns: DAY 6, Total, C1s, C2s, C3s, C4s, C5s, C6s, Fix1, Time, Vbin 0-10, Vbin 10-15, Vbin 15-20, Vbin 20-25, Vbin 25-30, Vbin 30-35, Vbin 35-40, Vbin 40-45, Vbin 45-50, Vbin 50-60, Vbin 60-70, Vbin 70-80, Vbin 80-90, Vbin 90-100, Mean, P85, JPSL 85, JPSL 40, PSL 40, PSL 85, ACPD 40, ACPD 85, DIT 40, DIT 85. Rows represent time intervals from 0000 to 0600.



# APPENDIX C

## Proposed Site Access Arrangement



- Note:
1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
  2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
  3. Do not scale from this drawing. Work from figured dimensions only.
  4. All dimensions are shown in metres unless noted otherwise.
  5. Drawing based on FPCR Layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03

REV	DATE	REMARKS
M	20.12.2023	Site access alignment updated
L	18.12.2023	Site access alignment updated
K	18.12.2023	Revised red line boundary
J	16.11.2023	Revised layout added
I	27.10.2023	Revised junction access
H	21.06.2023	Revised red line boundary
G	23.05.2023	Revised topographical survey
F	05.12.2022	Updated information
E	09.11.2022	Updated information
D	04.10.2022	Site access alignment updated
C	29.09.2022	Updated with contract plan
B	22.08.2022	Updated with tree survey
A	15.06.2022	Site access alignment updated

CLIENT  
**Bloor Homes Southern**

JOB TITLE  
**Land at Pinewood, Wokingham**

DRAWING TITLE  
**Proposed SANG Access**

DRAWING NO.  
**J32-6699-PS-002**

DRAWN	<b>PS</b>	CHECKED	<b>KM</b>
CREATED	<b>Oct. '23</b>	SCALE	<b>1:500 at A3</b>

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# APPENDIX D

## Proposed Site Access Swept Path Analysis

**Inbound (from North)**

66.9m



**Outbound (towards North)**

66.9m



**Inbound (from South)**

66.9m



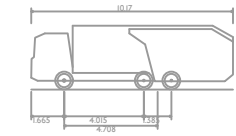
**Outbound (towards South)**

66.9m



Note:

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
3. Do not scale from this drawing. Work from figured dimensions only.
4. All dimensions are shown in metres unless noted otherwise.
5. Drawing based on FPCR Layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03



Phoenix 2 High Capacity Twin Pack 50/50 (with Elite 2 6x4 chassis)  
 Overall Length 10.170m  
 Overall Width 2.550m  
 Overall Body Height 3.214m  
 Min Body Ground Clearance 0.419m  
 Track Width 2.550m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 10.300m

REV	DATE	REMARKS
C	18.12.2023	Revised red line boundary
B	16.11.2023	Revised layout added
A	01.11.2023	Revised layout added
-	24.10.2023	Initial Issue

CLIENT

Bloor Homes Southern

JOB TITLE

Land at Pinewood, Wokingham

DRAWING TITLE

Swept Path Analysis -  
Refuse Vehicle

DRAWING NO.

