



Transport Statement

Project: Hogwood Farm Parcels 4 & 5

Client: Cala Homes Thames Ltd.

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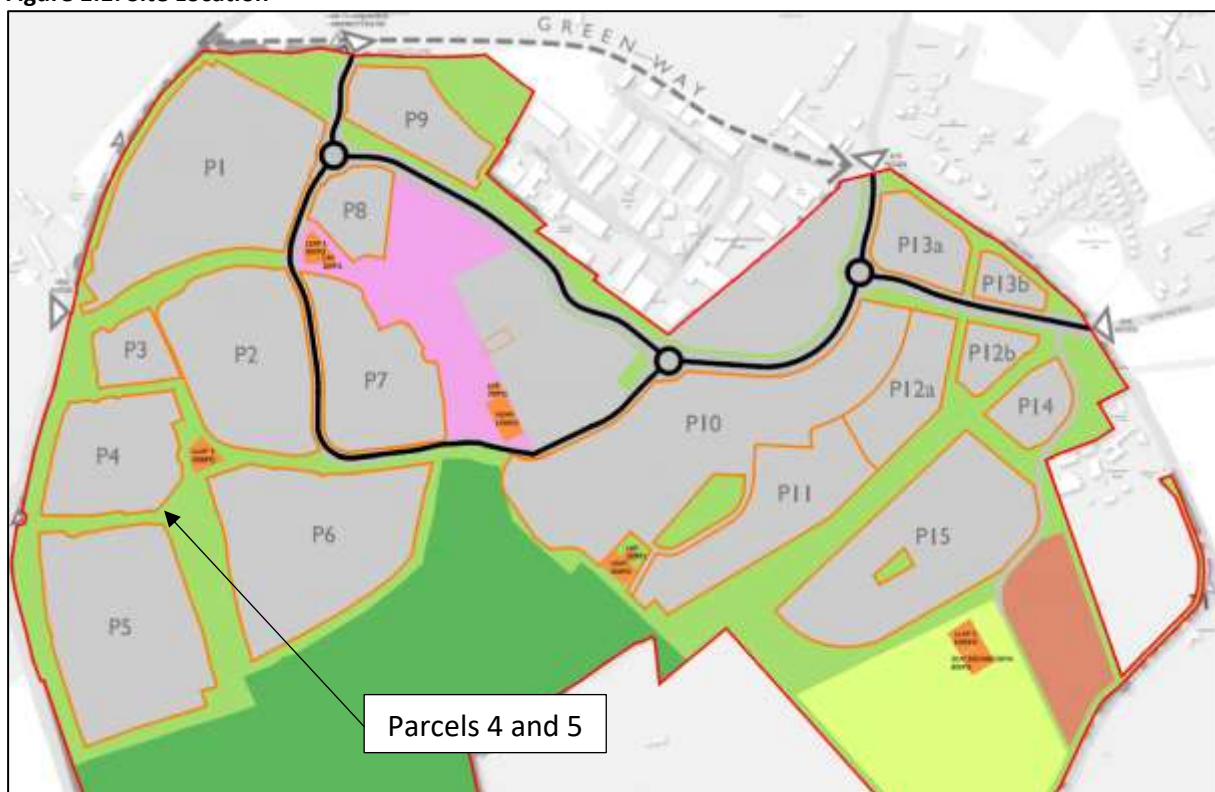
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1 INTRODUCTION

1.1 Background

- 1.1.1 JNP Group have been commissioned by Cala Homes Thames Ltd. to prepare a Transport Statement (TS) to accompany a Reserved Matters planning application for Parcels 4 and 5 at Hogwood Farm, pursuant to the Hybrid Planning Consent O/2014/2179, as varied by application 181194.
- 1.1.2 The Reserved Matters application proposes the construction of 186 dwellings alongside the provision of associated internal access roads, parking, landscaping, footpaths and sustainable urban drainage systems (SuDS). Details of access, appearance, landscaping, layout and scale are to be considered.
- 1.1.3 The location of Parcels 4 and 5 at Hogwood Farm is shown on Figure 1.1 below.

Figure 1.1: Site Location



1.2 Scope of the Statement

- 1.2.1 This TS is designed to build upon the content of the Transport Assessment prepared to support the hybrid planning application, with a particular focus on detailed matters such as access, internal road geometry and parking arrangements.

1.3 Report Structure

- 1.3.1 Following this introductory section, the TS comprises the following sections:

- **Section 2 Baseline Conditions:** summarises the existing and future conditions applicable to the site including access by all modes of transport.
- **Section 3 Development Proposals:** outlines the development proposals including the access arrangements, internal site layout and parking.
- **Section 4 Trip Generation:** provides details on the likely impact of the development in terms of vehicular trip generation.
- **Section 5 Conclusion:** summarises and concludes the findings of the above sections.

2 BASELINE CONDITIONS

2.1 Site Location

- 2.1.1 Parcels 4 and 5 are located along the west boundary of Hogwood Farm. They are bound by Sheerlands Road to the west, Parcels 2 and 3 to the north and east and Suitable Alternative Natural Greenspace (SANG) to the south.

2.2 Local Highway Network

Parcel 2 Road Network

- 2.2.1 Parcels 4 and 5 will be accessed from the east via the internal road network of Finchwood Park Parcel 2, which was approved under application 213645.
- 2.2.2 A road narrowing is present where the Parcel 2 road meets the boundary of Parcels 4 and 5. The road through Parcel 2 (Rye Way) is 5.5m wide and continues east towards a north-south route (Wheat Street), which joins the Nine Mile Ride Extension South (NMRE(S)) to the north and the Southern Bus Loop (SBL) to the south.

Sheerlands Road

- 2.2.3 Sheerlands Road forms a north-south route along the west boundary of Finchwood Park, forming a junction with A237 Reading Road to the south. To the north, Sheerlands Road forms a junction with Parcel 1 of Finchwood Park and becomes a pedestrian/cycle only route beyond this.

Nine Mile Ride Extension South (NMRE(S))

- 2.2.4 The Parcel 2 road network connects to the southern part of the Nine Mile Ride Extension (NMRE), referred to as the NMRE(S). This is shown in black on Figure 2.1.
- 2.2.5 The NMRE(S) comprises the construction of 1.25km of new carriageway, verges, swales, and foot/cycleways between NMRE(N) and Park Lane in the east along with three new roundabouts (and provision for priority junctions) to facilitate access into the Hogwood Farm development site.
- 2.2.6 A link of approximately 170m will take access off the sites most easterly roundabout northwards towards Hogwood Industrial Estate and Park Lane. This has been delivered as part of the construction of the NMRE(S) and is referred to separately as Hogwood Spur Road (HSR). The total length of new highway infrastructure delivered through the NMRES will be approximately 1.42km.
- 2.2.7 The NMRE(S) received reserved matters planning permission under Wokingham Borough Council (WBC) ref 192997 in February 2020 and has since undergone detailed design. The NMRE(S) opened in November 2022.

Nine Mile Ride Extension North

- 2.2.8 The northern section of the Nine Mile Ride Extension (NMRE(N)) connects the existing A327 Eversley Road in the north and joins the NRME(S) to the south.
- 2.2.9 A TS was prepared by iTransport in December 2015 to supplement traffic modelling undertaken as part of a separate study for the delivery of the NRME(N).

- 2.2.10 AECOM were the principal designers of the NMRE(N) and the alignment was consistent with that approved under the hybrid application (O/2017/2280) and the 'Movement and Access Parameter Plan' prepared by idpartnership on behalf of Crest Nicholson.
- 2.2.11 The new roundabout connecting NMRE(N) with the A327 received full planning permission as part of the hybrid application and thus was not subject to discussion within the TS submitted in support of the NMRE(N).
- 2.2.12 Following detailed design and construction, the NMRE(N) opened on 26th June 2017 to serve the northern part of the Arborfield Garrison Strategic Development Location (AGSDL), including Bohunt Secondary School.

3 DEVELOPMENT PROPOSALS

3.1 Introduction

- 3.1.1 The development proposals comprise the construction of 186 dwellings of mixed tenure and dwelling type. A total of 131 dwellings (70.4%) will be offered for private sale, with 55 (29.6%) of dwellings being affordable housing.
- 3.1.2 The scheme comprises a mix of one and two-bedroom apartments, plus two, three and four-bedroom houses.

3.2 Vehicular Access

- 3.2.1 The primary access to Parcels 4 and 5 will be via the internal road layout of Parcel 2 of Hogwood Farm, in the north-east corner of the site. The carriageway is 5.5m wide and a narrowing to 4.5m will be provided in the centre of the carriageway where Parcels 4 and 5 meet Parcel 2.
- 3.2.2 There is an existing access in the south-west corner of Parcels 4 and 5 which forms a simple priority junction with Sheerlands Road. The junction is currently used as a temporary construction access and the parameter plans from the outline approval showed that this would ultimately become an access for emergency vehicles only.
- 3.2.3 During pre-application discussions with WBC, it was agreed that the access should be retained to form a permanent secondary access to provide a more direct route to the A327 Reading Road for residents of Parcels 4 and 5. The proposals for the secondary access will be subject to a separate, full planning application and do not form part of the Reserved Matters application for Parcels 4 and 5.
- 3.2.4 The general arrangement of the site access is shown on drawing **C86657-JNP-XX-XX-DR-C-7015-P02** 'Secondary Site Access General Arrangement', which is provided at the rear of this report.
- 3.2.5 The junctions will be linked by the internal road layout. During pre-application discussions with WBC, it was agreed that the secondary access should be designed in such a way that it benefits Parcels 4 and 5 residents but does not become a rat-run through the parcels for the wider development. As a result, the access does not form a direct connection with the primary secondary street through Parcels 4 and 5.
- 3.2.6 The access locations are shown on drawing **C86557-JNP-66-XX-DR-T-7002** 'P4&P5 Highway Geometry', which is provided at the rear of this report.

3.3 Pedestrian/Cyclist Access

- 3.3.1 Pedestrian and cyclist permeability has been considered with recognition of key desire lines and the need to provide links between existing and future infrastructure. Residents will be able to arrive and depart the site on foot or by cycle using the following:
- 2m wide footways along the primary secondary street;
 - Footways along at least one side of each road throughout the internal road layout, except for the shared surface roads; and

- Footpath connections to Parcel 2 to the north and the SANG to the south.

3.3.2 The secondary access does not have any footway provisions, owing to the lack of footways along Sheerlands Road and the A327 Reading Road.

3.4 Streets Hierarchy and Geometry

3.4.1 The geometry for each street can be seen to the rear of this report as **C86557-JNP-66-XX-DR-T-7002**. The proposals feature several street types as envisaged within the Hogwood Farm Masterplan Framework Document (MFD) and applied across other Parcels. This is summarised below.

3.4.2 The extents of adoption will be subject to agreement and detailed as part of a Section 38 application post-planning, however a preliminary adoptions plan has been prepared and is provided to the rear of this report as drawing **C86557-JNP-XX-XX-DR-T-7014** 'P4&P5 Adoptions Plan'.

Secondary Streets

3.4.3 The secondary street runs in a north-south direction through Parcels 4 and 5. The location of the secondary street is highlighted in orange on Figure 3.1 below.

Figure 3.1 - Secondary Streets within Parcels 4 and 5



3.4.4 The secondary street is 5.5m wide, with localised widening in the central section between the band of trees to enable a refuse vehicle to pass a car at the same time on the bends.

- 3.4.5 There are 2m wide footways on each side of the carriageway and the western footway is set back from the carriageway by a grass verge.
- 3.4.6 There are two build outs on the southern section of the secondary road which reduce the carriageway width to 3.7m.

Tertiary Streets

- 3.4.7 Tertiary streets have a width of at least 5m and a 2m footway on at least one side of the carriageway. Where one footway has been provided, a 2m wide service margin has been provided on the opposite side of the road where development is present and 1m where it is not (e.g. adjacent to the woodland buffer).
- 3.4.8 The location of the tertiary streets is highlighted purple on Figure 3.2 below.

Figure 3.2 - Tertiary Streets within Parcels 4 and 5



- 3.4.9 A section of the east-west tertiary road and the tertiary road leading towards the southern boundary are 5.5m wide. There is a verge on the north-south section towards the southern boundary which sets the footway back from the carriageway.

Shared Surface Streets

- 3.4.10 One shared surface street will be provided, as shown in pink on Figure 3.3.

Figure 3.3 - Shared Surface Streets within Parcels 4 and 5



- 3.4.11 The shared surface road will have a width of 4.1m, with 2m service margins on each side.
- 3.4.12 By providing a shared surface street in this location, vehicles are discouraged from using the road as an east-west link between the secondary access and primary secondary street.

Private Drives and Parking Courts

- 3.4.13 Private drives and parking courts are highlighted in green on the plan shown as Figure 3.4.

Figure 3.4: Private Drives and Parking Courts within Parcels 4 and 5



- 3.4.14 To allow for permeability by refuse vehicles, most private drives have been designed with a 5m road width and 6m kerb geometry. Where private drives will not be utilised by refuse vehicles, 3.8m carriageway widths have been provided.
- 3.4.15 At least 7m reversing distance is provided in parking courts to allow access and egress for a large car. The swept path analysis for the parking courts is provided as drawing **C86557-JNP-66-XX-DR-T-7011** 'Large Car Parking Court SPA'.

3.5 Junction, Forward and Pedestrian Visibility

- 3.5.1 Junction visibility has been assessed in accordance with a site-wide design speed of 20mph. The proposals meet the requirements of Manual for Streets and visibility splays of 2.4m x 25m are achievable at all priority junctions. This can be seen on drawing **C86557-JNP-66-XX-DR-T-7003**.
- 3.5.2 Forward visibility on bends has also been assessed in accordance with Table 8.2 of Manual for Streets 2. Table 8.2 sets out percentage speed reductions on bends based on the centre

radius of the lane where the vehicle will be travelling, which in turn provides an updated stopping Sight Distance (SSD) value.

- 3.5.3 JNP Group have prepared a calculator which produces this SSD value and utilised it for each bend within the site. This is contained within **Appendix C** of this report. The forward visibility splays are shown on drawing **C86557-JNP-66-XX-DR-T-7003**.
- 3.5.4 A plan has been prepared to show 2m x 2m visibility splays from private driveways abutting footways throughout the layout, as shown on drawing **C86557-JNP-66-XX-DR-T-7004**. No issues have been identified.
- 3.5.5 Any trees located with visibility envelopes will be 'clear stem' trees to reduce the extent of any obstruction.

3.6 Refuse Vehicle Access

- 3.6.1 In order to ensure the suitability of the development in accommodating refuse collection vehicles, swept path analysis of the scheme has been undertaken using an 11.3m long refuse vehicle as advised for use by WBC Highway Development Control.
- 3.6.2 The swept paths as shown on drawings **C86557-JNP-66-XX-DR-T-7005**, **C86557-JNP-66-XX-DR-T-7006** and **C86557-JNP-66-XX-DR-T-7007**, which are provided at the rear of this report. The drawings demonstrate that suitable refuse collection arrangements exist for all dwellings and that the turning heads provided are of appropriate size.
- 3.6.3 A review of carry distances in accordance with WBC's Living Streets Design Guide and Waste & Recycling Guidance for developers has been carried out. The dwellings have been assessed against maximum operatives carry distance of 25m and a maximum residents carry distance of 30m. As shown on the drawings, these distances can be achieved for all dwellings. Bin presentation points will be utilised where necessary, namely near Plots 182 and 129.
- 3.6.4 Swept path analysis has also been carried out for a refuse vehicle passing a large car on all secondary and tertiary roads within the site. This is shown on drawings **C86557-JNP-66-XX-DR-T-7009** and **C86557-JNP-66-XX-DR-T-7010**, which are provided at the rear of this report.
- 3.6.5 On bends where the vehicles would not be able to pass without extensive road widening, sufficient forward intervisibility is available between the two vehicles to allow one to wait for the other to pass.

3.7 Fire Tender Access

- 3.7.1 Access for fire tenders has been assessed both in terms of swept path requirements and distances to dwellings. It can be seen on **C86557-JNP-66-XX-DR-T-7008** that the layout suitably accommodates the movements of fire tender vehicles.
- 3.7.2 The drawing also demonstrates that a pump appliance can access all parts of a dwelling house within 45m, in accordance with Building Regulations Approved Document Part B.

3.8 Car Parking

- 3.8.1 Car parking is required to be provided at a level that meets the forecasted demand within WBC's 'Parking Demand Calculation Spreadsheet'. The spreadsheet requires details to be entered of the proposed property type, tenure, number of habitable rooms, number of

allocated spaces and number of garages in order to calculate the unallocated parking demand.

- 3.8.2 The development location has been selected as 'Village' where standards for unallocated parking are more onerous. It is worth noting that following completion of Hogwood Farm, the site will provide a mix of land uses including a neighbourhood centre, primary school, employment land and sports pitches that support localised movements by foot/cycle without the reliance on a private car and thus need for parking.
- 3.8.3 Once complete, the area could be viewed as less of a 'Village' location and more of a 'Town and Fringe' location but for now the 'Village' category has been maintained.
- 3.8.4 In the calculator's guidance notes, it states '*visitor (sic) parking is taken as being unallocated parking provision. It is calculated on the basis of 0.2 spaces per dwelling, where at least 1 allocated space is provided per dwelling*'.
- 3.8.5 The calculator considers garages as forming 0.5 of a space to reflect their underutilisation and where they are sometimes used for the purposes of storage.
- 3.8.6 The use of the parking calculator and the counting of garages was raised during pre-application discussions with WBC. It was agreed that two versions of the parking calculator would be prepared – one which factors the garages into the overall parking provision and another which discounts the garages. The latter would be used to determine the level of unallocated and visitor parking spaces for Parcels 4 and 5. Both parking calculators are provided in **Appendix A** of this report.
- 3.8.7 When garages are discounted, the unallocated parking requirement is 68 spaces per the calculator. A total of 62 spaces will be provided throughout Parcels 4 and 5, which is a shortfall of 6 spaces.
- 3.8.8 The quantum of unallocated spaces equate to an average provision of 0.3 spaces per dwelling, thus exceeding the typically referenced requirements of 0.2 spaces per dwelling¹.
- 3.8.9 In terms of the distribution of visitor spaces, each plot has been assessed to determine the number of visitor or unallocated spaces that are within a 50m walking distance. This has been measured as the crow flies, however spaces that are not within a logical walking route of a dwelling have been discounted e.g. the visitor space near the apartment building is within 50m of Plot 846, but it is unlikely that Plot 846's visitors would use this space.
- 3.8.10 Table 3.1 provides a summary of how many plots are within a 50m walking distance of 1, 2, 3 and 4 or more unallocated parking spaces.

Table 3.1 - Walking Distances to Unallocated/Visitor Bays

Summary	Number of Plots	Percentage of Plots	Cumulative Percentage
Plots with 1 space within 50m	12	6%	100%
Plots with 2 spaces within 50m	28	15%	94%
Plots with 3 spaces within 50m	47	25%	79%
Plots with 4+ spaces within 50m	99	53%	54%

¹ Typically referenced standard of 0.2 spaces per dwelling comes from the Department for Communities and Local Government (DCLG) 2007 publication 'Residential Car Parking Research'.

- 3.8.11 As shown in Table 3.1, over half of the plots are within a 50m walking distance of 4 or more visitor/unallocated spaces. In total, 94% of plots are within a 50m walking distance of at least 2 spaces and only 12 plots in total are within 50m of one unallocated space. The proposed quantity and distribution of spaces is therefore considered suitable for ensuring that all dwellings are within a reasonable distance of a visitor or unallocated bay.
- 3.8.12 A review of previous Reserved Matters applications for other Parcels with Hogwood Farm has confirmed that the requirement for electric vehicle charging and details pertaining to this will be secured by condition. All dwellings will have either active or passive provision.
- 3.8.13 With regards to geometry, driveways are 3.1m wide and parking bays within parking courts are 2.5m x 5m. Parallel bays are 6.5m x 2.5m and have a 1m service margin running through the bays. In some instances, the width of the parallel bays has been increased to 3m as there is no service margin or landscaped area to the rear.

3.9 Cycle Parking

- 3.9.1 Cycle parking is to be provided for all dwellings in accordance with the standards set out in WSP's Parking Standards Study Report prepared on behalf of WBC. The requirements are provided in Table 3.2.

Table 3.2 - Cycle Parking Standards

Dwelling Type	Bedrooms	Requirement
Flats	1 Bedroom (1/2 Habitable Rooms)	1 per dwelling
	2 Bedroom (4 Habitable Rooms)	1 per dwelling
Houses	1 Bedroom (1/2 Habitable Rooms)	1 per dwelling
	2 Bedroom (4 Habitable Rooms)	2 per dwelling
	3+ Bedroom (6 Habitable Rooms)	3 per dwelling

Source: WSP Parking Standards Study Report

Note: Standards are based on no. of habitable rooms though no. of bedrooms is not prescribed within WBC's Parking Calculator Conversion Table for dwellings with 3 habitable rooms. For reference, 3 habitable rooms require 1 space per dwelling.

- 3.9.2 Garages have been designed to have internal dimensions of 3m x 7m, meaning they are suitable for use as cycle parking in accordance with the WBC standards. All dwellings without garages will be provided with cycle storage lockers or sheds in their rear gardens, and it is expected that this will be specified further at the detailed design stage. Communal cycle stores will be provided for apartments.

4 TRIP GENERATION AND TRAFFIC IMPACT ASSESSMENT

4.1 Background

- 4.1.1 Trip generation for the proposals have been calculated using the same methodology contained within the original TA and that used within Transport Statements' submitted in support of reserved matters applications for Parcels within the wider SDL.

4.2 Vehicular Trip Generation

- 4.2.1 Trip rates produced from the Wokingham Strategic Transport Model 4 (WSTM4) have been used to assess the likely number of vehicular trips resulting from 186 dwellings proposed under Parcels 4 and 5. Separate trip rates are provided for houses and flats. The results are shown in Table 4.1 below.

Table 4.1: Trip Rates and Trips (186 dwellings)

Time Range	Inbound		Outbound		Two-way	
	Trip Rate	Trips	Trip Rate	Trips	Trip Rate	Trips
Dwelling Houses (170 dwellings)						
08:00-09:00	0.17	29	0.41	70	0.58	99
17:00-18:00	0.36	61	0.16	27	0.51	87
Dwelling Flats (16 dwellings)						
08:00-09:00	0.06	1	0.18	3	0.25	4
17:00-18:00	0.19	3	0.10	2	0.29	5
Total Trip Generation (186 dwellings)						
08:00-09:00	30		73		103	
17:00-18:00	64		29		91	

**Errors in arithmetic are due to rounding*

- 4.2.2 The trip rates show that the dwellings can be expected to generate 103 two-way trips during the AM peak period and 91 two-way trips during the PM peak hour.

4.3 Trip Distribution and Junction Capacity

- 4.3.1 Parcels 4 and 5 will have two access points. One access joins the internal layout of Parcel 2 and ultimately the NRME(S), while the other will join Sheerlands Road and the A327 Reading Road thereafter. Vehicle trips from residents and visitors of Parcels 4 and 5 are expected to arrive and depart via both accesses.
- 4.3.2 It is acknowledged that vehicles from the wider Hogwood Farm development may also use the access to Sheerlands Road, though the creation of a 'rat run' or desire line has been discouraged through the internal layout of Parcels 4 and 5.
- 4.3.3 The junction capacity at the secondary access has previously been assessed within document Technical Note TN016 'Junction Assessment Sheerlands Road / A327 / Church Road Update (Trip Distribution)' dated August 2018, which was prepared by JNP Group and submitted and approved in support of the Parcel 1 (ref: 181422) application. The Technical Note is appended as **Appendix D**.
- 4.3.4 The Technical Note was prepared to assess the highway impact of utilising the Sheerlands Road access as the main vehicle access to Parcel 1, while the NRME(S) was still under construction.

- 4.3.5 The Sheerlands Road / A327 Reading Road junction was tested in a '2028 Do Something' scenario for the 178 dwellings which formed Parcel 1, as well as a sensitivity test of 400 dwellings. The junction operated within capacity for the trips associated with 400 dwellings, with a maximum RFC of 0.82 for Church Road right turn movements in the AM Peak.
- 4.3.6 The 400 dwellings which the junction was tested against would account for the trips associated with all 186 dwellings within Parcels 4 and 5, plus an additional 214 dwellings from the wider Hogwood Farm development. Overall, this amounts to 27% of the consented 1,500 dwellings from the outline scheme.
- 4.3.7 Given that the capacity of the junction has previously been assessed and was found to operate within capacity, no further assessment is considered necessary, and this was agreed during pre-application discussions with WBC. The previous assessment is considered robust given that it accounts for more dwellings than what will be provided within Parcels 4 and 5.
- 4.3.8 It is considered unlikely that the trips associated with 400 dwellings will utilise the access, as the internal layout of Parcels 4 and 5 has been designed to discourage rat-running and the NRME(S) will continue to form the principal desire line within the site and to the wider area.

4.4 Multi-Modal Trip Generation

- 4.4.1 In order to assess the likely travel methods used by future residents, 'Method of Travel to Work' data obtained during the 2021 census has been analysed for the output areas surrounding the site.
- 4.4.2 Parcels 4 and 5 are located within the E00188503 output area which covers Finchwood Park. Given that the Finchwood Park development was only partly occupied at the time of the 2021 census, five surrounding output areas which incorporate earlier parcels of residential development and wider SDL have been included. This is illustrated in Figure 4.1 overleaf.

Figure 4.1: Output Areas



Source: Nomis Statistics

4.4.3 Data for the output area has been adjusted to remove those who stated that they work from home. From calculating the likely number of vehicular trips, it is possible to derive the likely number of trips made by other methods using the 2021 census modal split. This is provided overleaf in Table 4.2 with raw data contained as **Appendix B**.

Table 4.2: 2021 Census Method of Travel to Work – 186 dwellings

Method of Travel	Percentage of total	AM 2 Way Trips	PM 2 Way Trips
Underground, Metro, Light Rail, Tram	0%	0	0
Train	2%	2	2
Bus, Minibus or Coach	3%	4	3
Taxi	0%	0	0
Motorcycle, Scooter or Moped	1%	1	1
Driving a Car or Van	86%	103	91
Passenger in a Car or Van	3%	4	3
Bicycle	2%	2	2
On Foot	3%	4	3
Other	1%	1	1

4.4.4 The travel characteristics of those residing in the local area have been calculated using data collected during the 2021 census. It is recognised that there are limitations to the validity of this dataset, as Nomis have confirmed the following COVID-19 related matters which may have affected travel to work on the census day:

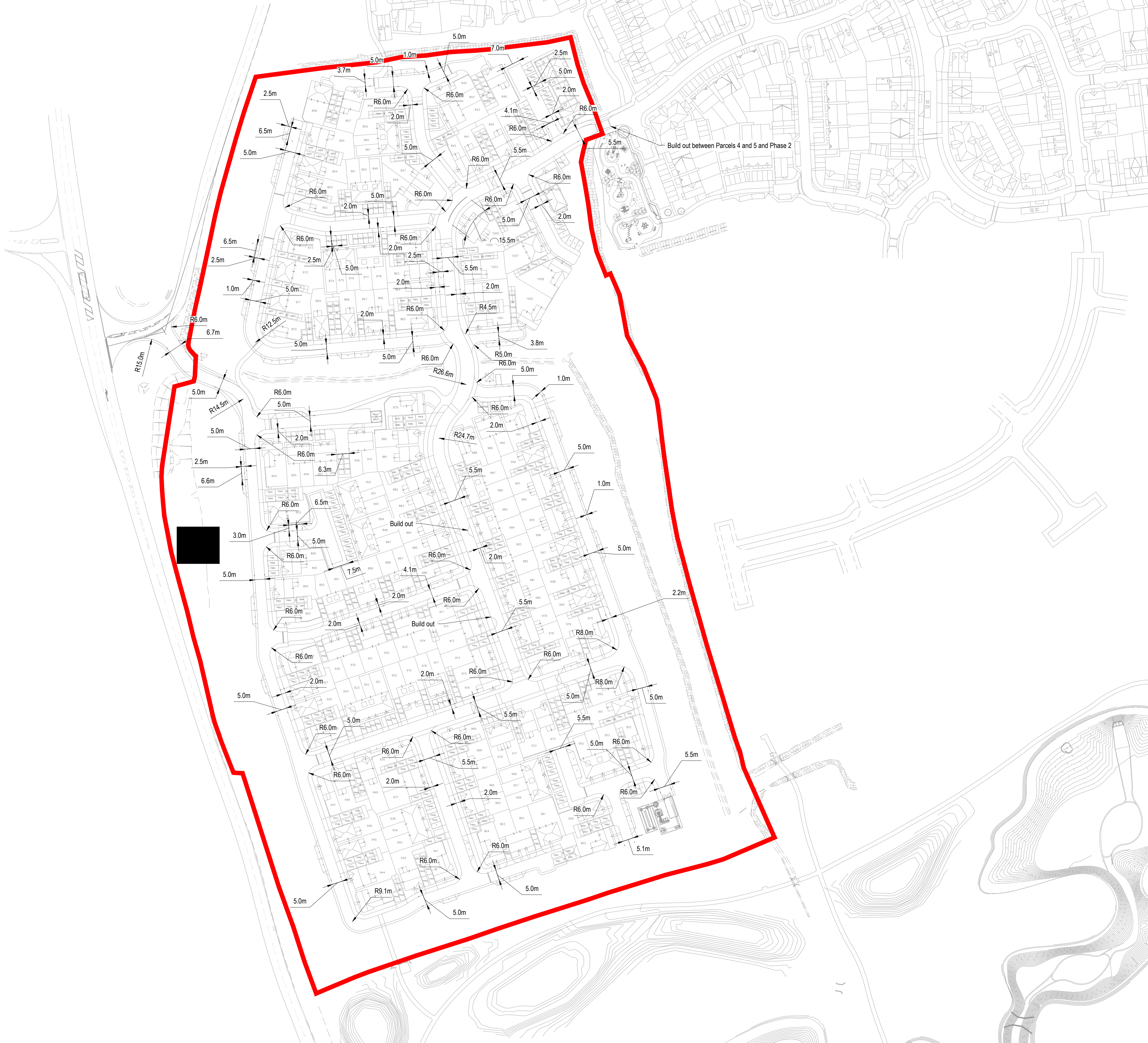
- A nationwide lockdown was still in place, requiring people to work from home wherever possible.
- Non-essential retail and businesses were closed.