J32-6699-AT-A02

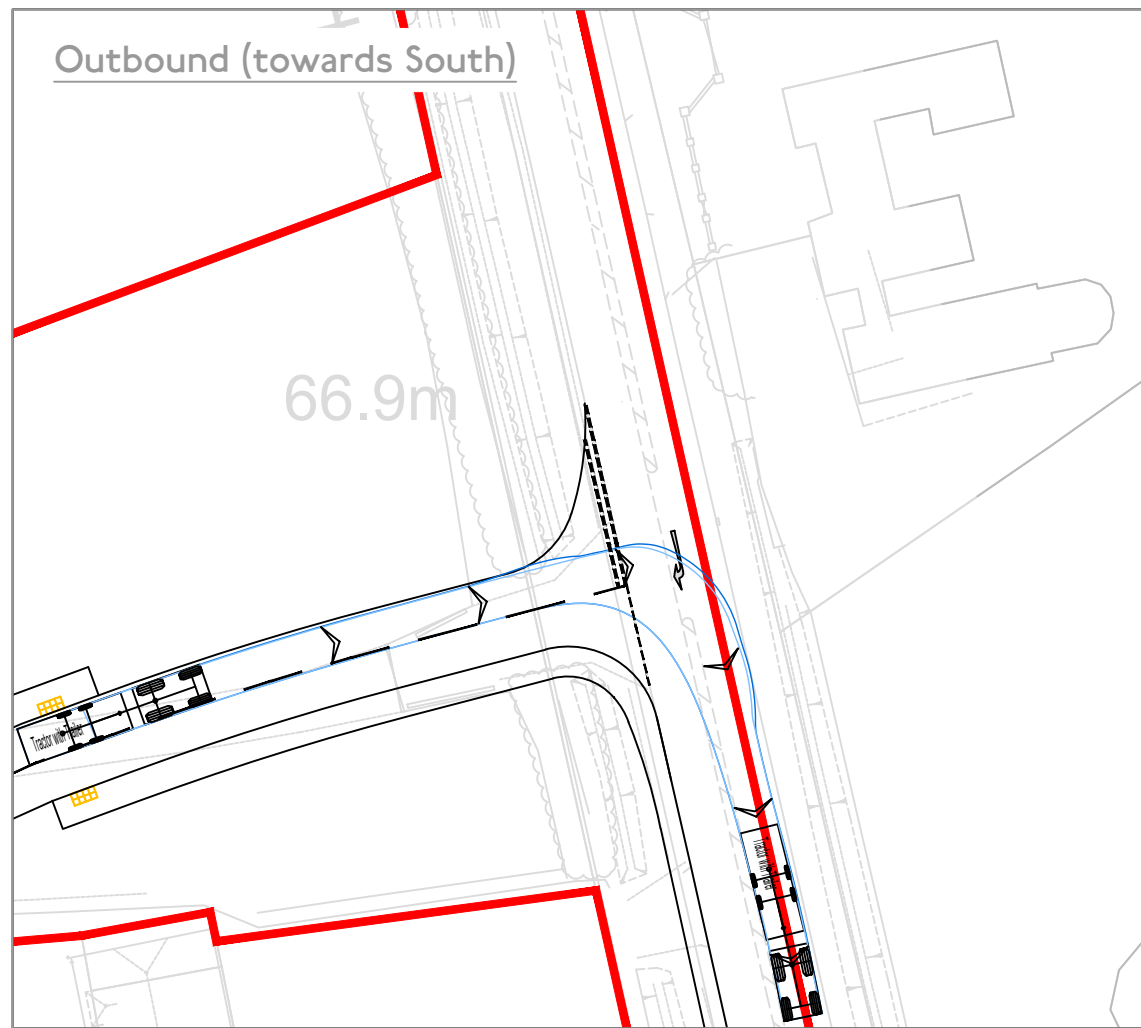
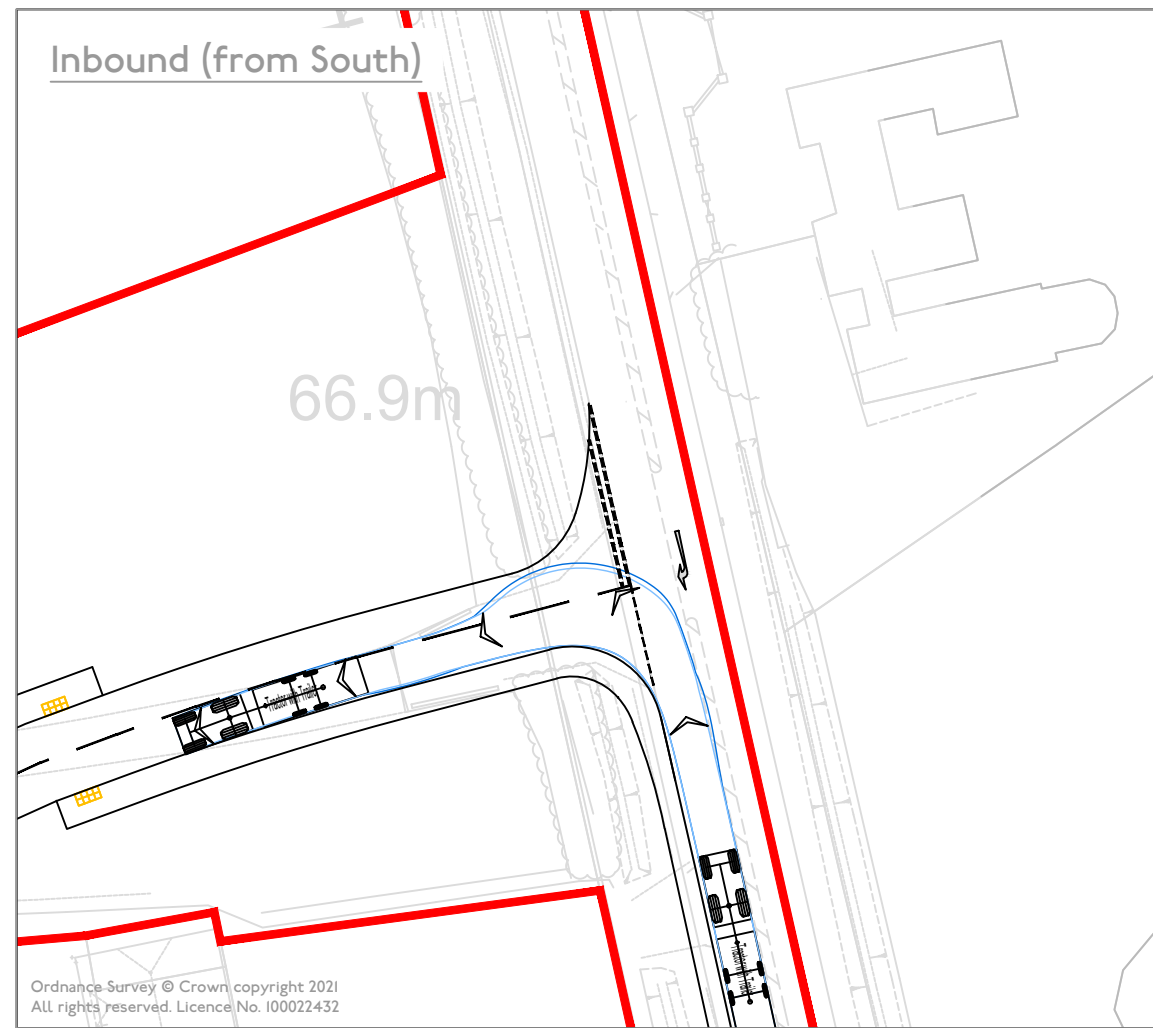
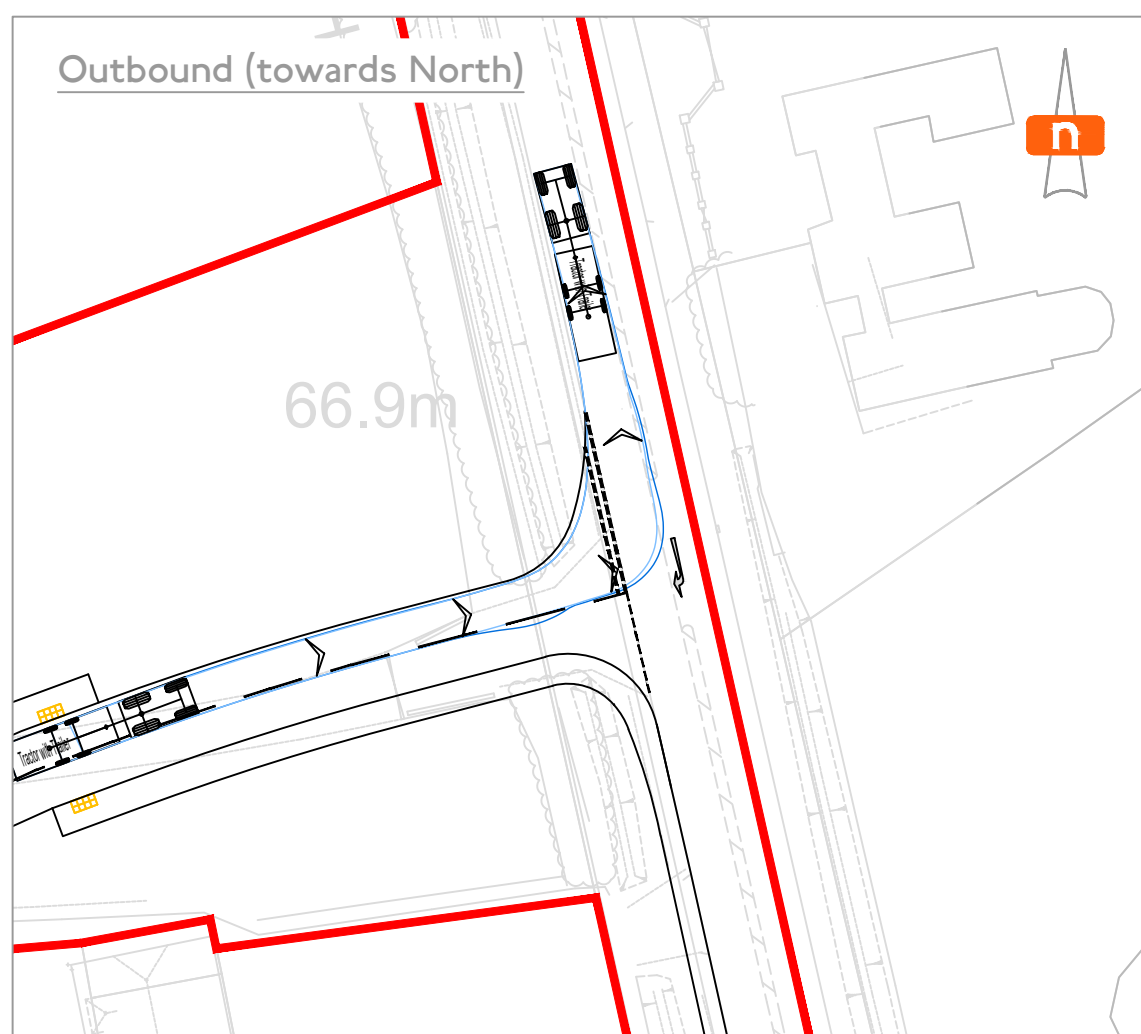
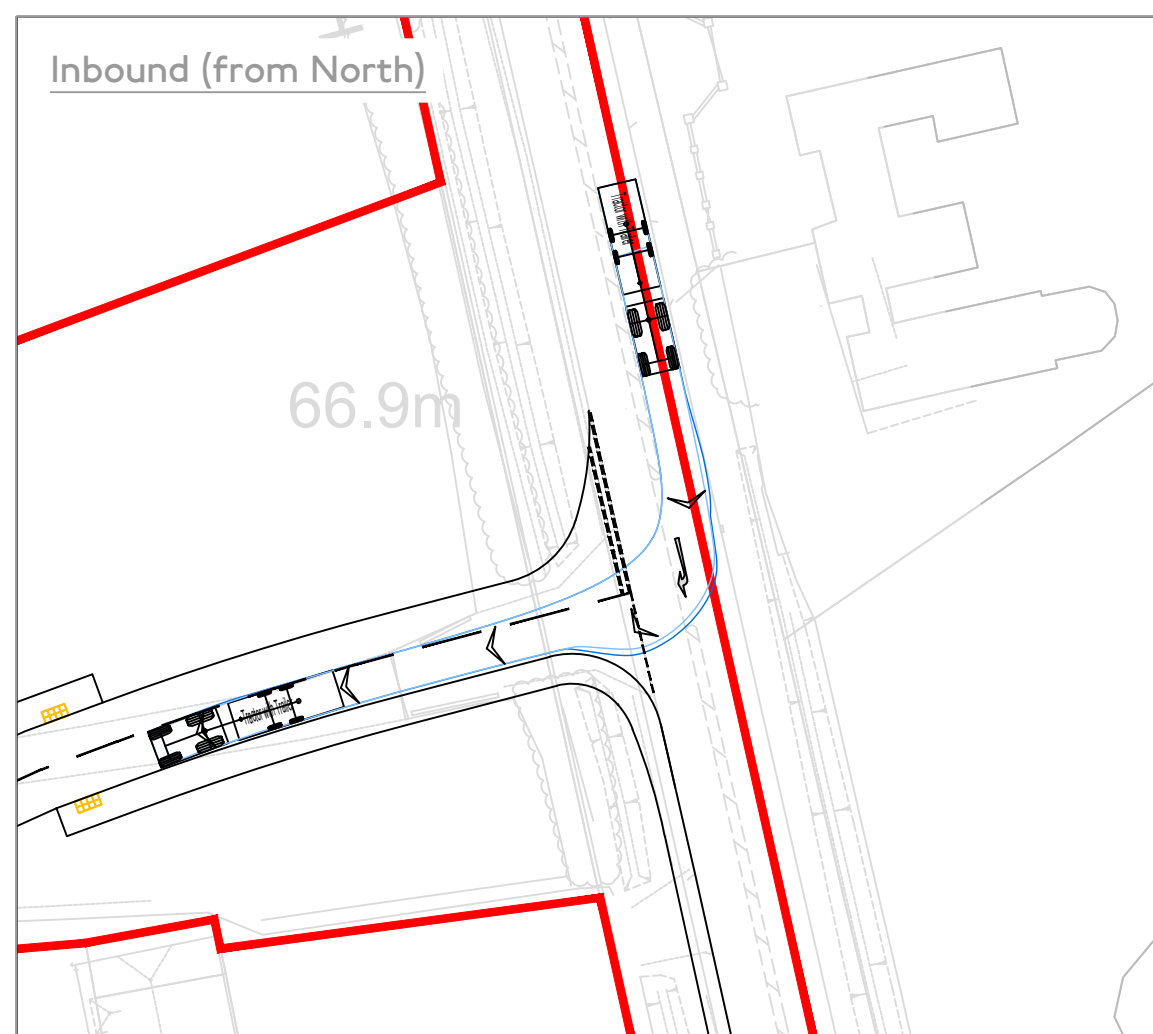
DRAWN	PS	CHECKED	KM
CREATED	Oct. '23	SCALE	1:500 at A3

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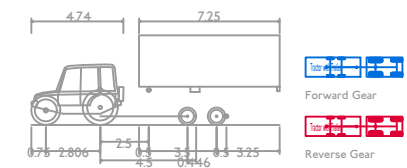






Note:

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
3. Do not scale from this drawing. Work from figured dimensions only.
4. All dimensions are shown in metres unless noted otherwise.
5. Drawing based on FPCR layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03



Tractor with Trailer	12.806m
Overall Length	2.550m
Overall Width	4.620m
Overall Body Height	0.446m
Min Body Ground Clearance	2.550m
Max Track Width	6.00s
Lock to lock time	5.400m
Kerb to Kerb Turning Radius	

REV	DATE	REMARKS
A	18.12.2023	Revised red line boundary
-	17.11.2023	Initial Issue

CLIENT

Bloor Homes Southern

JOB TITLE

Land at Pinewood, Wokingham

DRAWING TITLE

Swept Path Analysis -  
Tractor with Trailer

DRAWING NO.