- Around 7% of the population were self-isolating with symptoms consistent with COVID-19.
 - Key workers who were working outside of their homes were encouraged to avoid public transport where possible.
 - The Government's furlough scheme was in place and affected up to 5.6 million people in England and Wales. While guidance was issued with the census on how furloughed individuals should respond to the question, Nomis have stated they are unable to determine if people followed the guidance.
- 4.4.5 As such, the travel to work data from the 2021 census may not accurately reflect travel patterns throughout the period covered by the census. While the data will be used to determine the baseline modal share, the actual profile of how residents travel may be more sustainable than reflected in the census data once the site is occupied.
- 4.4.6 The data is also based on a relatively small sample size of 585 people who were over the age of 16 and in employment the week before the census, when removing those that work from home.
- 4.4.7 Importantly, this data also does not take into consideration the full build out of all infrastructure provided as part of Hogwood Farm or the wider SDL, all of which will facilitate more sustainable travel and make the development less reliant on the private car. This is further supported through careful site design with opportunities taken to maximise permeability on foot and cycle.
- 4.4.8 The trips generated by the development across all modes of transport are not expected to have a severe or detrimental impact on the safety and operation of the surrounding highway network. The predicted trip generation is also consistent with that of the Transport Assessment and wider principles of assessment which formed part of the outline consent.

5 CONCLUSION

- 5.1.1 This TS has been prepared to accompany a Reserved Matters planning application for 186 dwellings on Parcels 4 and 5 of Hogwood Farm (Finchwood Park). Details of access, appearance, landscaping, layout and scale are also to be considered.
- 5.1.2 This TS supports the TA prepared as part of the hybrid planning application and demonstrates that the proposals are acceptable from a transport and highways perspective, with no unacceptable cumulative impacts upon highways safety or capacity.
- 5.1.3 Parcels 4 and 5 will be served by two points of access, one of which joins the internal road layout of Parcel 2 and the other forming a junction with Sheerlands Road. The Sheerlands Road access will formalise the existing construction access. The capacity of the junction has previously been tested in a future year scenario of 2028 for the trips associated with 400 dwellings. The junction was found to operate within capacity and so no further assessment is considered necessary.
- 5.1.4 In accordance with pre-application discussions held with WBC, two separate versions of WBC's Parking Demand Calculation Spreadsheet have been prepared. The first accounts for the garages throughout the development, while the second version discounts the garages. The latter was to be used to determine the quantum of visitor and unallocated spaces. A total of 68 unallocated/visitor spaces will be provided throughout the site, with 94% of plots being within a 50m walking distance of two or more visitor/unallocated bays.
- 5.1.5 Overall, this TS demonstrates that the proposals meet the design standards and principles set out within local and national guidance. Safe access is achievable for motorised and non-motorised users of the site and the local highway network is deemed suitable in accommodating the vehicular movements associated with the proposed development.

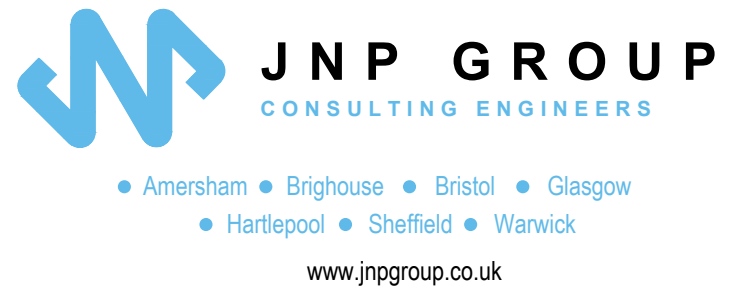
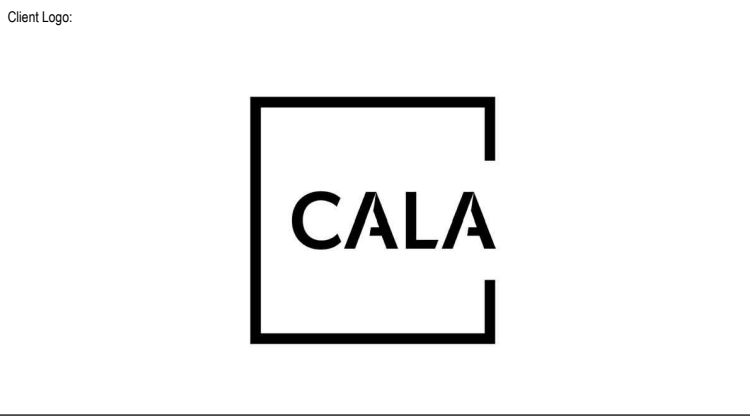
FIGURES / DRAWINGS



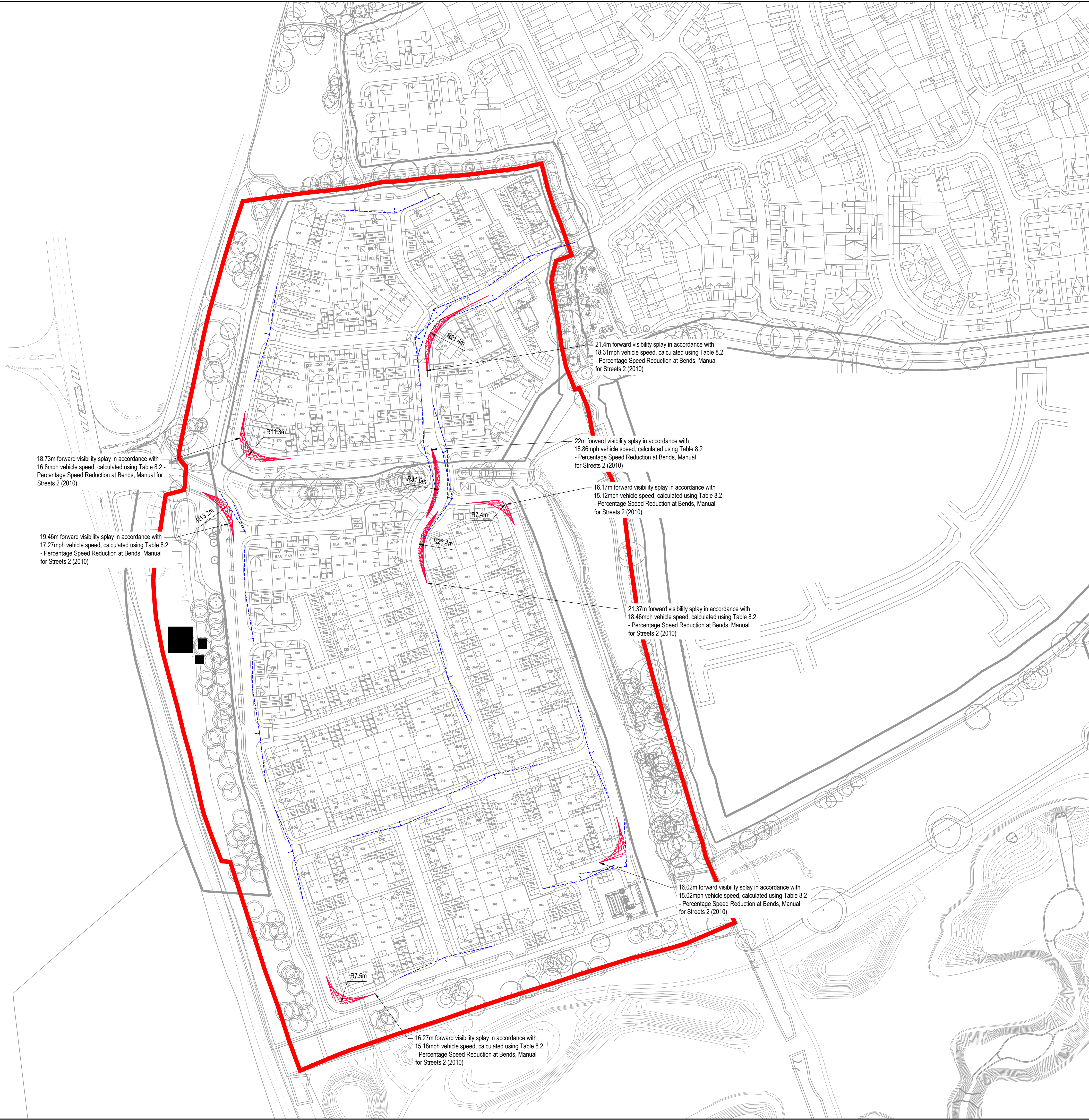
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P02	04/06/2024	Second Issue	ELUKMKM
P01	03/05/2024	First Issue	ELUKMKM
Rev	Date	Description	Dwn / Chk'd / App'd
Stability:			
S2 - Suitable for Information			



Client	CALA Homes		
Job:	Hogwood Farm Parcels 4 & 5		
Title:	Highway Geometry		
Classification	FL_60_20		
Scale @ A1:	1:1000		
Project - Originator - Volume/System - Level/Location - Type - Discipline - Number	C86557 - JNP - 66 - XX - DR - T - 7002		
Revision	P02		



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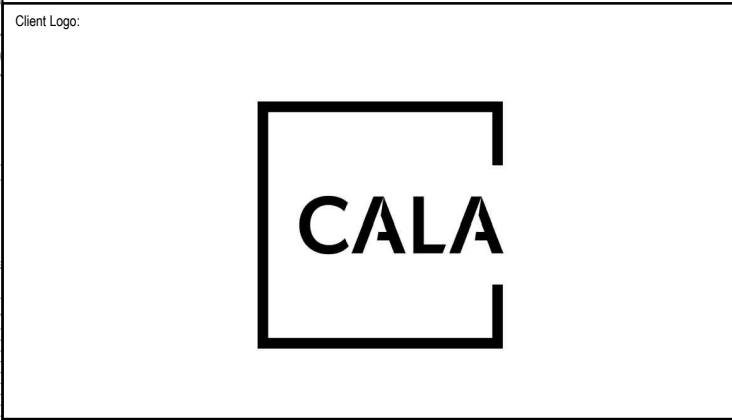
Legend

2.4m x 25m visibility splay in accordance with Manual for Streets (MfS) Table 7.1 and 20mph design speed

Forward visibility splay, calculated in accordance with Table 8.2 of Manual for Streets 2 (2010)

Rev	Date	Description	Drawn / Check / App'd
P02	04/06/2024	Second Issue	ELK/MKM
P01	03/06/2024	First Issue	ELK/MKM

Subsidiary: S2 - Suitable for Information



Client: CALA Homes

Job: Hogwood Farm Parcels 4 & 5

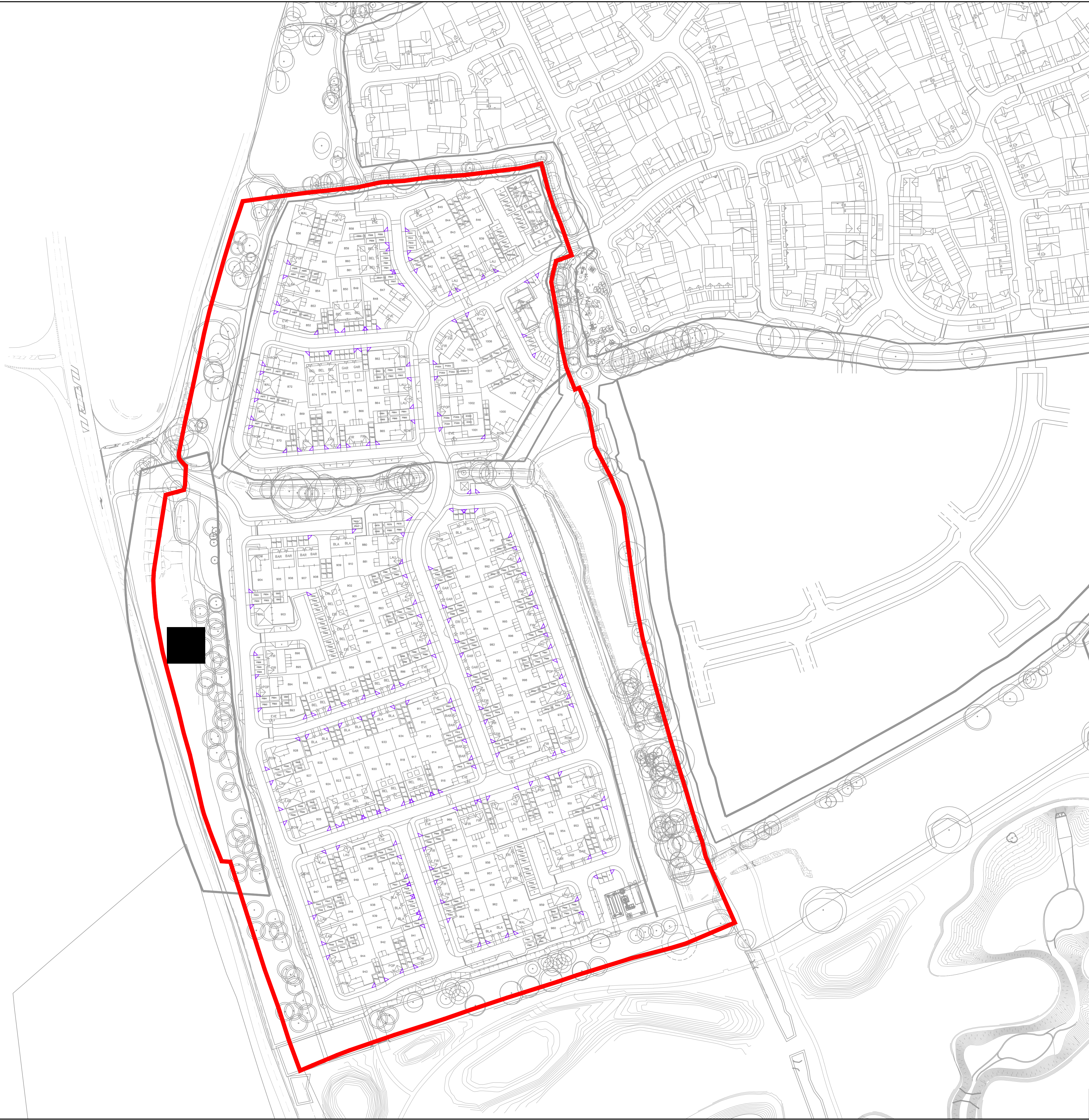
Title: Junction and Forward Visibility Splays

Classification: FL_60_20
Scale @ A1: 1:1000

certificat HAS Constructionline

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number
C86557 - JNP - 66 - XX - DR - T - 7003
Document/Drawing Number

Reason: P02



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Legend

2m x 2m pedestrian visibility splay where the driveway crosses a footway



P02	04/06/2024	Second Issue	EL/KMKM
P01	03/06/2024	First Issue	EL/KMKM

Rev. Date Description Dm / Chk / App'd

Subsidiary

S2 - Suitable for Information

Client Logo:

CALA



Client: CALA Homes

Job: Hogwood Farm Parcels 4 & 5

Title: Pedestrian Visibility Splays

Classification: FL_60_20	Construction	HAS	Constructionline	Supplier No: 000019
Scale @ A1: 1:1000	Accredited Contractor	Accredited		

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number
C86557 - JNP - 66 - XX - DR - T - 7004 P02
Document/Drawing Number



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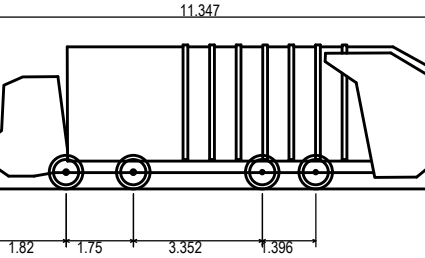
Legend

Maximum 30m carry distance for residents in accordance with WBC Living Streets Design Guide (2019)

Maximum 25m carry distance for operatives in accordance with WBC Waste Management Facilities in New Developments Guidance Notes for Developers (2021)

Maximum 10m carry distance from bin stores to parked collection vehicles in accordance with WBC Waste & Recycling Guidance for Developers

Bin Store Locations for Apartments



Large Refuse Vehicle (4 axle)
Overall Length 11.347m
Overall Width 2.500m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 6.00s
Wall to Wall Turning Radius 11.330m

P02	04/06/2024	Second Issue
P01	03/06/2024	First Issue
Rev	Date	Description
Subsidiary		