J32-6699-AT-A06

DRAWN	PS	CHECKED	KM
CREATED	Nov. '23	SCALE	1:500 at A3

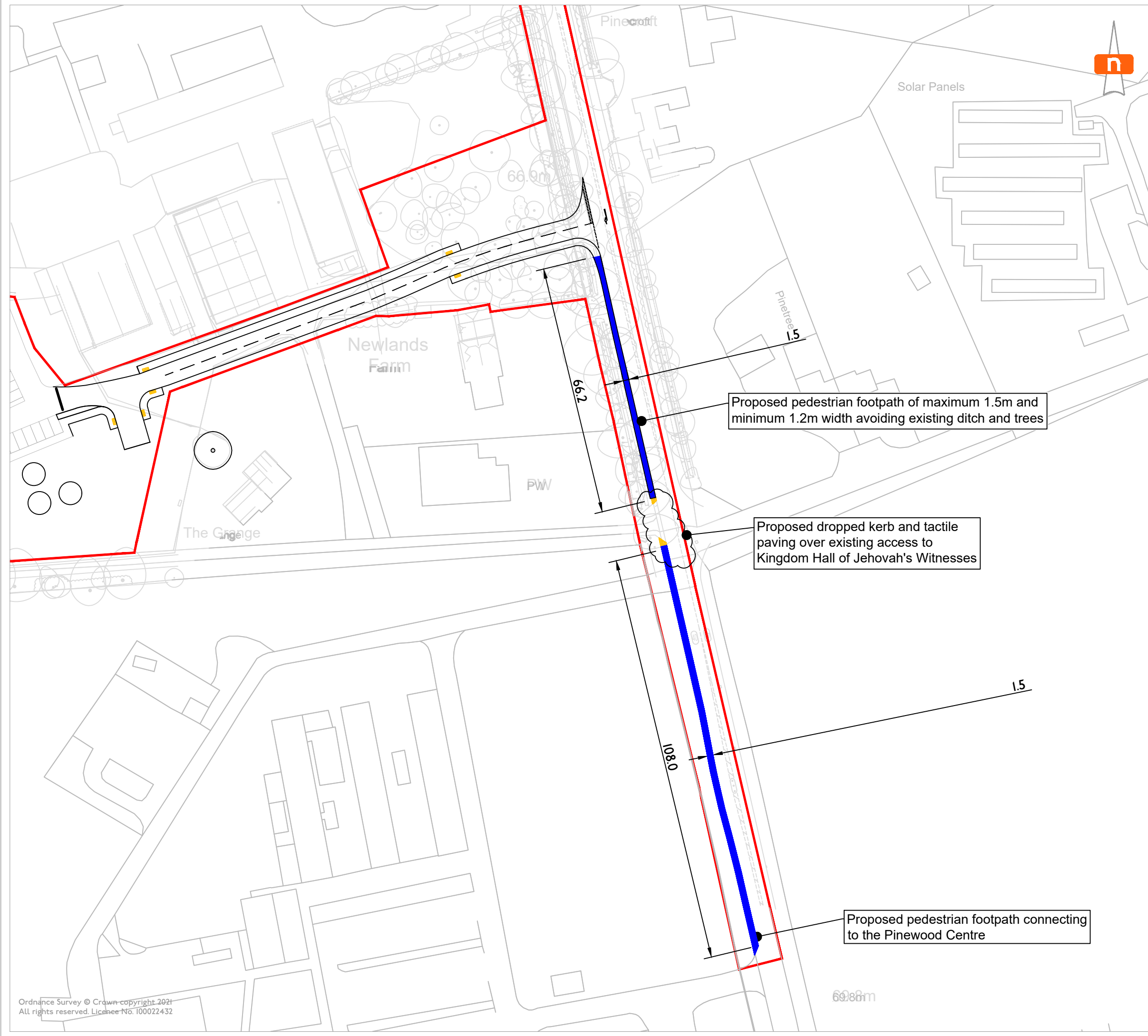
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# APPENDIX E

Proposed Footpath along Old Wokingham Road



- Note:
1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
  2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
  3. Do not scale from this drawing. Work from figured dimensions only.
  4. All dimensions are shown in metres unless noted otherwise.
  5. Drawing based on FPCR Layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03

**Key**

Site Boundary —

Proposed pedestrian footpath —

Proposed tactile paving —

REV	DATE	REMARKS
D	20.12.2023	Site access alignment updated
C	18.12.2023	Site access alignment updated
B	18.12.2023	Revised red line boundary
A	17.11.2023	Revised red line boundary
-	27.10.2023	Initial issue

CLIENT

**Bloor Homes Southern**

JOB TITLE

**Land at Pinewood, Wokingham**

DRAWING TITLE

**Proposed Indicative Pedestrian Footpath**

DRAWING NO.

**J32-6699-PS-003**

DRAWN	PS	CHECKED	KM
CREATED	Oct. '23	SCALE	1:500 at A3

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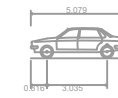
**mode**  
transport planning

# APPENDIX F

## Car Park Layout Swept Path Analysis

Note:

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
3. Do not scale from this drawing. Work from figured dimensions only.
4. All dimensions are shown in metres unless noted otherwise.
5. Drawing based on FPCR Layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03



Large Car (2006)  
 Overall Length 5.079m  
 Overall Width 1.872m  
 Overall Body Height 1.525m  
 Min Body Ground Clearance 0.310m  
 Max Track Width 1.831m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 5.900m



5.079m  
 1.872m  
 1.525m  
 0.310m  
 1.831m  
 4.00s  
 5.900m

REV	DATE	REMARKS
D	20.12.2023	Revised red line boundary
C	18.12.2023	Revised red line boundary
B	16.11.2023	Revised layout added
A	01.11.2023	Revised layout added
-	24.10.2023	Initial Issue

CLIENT

Bloor Homes Southern

JOB TITLE

Land at Pinewood, Wokingham

DRAWING TITLE

Swept Path Analysis -  
 Large Car (Inbound)