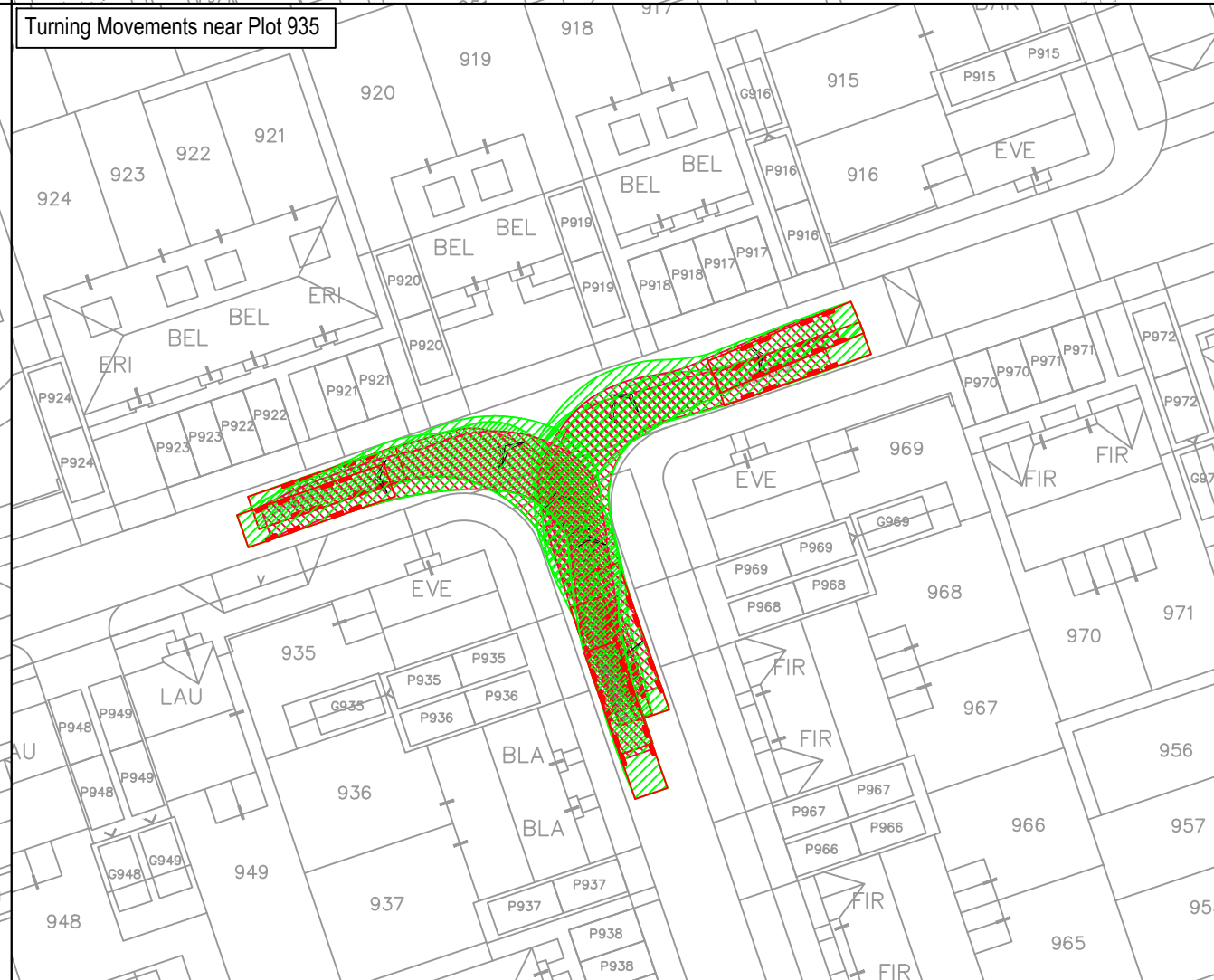
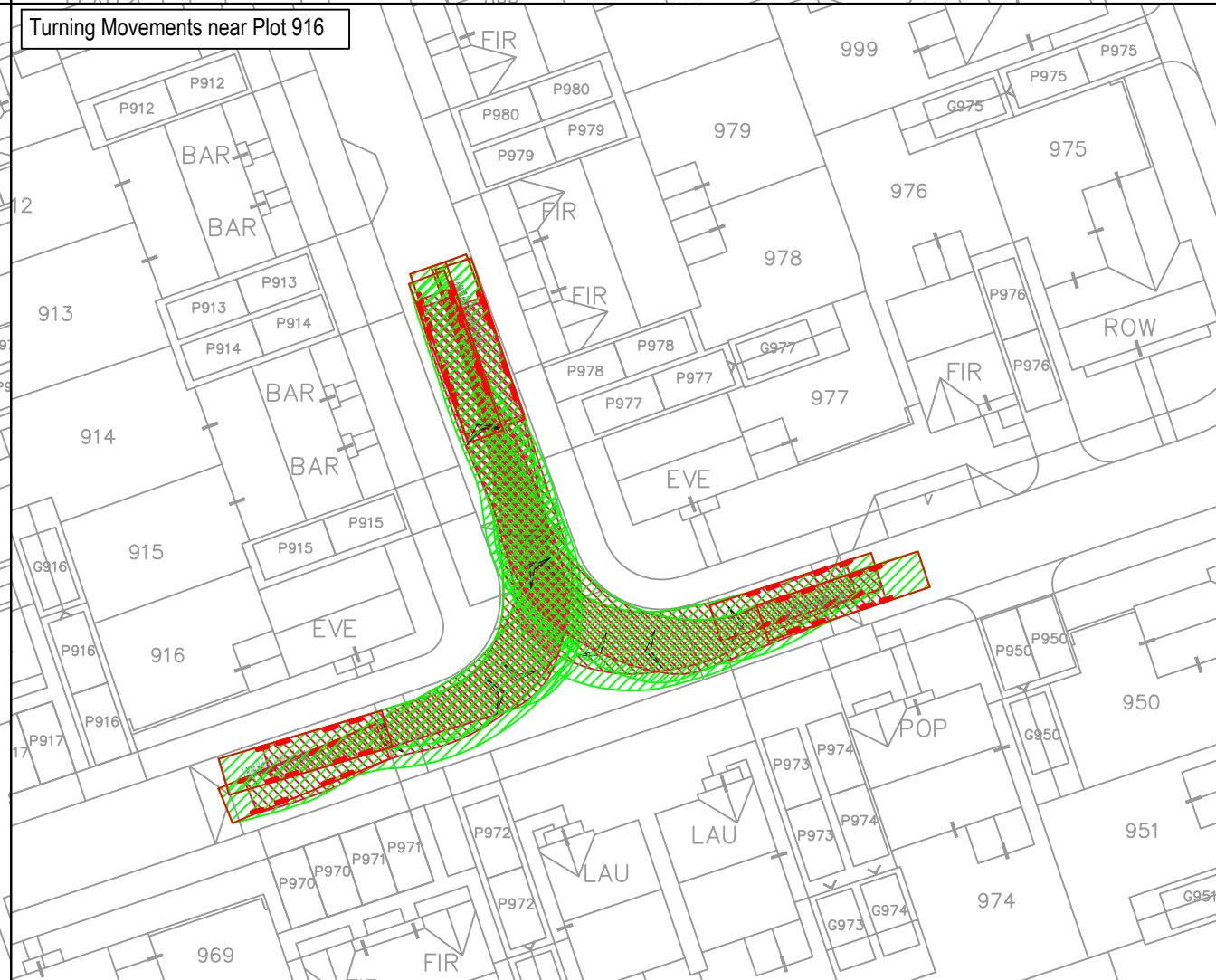
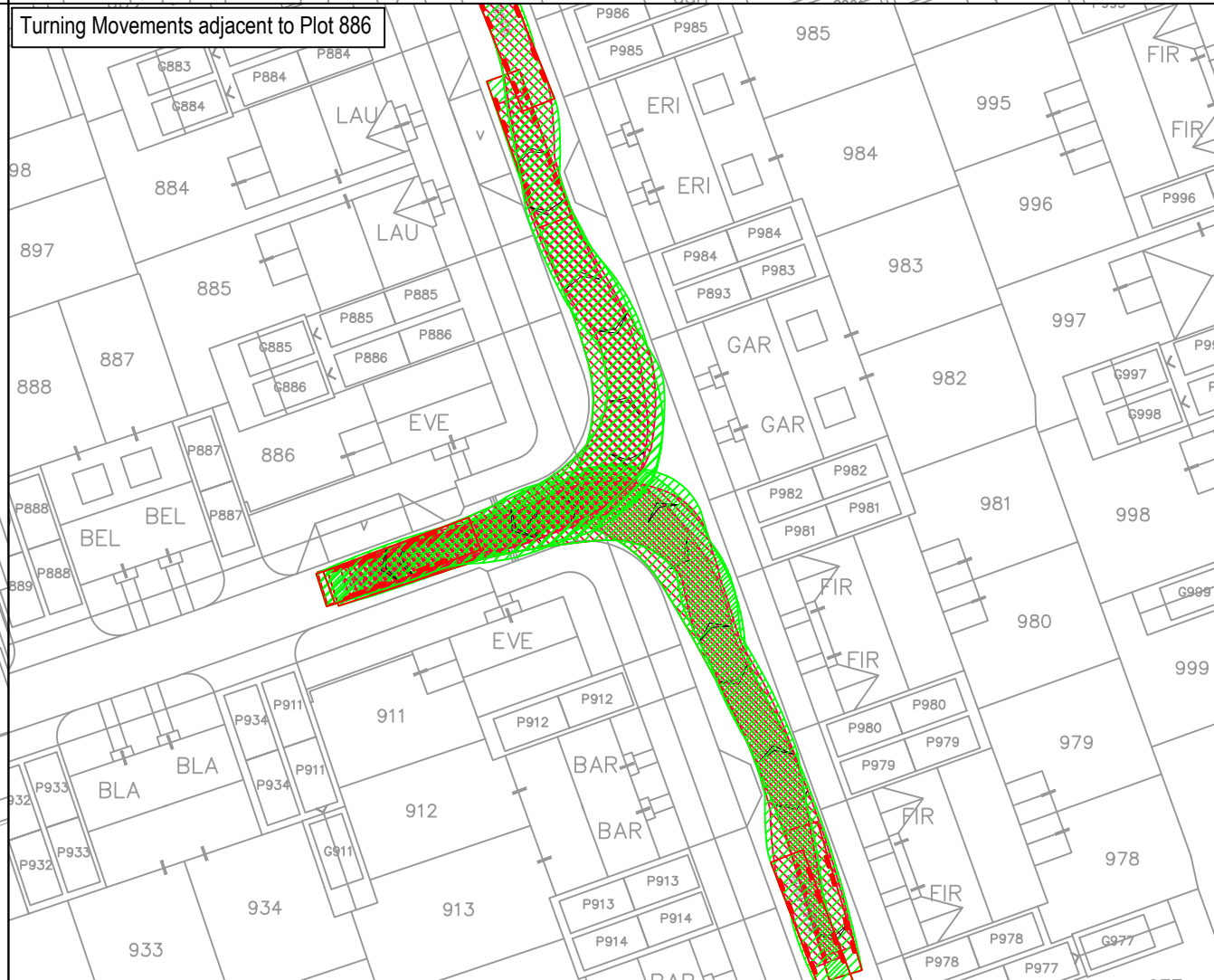
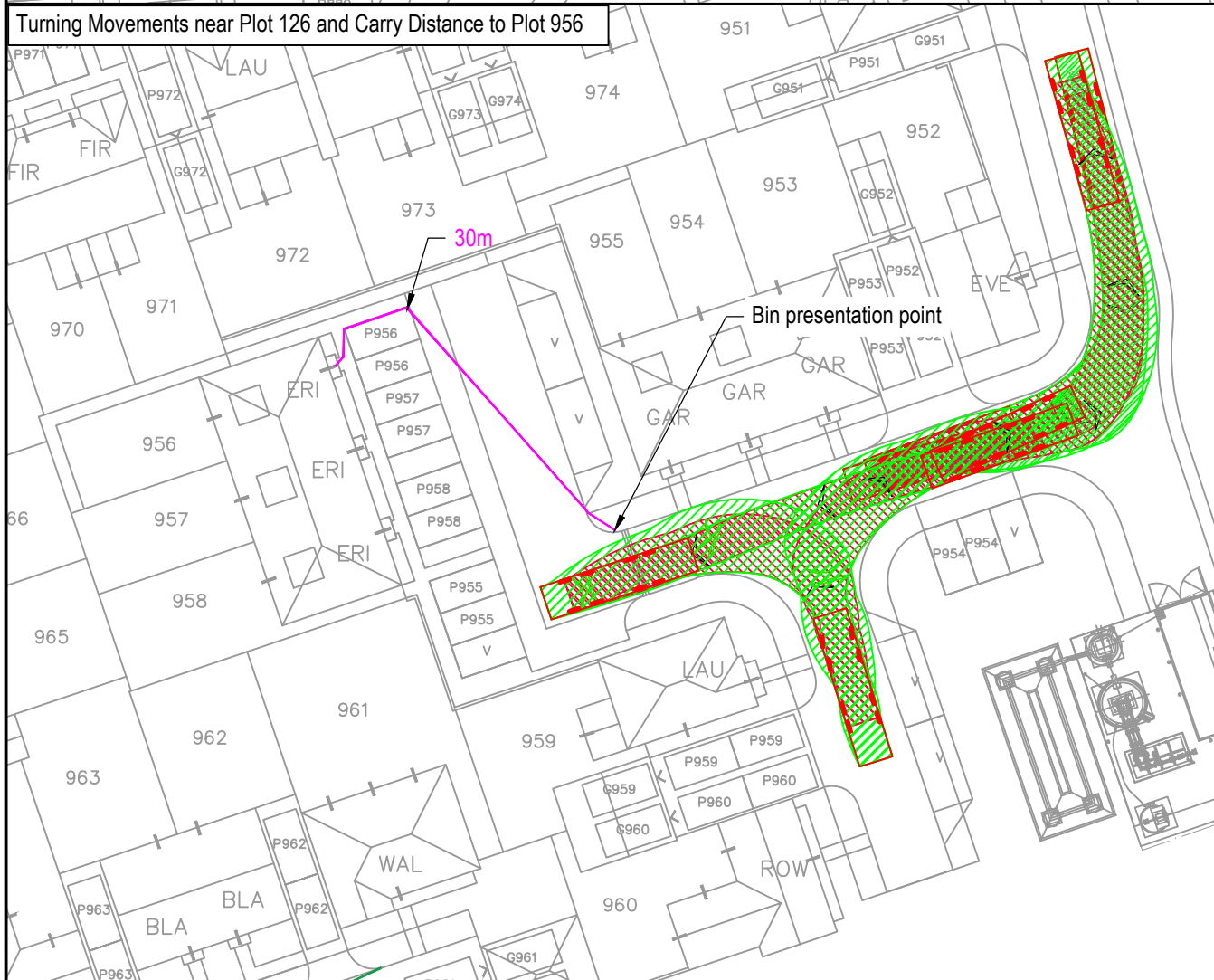
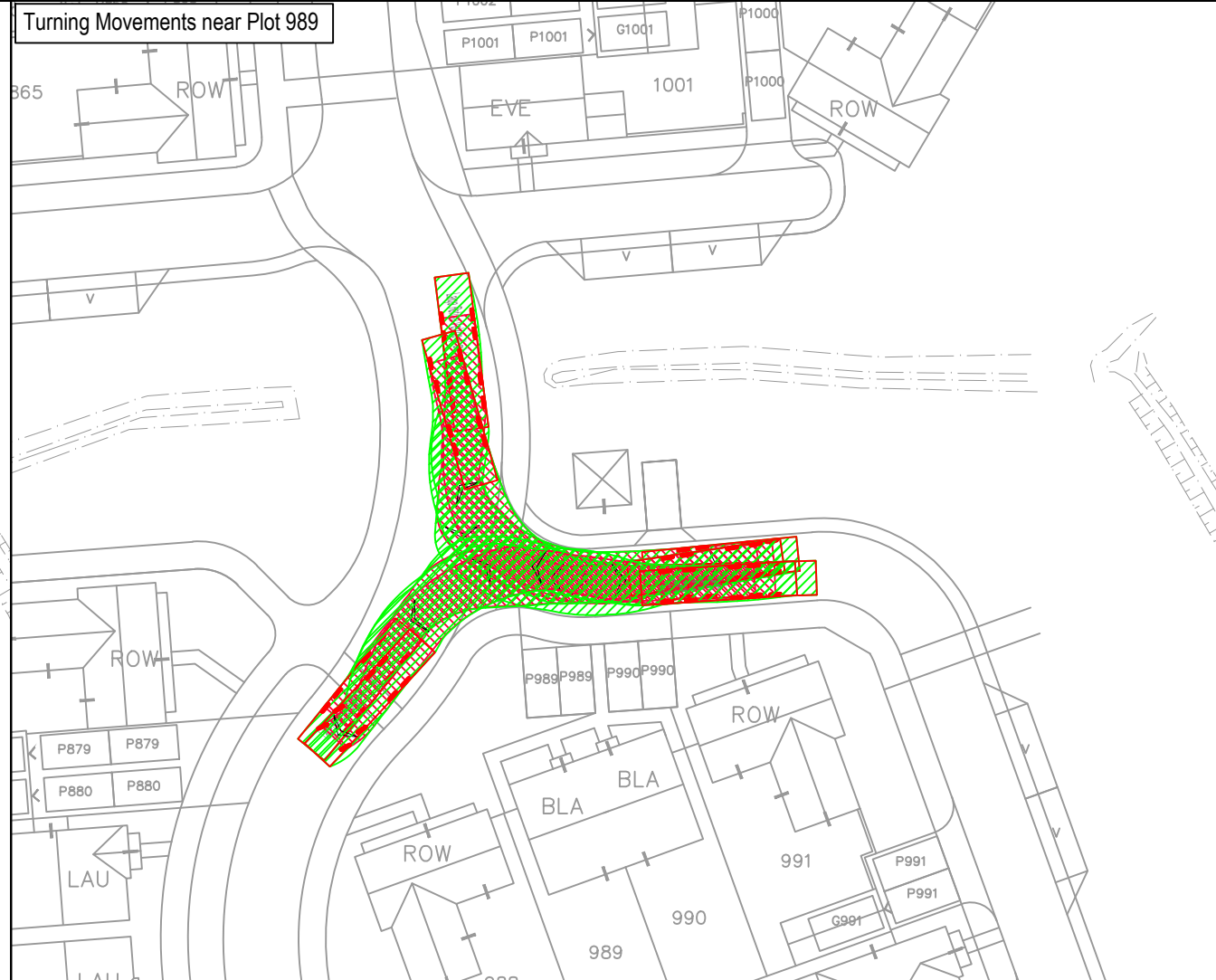
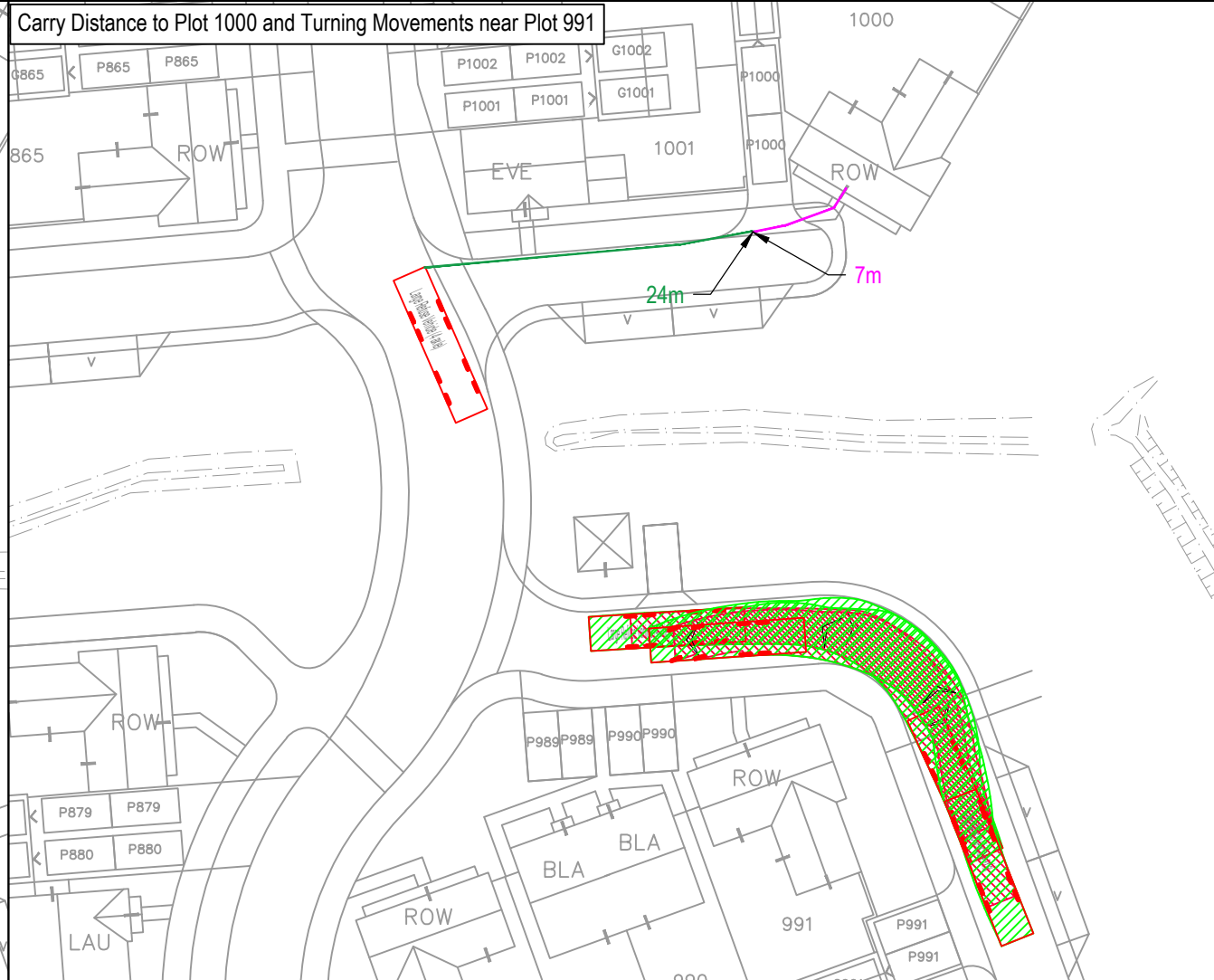
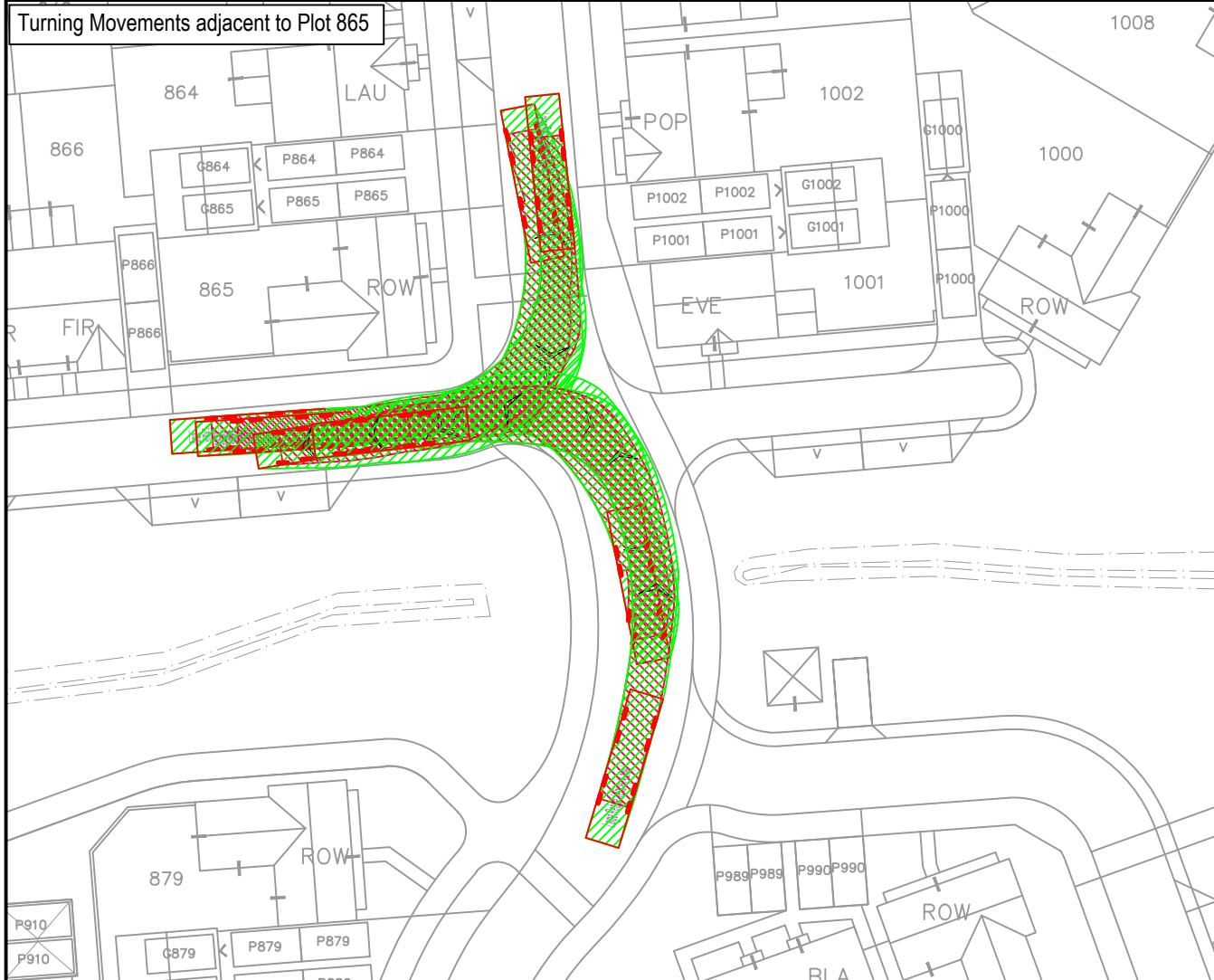
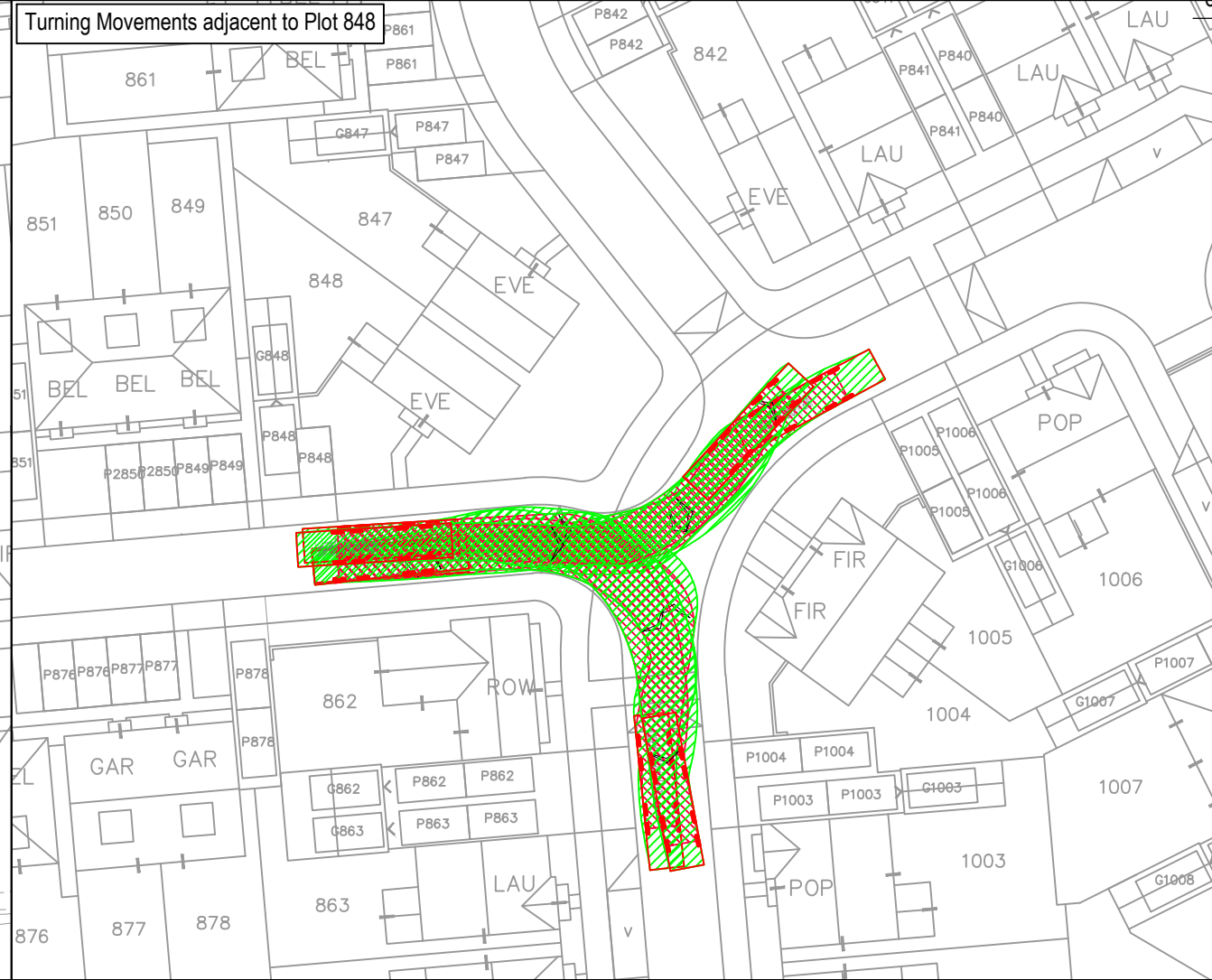
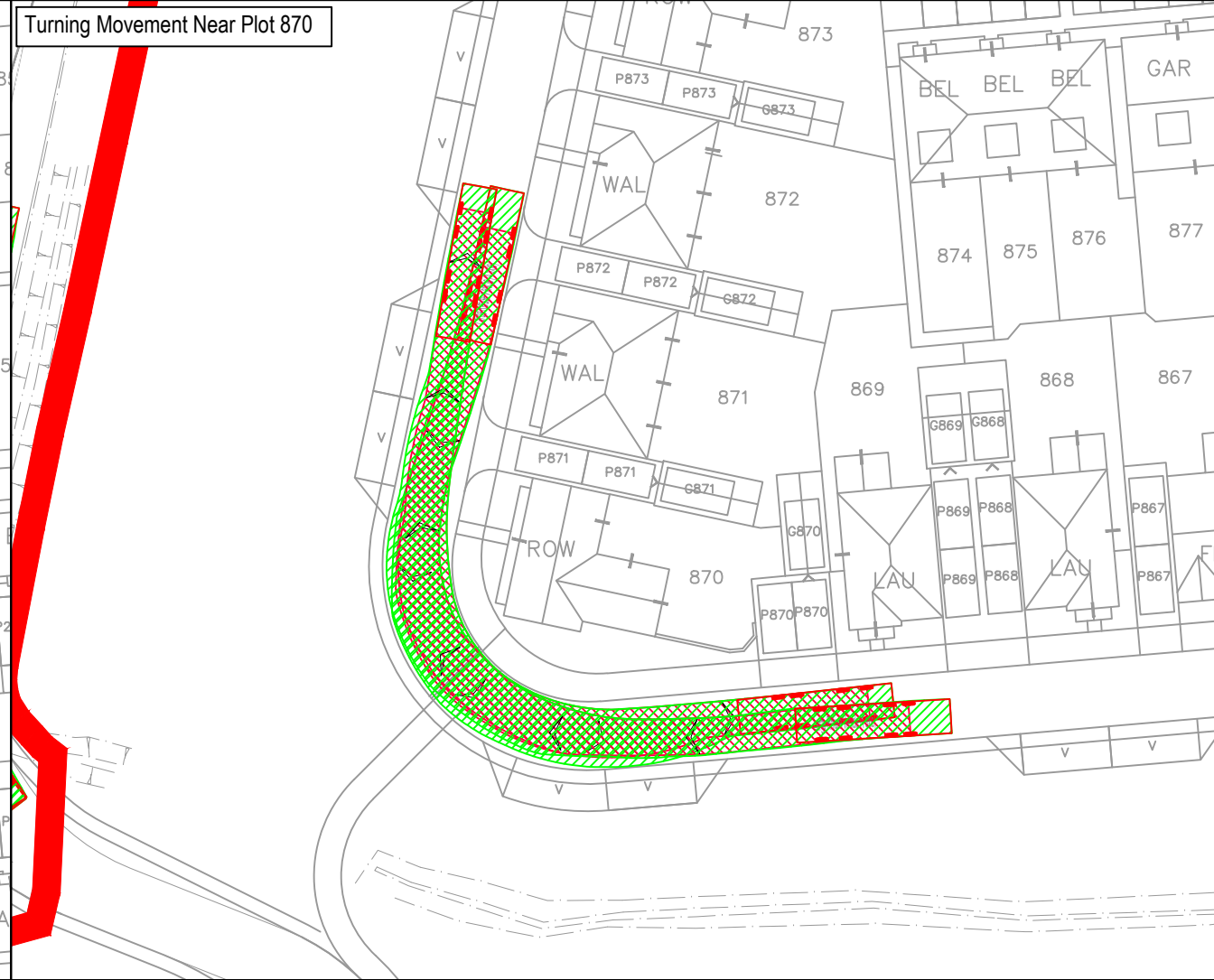
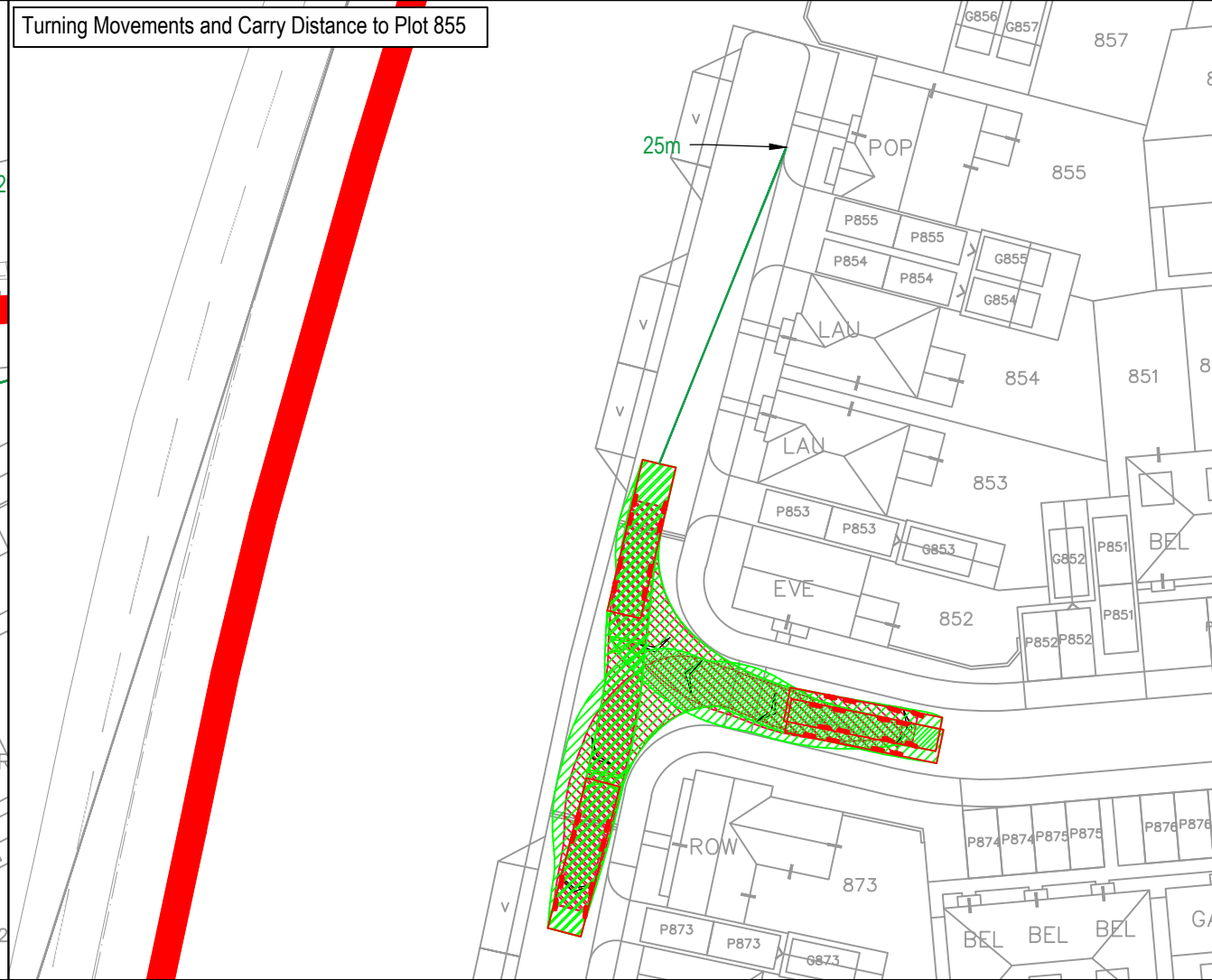
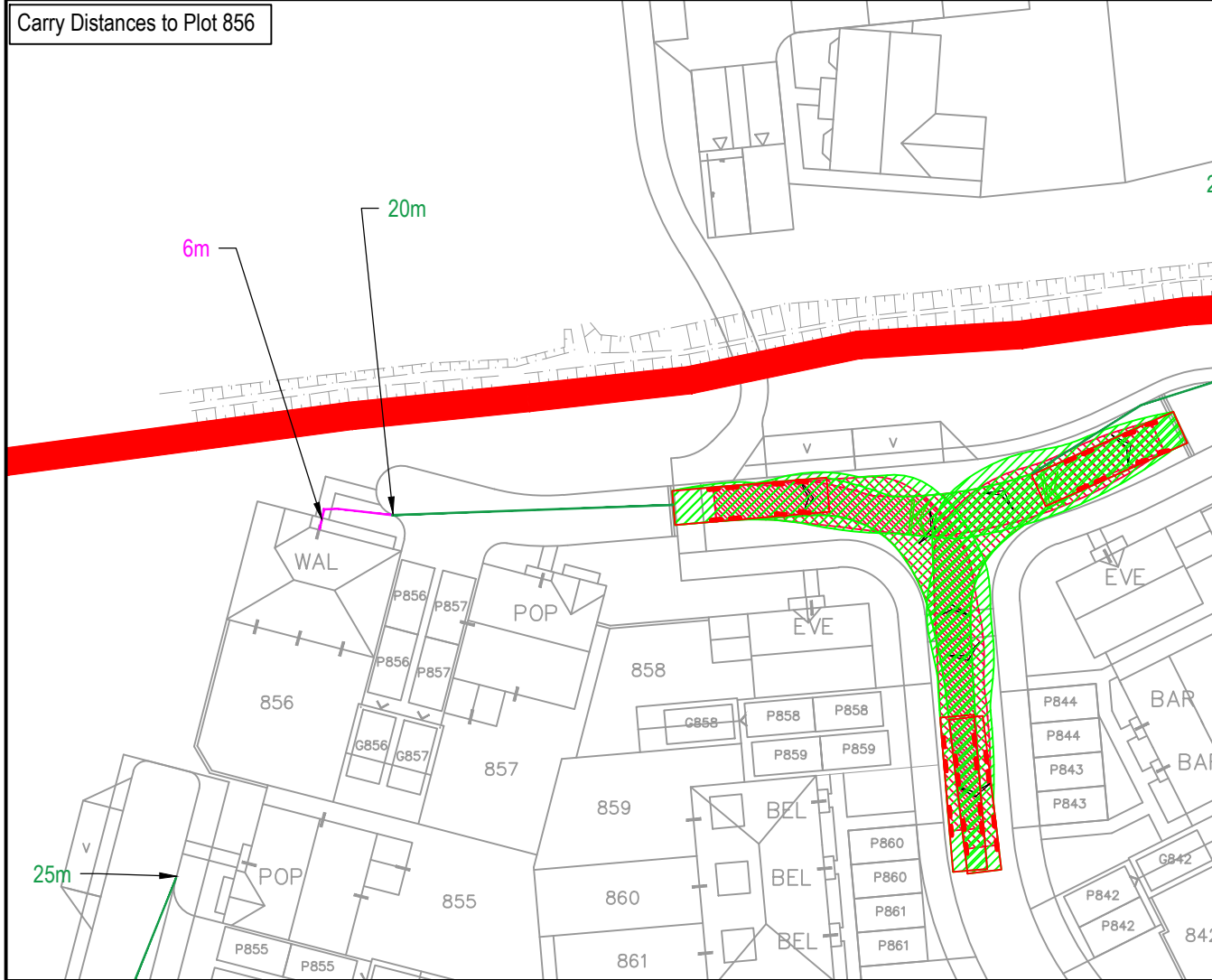
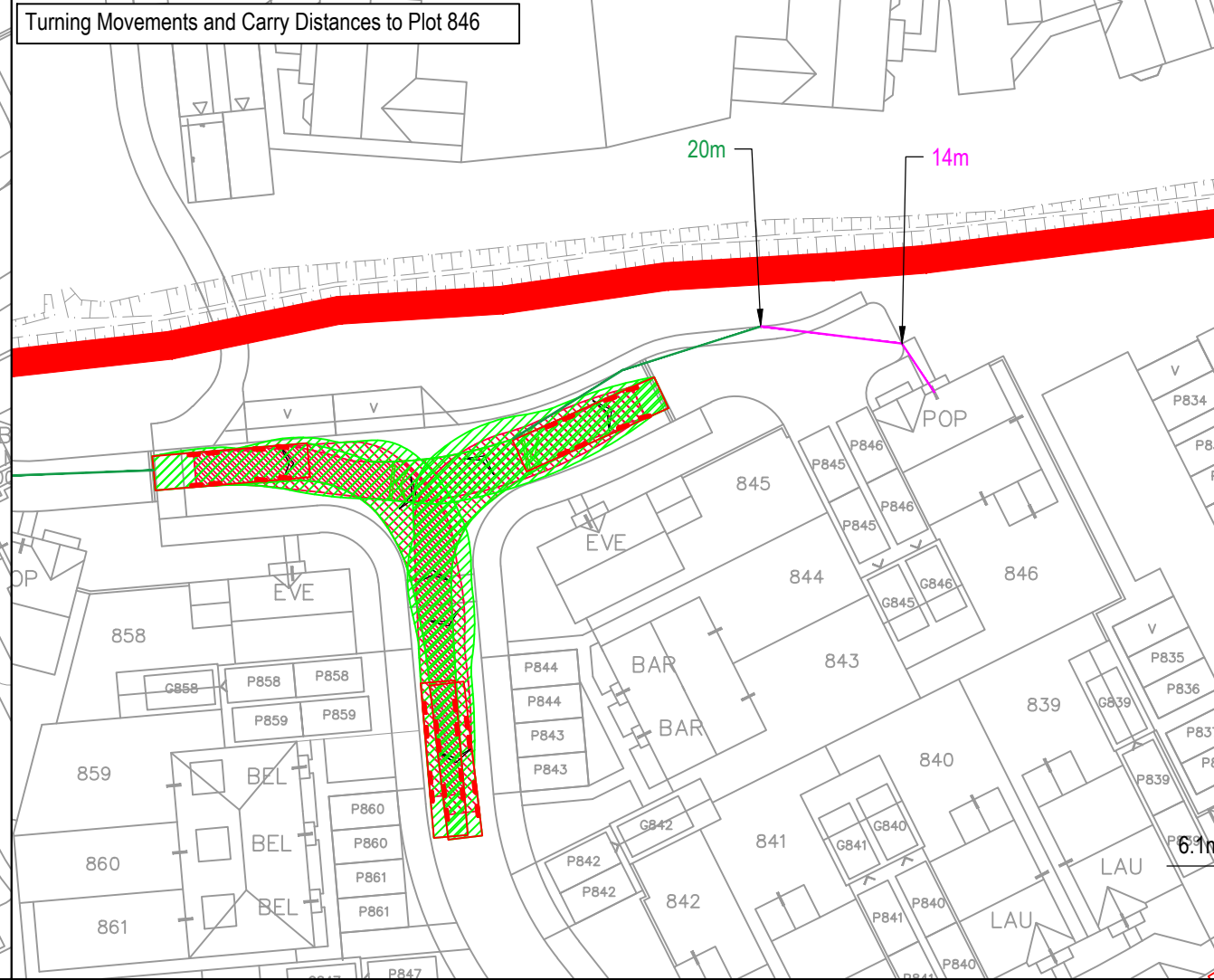
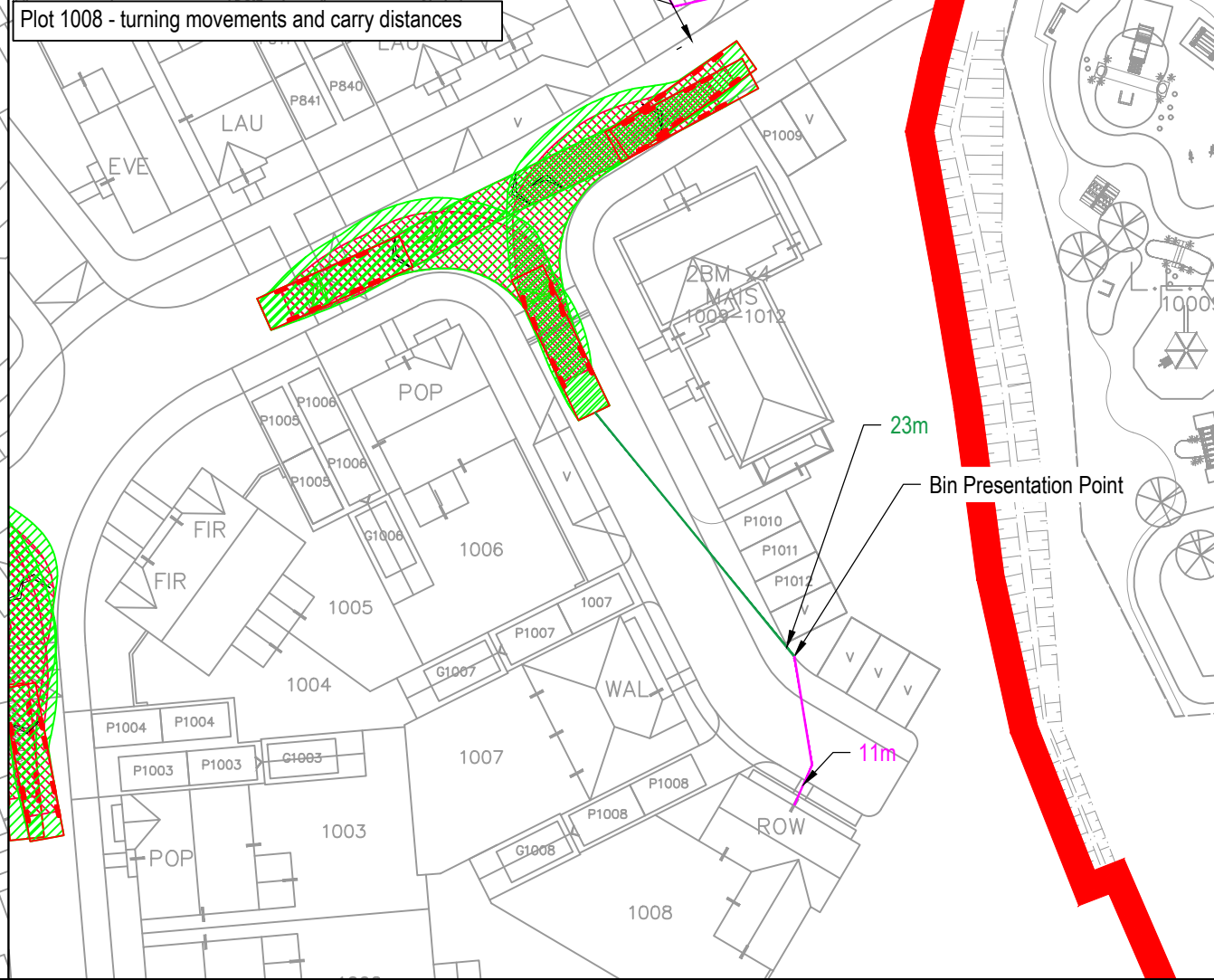
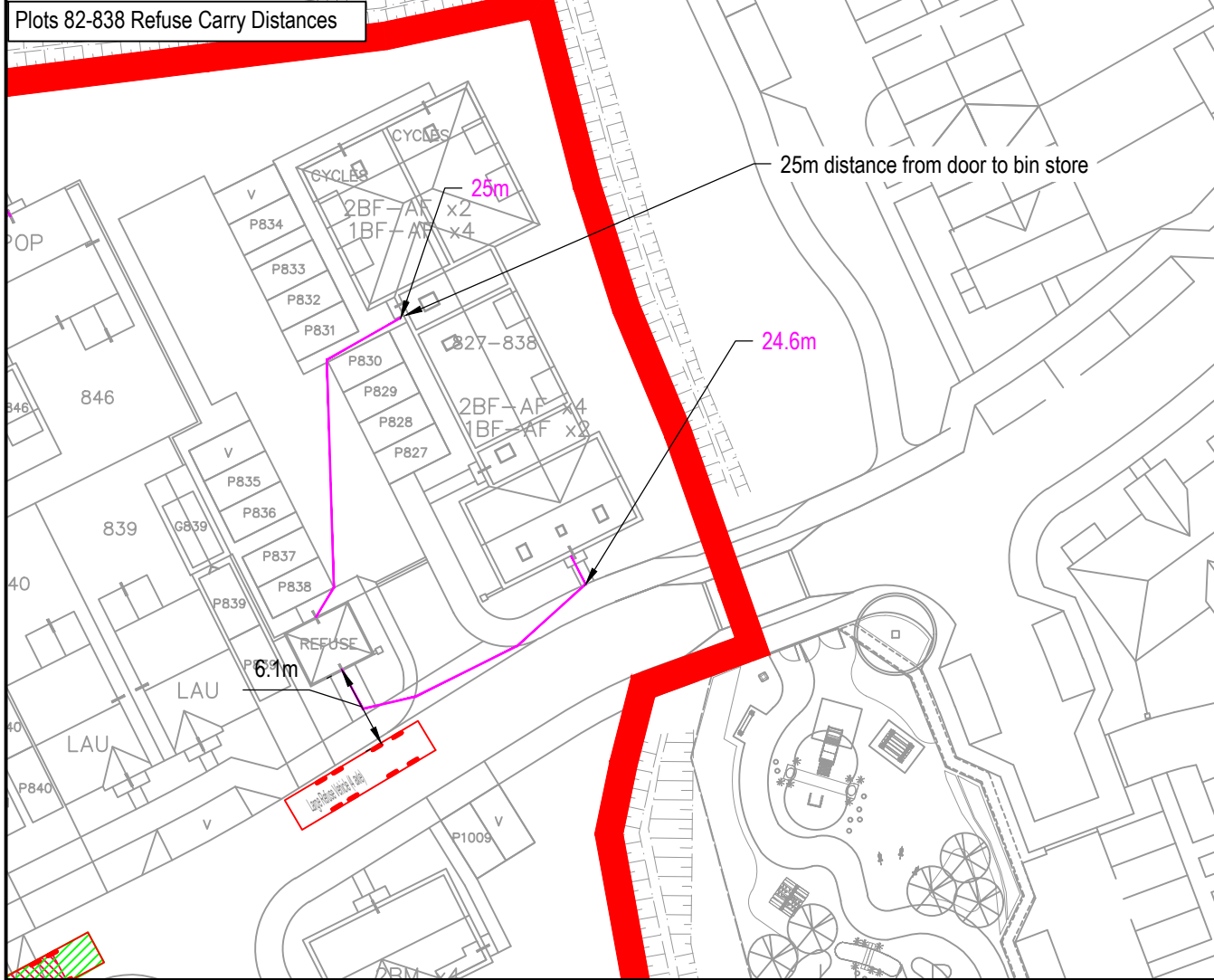
S2 - Suitable for Information

Client Logo:

CALA



Client:	CALA Homes
Job:	Hogwood Farm Parcels 4 & 5
Title:	Swept Path Analysis Overview Refuse Vehicle
Classification:	FL_60_20
Scale @ A1:	1:1000
Project - Originator - Volume/System - Level/Location - Type - Discipline - Number	C86555 - JNP - 66 - XX - DR - T - 7005
Reason:	P02
Document/Drawing Number	



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Legend

Maximum 30m carry distance for residents in accordance with WBC Living Streets Design Guide (2019) —

Maximum 25m carry distance for operatives in accordance with WBC Waste Management Facilities in New Developments Guidance Notes for Developers (2021) —

Maximum 10m carry distance from bin stores to parked collection vehicles in accordance with WBC Waste & Recycling Guidance for Developers —

Bin Store Locations for Apartments ●

Large Refuse Vehicle (4 axle)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Revision Table

Rev	Date	Description	Drawn / Checked / App'd
P02	04/06/2024	Second Issue	EL/KMKM
P01	03/06/2024	First Issue	EL/KMKM

Stability: S2 - Suitable for Information

Client Logo: CALA

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Client: CALA Homes

Job: Hogwood Farm Parcels 4 & 5

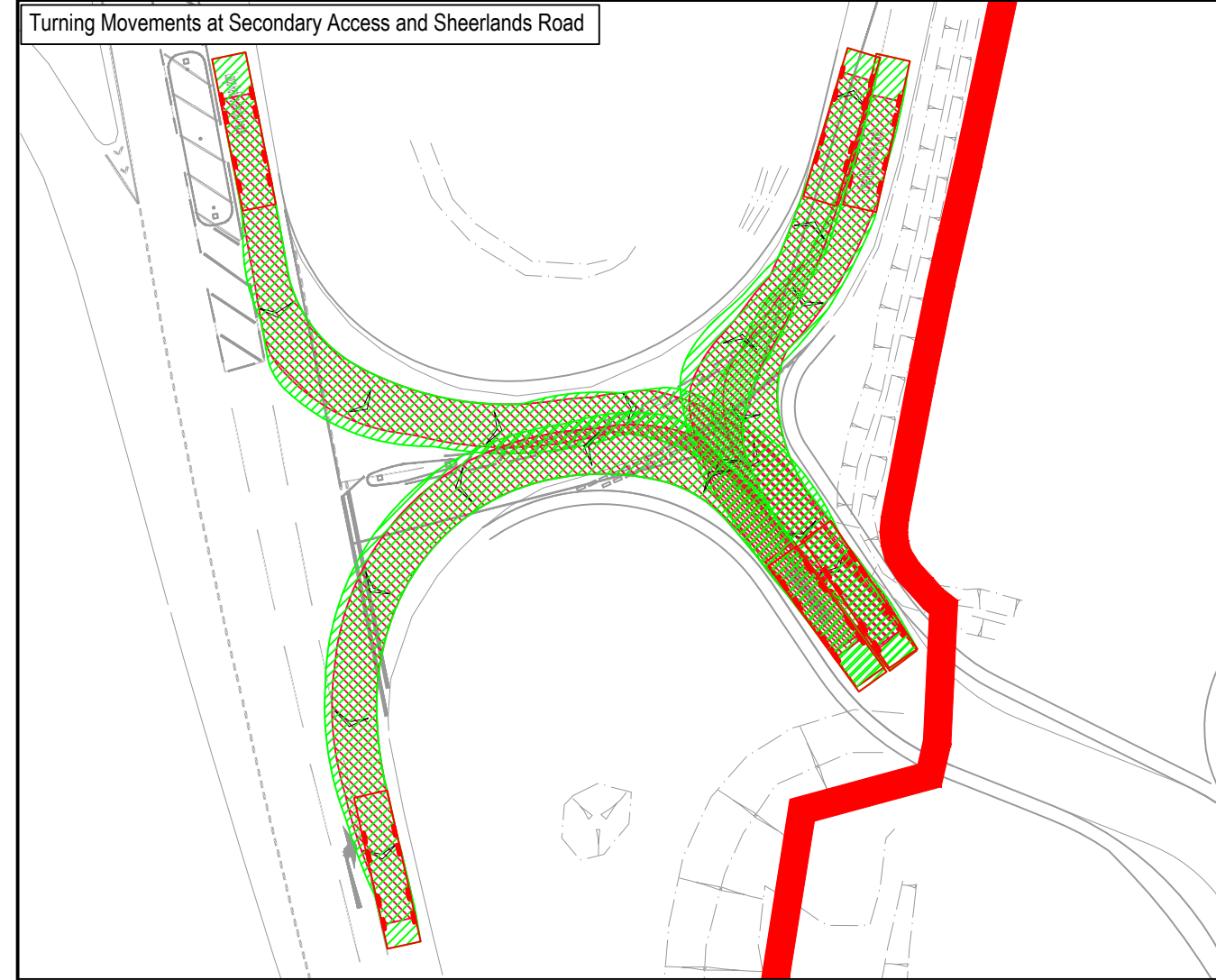
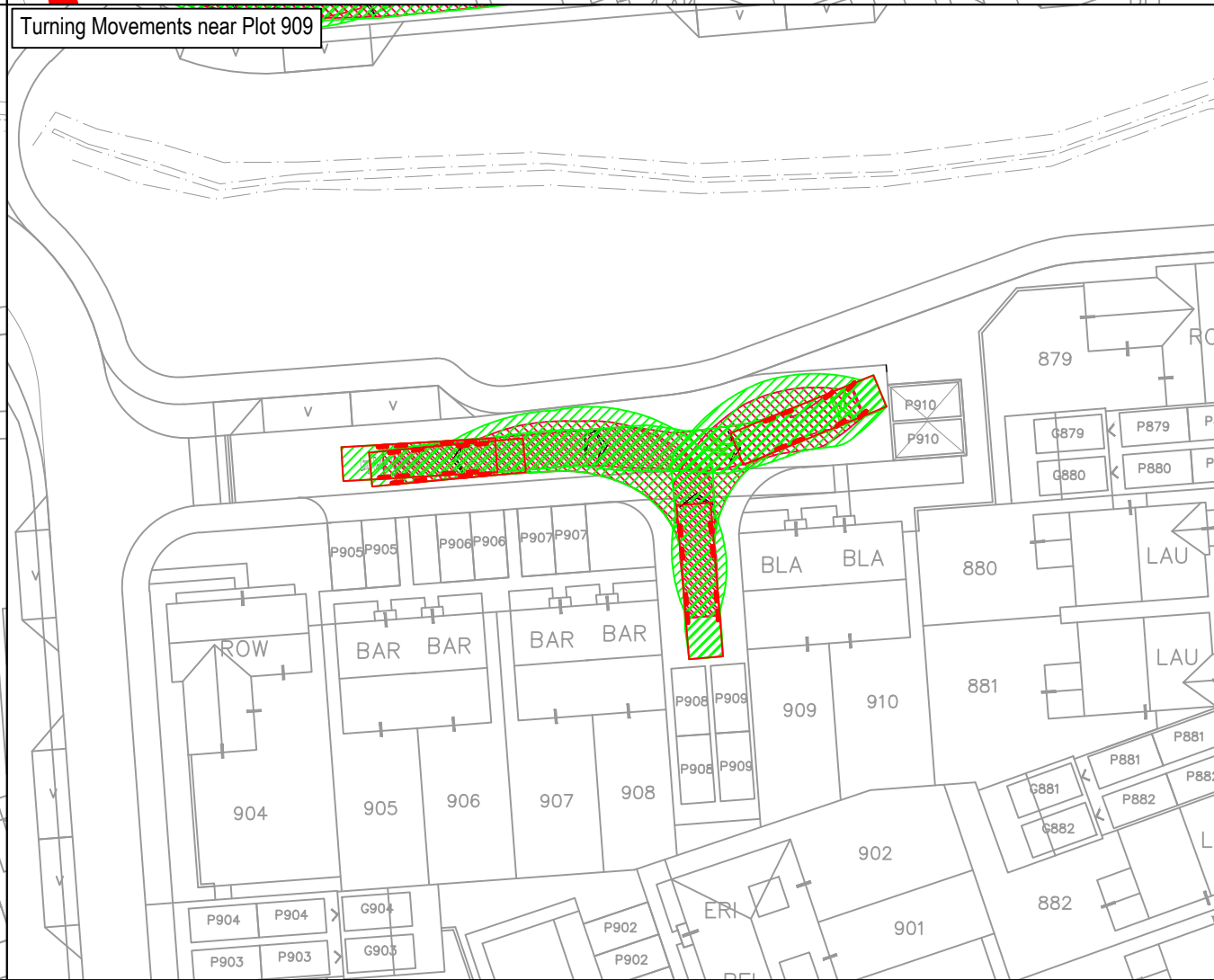
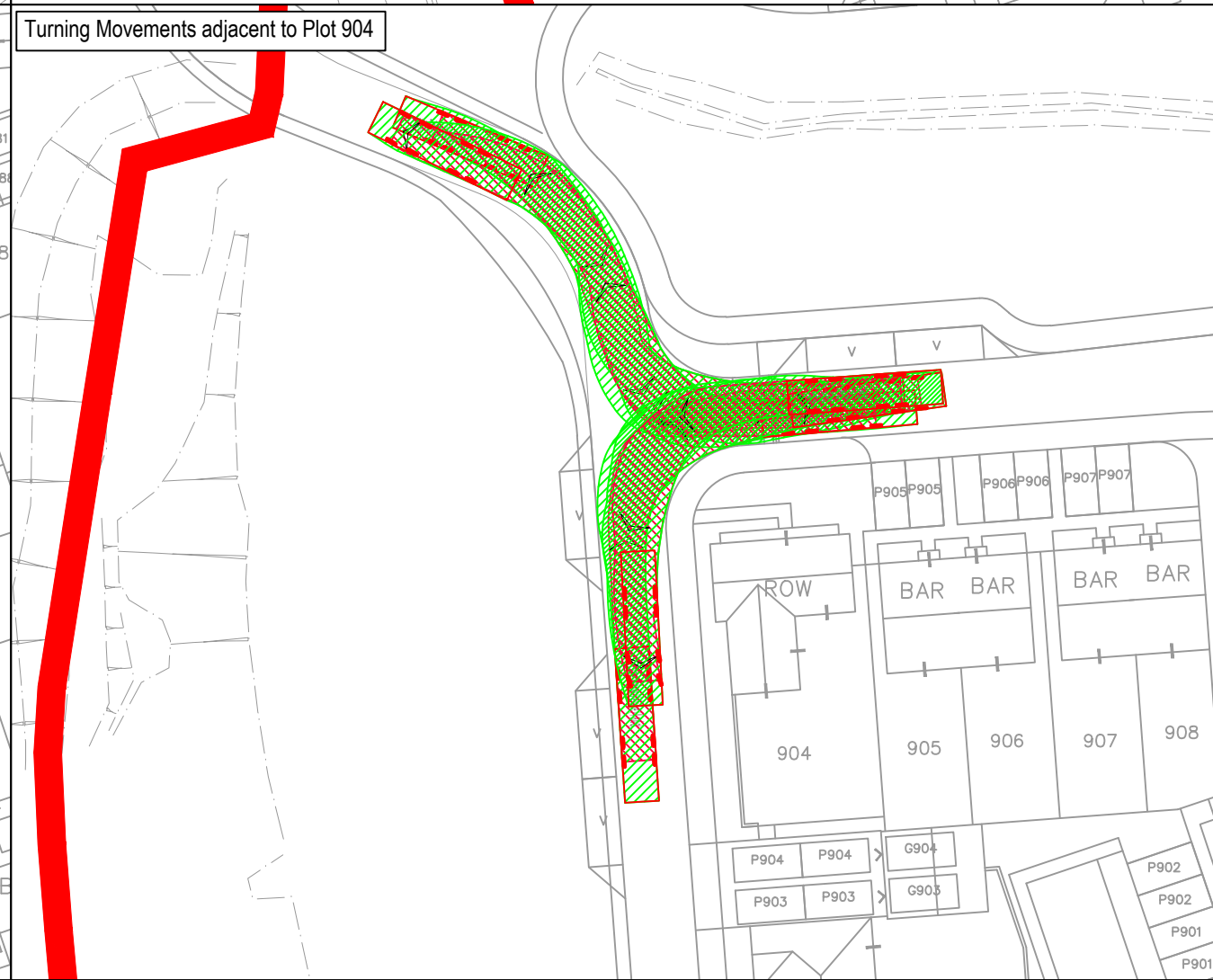
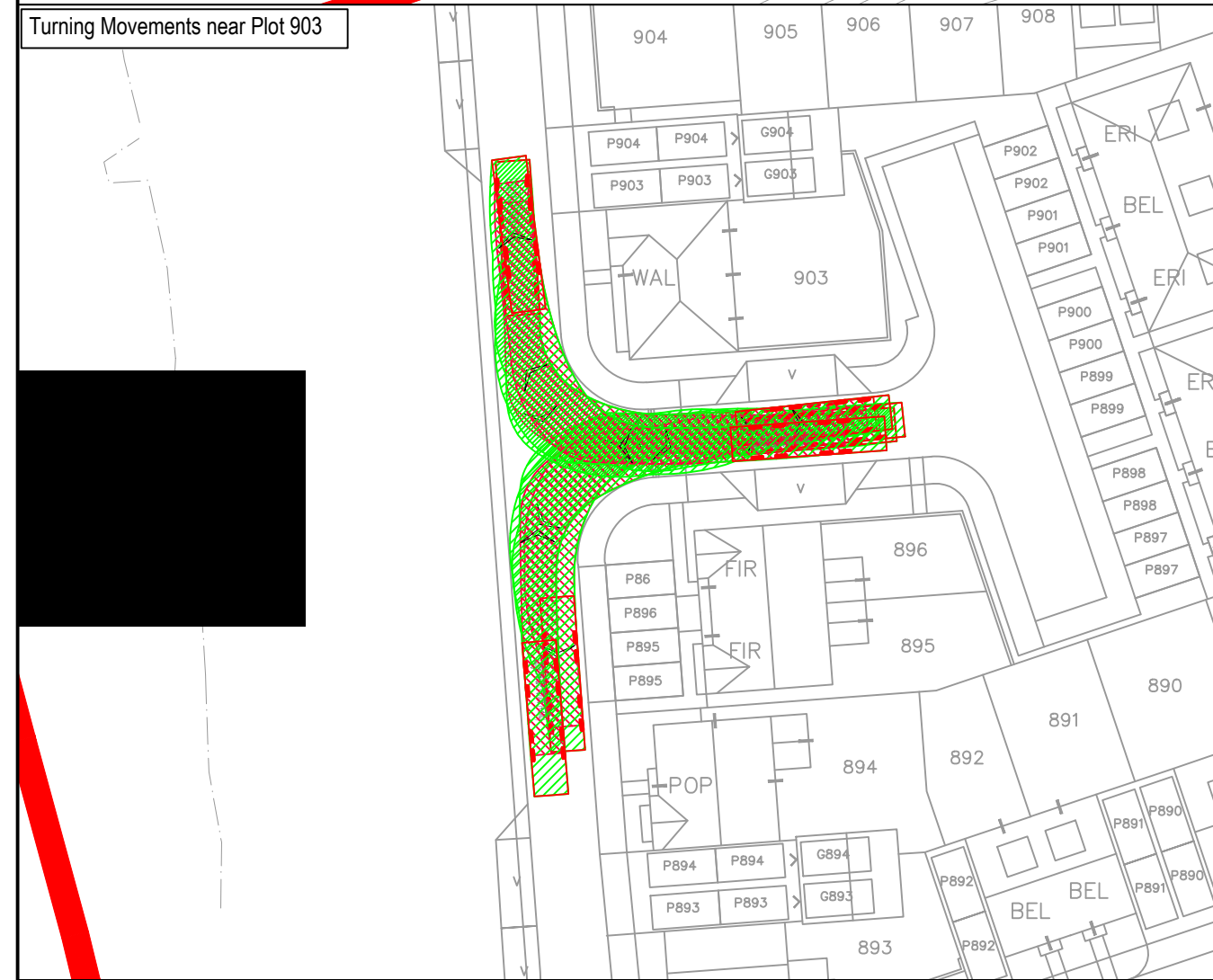
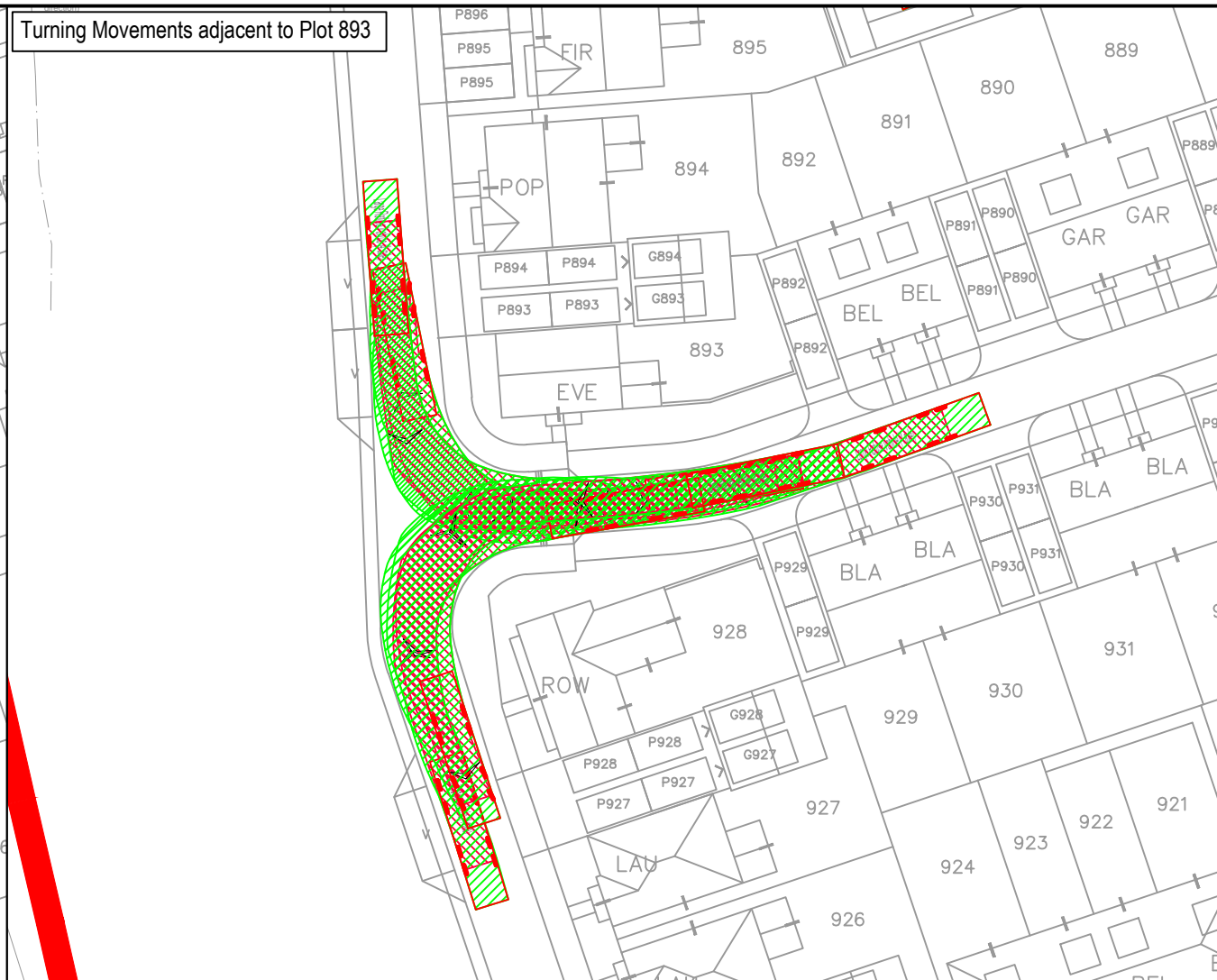
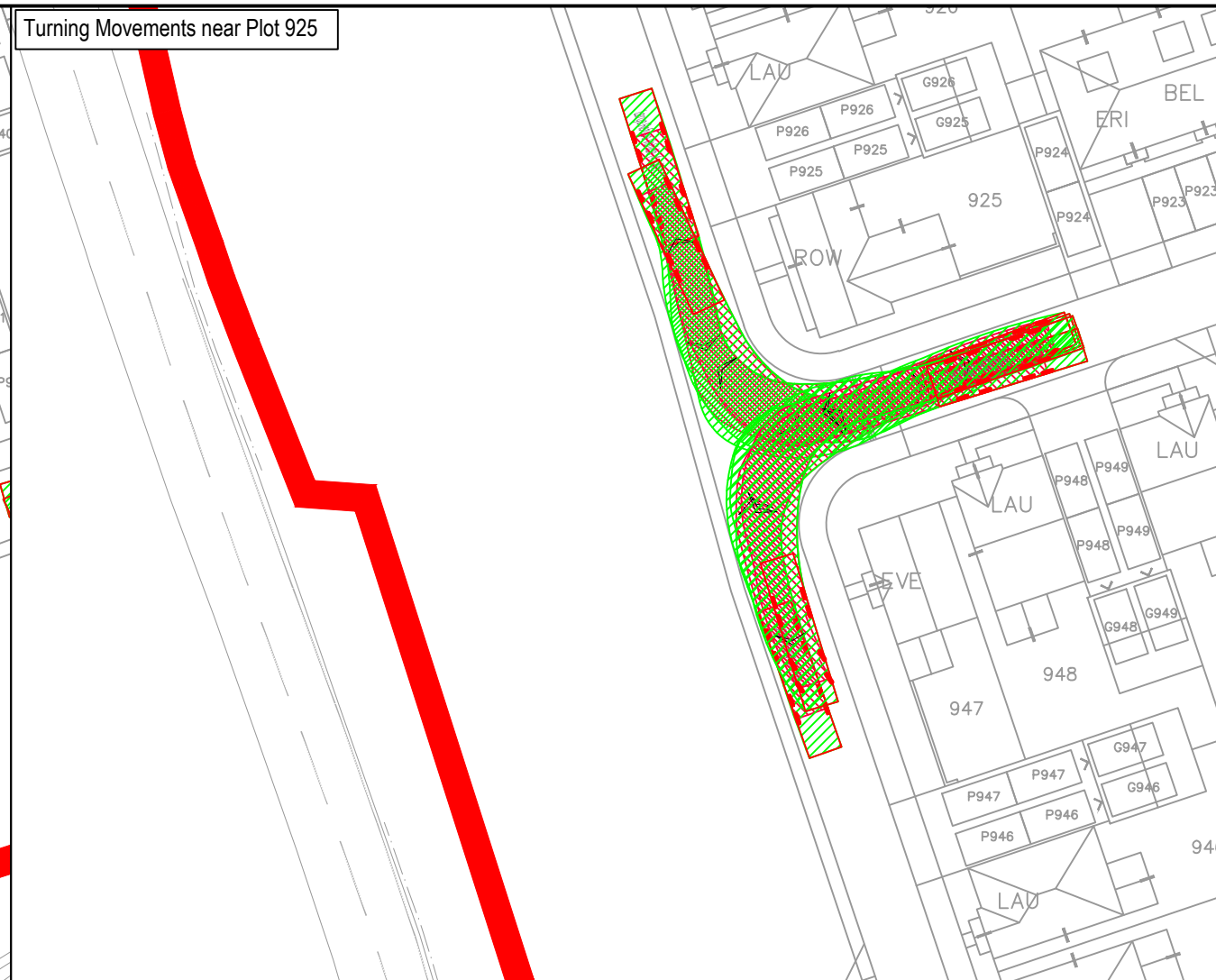
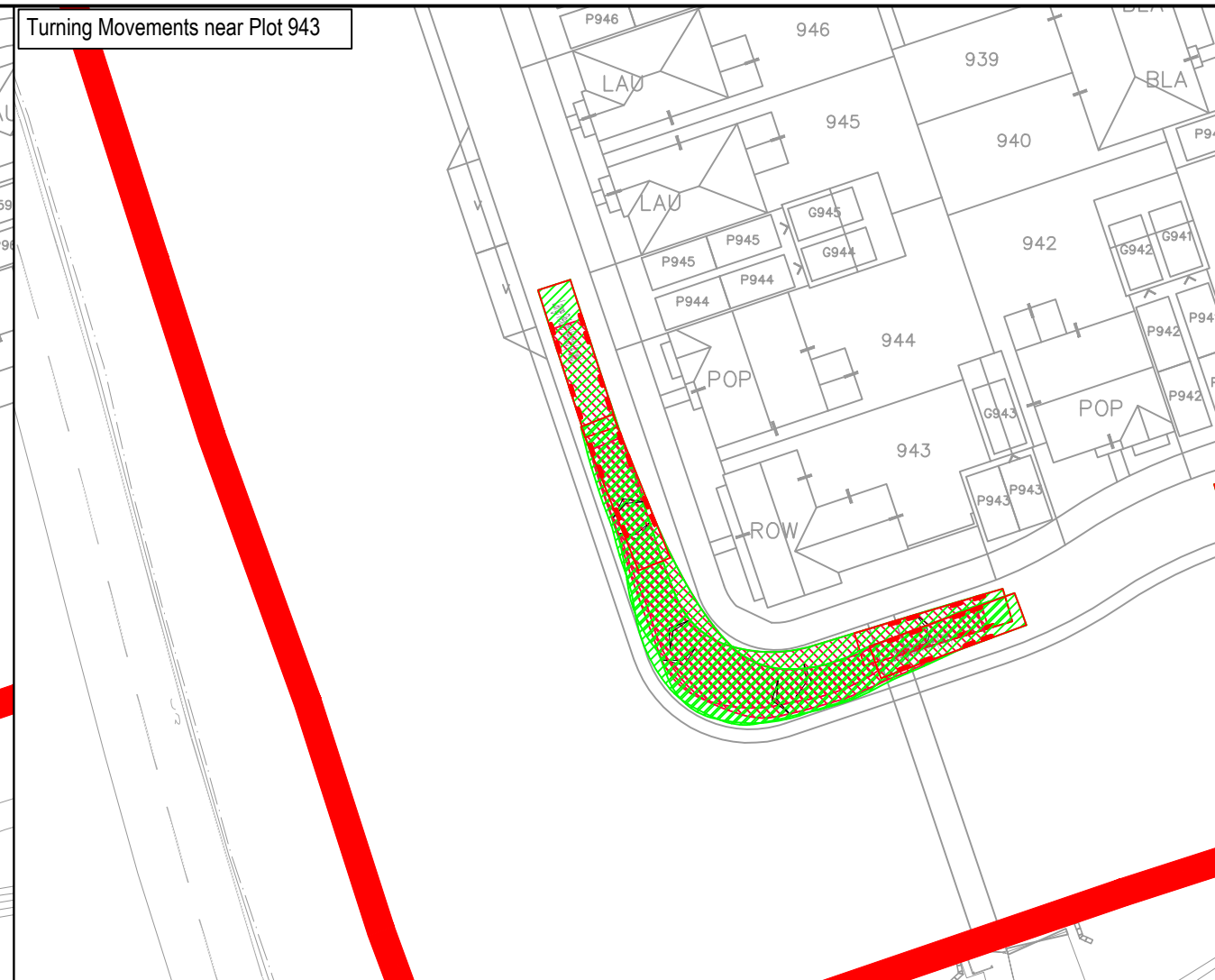
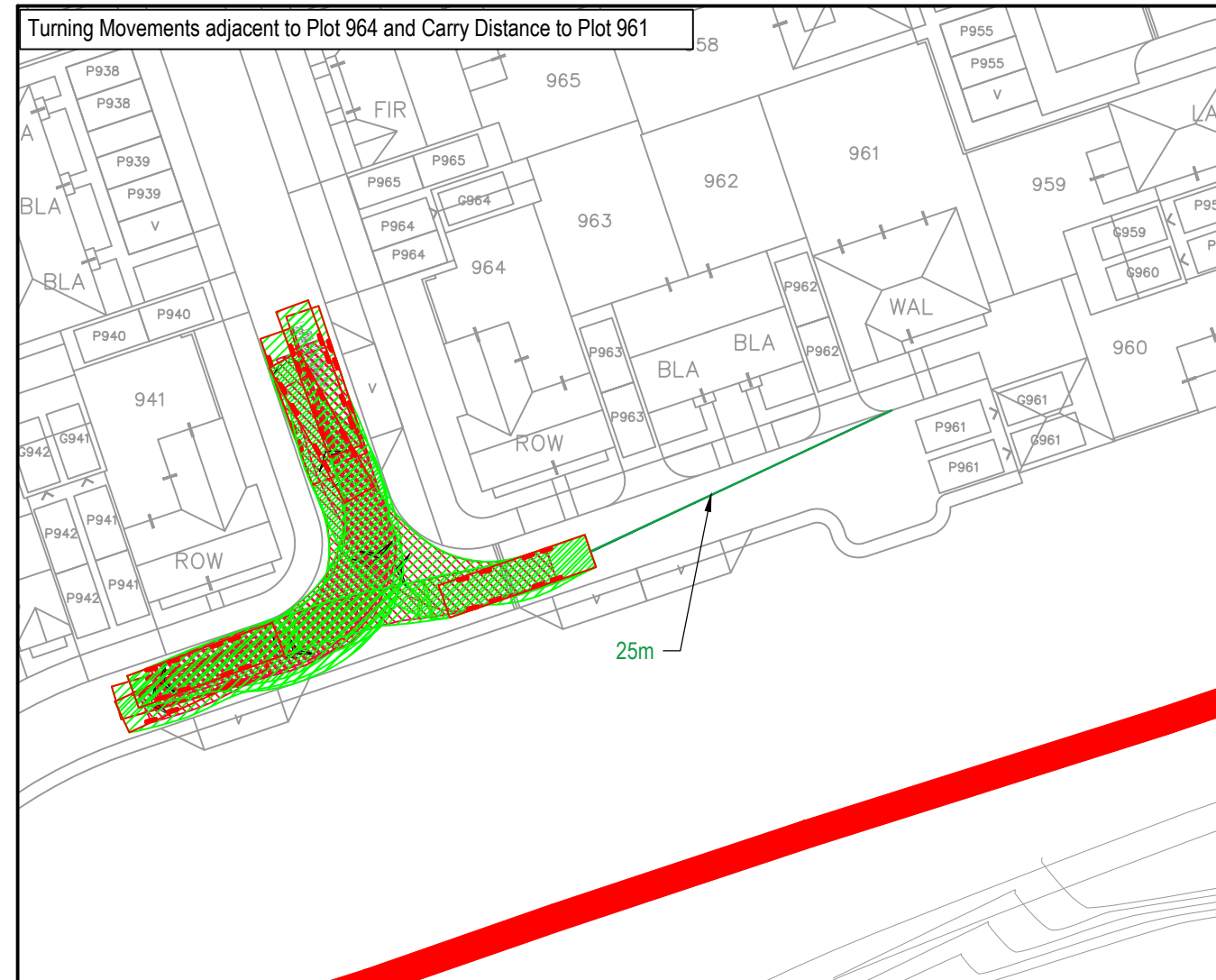
Title: Swept Path Analysis
Refuse Vehicle
Sheet 1 of 2