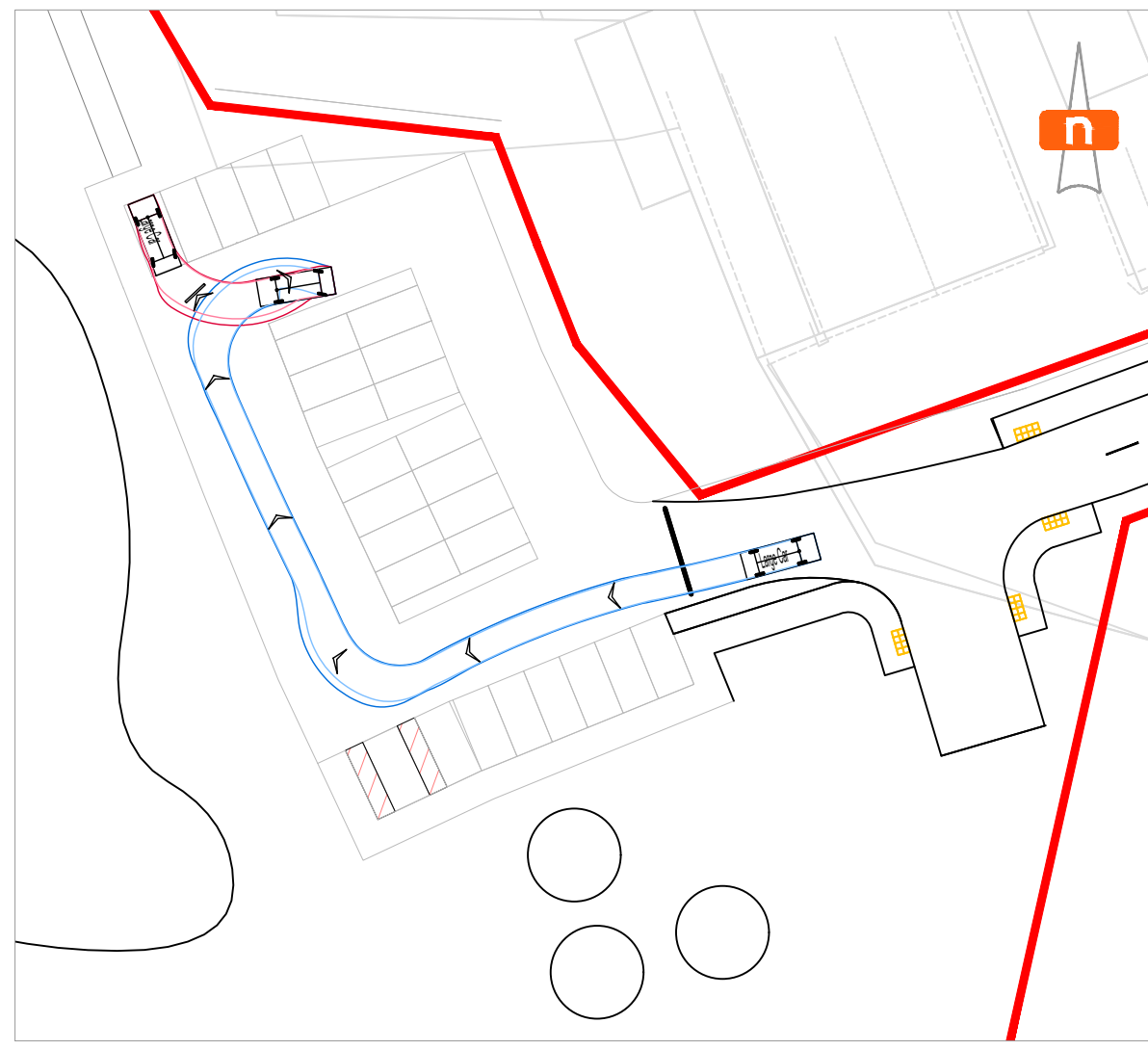
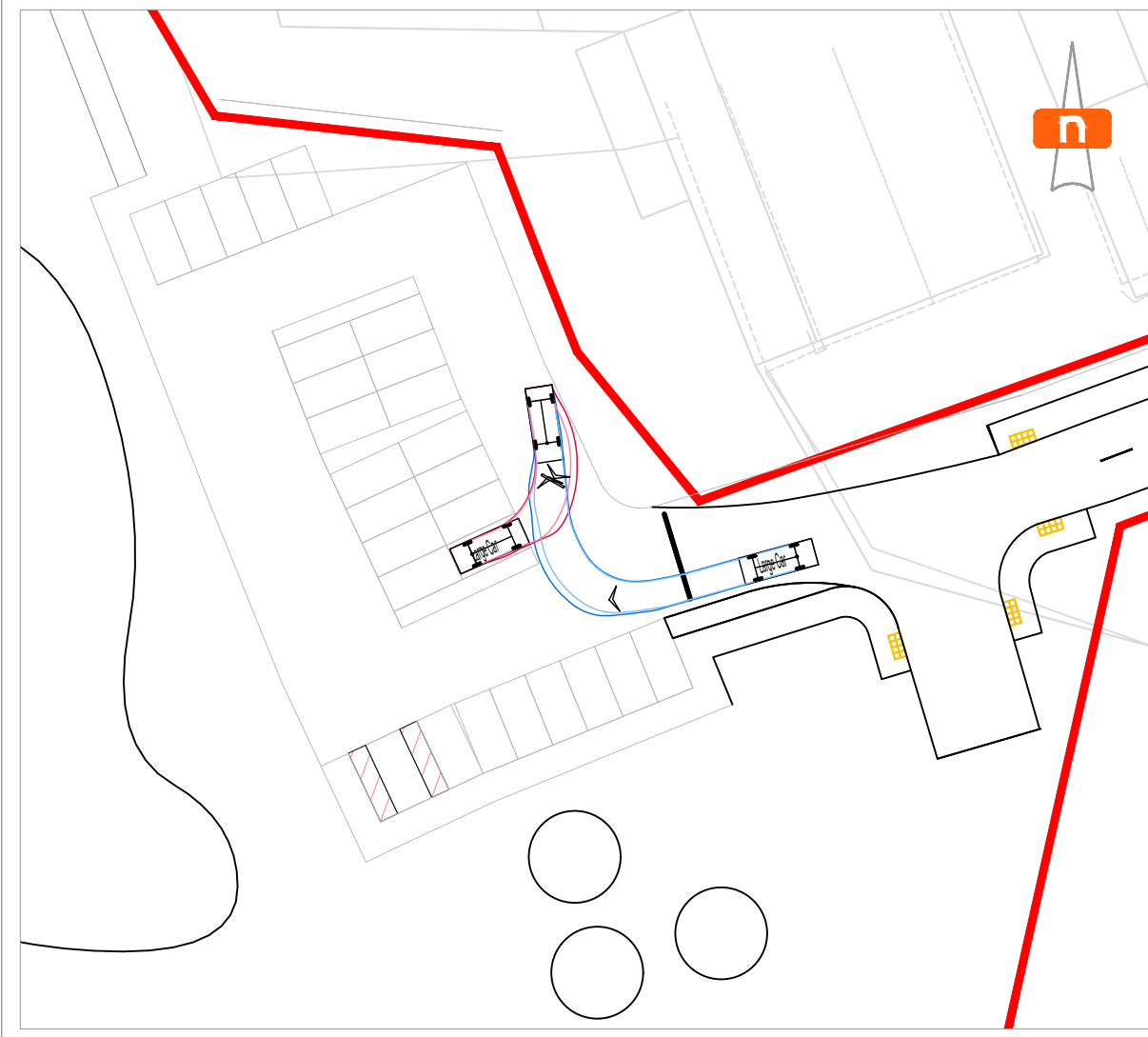
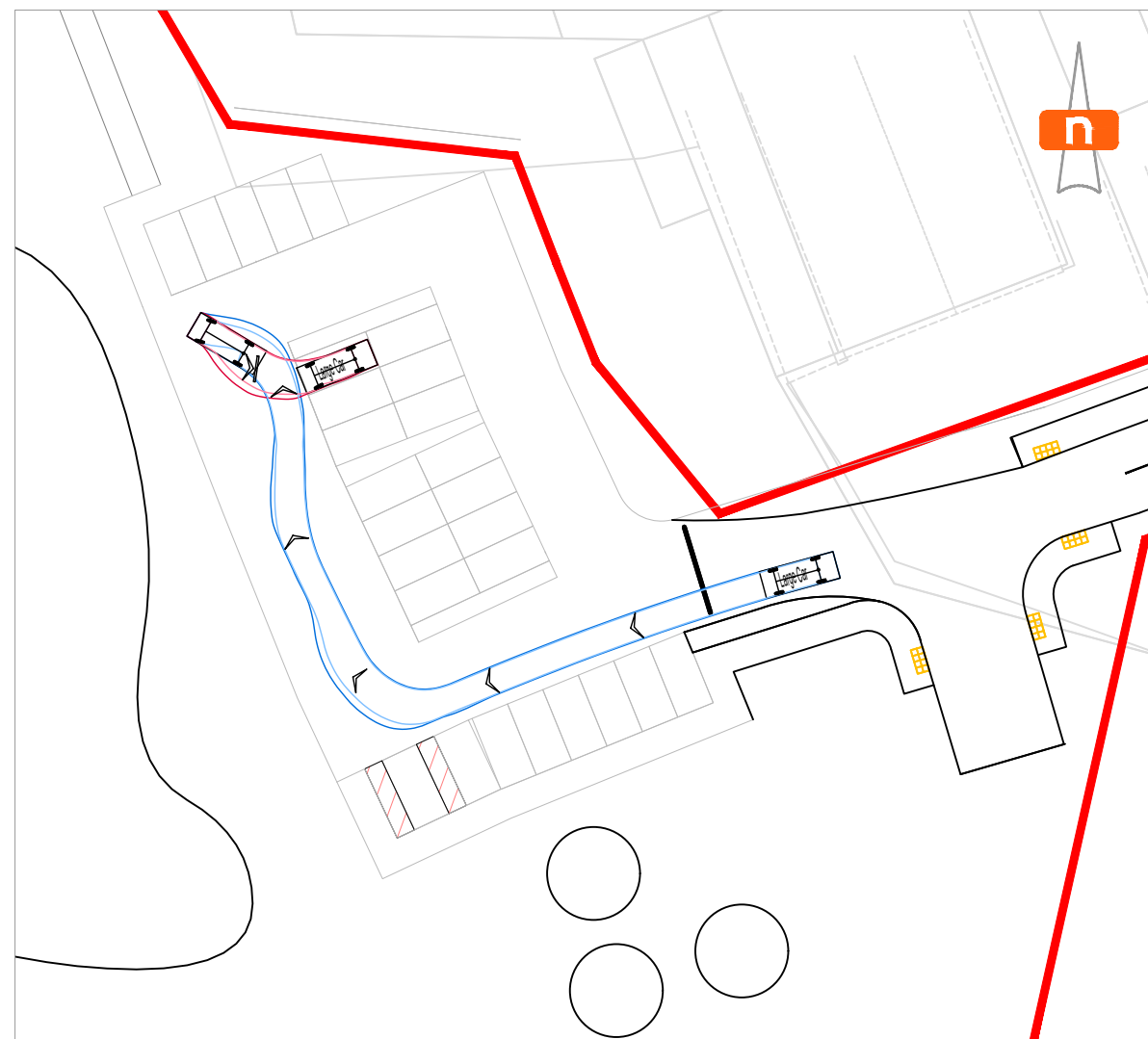
DRAWING NO.

J32-6699-AT-A03

DRAWN	PS	CHECKED	KM
CREATED	Oct. '23	SCALE	1:500 at A3

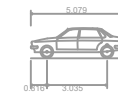
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Note:

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
3. Do not scale from this drawing. Work from figured dimensions only.
4. All dimensions are shown in metres unless noted otherwise.
5. Drawing based on FPCR Layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03



Large Car (2006)  
 Overall Length 5.079m  
 Overall Width 1.872m  
 Overall Body Height 1.525m  
 Min Body Ground Clearance 0.310m  
 Max Track Width 1.831m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 5.900m



5.079m  
 1.872m  
 1.525m  
 0.310m  
 1.831m  
 4.00s  
 5.900m

REV	DATE	REMARKS
D	20.12.2023	Revised red line boundary
C	18.12.2023	Revised red line boundary
B	16.11.2023	Revised layout added
A	01.11.2023	Revised layout added
-	24.10.2023	Initial Issue

CLIENT

Bloor Homes Southern

JOB TITLE

Land at Pinewood, Wokingham

DRAWING TITLE

Swept Path Analysis -  
 Large Car (Outbound)

DRAWING NO.