Classification: FL 60_20
Scale @ A1: 1:500

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number
C86557 - JNP - 66 - XX - DR - T - 7006

Reason: P02

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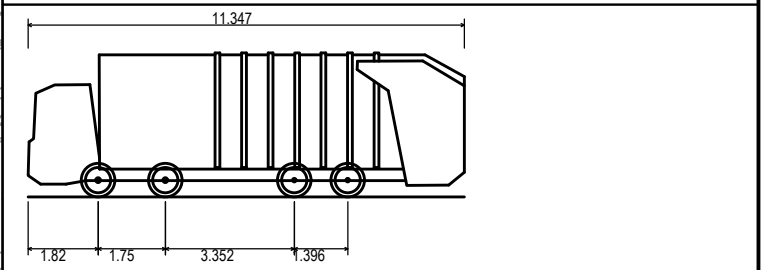
Legend

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Maximum 25m carry distance for operatives
in accordance with WBC Waste Management Facilities
in New Developments Guidance Notes for Developers
(2021)

Maximum 10m carry distance from bin stores to parked collection vehicles in accordance with WBC Waste & Recycling Guidance for Developers

Bin Store Locations for Apartments ●



Large Refuse Vehicle (4 axle)	
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Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

P02	04/06/2024	Second Issue	ELIKMKM
P01	03/06/2024	First Issue	ELIKMKM
Rev.	Date	Description	Dwn / Chngd / Appld

Suitability: S2 - Suitable for Information

Client ID: _____



Client: CALA Homes

Job:

Hogwood Farm Parcels 4 & 5

Title:

Swept Path Analysis
Refuse Vehicle
Sheet 2 of 2

Classification: FI_60_20	   
Scale @ A1: 1:500	Accredited Contractor Part of Capital plc Supplier No. 000026

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number	Revision:
C86557 - JNP - 66 -XX- DR - T - 7007	P02

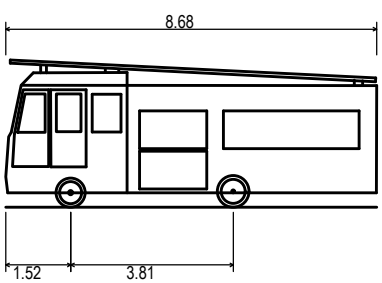


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Legend

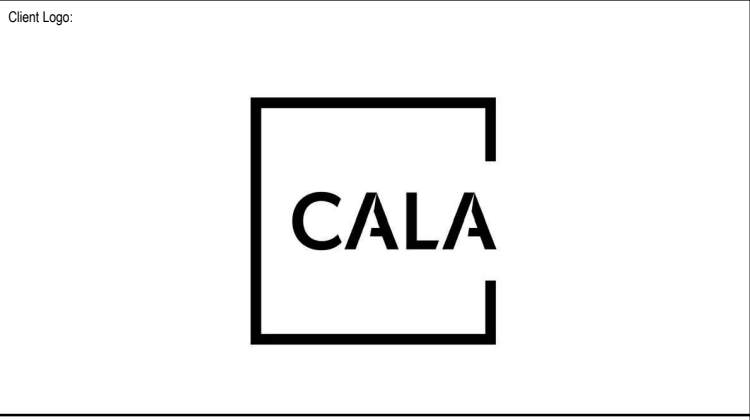
- Access for pumping appliance within 45m of all parts of dwelling, in accordance with Building Regulations Approved Document B (2019 edition, incorporating 2020 and 2022 amendments)
- Maximum 20m reversing distance from turning point, in accordance with Building Regulations Approved Document B (2019 edition, incorporating 2020 and 2022 amendments)
- 18m radius from fire tender to dry riser, in accordance with Building Regulations Approved Document B (2019 edition, incorporating 2020 and 2022 amendments)



DB32 Fire Appliance	8.680m
Overall Length	2.180m
Overall Width	3.452m
Overall Body Height	0.337m
Min Body Ground Clearance	2.121m
Max Track Width	6.00s
Lock to lock time	7.910m
Kerb to Kerb Turning Radius	

P02	04/06/2024	Second Issue
P01	03/06/2024	First Issue
Rev	Date	Description

Stability:	S2 - Suitable for Information
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Client:	CALA Homes
Job:	Hogwood Farm Parcels 4 & 5
Title:	Swept Path Analysis Fire Tender
Classification:	FL_60_20
Scale @ A1:	1:1000
Project - Originator - Volume/System - Level/Location - Type - Discipline - Number	C86555 - JNP - 66 - XX - DR - T - 7008
Reason:	P02
Document/Drawing Number	

Adequate forward visibility available on bend in accordance with MfS2 Table 8.2 to allow intervisibility between estate car and refuse vehicle

Adequate forward visibility available on bend in accordance with MfS2 Table 8.2 to allow intervisibility between estate car and refuse vehicle

Adequate forward visibility available on bend in accordance with MfS2 Table 8.2 to allow intervisibility between estate car and refuse vehicle

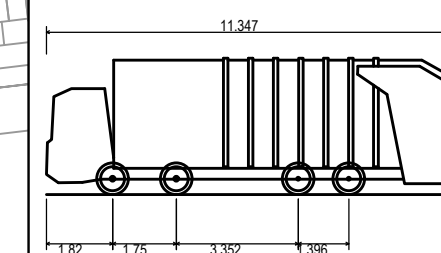
Adequate forward visibility available on bend in accordance with MfS2 Table 8.2 to allow intervisibility between estate car and refuse vehicle

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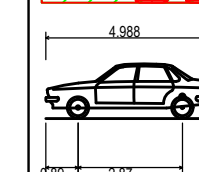
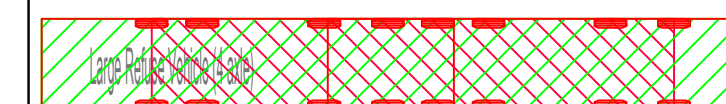
Adequate forward visibility available on bend in accordance with MfS2 Table 8.2 to allow
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Large Refuse Vehicle (4 axle)	
Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m



Large Car	
Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.502m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.200m



P02	04/06/2024	Second Issue	EL/KM/KM
P01	03/06/2024	First Issue	EL/KM/KM
Rev	Date	Description	On / Off / Appl

S2 - Suitable for Information

Client Log



	3
--	---

CALA Homes

Job:

Hogwood Farm Parcels 4 & 5

2	Time
---	------

Refuse Vehicle and Large Car Swept Path Analysis
Sheet 1 of 2

Classification:

FI_60_2

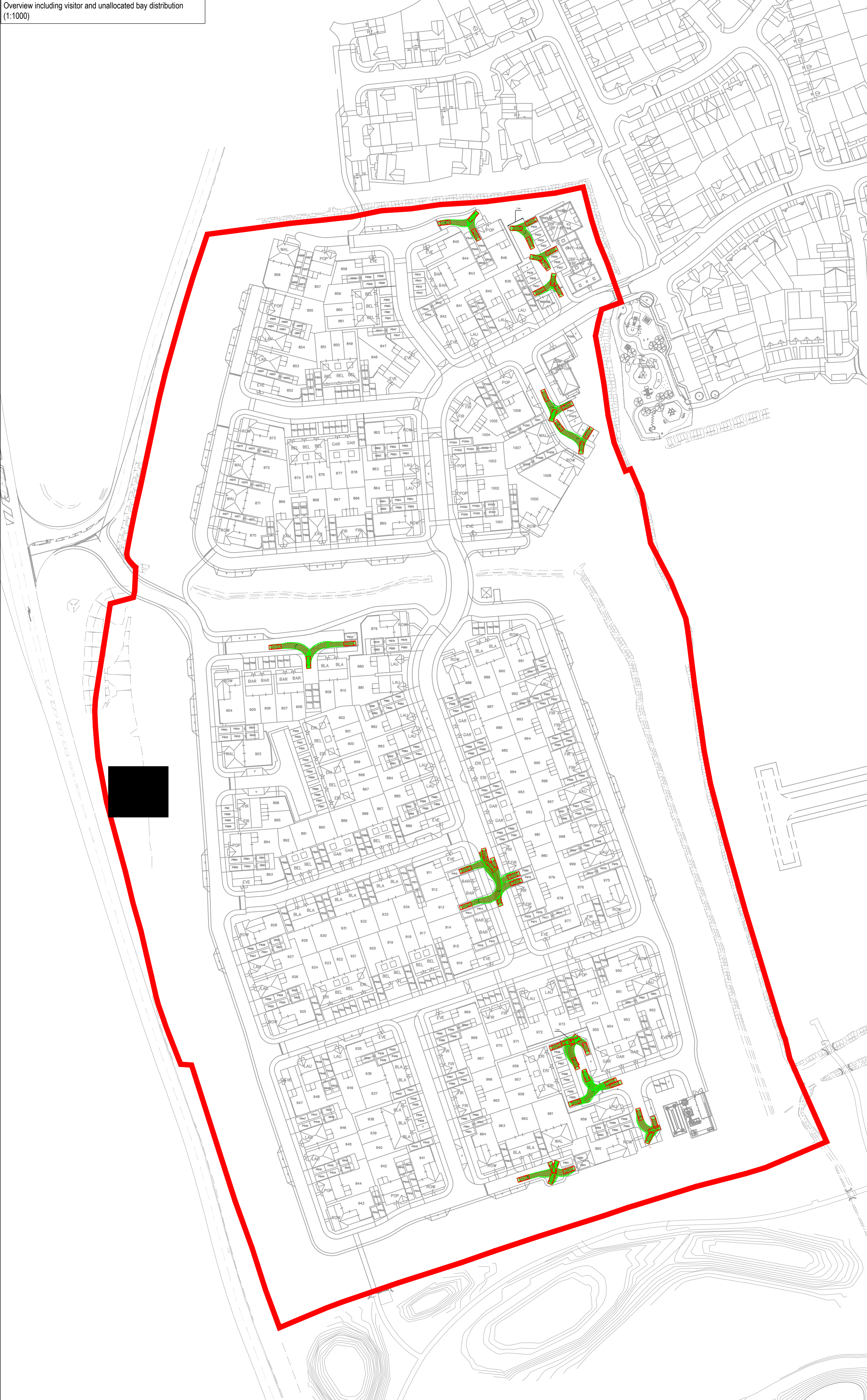
Scale @ A1:
1:1000



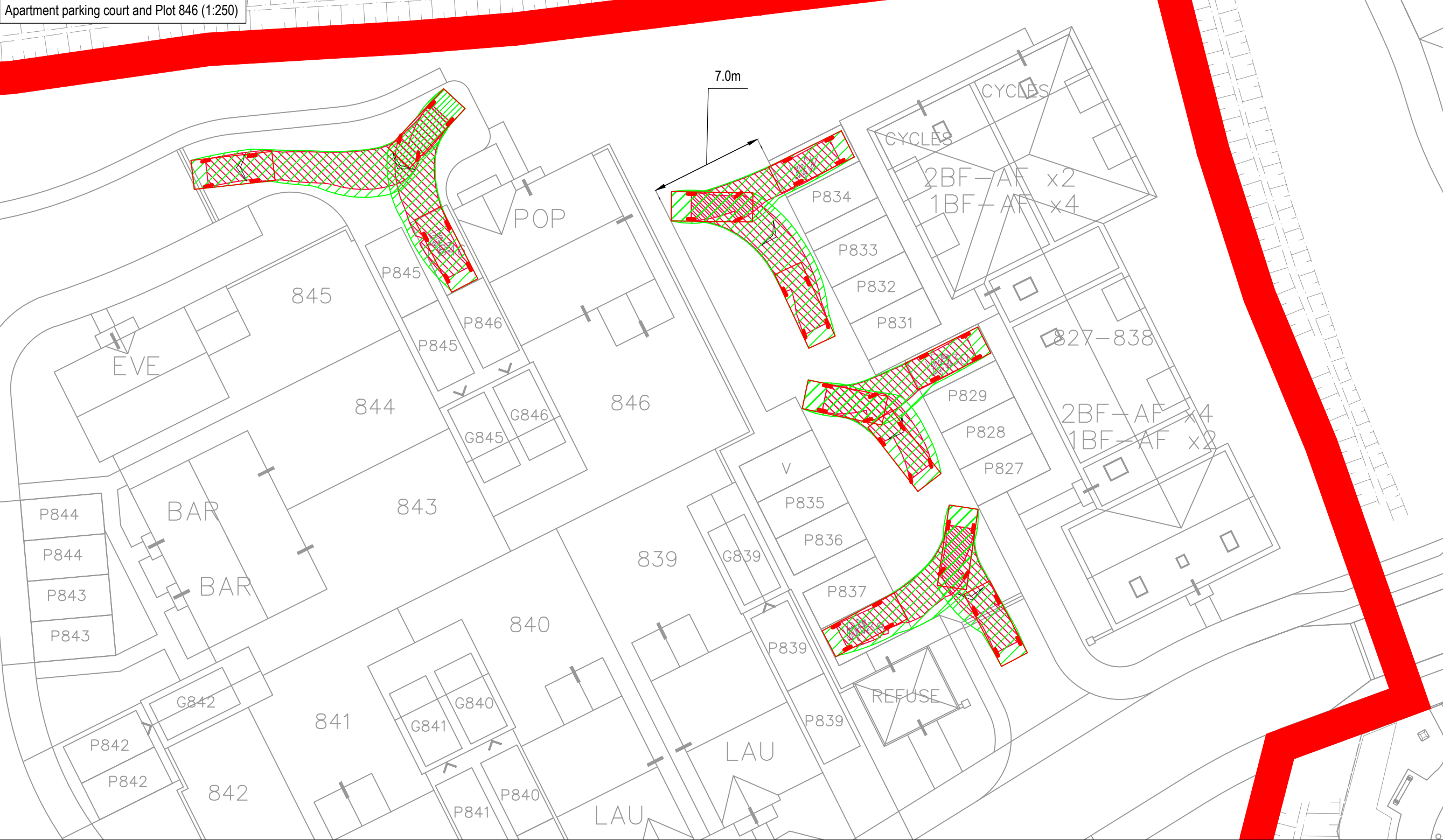
Project - Originator - Volume/System - Level/location - Type - Discipline - Number	Revision:
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C86557 - JNP-66-XX-DR-T-7010

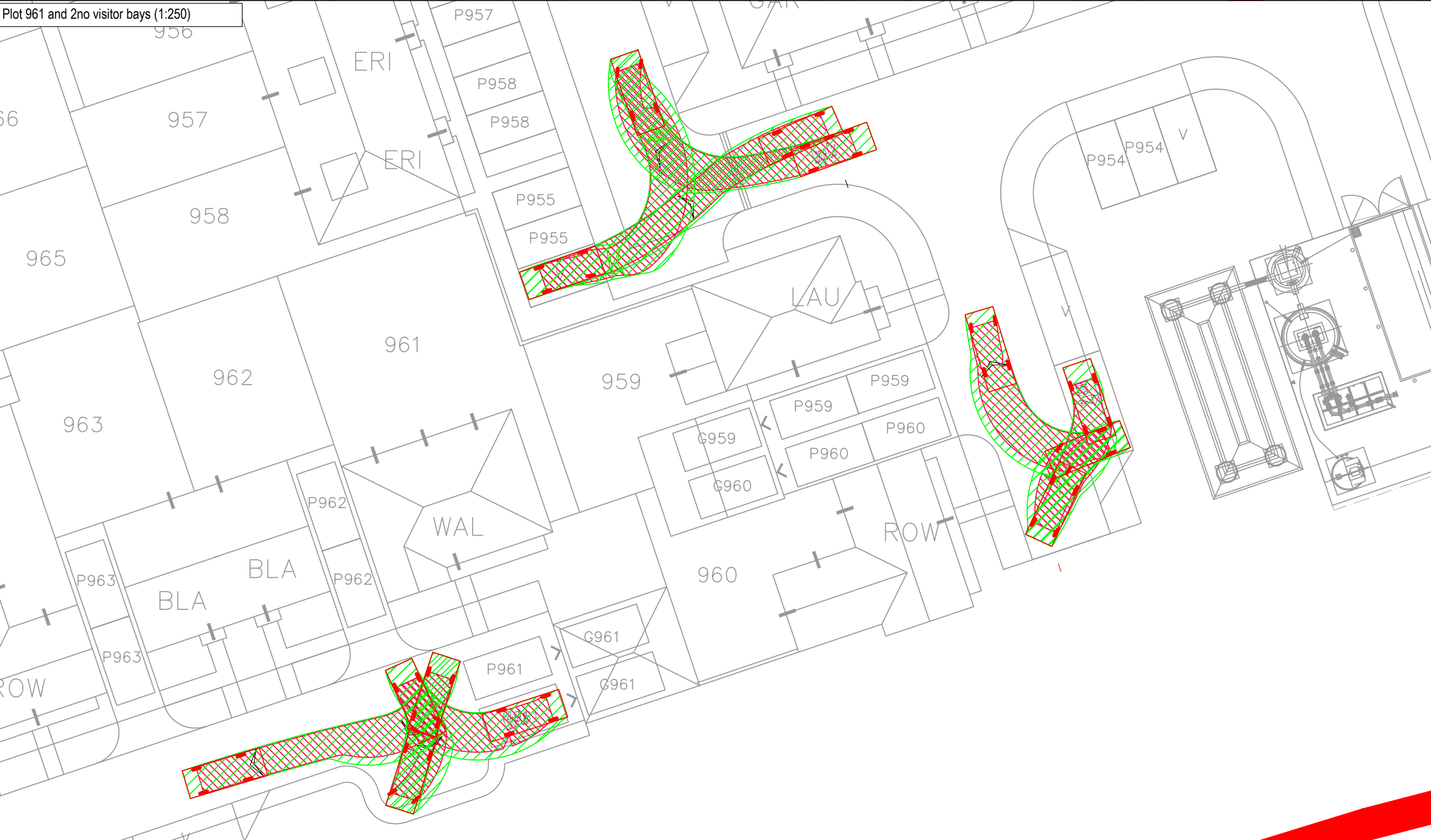
	Revisions:
--	------------



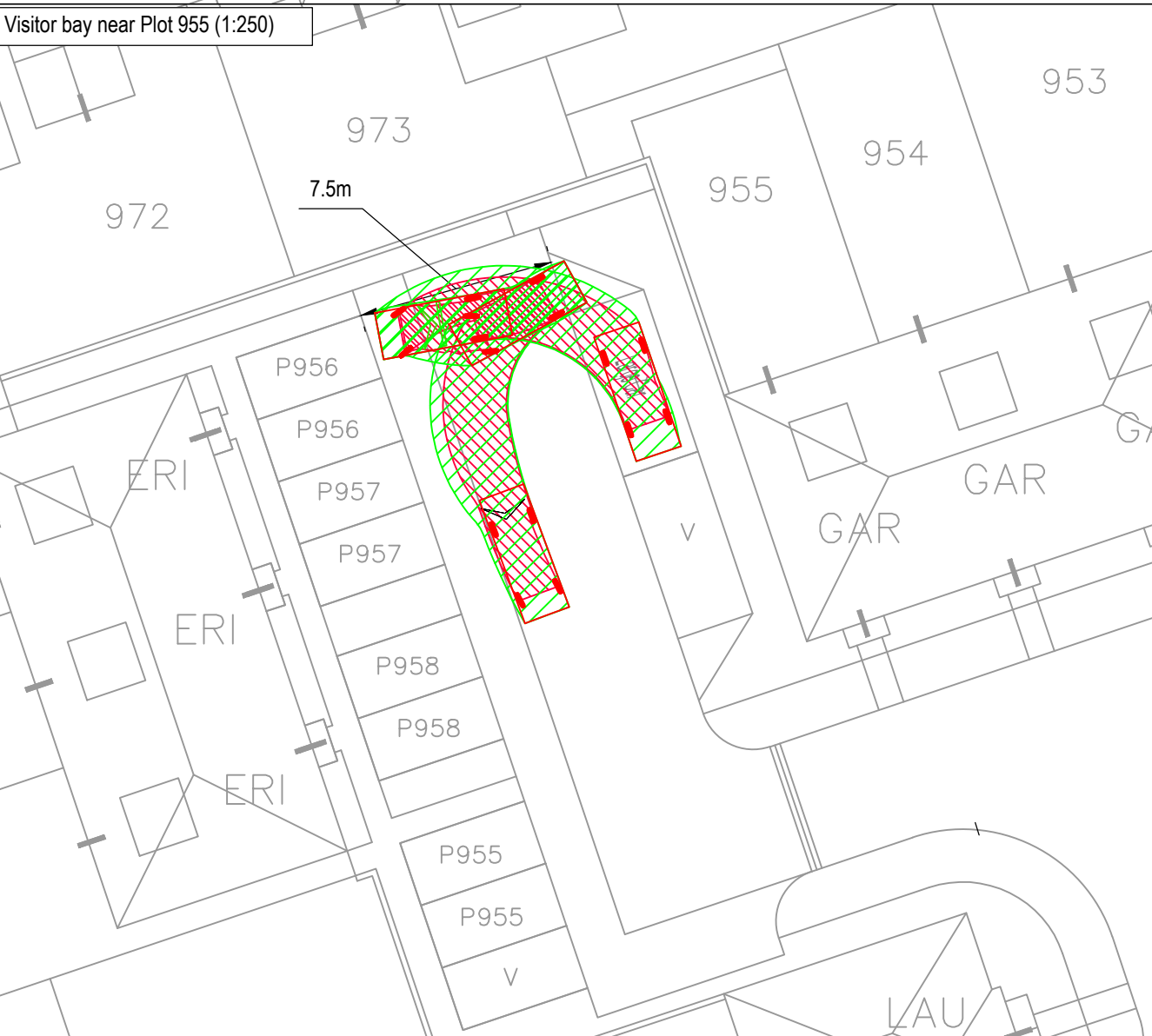
Apartment parking court and Plot 846 (1:250)