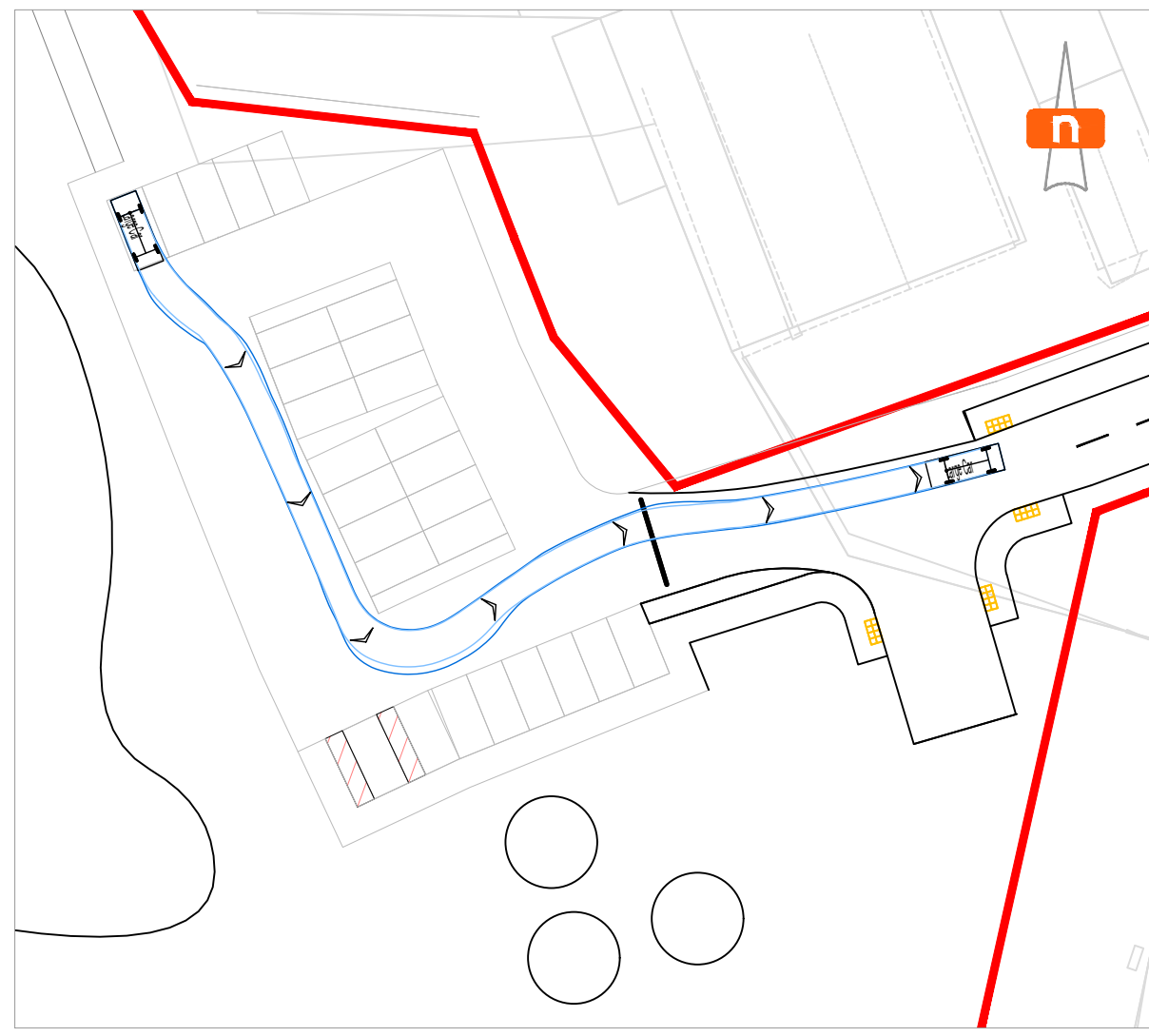
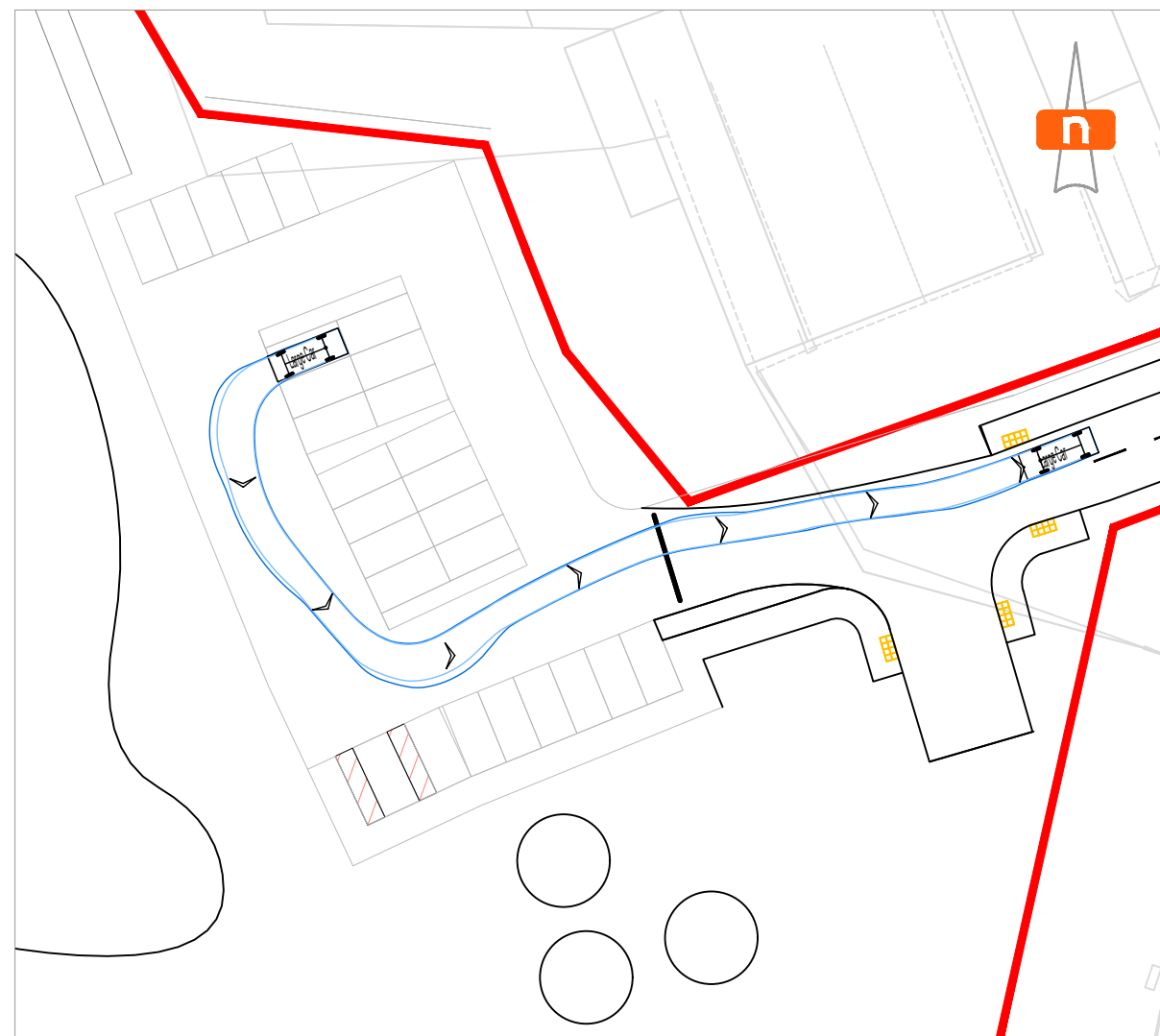
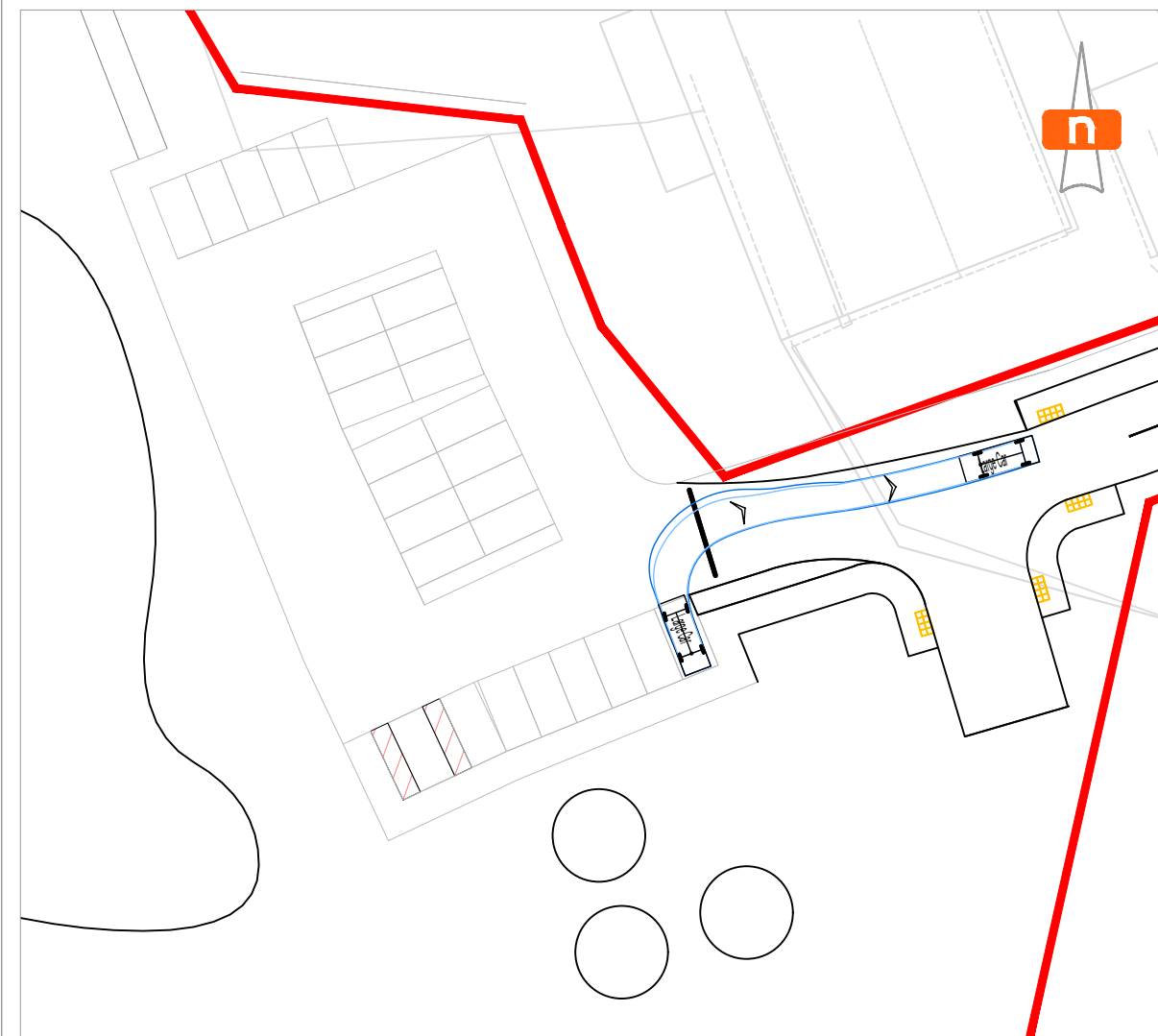
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DRAWN	PS	CHECKED	KM
CREATED	Oct. '23	SCALE	1:500 at A3

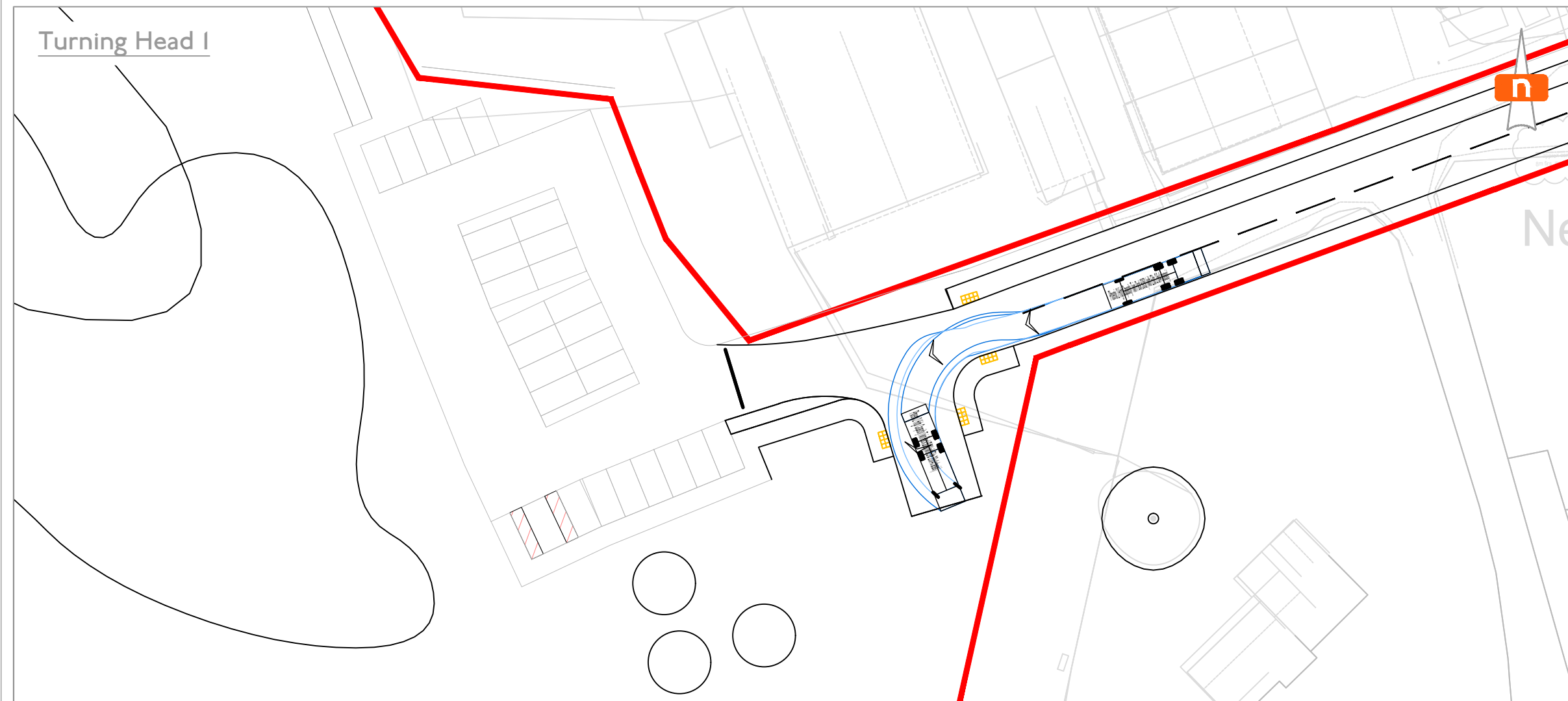
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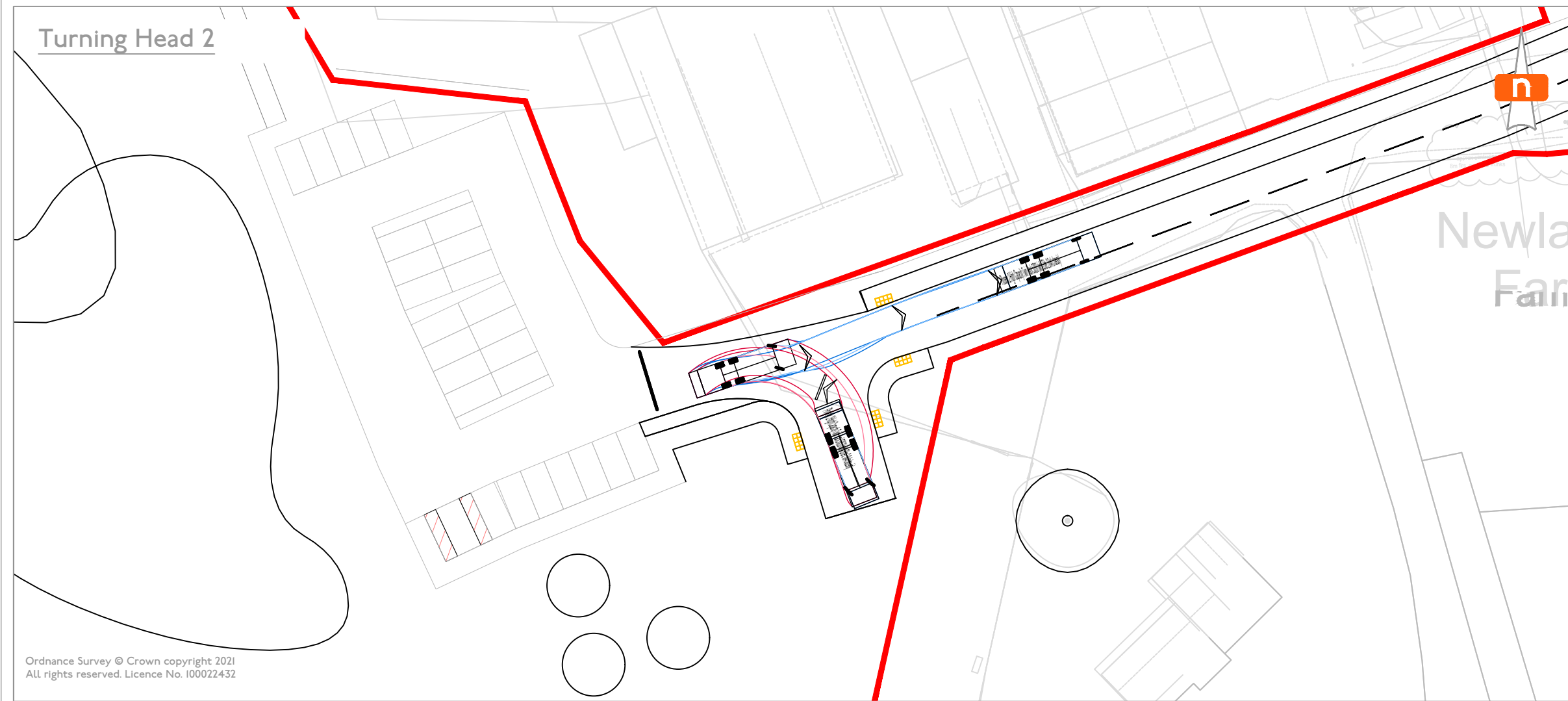
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## Turning Head 1

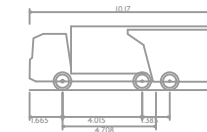


## Turning Head 2

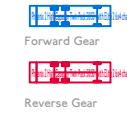


Note:

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
3. Do not scale from this drawing. Work from figured dimensions only.
4. All dimensions are shown in metres unless noted otherwise.
5. Drawing based on FPCR Layout: I0930-FPCR-ZZ-ZZ-DR-L-0001 [SANG] v2023 p03



Phoenix 2 High Capacity Twin Pack 50/50 (with Elite 2 6x4 chassis)  
 Overall Length 10.170m  
 Overall Width 2.550m  
 Overall Body Height 3.214m  
 Min Body Ground Clearance 0.419m  
 Track Width 2.550m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 10.300m



REV	DATE	REMARKS
D	20.12.2023	Revised red line boundary
C	18.12.2023	Revised red line boundary
B	16.11.2023	Revised layout added
A	01.11.2023	Revised layout added
-	24.10.2023	Initial Issue

CLIENT

Bloor Homes Southern

JOB TITLE

Land at Pinewood, Wokingham

DRAWING TITLE

Swept Path Analysis -  
Refuse Vehicle (Turning Head)

DRAWING NO.