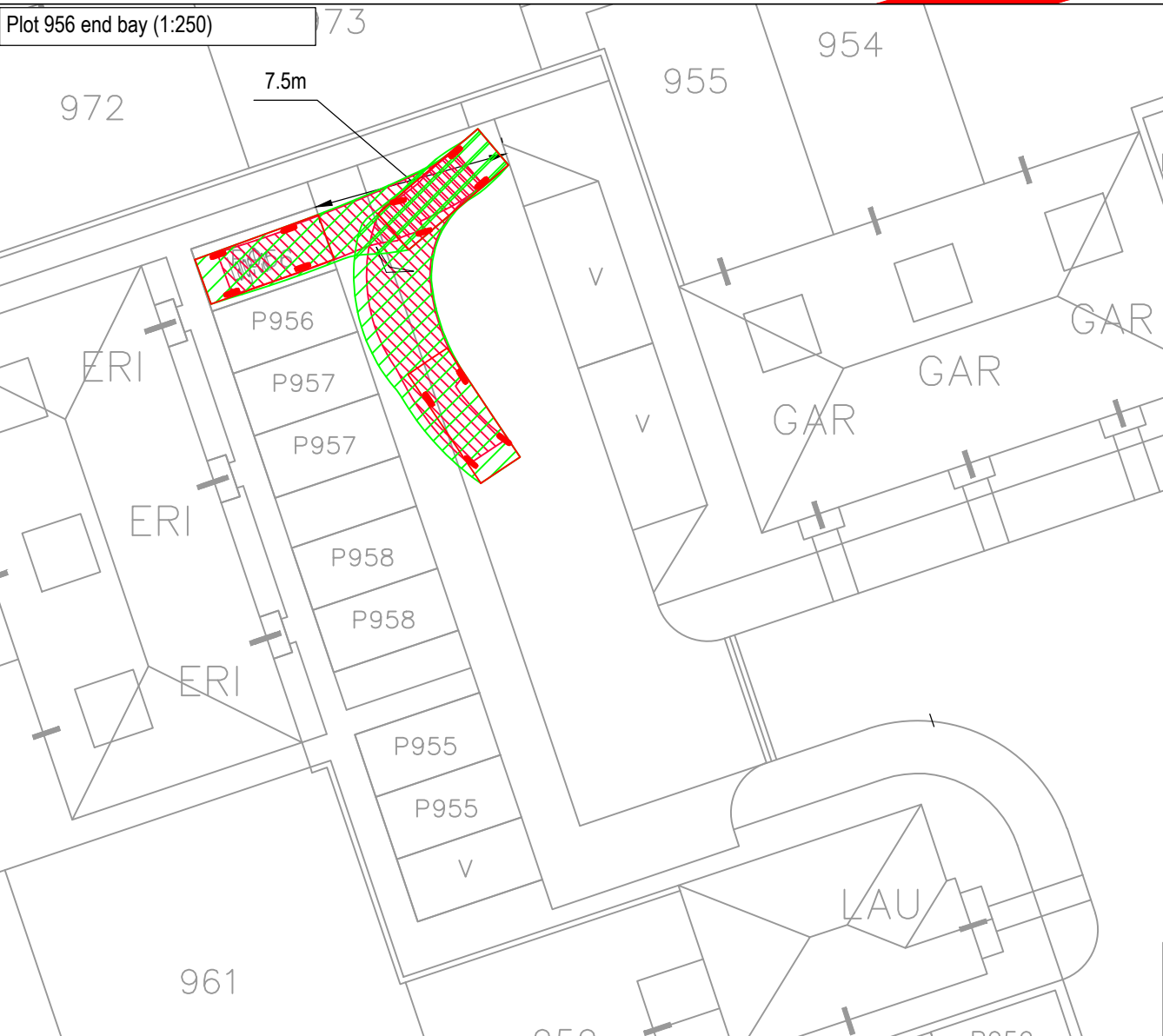
Plot 961 and 2no visitor bays (1:250)



Visitor bay near Plot 955 (1:250)

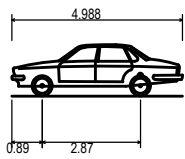


Plot 956 end bay (1:250)



General Notes

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Large Car
Overall Length 4.98m
Overall Width 1.79m
Overall Body Height 1.50m
Min Body Ground Clearance 0.25m
Track Width 1.70m
Lock to lock time 4.0s
Kerb to Kerb Turning Radius 6.20m

P02	04/06/2024	Second Issue	EL/KMKM
P01	03/06/2024	First Issue	EL/KMKM

Rev. Date Description Dwn / Chk / App'd

Stability:

S2 - Suitable for Information

Client Logo:

CALA



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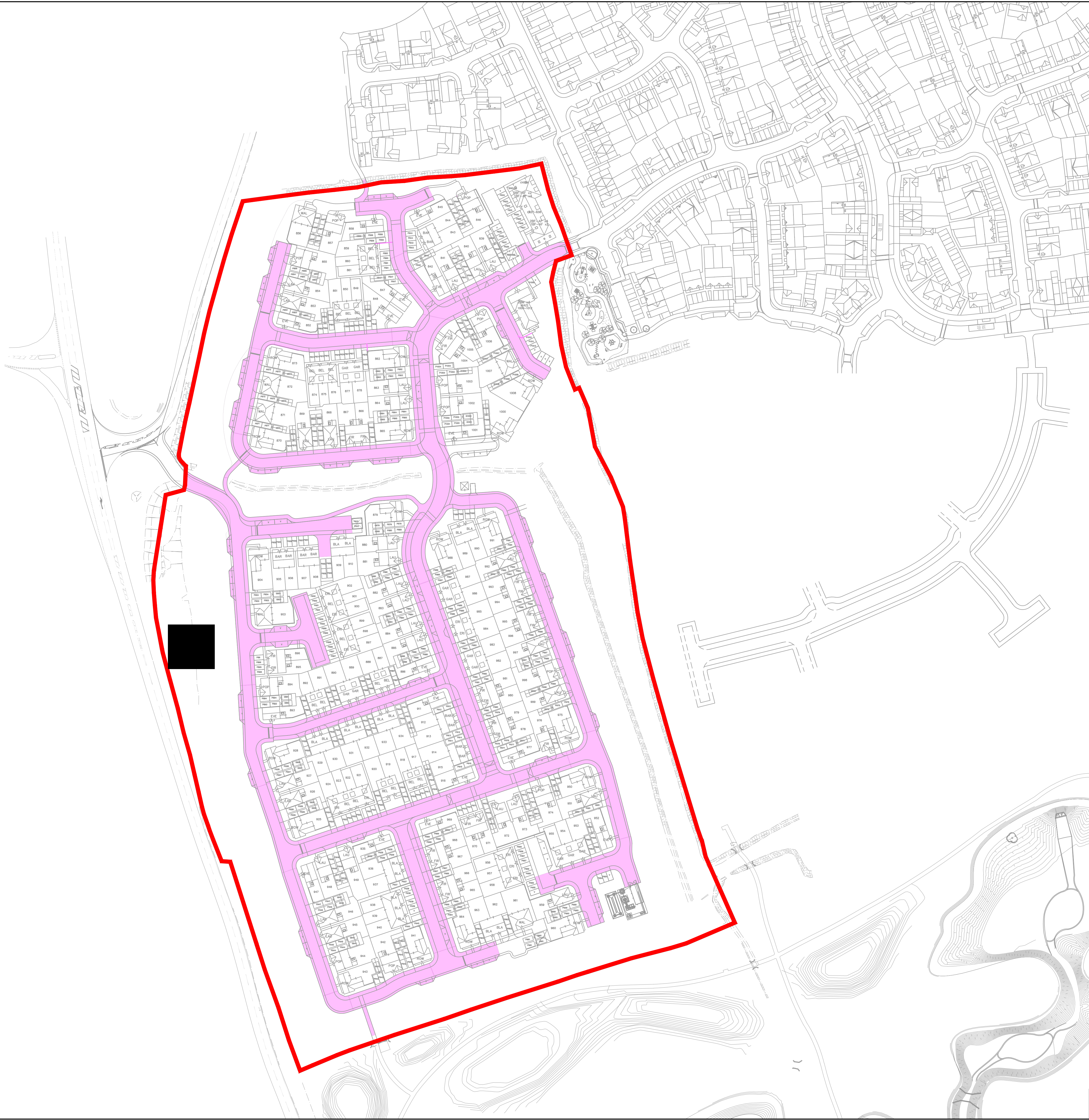
Client: CALA Homes

Job: Hogwood Farm Parcels 4 & 5

Title: Swept Path Analysis
Large Car

Classification: FL_60_20	Constructionline	HAS	Constructionline	Supplier No: 000000
Scale @ A1: As shown	Accredited Contractor	Accredited Contractor	Accredited Contractor	Accredited Contractor

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number
C86555 - JNP - 66 - XX - DR - T - 7011 P02



General Notes

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Legend

Proposed adoptable extents

P02	04/06/2024	Second Issue	EL/KMKM
P01	03/06/2024	First Issue	EL/KMKM

Rev. Date Description Dm / Chk3 / App3

Subsidiary

S2 - Suitable for Information

Client Logo

CALA



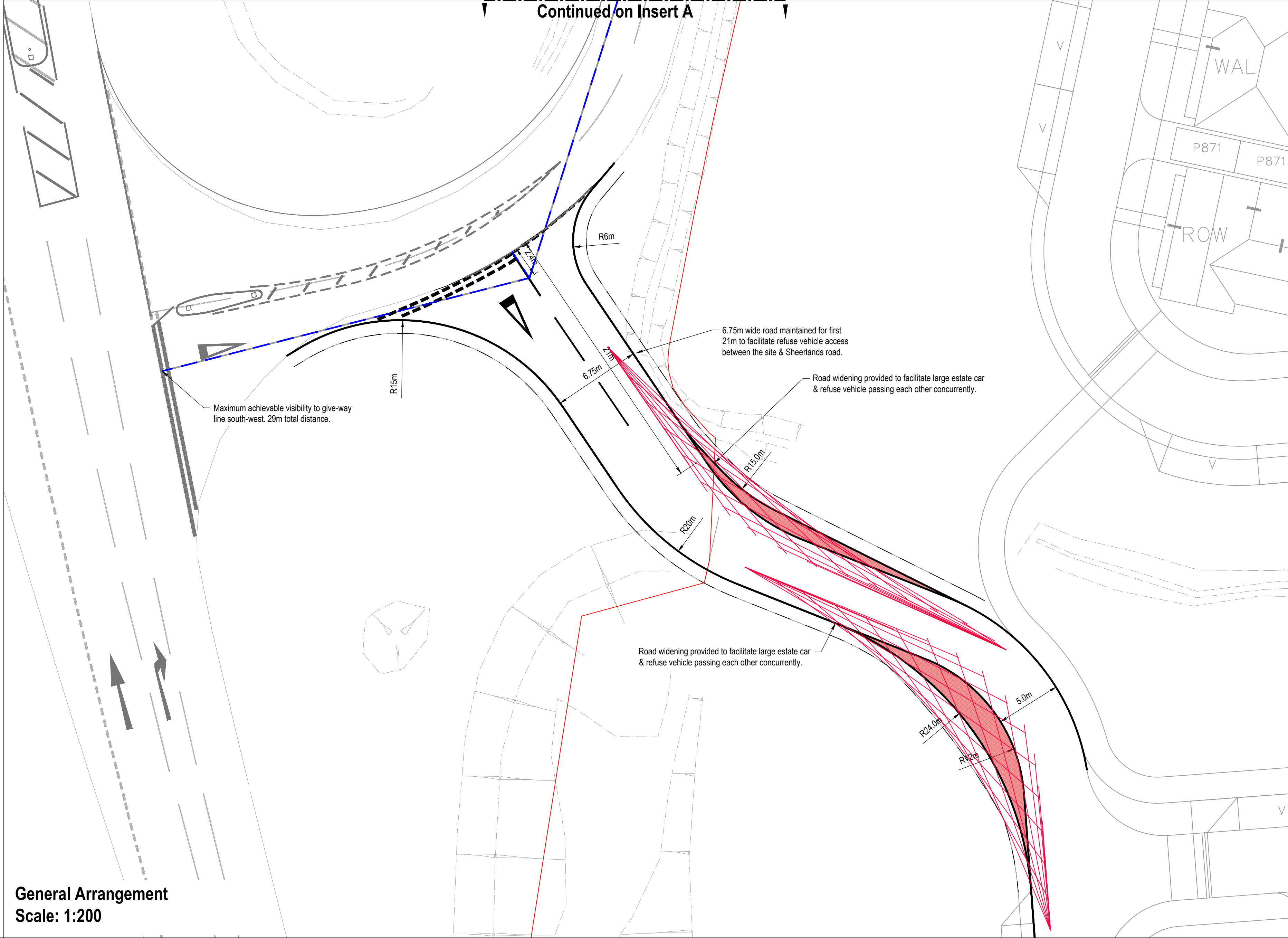
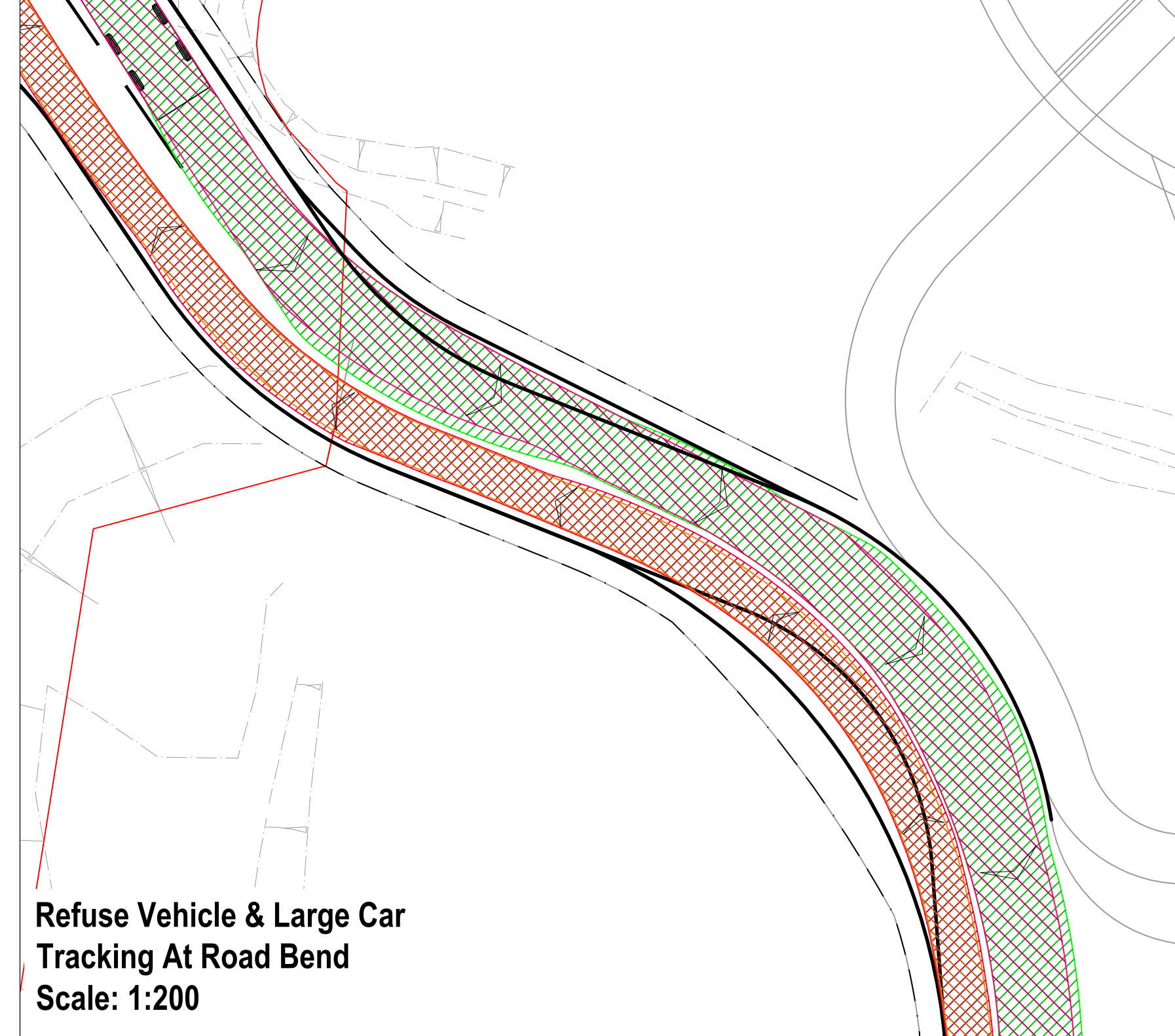
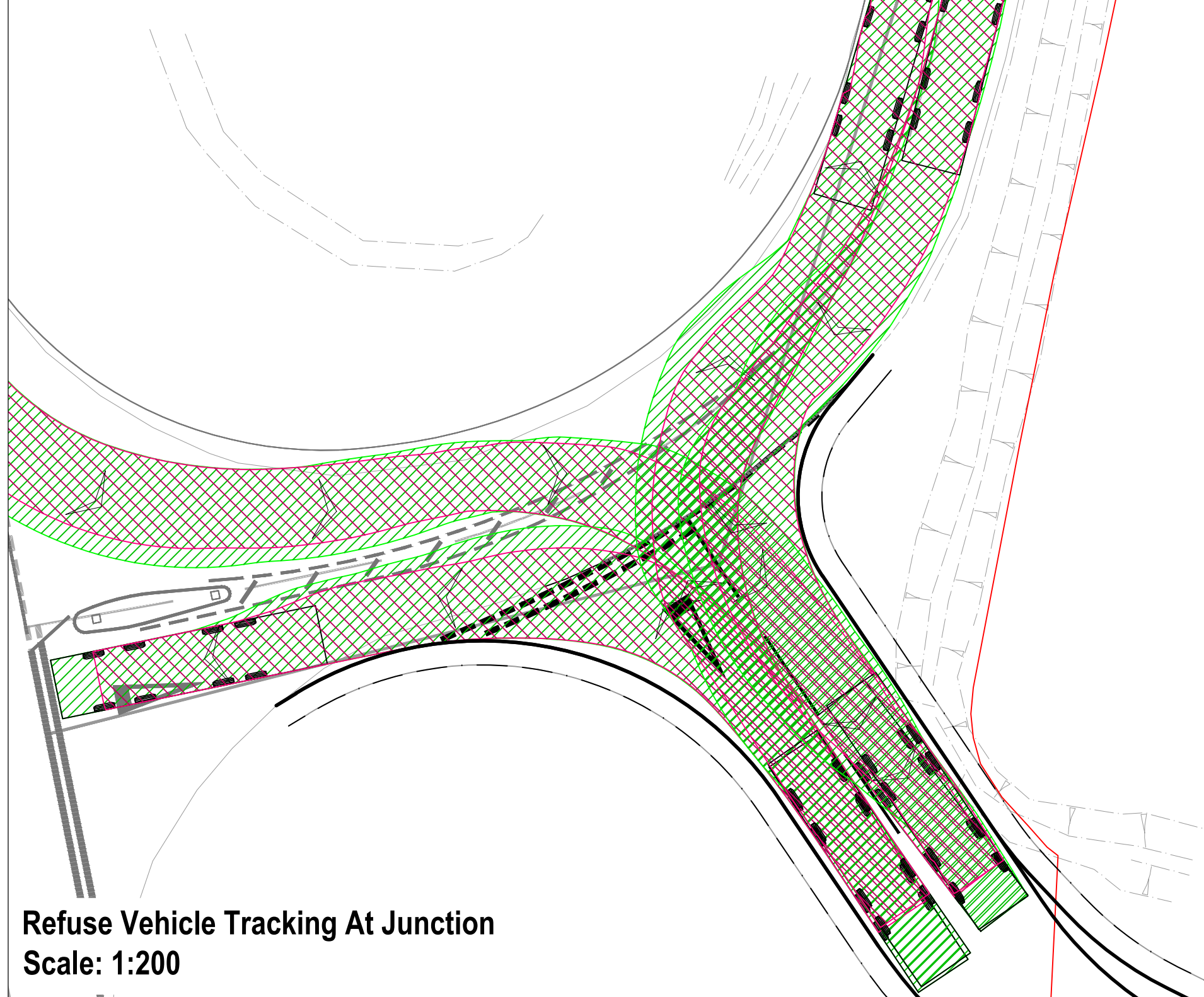
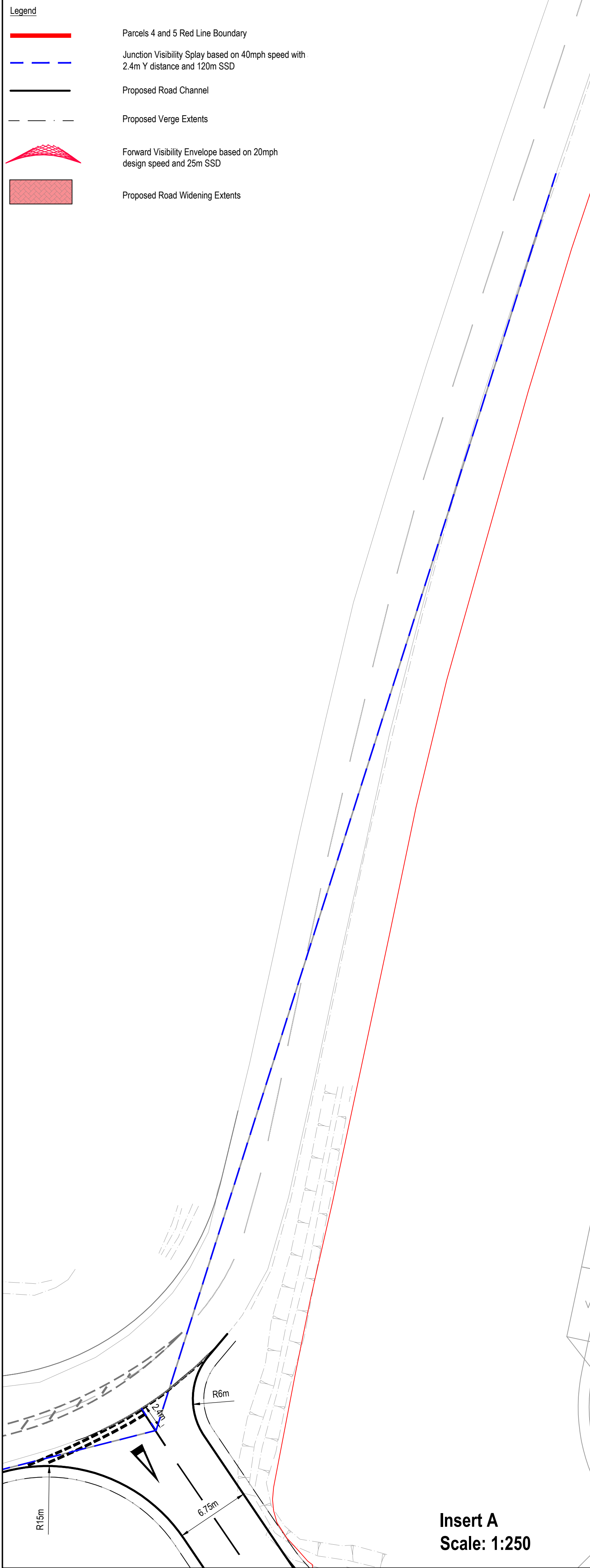
Client: CALA Homes

Job: Hogwood Farm Parcels 4 & 5

Title: Adoptions Plan

Classification: FL_60_20	Construction	HAS	Constructionline	Supplier No: 000019
Scale @ A1: 1:1000	Accredited Contractor			

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number
C86557 - JNP - 66 - XX - DR - T - 7014 P02
Document/Drawing Number



General Notes

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- All dimensions to be checked on site prior to construction/fabrication.
- Do not scale from this drawing.
- Any discrepancies between drawings of different scales, and between drawings and specification where appropriate to be notified to JNP Group for decision.
- Copyright reserved. This drawing may only be used for The Client and location specified in the title block. It may not be copied or disclosed to any third party without the prior written consent of JNP Group.
- This drawing should only be used for construction if the drawing status is "Construction". JNP Group take no responsibility for construction works undertaken to drawings which are not marked with this status.

Refuse Vehicle

Vehicle body envelope

Vehicle chassis envelope

11.347m
1.82 1.75 3.352 3.36

Large Refuse Vehicle (4 axle)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Large Car

Vehicle body envelope

Vehicle chassis envelope

4.988m
0.99 2.97

Large Car

Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.602m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.200m

P03	04/06/2024	Third Issue	EL / KM / KM
P02	21/05/2024	Second Issue	EL / KM / KM
P01	25/04/2024	First Issue	AK / EL / KM

Rev. Date Description Dim / Check / App'd

Stability:

S2 - Suitable for Information

Client Logo:

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Leamington Spa • Sheffield
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Client: **Cala Homes Thames Ltd**

Job: **Hogwood Farm Parcels 4 & 5**

Title: **Secondary Access General Arrangement**

Classification: **FL_60_20**
Scale @ A1: **As Shown**

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number
C86555 - JNP-XX-XX-DR-C-7015

Reason: **P03**

Document/Drawing Number

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APPENDIX A: WBC PARKING DEMAND CALCULATOR SPREADSHEET



PARKING DEMAND CALCULATION SHEET

Search your development location area by postcode

Hogwood Farm

enter postcode with no spaces (e.g. RG40 1BN as RG401BN) and click on "find postcode"

Find Postcode

Total number of properties	186
Total allocated spaces	396
Total unallocated spaces	108

Select your development location from a map

Access Map

click "access map" and click on where your development is located

Development location

Village

Reset Sheet

Development composition

Property type	Tenure	no. habitable rooms	no. allocated spaces per property, excluding garages	Total number of properties	Total number of garages for property type	unallocated spaces (including visitor parking and 50% for garages)	allocated spaces (including 50% garages)	
House or flat (choose from drop down list)	Owned or rented/shared (choose from drop down list)	1 to 4+ (choose from drop down list)	0-2					
Choose from drop down lists				Enter below				
Flat	owned	3	1	4	0	1.2	4.0	2BF
House	owned	4	2	10	0	3.0	20.0	Barley (2 bed)
House	owned	5	2	17	0	5.1	34.0	Blackthorne (2 bed)
House	owned	5	2	21	0	6.3	42.0	Fir (2 bed)
House	owned	5	2	16	16	12.8	40.0	Everglade (3 bed)
House	owned	7	2	28	28	25.2	70.0	Laurel (4 bed)
House	owned	8	2	18	18	19.8	45.0	Rowan (4 bed)
House	owned	8	2	11	11	12.1	27.5	Poplar + GR (4 bed)
House	owned	8	2	1	2	1.6	3.0	Walnut - single garage (4 bed)
House	owned	8	2	5	5	5.5	12.5	Wanut - double garage (4 bed)
Flat	shared/rental	2	1	6	0	1.8	6.0	1BF-AFF (1 bed)
Flat	shared/rental	3	1	6	0	2.4	6.0	2BF-AFF (2 bed)
House	shared/rental	4	2	21	0	4.2	42.0	2BH-AFF Bellflower (2 bed)
House	shared/rental	5	2	11	0	3.3	22.0	4BH-AFF Erica (3 bed)
House	shared/rental	6	2	11	0	3.3	22.0	4BH-AFF Gardenia (4 bed)



PARKING DEMAND CALCULATION SHEET

Search your development location area by postcode

Hogwood Farm

enter postcode with no spaces (e.g. RG40 1BN as RG401BN) and click on "find postcode"

Find Postcode

Total number of properties	186
Total allocated spaces	356
Total unallocated spaces	68

Select your development location from a map

Access Map

click "access map" and click on where your development is located

Development location

Village

Reset Sheet

Development composition

Property type	Tenure	no. habitable rooms	no. allocated spaces per property, excluding garages	Total number of properties	Total number of garages for property type	unallocated spaces (including visitor parking and 50% for garages)	allocated spaces (including 50% garages)	
House or flat (choose from drop down list)	Owned or rented/shared (choose from drop down list)	1 to 4+ (choose from drop down list)	0-2					
Choose from drop down lists				Enter below				
Flat	owned	3	1	4	0	1.2	4.0	2BF
House	owned	4	2	10	0	3.0	20.0	Barley (2 bed)
House	owned	5	2	17	0	5.1	34.0	Blackthorne (2 bed)
House	owned	5	2	21	0	6.3	42.0	Fir (2 bed)
House	owned	5	2	16	0	4.8	32.0	Everglade (3 bed)
House	owned	7	2	28	0	11.2	56.0	Laurel (4 bed)
House	owned	8	2	18	0	10.8	36.0	Rowan (4 bed)
House	owned	8	2	11	0	6.6	22.0	Poplar + GR (4 bed)
House	owned	8	2	1	0	0.6	2.0	Walnut - single garage (4 bed)
House	owned	8	2	5	0	3.0	10.0	Wanut - double garage (4 bed)
Flat	shared/rental	2	1	6	0	1.8	6.0	1BF-AFF (1 bed)
Flat	shared/rental	3	1	6	0	2.4	6.0	2BF-AFF (2 bed)
House	shared/rental	4	2	21	0	4.2	42.0	2BH-AFF Bellflower (2 bed)
House	shared/rental	5	2	11	0	3.3	22.0	4BH-AFF Erica (3 bed)
House	shared/rental	6	2	11	0	3.3	22.0	4BH-AFF Gardenia (4 bed)

APPENDIX B: 2021 CENSUS TRAVEL TO WORK DATA

TS061 - Method used to travel to work

ONS Crown Copyright Reserved [from Nomis on 11 April 2023]

population All usual residents aged 16 years and over in employment the week before the census
units Persons
date 2021

Method of travel to workplace	E00083864	E00188347	E00188374	E00188424	E00188465	E00188503	Total	Total w/o WFH	%
Total: All usual residents aged 16 years and over in employment the week before the census	163	179	195	230	185	171	1,123	585	100%
Work mainly at or from home	68	102	95	72	105	96	538	0	-
Underground, metro, light rail, tram	0	0	0	0	0	0	0	0	0%
Train	1	1	2	0	3	2	9	9	2%
Bus, minibus or coach	4	0	3	7	0	4	18	18	3%
Taxi	0	0	0	0	0	0	0	0	0%
Motorcycle, scooter or moped	0	0	1	3	0	0	4	4	1%
Driving a car or van	85	68	91	133	68	59	504	504	86%
Passenger in a car or van	2	2	2	4	5	4	19	19	3%
Bicycle	2	0	0	5	0	2	9	9	2%
On foot	0	6	1	2	4	4	17	17	3%
Other method of travel to work	1	0	0	4	0	0	5	5	1%

In order to protect against disclosure of personal information, records have been swapped between different geographic areas and counts perturbed by small amounts. Small counts at the lowest geographies will be most affected.