J32-6699-AT-A05

DRAWN PS CHECKED KM

CREATED Oct. '23 SCALE 1:500 at A3

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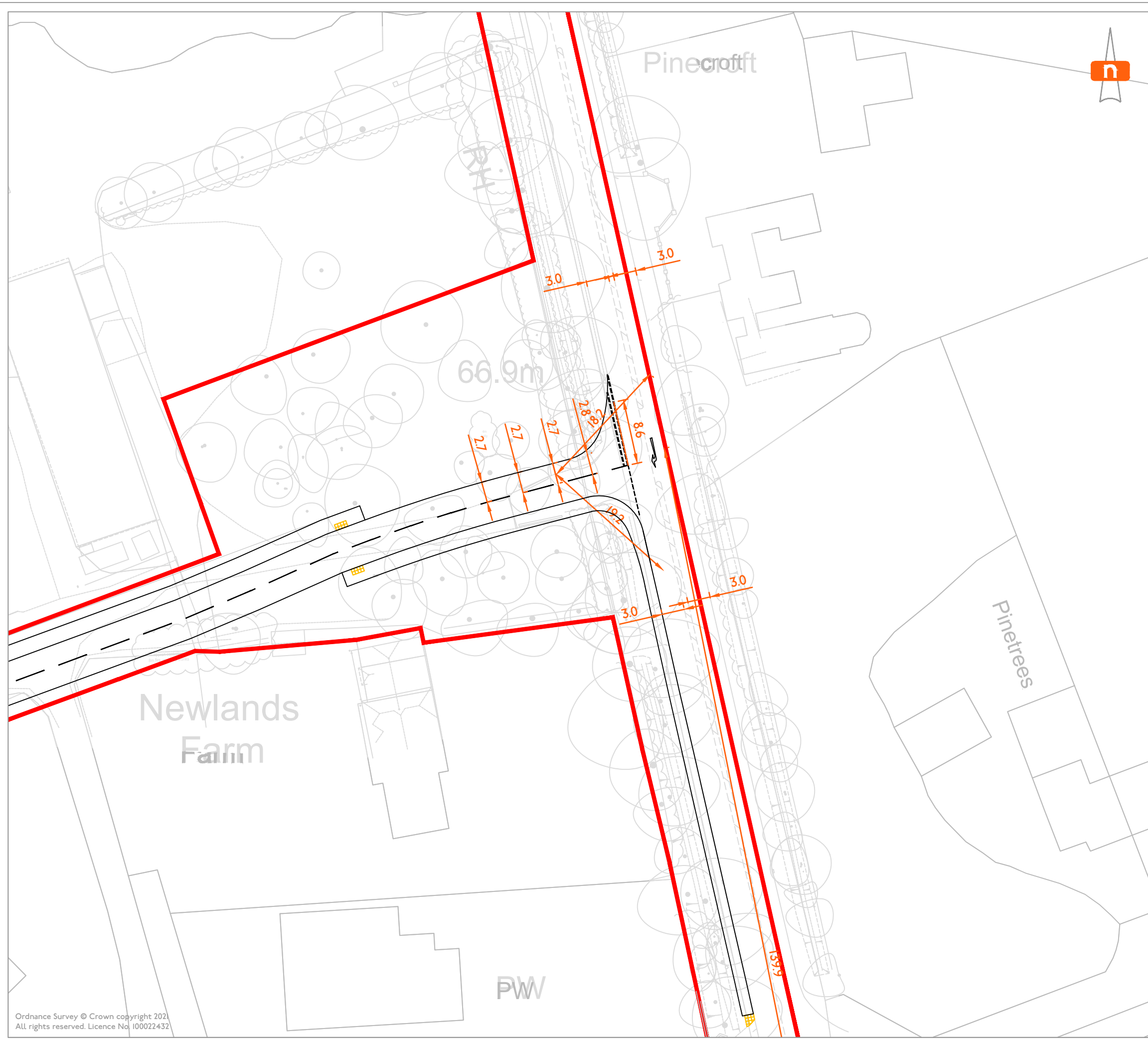
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# APPENDIX G

## PICADY Geometries





Note:

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography location of statutory services, detailed design and traffic modelling.
2. Road markings & traffic signs are to be in accordance with "The Traffic Signs Regulations and General Directions 2016".
3. Do not scale from this drawing. Work from figured dimensions only.
4. All dimensions are shown in metres unless noted otherwise.
5. Drawing based on topographical data

REV	DATE	REMARKS
B	18.12.2023	Revised red line boundary
A	17.11.2023	Revised site access
-	01.10.2023	Initial Issue

CLIENT

Bloor Homes Southern

JOB TITLE

Land at Pinewood, Wokingham

DRAWING TITLE

PICADY Geometries

DRAWING NO.

J32-6699-SK-003

DRAWN	KM	CHECKED	CH
CREATED	Oct '23	SCALE	1:500 at A3

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# APPENDIX H

## PICADY Outputs



Stream C-B	0.0	9.72	0.0 1	A		0.0	7.55	0.0 1	A		0.0	8.38	0.0 1	A		0.0	8.39	0.0 1	A																						
<b>Baseline + Development (Weekend)</b>																																									
Stream B-C						0.0	6.89	0.0 1	A								0.0	7.12	0.0 1	A								0.0	6.69	0.0 1	A						0.0	6.53	0.0 1	A	
Stream B-A						0.0	10.2 1	0.0 1	B	144 % [Stream B-A]							0.1	13.1 4	0.0 6	B	76 % [Stream B-A]						0.0	13.5 1	0.0 1	B	72 % [Stream B-A]						0.0	12.6 4	0.0 2	B	87 % [Stream B-A]
Stream C-B						0.0	6.82	0.0 1	A								0.0	7.23	0.0 1	A							0.0	7.32	0.0 1	A						0.0	7.16	0.0 1	A		

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

## File summary

### File Description

Title	
Location	
Site number	
Date	02/02/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-CE95GQI\ModeT
Description	

## Units

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

## Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Baseline + Development (Weekday)	AM (0800 - 0900)	ONE HOUR	07:45	09:15	15
D2	Baseline + Development (Weekday)	AM (0900 - 1000)	ONE HOUR	08:45	10:15	15
D3	Baseline + Development (Weekday)	PM (1600 - 1700)	ONE HOUR	15:45	17:15	15
D4	Baseline + Development (Weekday)	PM (1700 - 1800)	ONE HOUR	16:45	18:15	15
D5	Baseline + Development (Weekend)	AM (0900 - 1000)	ONE HOUR	08:45	10:15	15
D6	Baseline + Development (Weekend)	AM (1000 - 1100)	ONE HOUR	09:45	11:15	15
D7	Baseline + Development (Weekend)	PM (1300 - 1400)	ONE HOUR	12:45	14:15	15
D8	Baseline + Development (Weekend)	PM (1400 - 1500)	ONE HOUR	13:45	15:15	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

## Baseline + Development (Weekday), AM (0800 - 0900)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	9.87	0.0	A
B-A	0.02	25.03	0.0	D
C-A				
C-B	0.01	9.72	0.0	A
A-B				
A-C				

### Main Results for each time segment

## 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	457	0.007	3	0.0	7.922	A
B-A	2	265	0.006	1	0.0	13.654	B
C-A	490			490			
C-B	3	463	0.007	3	0.0	7.821	A
A-B	2			2			
A-C	739			739			

## 08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	420	0.009	4	0.0	8.636	A
B-A	2	215	0.008	2	0.0	16.872	C
C-A	585			585			
C-B	4	426	0.008	4	0.0	8.521	A
A-B	2			2			
A-C	883			883			

## 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	369	0.012	4	0.0	9.870	A
B-A	2	146	0.015	2	0.0	25.030	D
C-A	717			717			
C-B	4	375	0.012	4	0.0	9.724	A
A-B	2			2			
A-C	1081			1081			

## 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	369	0.012	4	0.0	9.871	A
B-A	2	146	0.015	2	0.0	25.035	D
C-A	717			717			
C-B	4	375	0.012	4	0.0	9.724	A
A-B	2			2			
A-C	1081			1081			

## 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	369	0.012	4	0.0	9.871	A
B-A	2	146	0.015	2	0.0	25.035	D
C-A	717			717			
C-B	4	375	0.012	4	0.0	9.724	A
A-B	2			2			
A-C	1081			1081			

B-C	4	420	0.009	4	0.0	8.638	A
B-A	2	215	0.008	2	0.0	16.880	C
C-A	585			585			
C-B	4	426	0.008	4	0.0	8.523	A
A-B	2			2			
A-C	883			883			

#### 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	457	0.007	3	0.0	7.924	A
B-A	2	265	0.006	2	0.0	13.658	B
C-A	490			490			
C-B	3	463	0.007	3	0.0	7.823	A
A-B	2			2			
A-C	739			739			

## Baseline + Development (Weekday), AM (0900 - 1000)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	7.69	0.0	A
B-A	0.01	12.69	0.0	B
C-A				
C-B	0.01	7.55	0.0	A
A-B				
A-C				

## Main Results for each time segment

### 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	528	0.006	3	0.0	6.858	A
B-A	2	363	0.006	2	0.0	9.988	A
C-A	321			321			
C-B	2	536	0.004	2	0.0	6.749	A
A-B	2			2			
A-C	460			460			

### 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	505	0.007	4	0.0	7.183	A
B-A	3	331	0.008	3	0.0	10.966	B
C-A	384			384			
C-B	3	512	0.005	3	0.0	7.062	A
A-B	2			2			
A-C	549			549			

### 09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	473	0.009	4	0.0	7.685	A
B-A	3	287	0.012	3	0.0	12.695	B
C-A	470			470			
C-B	3	480	0.007	3	0.0	7.545	A
A-B	2			2			
A-C	673			673			

### 09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	473	0.009	4	0.0	7.686	A
B-A	3	287	0.012	3	0.0	12.690	B
C-A	470			470			
C-B	3	480	0.007	3	0.0	7.545	A
A-B	2			2			
A-C	673			673			

### 09:45 - 10:00



Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	505	0.007	4	0.0	7.184	A
B-A	3	331	0.008	3	0.0	10.959	B
C-A	384			384			
C-B	3	512	0.005	3	0.0	7.065	A
A-B	2			2			
A-C	549			549			

#### 10:00 - 10:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	528	0.006	3	0.0	6.863	A
B-A	2	363	0.006	2	0.0	9.979	A
C-A	321			321			
C-B	2	536	0.004	2	0.0	6.752	A
A-B	2			2			
A-C	460			460			

## Baseline + Development (Weekday), PM (1600 - 1700)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	7.65	0.0	A
B-A	0.02	20.80	0.0	C
C-A				
C-B	0.01	8.38	0.0	A
A-B				
A-C				

## Main Results for each time segment

### 15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	552	0.004	2	0.0	6.543	A
B-A	2	277	0.008	2	0.0	13.094	B
C-A	565			565			
C-B	3	504	0.006	3	0.0	7.184	A
A-B	3			3			
A-C	580			580			

### 16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	519	0.005	3	0.0	6.967	A
B-A	3	235	0.011	3	0.0	15.504	C
C-A	674			674			
C-B	4	475	0.008	4	0.0	7.640	A
A-B	4			4			
A-C	693			693			