Census 2021 took place during a period of rapid change. We gave extra guidance to help people on furlough answer the census questions about work. However, we are unable to determine how furloughed people followed the guidance. Take care when using this data for planning purposes. Read more about specific quality considerations in our <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/traveltoworkqualityinformationforcensus2021>.

APPENDIX C: MANUAL FOR STREETS 2 – TABLE 8.2 SPEED REDUCTION ON BENDS CALCULATOR

Hogwood Farm P4 & P5 - Plot 870

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	11.3

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	11.3

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
91	16	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	16%	16.80 mph
32	kph	16%	26.88 kph

Speed	16.80	MPH
SSD =	18.73006284	M
V	7.511357103	MPS
T	1.5	secs
D	3.68	m/s2

Hogwood Farm P4 & P5 - Plot 1005

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	21.4

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	21.4

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
48	8	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	8%	18.31 mph
32	kph	8%	29.30 kph

Speed	18.31	MPH
SSD =	21.14283807	M
V	8.186000713	MPS
T	1.5	secs
D	3.68	m/s2

Hogwood Farm P4 & P5 - Central Link Between P4 and P5

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	31.6

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	31.6

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
32	6	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	6%	18.86 mph
32	kph	6%	30.17 kph

Speed	18.86	MPH
SSD =	22.04377046	M
V	8.429638458	MPS
T	1.5	secs
D	3.68	m/s2

Hogwood Farm P4 & P5 - Plot 988

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	23.4

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	23.4

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
44	8	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	8%	18.46 mph
32	kph	8%	29.53 kph

Speed	18.46	MPH
SSD =	21.37986711	M
V	8.250513473	MPS
T	1.5	secs
D	3.68	m/s2

Hogwood Farm P4 & P5 - Plot 991

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	7.4

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	7.4

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
138	24	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	24%	15.12 mph
32	kph	24%	24.19 kph

Speed	15.12	MPH
SSD =	16.17808668	M
V	6.758002063	MPS
T	1.5	secs
D	3.68	m/s2

Hogwood Farm P4 & P5 - Access from Sheerlands Road

Speed Reduction Bend SSD Calculator



Design Speed (KPH)	32
Radius (M)	13.25

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	13.25

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
77	14	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	14%	17.27 mph
32	kph	14%	27.64 kph

Speed	17.27	MPH
SSD =	19.46950759	M
V	7.721727945	MPS
T	1.5	secs
D	3.68	m/s2

Hogwood Farm P4 & P5 - Plot 943

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	7.5

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	7.5

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
137	24	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	24%	15.18 mph
32	kph	24%	24.29 kph

Speed	15.18	MPH
SSD =	16.27388767	M
V	6.787106036	MPS
T	1.5	secs
D	3.68	m/s ²

Hogwood Farm P4 & P5 - Plot 943

Speed Reduction Bend SSD Calculator



JNP GROUP
CONSULTING ENGINEERS

Design Speed (KPH)	32
Radius (M)	7.25

	V ²	Radius of vehicle path (M)
20mph (32kph)	1024	7.25

V ² /R	From 50%ile speed	Calc to get 50%ile Speed
20	3.5	0.175
28	5	0.178571429
40	7	0.175
56	10	0.178571429
80	14	0.175
141	25	0.176428571

Design Speed	Units	Adjustment factor (%)	Adjusted Design Speed
20	mph	25%	15.02 mph
32	kph	25%	24.03 kph

Speed	15.02	MPH
SSD =	16.02987361	M
V	6.712840727	MPS
T	1.5	secs
D	3.68	m/s2

APPENDIX D: TECHNICAL NOTE TN016

‘JUNCTION ASSESSMENT SHEERLANDS ROAD / A327 / CHURCH ROAD UPDATE (TRIP DISTRIBUTION)’

Job name: Hogwood Farm, Finchampstead
Job No: C85672
Note No: TN016
Date: 16/08/2018
Prepared by: Stuart Wilson
Subject: Junction Assessment Sheerlands Road / A327 / Church Road Update (Trip Distribution)

1 Trip Generation and traffic impact assessment

1.1 Introduction

- 1.1.1 Trip generation for the proposals on P1 have been calculated using the same methodology contained within the original TA and that used within Transport Statements' submitted in support of reserved matters applications for parcels within the wider SDL.

1.2 Trip Generation

- 1.2.1 Trip rates as produced from the Wokingham Strategic Transport Model 3 (WSTM3) have been used to assess the likely number of vehicular trips resulting from the 178 dwellings proposed at P1. These are shown below in Table 4.1.

Table 4.1: Trip Rates and Trips (178 dwellings)

Time Range	Inbound		Outbound		Two-way	
	Trip Rate	Trips	Trip Rate	Trips	Trip Rate	Trips
08:00-09:00	0.130	23	0.400	71	0.530	94
17:00-18:00	0.330	59	0.200	36	0.530	95

1.3 Traffic Impact Assessment

- 1.3.1 As it is likely Parcel 1 will be occupied before the completion of the NMRE(S), the traffic impact of the proposals on the Sheerlands Road/A327 junction have been assessed for the following scenarios:

-  2017 Base
-  2028 Base (Includes AGLC Development)
-  2028 Do Something (2028 Base + 178 Dwellings)
-  2028 Do Something Sensitivity Test (assessed against 400 dwellings)

- 1.3.2 The 2017 Base scenario uses the traffic flows as recorded by JNP. Traffic flows were acknowledged as being lower in 2017 between Sheerlands Road and Church Road compared to those surveyed in 2014 due to the closure of Sheerlands Road where it intersects NMRE(N).

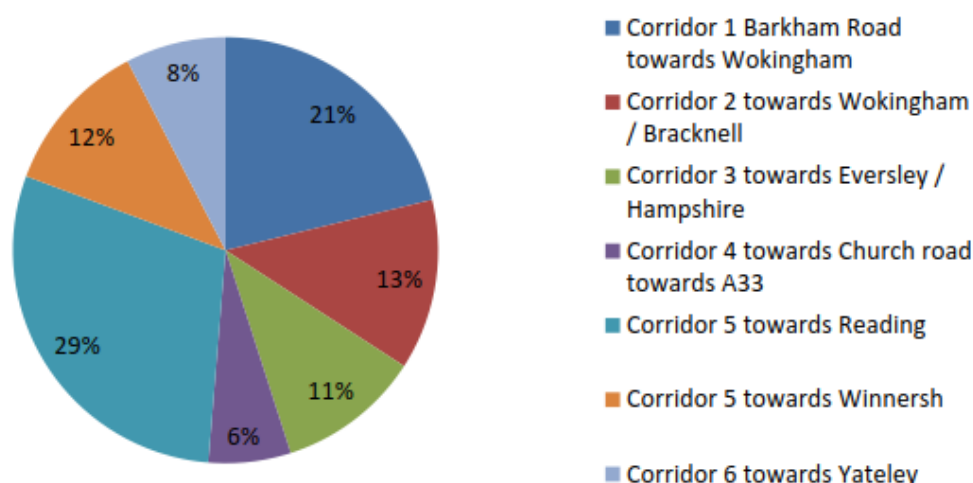
- 1.3.3 Flows were 'growthed' from 2017 to 2028 using the NTEM AF15 Dataset for Wokingham 018. The growth factors which were applied can be found below in Table 4.2.

Table 4.2: Trip Rates and Trips (178 dwellings)

Peak Hour	Growth Factor
AM	1.1754
PM	1.1822

- 1.3.4 For the 2028 Base scenario, the trips associated with the AGLC were derived by removing the trips associated with the standalone scenario from the cumulative scenario contained within the original TA.
- 1.3.5 A flow diagram was produced to support the hybrid planning application and the distributions were obtained from Wokingham Borough Council (WBC). The growth in traffic was also obtained from WBC. The growth and redistribution of traffic after the implementation of the Arborfield Relief Road was calculated using the WSTM.
- 1.3.6 As a result of the meeting on 23rd July 2018, it was agreed that the distribution will be taken from the original Outline Transport Assessment carried out on behalf of the Marino Family as opposed to existing traffic flows. With reference to Appendix I or the original TA by Royal Haskoning, Table 4.3 below details the trip distribution used.

Table 4.3 Extract of 2014 TA Trip Distribution



- 1.3.7 In order to apply this distribution to the Parcel 1 Development via Sheerlands Road, Google Maps was used to establish the quickest peak hour routing. Table 4.4 below shows the results.

Table 4.4: Trip Distribution applied to Parcel 1

Arm	Route to Sheerlands Road	Distribution
Corridor 1	A327 (N)	21%
Corridor 2	A327 (N)	13%
Corridor 3	A327 (S)	11%
Corridor 4	Church Road	6%
Corridor 5	A327 (N)	29%
Corridor 5	A327 (N)	12%
Corridor 6	A327 (S)	8%

1.3.8 In summary, the distribution at Sheerlands Road will be as follows:

- To/from A327 (N) 75%
- To/from Church Road 6%
- To/from A327 (S) 19%

1.3.9 It is noted that the highways consultation on the Reserved Matters Application suggested that the trip distribution is 'broadly 40% north, 40% east and 20% south'. JNP were not able to validate this from the TA, but showing 75% turning right would instead be considered very robust.

1.4 2017 Base Junction Modelling

1.4.1 The results of junction modelling for the 2017 base year are shown below in Table 4.5. Full model output reports for all scenarios are provide under **Appendix A**.

Table 4.5: 2017 Base Junction Modelling

Arm	2017 Surveyed AM Peak Hour (07:45-08:45)		2017 Surveyed PM Peak Hour (17:00-18:00)	
	RFC	End Queue	RFC	End Queue
Sheerlands Road-A327 (S)	0.01	0	0.02	0
Sheerlands Road Right-turns	0.03	0	0.05	0
A327 (N) Southbound	0.20	0	0.05	0
Church Road-A327 (N)	0.21	0	0.08	0
Church Road Right-turns	0.39	1	0.31	0
A327 (S) Northbound	0.02	0	0.01	0

1.4.2 Table 4.3 illustrates the maximum Ratio of Flow to Capacity (RFC which occurs at the Sheerlands Road/A327 Junction is 0.39 and no queues greater than 1 car are expected.

1.5 2028 Base Junction Modelling

1.5.1 The modelling results for a 2028 Base Year inclusive of wider development are shown below in Table 4.6.

Table 4.6: 2028 Base Including AGLC Development

Arm	2028 AGLC AM Peak Hour (07:45-08:45)		2028 AGLC PM Peak Hour (17:00-18:00)	
	RFC	End Queue	RFC	End Queue
Sheerlands Road-A327 (S)	0.03	0	0.03	0
Sheerlands Road Right-turns	0.05	0	0.07	0
A327 (N) Southbound	0.30	0	0.20	0
Church Road-A327 (N)	0.34	1	0.30	0
Church Road Right-turns	0.62	2	0.23	0
A327 (S) Northbound	0.03	0	0.01	0

1.5.2 Table 4.6 above shows that the maximum RFC occurring at the Sheerlands Road/A237 Junction is 0.62 and no queues greater than 2 cars are expected resulting in significant residual capacity.

1.6 2028 Do Something Junction Modelling

1.6.1 Two 'Do Something' scenarios have been prepared to assess the operational performance of the Sheerlands Road/A327 junction serving 178 dwellings and 400 dwellings as a sensitivity test.

1.6.2 The results for both scenarios are contained in Tables 4.7 and 4.8.

Table 4.7: 2028 Do Something 178 Dwellings

Arm	2028 Do Something AM Peak Hour (07:45-08:45)		2028 Do Something PM Peak Hour (17:00-18:00)	
	RFC	End Queue	RFC	End Queue
Sheerlands Road-A327 (S)	0.07	0	0.05	0
Sheerlands Road Right-turns	0.39	1	0.24	0
A327 (N) Southbound	0.31	0	0.20	0
Church Road-A327 (N)	0.36	1	0.31	0
Church Road Right-turns	0.70	2	0.27	0
A327 (S) Northbound	0.03	0	0.03	0

Table 4.8: 2028 Do Something Sensitivity Test 400 Dwellings

Arm	2028 Do Something Sensitivity Test AM Peak Hour (07:45-08:45)		2028 Do Something Sensitivity Test PM Peak Hour (17:00-18:00)	
	RFC	End Queue	RFC	End Queue
Sheerlands Road-A327 (S)	0.14	1	0.09	0
Sheerlands Road Right-turns	0.83	4	0.48	1
A327 (N) Southbound	0.33	0	0.21	0
Church Road-A327 (N)	0.40	1	0.32	0
Church Road Right-turns	0.82	3	0.33	0
A327 (S) Northbound	0.05	0	0.07	0

1.6.3 It can be seen from Tables 4.7 and 4.8 that the Sheerlands Road/A327 junction will continue to operate within capacity in both Do Something scenarios. The highest RFC of 0.83 can be seen in the sensitivity test and applies to right turners out of Sheerlands Road with queues of 4 vehicles expected.

Document Issue Record

Technical Note No	Rev	Date	Prepared	Reviewed	Approved
015	~	16/08/2018	SW	SW	SW

List of Appendices

Appendix A Junction Modelling Outputs

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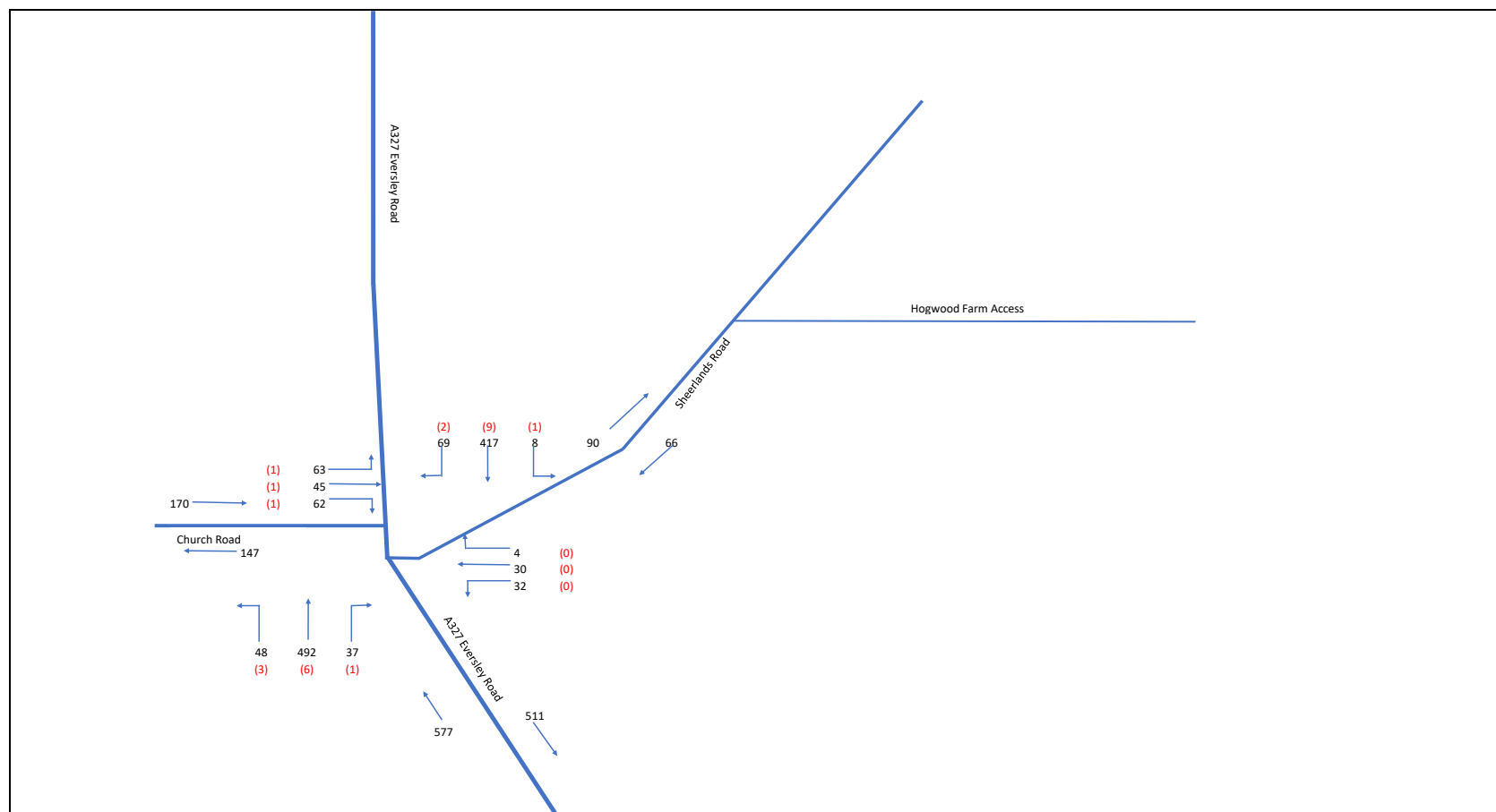
Any advice, opinions or recommendations within this document should be read and relied upon only in the context of this document as a whole.

Any comments given within this report are based on the understanding that the proposed works to be undertaken will be as described in the introduction. The information referred to and provided by others and will be assumed to be correct and will not have been checked by jnp group, jnp group will not accept any liability or responsibility for any inaccuracy in such information.

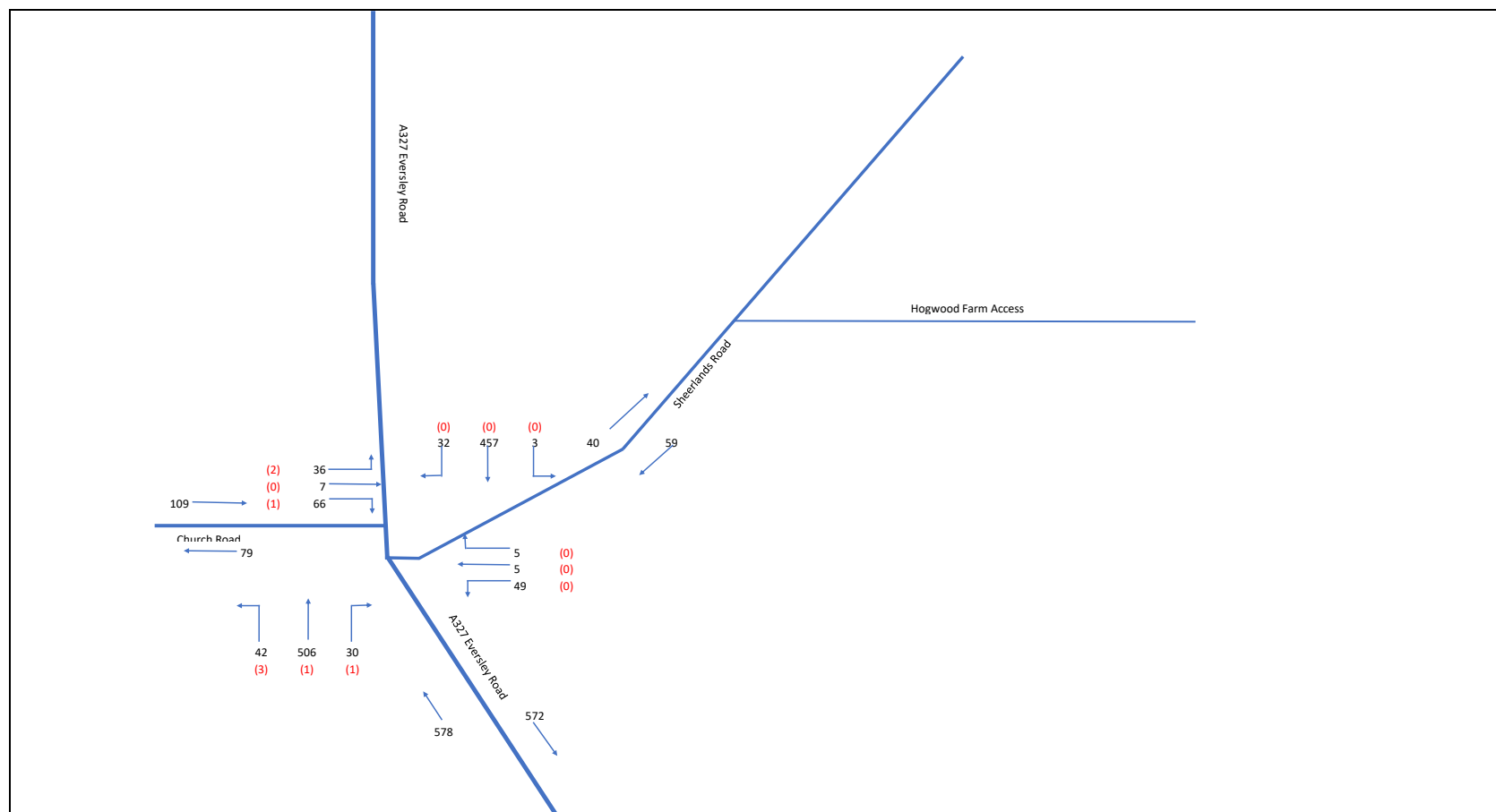
Any deviation from the recommendations or conclusions contained in this report should be referred to jnp group in writing for comment and jnp group reserve the right to reconsider their recommendations and conclusions contained within. jnp group will not accept any liability or responsibility for any changes or deviations from the recommendations noted in this report without prior consultation and our full approval.

Appendix A

Flow Diagrams



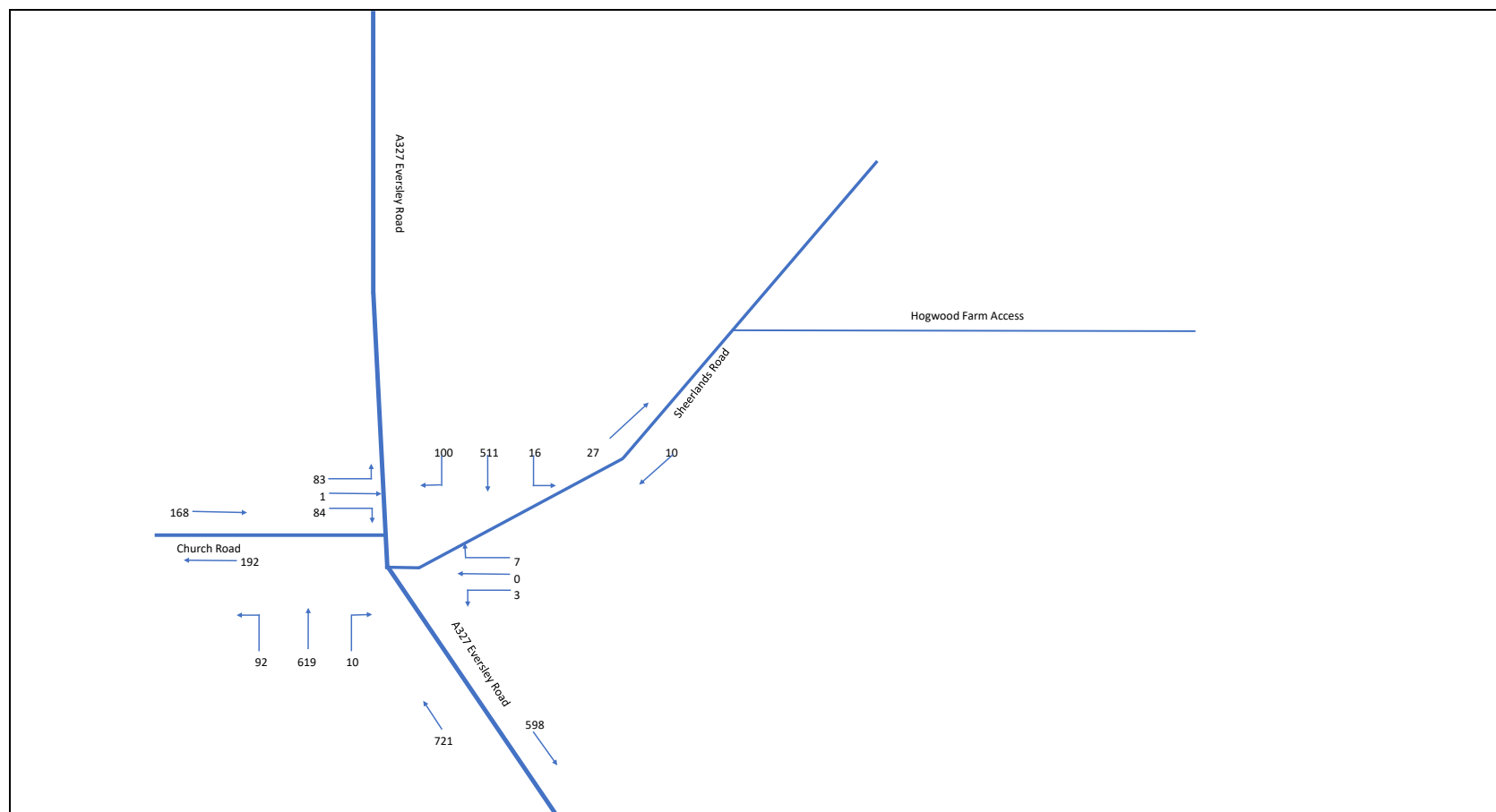
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		Title: 2014 Observed Flows AM-Peak Hour (07:45-08:45) Sheerlands/A327 Junction Traffic Flow Diagram
		Drawn By: AM
		Eng. Check: SW
		Tech. Check: SW
		Date: Nov-17
		Figure Number: C85672-F-101
		Rev. A



Key:

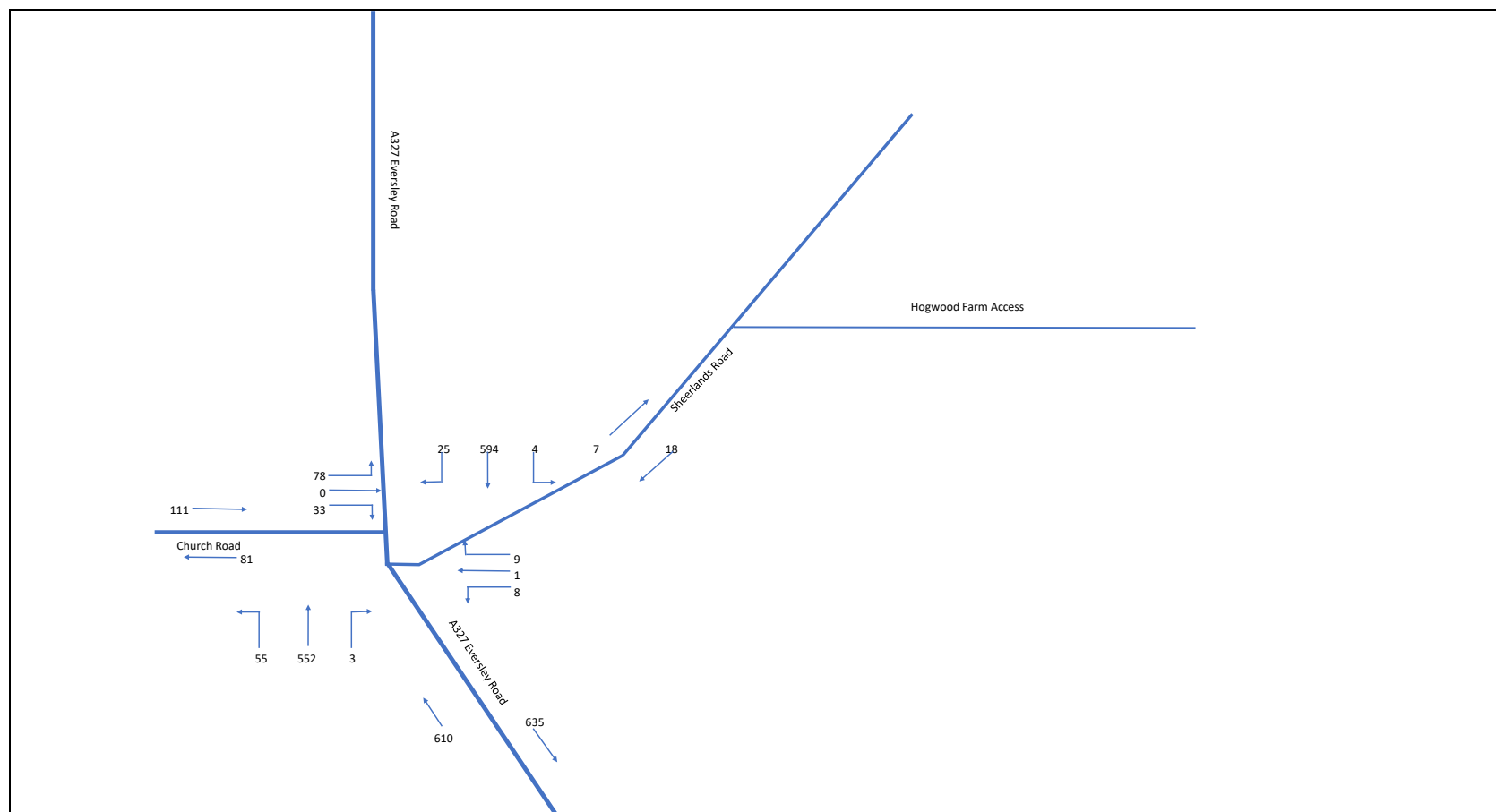
- 888 Traffic Flows
- (888) HGV
- 888 Passenger Car Units (for Signalised Junctions Only)