### 16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	474	0.007	3	0.0	7.645	A
B-A	3	176	0.019	3	0.0	20.795	C
C-A	826			826			
C-B	4	434	0.010	4	0.0	8.376	A
A-B	4			4			
A-C	849			849			

### 16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	474	0.007	3	0.0	7.654	A
B-A	3	176	0.019	3	0.0	20.796	C
C-A	826			826			
C-B	4	434	0.010	4	0.0	8.376	A
A-B	4			4			

A-C	849			849			
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#### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	518	0.005	3	0.0	6.986	A
B-A	3	235	0.011	3	0.0	15.503	C
C-A	674			674			
C-B	4	475	0.008	4	0.0	7.643	A
A-B	4			4			
A-C	693			693			

#### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	551	0.004	2	0.0	6.558	A
B-A	2	277	0.008	2	0.0	13.092	B
C-A	565			565			
C-B	3	504	0.006	3	0.0	7.187	A
A-B	3			3			
A-C	580			580			

## Baseline + Development (Weekday), PM (1700 - 1800)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	8.13	0.0	A
B-A	0.03	22.37	0.0	C
C-A				
C-B	0.01	8.39	0.0	A
A-B				

A-C				
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## Main Results for each time segment

### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	521	0.004	2	0.0	6.932	A
B-A	3	271	0.011	3	0.0	13.407	B
C-A	624			624			
C-B	3	504	0.006	3	0.0	7.190	A
A-B	3			3			
A-C	582			582			

### 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	490	0.006	3	0.0	7.386	A
B-A	4	227	0.016	4	0.0	16.120	C
C-A	745			745			
C-B	4	474	0.008	4	0.0	7.648	A
A-B	4			4			
A-C	695			695			

### 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	447	0.007	3	0.0	8.117	A
B-A	4	165	0.027	4	0.0	22.370	C
C-A	913			913			
C-B	4	434	0.010	4	0.0	8.387	A
A-B	4			4			
A-C	851			851			

### 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	446	0.007	3	0.0	8.129	A
B-A	4	165	0.027	4	0.0	22.374	C

C-A	913			913			
C-B	4	434	0.010	4	0.0	8.387	A
A-B	4			4			
A-C	851			851			

#### 17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	489	0.006	3	0.0	7.406	A
B-A	4	227	0.016	4	0.0	16.119	C
C-A	745			745			
C-B	4	474	0.008	4	0.0	7.651	A
A-B	4			4			
A-C	695			695			

#### 18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	520	0.004	2	0.0	6.948	A
B-A	3	272	0.011	3	0.0	13.406	B
C-A	624			624			
C-B	3	504	0.006	3	0.0	7.193	A
A-B	3			3			
A-C	582			582			

## Baseline + Development (Weekend), AM (0900 - 1000)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	6.89	0.0	A
B-A	0.01	10.21	0.0	B

C-A				
C-B	0.01	6.82	0.0	A
A-B				
A-C				

## Main Results for each time segment

### 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	565	0.005	3	0.0	6.409	A
B-A	2	410	0.006	2	0.0	8.830	A
C-A	241			241			
C-B	5	573	0.008	4	0.0	6.336	A
A-B	3			3			
A-C	315			315			

### 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	549	0.007	4	0.0	6.603	A
B-A	3	387	0.007	3	0.0	9.358	A
C-A	288			288			
C-B	5	557	0.010	5	0.0	6.530	A
A-B	4			4			
A-C	377			377			

### 09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	527	0.008	4	0.0	6.891	A
B-A	3	356	0.009	3	0.0	10.208	B
C-A	352			352			
C-B	7	534	0.012	7	0.0	6.818	A
A-B	4			4			
A-C	461			461			

### 09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	527	0.008	4	0.0	6.891	A
B-A	3	356	0.009	3	0.0	10.205	B
C-A	352			352			
C-B	7	534	0.012	7	0.0	6.818	A
A-B	4			4			
A-C	461			461			

#### 09:45 - 10:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	549	0.007	4	0.0	6.606	A
B-A	3	388	0.007	3	0.0	9.356	A
C-A	288			288			
C-B	5	557	0.010	5	0.0	6.532	A
A-B	4			4			
A-C	377			377			

#### 10:00 - 10:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	565	0.005	3	0.0	6.413	A
B-A	2	410	0.006	2	0.0	8.824	A
C-A	241			241			
C-B	5	573	0.008	5	0.0	6.338	A
A-B	3			3			
A-C	315			315			

## Baseline + Development (Weekend), AM (1000 - 1100)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	7.12	0.0	A
B-A	0.06	13.14	0.1	B
C-A				
C-B	0.01	7.23	0.0	A
A-B				
A-C				

## Main Results for each time segment

### 09:45 - 10:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	564	0.008	4	0.0	6.432	A
B-A	11	357	0.032	11	0.0	10.397	B
C-A	340			340			
C-B	5	552	0.008	4	0.0	6.575	A
A-B	4			4			
A-C	394			394			

### 10:00 - 10:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	542	0.010	5	0.0	6.702	A
B-A	13	329	0.041	13	0.0	11.399	B
C-A	405			405			
C-B	5	532	0.010	5	0.0	6.836	A
A-B	4			4			
A-C	471			471			

### 10:15 - 10:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	512	0.013	7	0.0	7.118	A
B-A	17	290	0.057	16	0.1	13.139	B
C-A	497			497			
C-B	7	504	0.013	7	0.0	7.232	A
A-B	6			6			



A-C	577			577			
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#### 10:30 - 10:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	512	0.013	7	0.0	7.118	A
B-A	17	290	0.057	17	0.1	13.144	B
C-A	497			497			
C-B	7	504	0.013	7	0.0	7.232	A
A-B	6			6			
A-C	577			577			

#### 10:45 - 11:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	542	0.010	5	0.0	6.706	A
B-A	13	329	0.041	14	0.0	11.408	B
C-A	405			405			
C-B	5	532	0.010	5	0.0	6.838	A
A-B	4			4			
A-C	471			471			

#### 11:00 - 11:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	564	0.008	5	0.0	6.436	A
B-A	11	357	0.032	11	0.0	10.408	B
C-A	340			340			
C-B	5	552	0.008	5	0.0	6.578	A
A-B	4			4			
A-C	394			394			

## Baseline + Development (Weekend), PM (1300 - 1400)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

## Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	6.69	0.0	A
B-A	0.01	13.51	0.0	B
C-A				
C-B	0.01	7.32	0.0	A
A-B				
A-C				

## Main Results for each time segment

### 12:45 - 13:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	598	0.004	2	0.0	6.041	A
B-A	2	341	0.007	2	0.0	10.627	B
C-A	383			383			
C-B	2	546	0.004	2	0.0	6.623	A
A-B	2			2			
A-C	420			420			

### 13:00 - 13:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	574	0.005	3	0.0	6.298	A
B-A	3	311	0.009	3	0.0	11.671	B
C-A	458			458			
C-B	3	524	0.005	3	0.0	6.898	A
A-B	3			3			
A-C	502			502			

### 13:15 - 13:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	542	0.006	3	0.0	6.686	A
B-A	3	270	0.012	3	0.0	13.509	B
C-A	560			560			
C-B	3	495	0.007	3	0.0	7.318	A

A-B	3			3			
A-C	614			614			

### 13:30 - 13:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	541	0.006	3	0.0	6.689	A
B-A	3	270	0.012	3	0.0	13.507	B
C-A	560			560			
C-B	3	495	0.007	3	0.0	7.318	A
A-B	3			3			
A-C	614			614			

### 13:45 - 14:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	574	0.005	3	0.0	6.307	A
B-A	3	311	0.009	3	0.0	11.672	B
C-A	458			458			
C-B	3	524	0.005	3	0.0	6.901	A
A-B	3			3			
A-C	502			502			

### 14:00 - 14:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	597	0.004	2	0.0	6.052	A
B-A	2	341	0.007	2	0.0	10.624	B
C-A	383			383			
C-B	2	546	0.004	2	0.0	6.623	A
A-B	2			2			
A-C	420			420			

## Baseline + Development (Weekend), PM (1400 - 1500)

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

# Results

## Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	6.53	0.0	A
B-A	0.02	12.64	0.0	B
C-A				
C-B	0.01	7.16	0.0	A
A-B				
A-C				

## Main Results for each time segment

### 13:45 - 14:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	608	0.005	3	0.0	5.954	A
B-A	3	354	0.009	3	0.0	10.248	B
C-A	343			343			
C-B	4	554	0.007	4	0.0	6.536	A
A-B	3			3			
A-C	385			385			

### 14:00 - 14:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	585	0.006	4	0.0	6.186	A
B-A	4	327	0.011	4	0.0	11.132	B
C-A	410			410			
C-B	4	535	0.008	4	0.0	6.785	A
A-B	4			4			
A-C	460			460			

### 14:15 - 14:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	555	0.008	4	0.0	6.532	A

B-A	4	289	0.015	4	0.0	12.641	B
C-A	502			502			
C-B	6	508	0.011	5	0.0	7.163	A
A-B	4			4			
A-C	564			564			

14:30 - 14:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	555	0.008	4	0.0	6.535	A
B-A	4	289	0.015	4	0.0	12.639	B
C-A	502			502			
C-B	6	508	0.011	6	0.0	7.163	A
A-B	4			4			
A-C	564			564			

14:45 - 15:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	585	0.006	4	0.0	6.191	A
B-A	4	327	0.011	4	0.0	11.131	B
C-A	410			410			
C-B	4	535	0.008	5	0.0	6.785	A
A-B	4			4			
A-C	460			460			

15:00 - 15:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	3	607	0.005	3	0.0	5.964	A
B-A	3	354	0.009	3	0.0	10.246	B
C-A	343			343			
C-B	4	554	0.007	4	0.0	6.536	A
A-B	3			3			
A-C	385			385			



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