Client:	Legal and General Homes	
Job:	Hogwood Farm Finchampstead, RG40 4QY	
Title:	2014 Observed Flows PM-Peak Hour (17:00-18:00) Sheerlands/A327 Junction Traffic Flow Diagram	
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Figure Number:	C85672-F-102	A

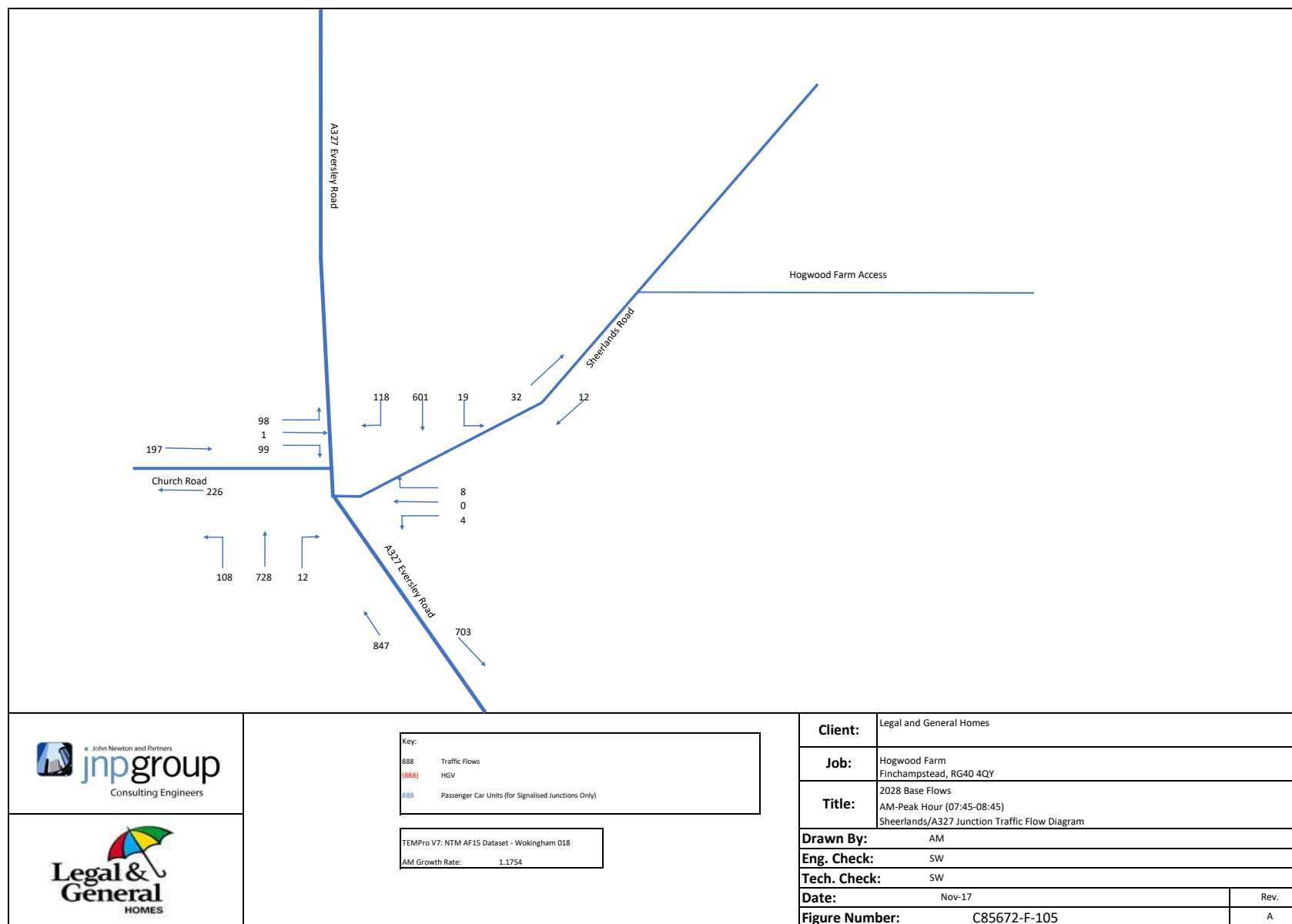


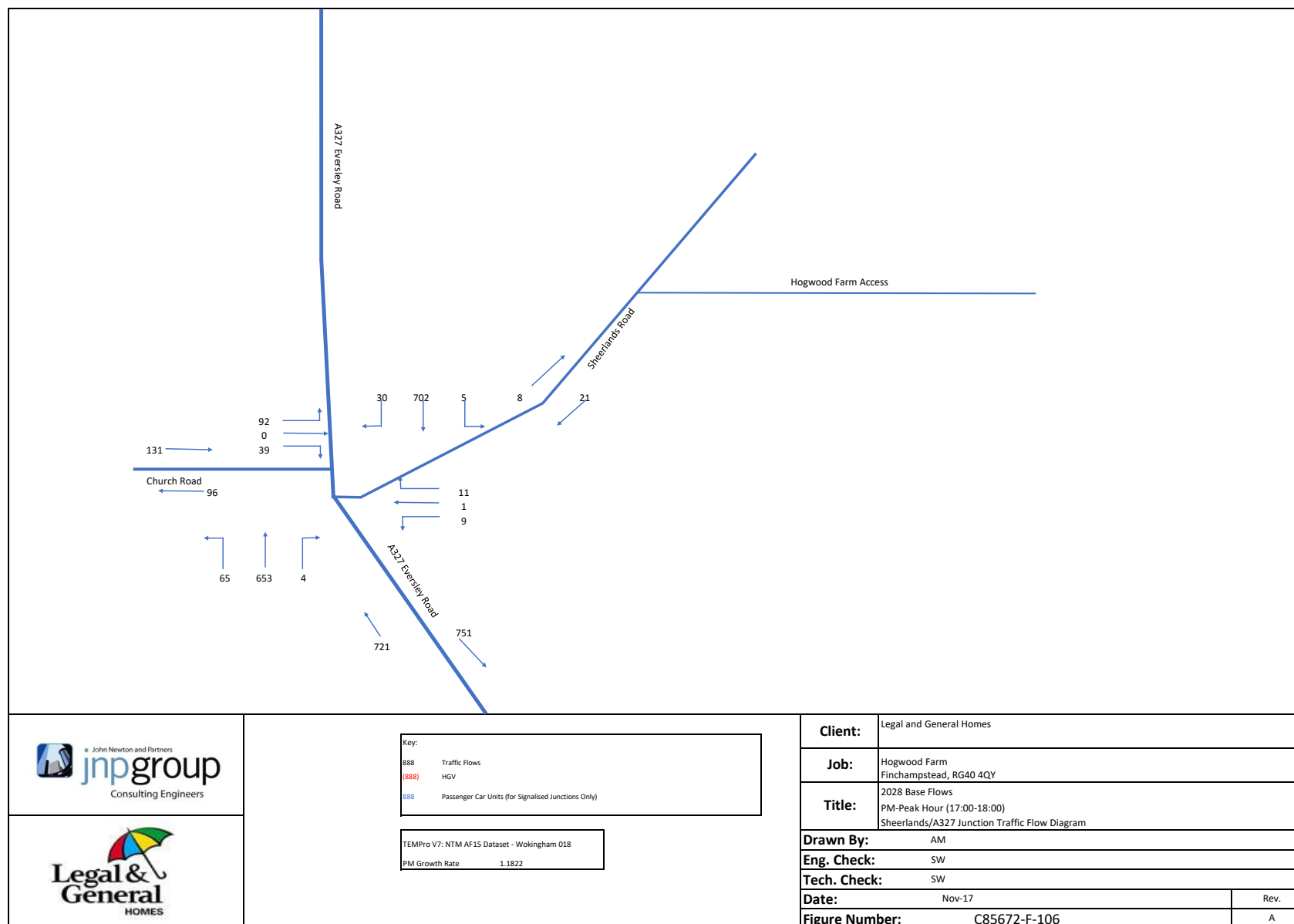
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(888)	HGV
888	Passenger Car Units (for Signalised Junctions Only)

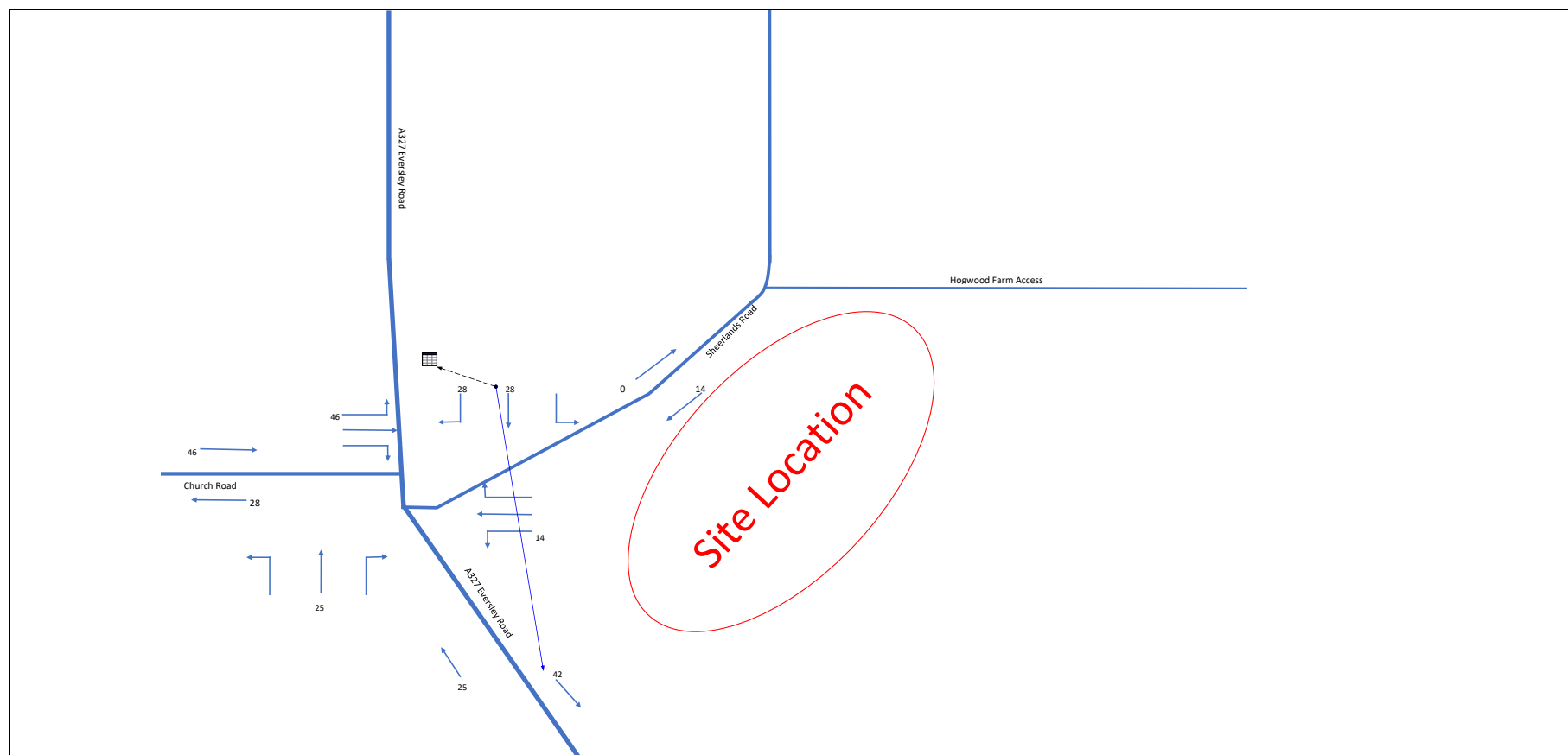
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Job:	Hogwood Farm Finchampstead, RG40 4QY	
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Tech. Check:	SW	
Date:	Nov-17	Rev.
Figure Number:	C85672-F-103	A



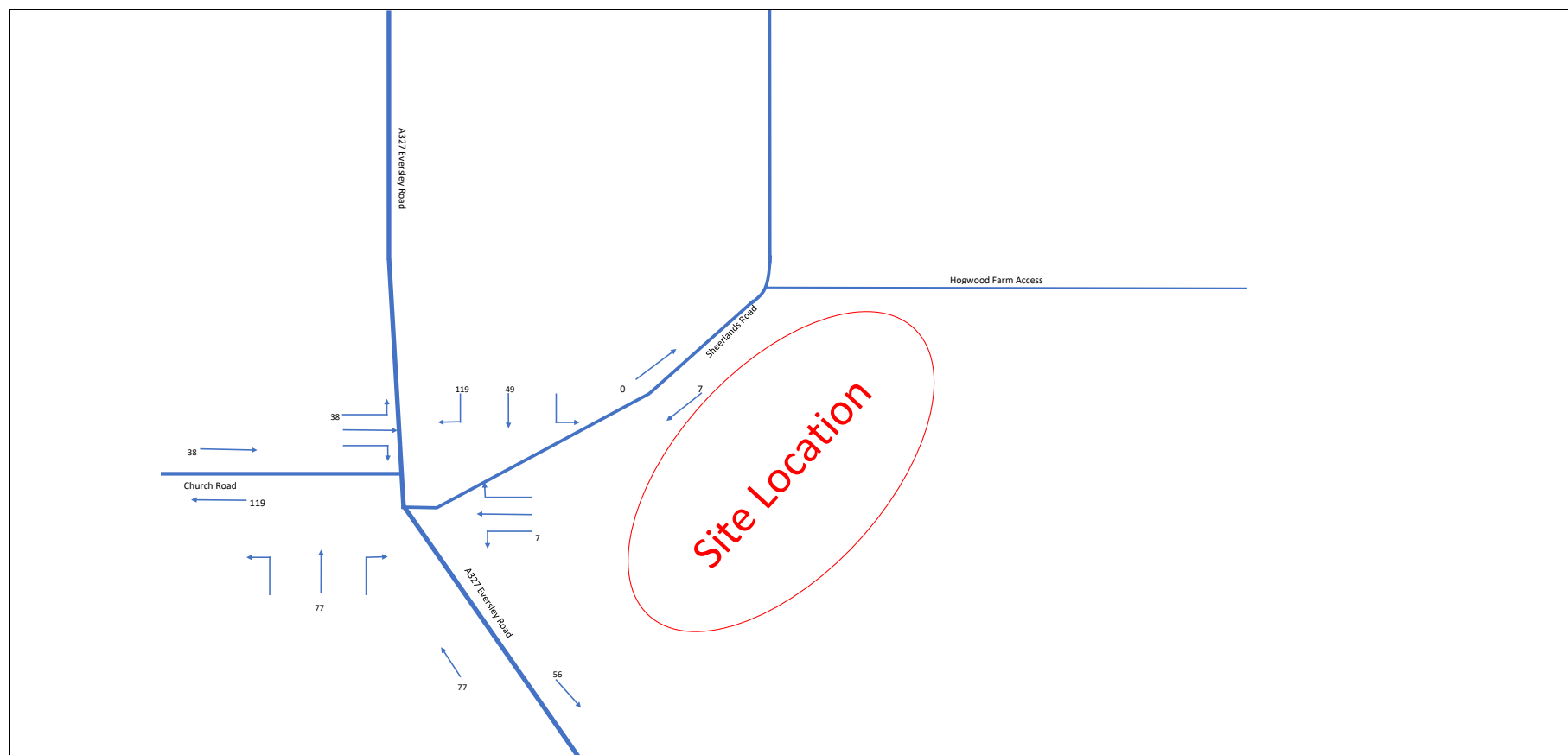
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Eng. Check:	SW	
Tech. Check:	SW	
Date:	Nov-17	Rev.
Figure Number:	C85672-F-104	A



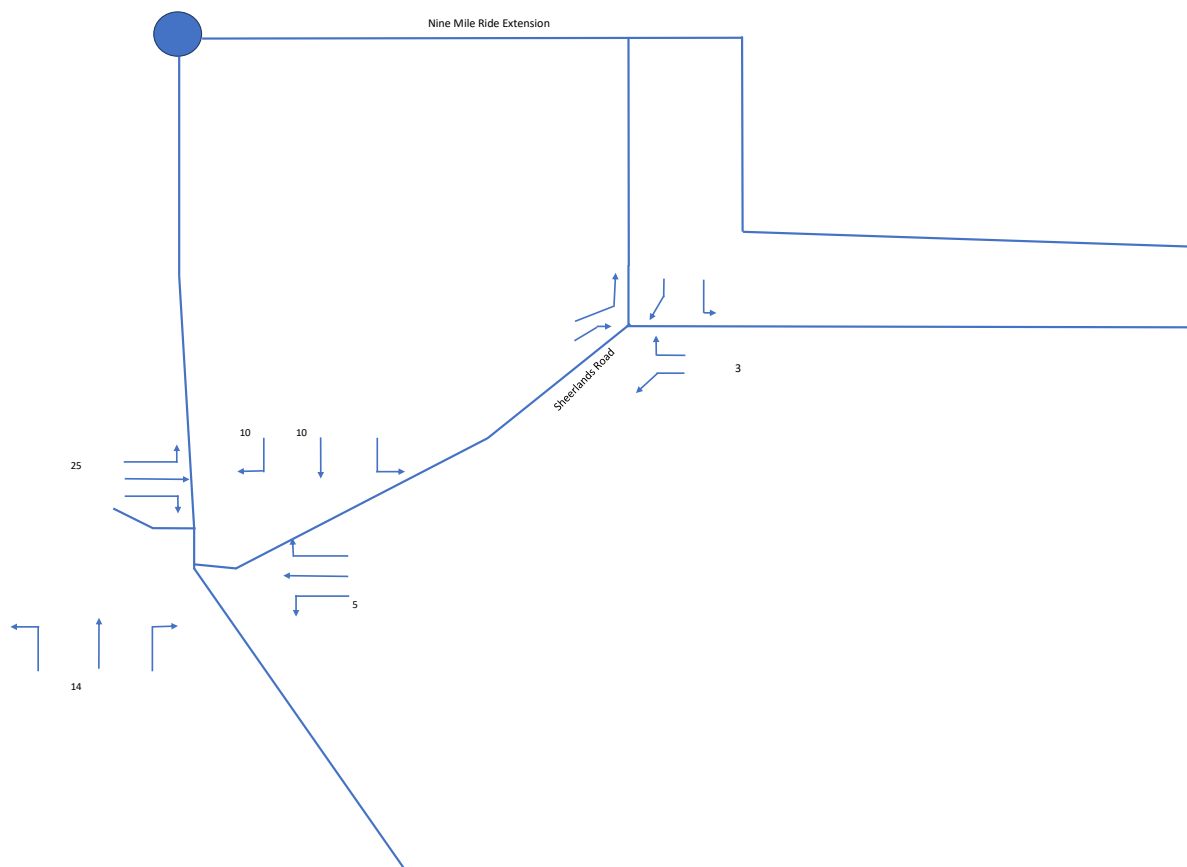




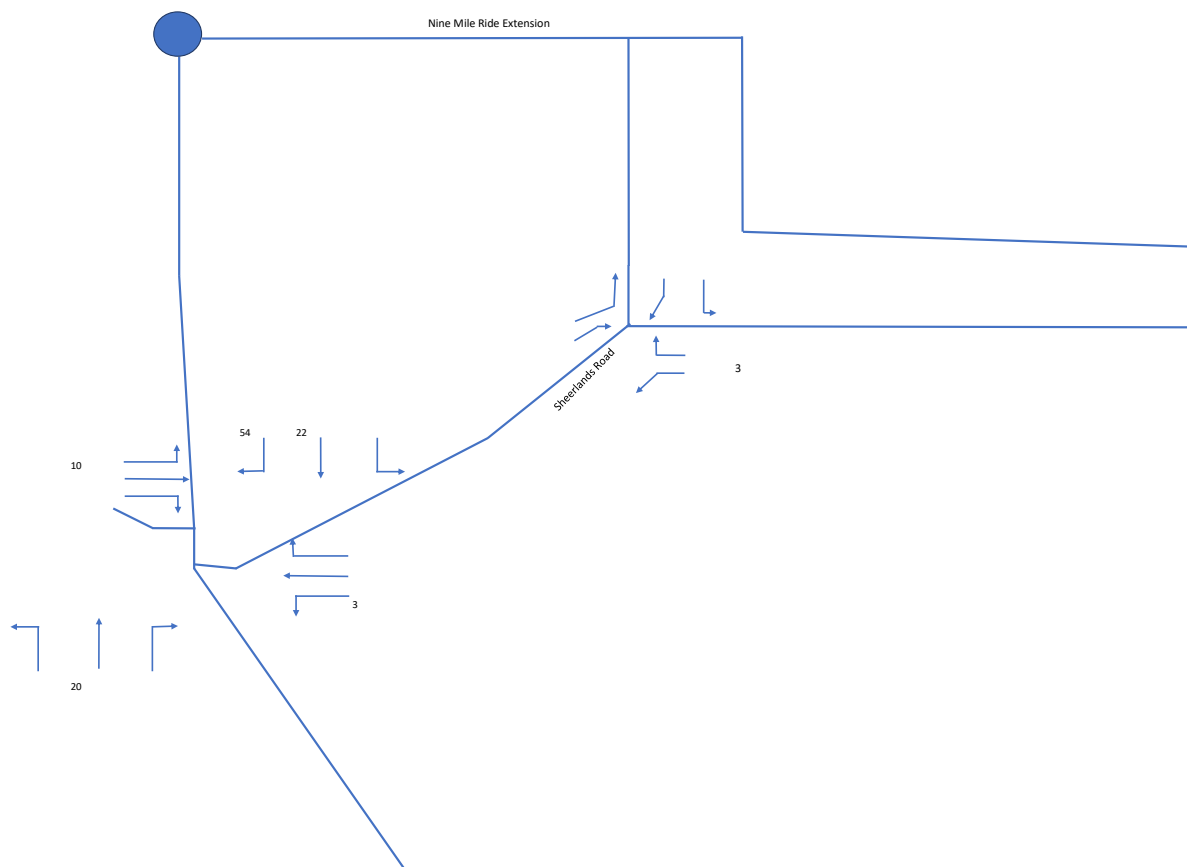
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Tech. Check:	SW		
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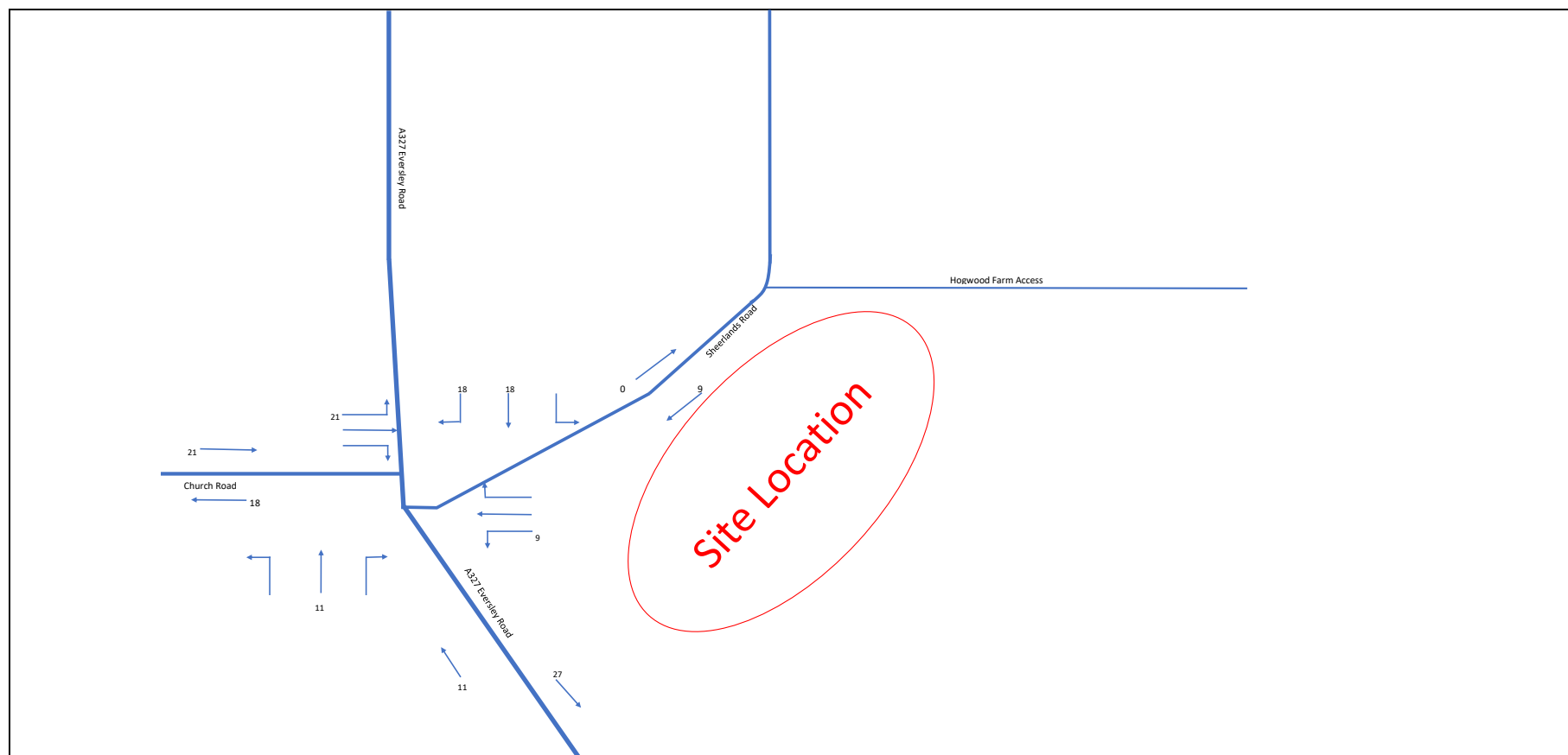
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Eng. Check:	SW	
Tech. Check:	SW	
Date:	Nov-17	Rev.
Figure Number:	C85672-F-108	A



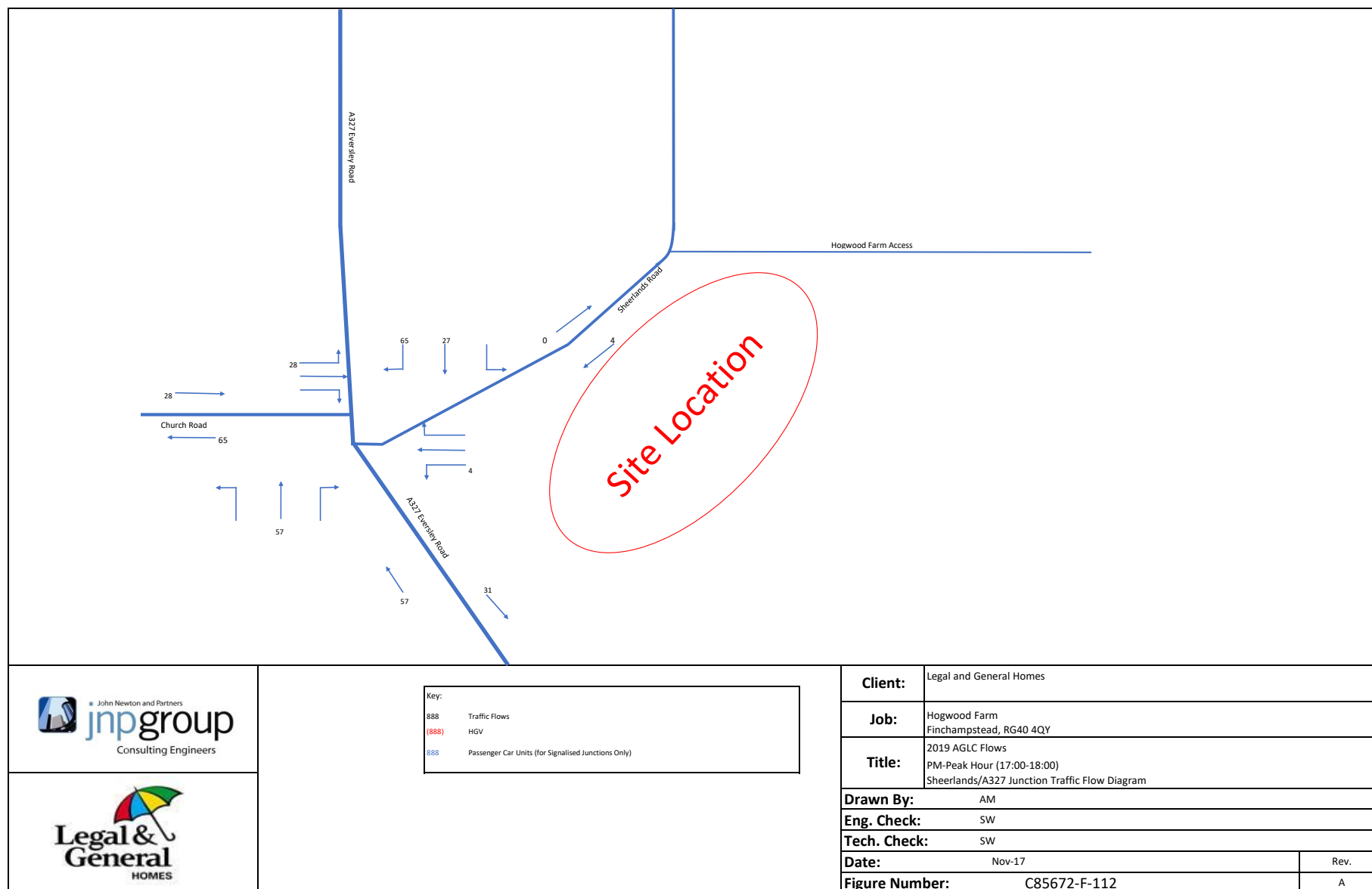
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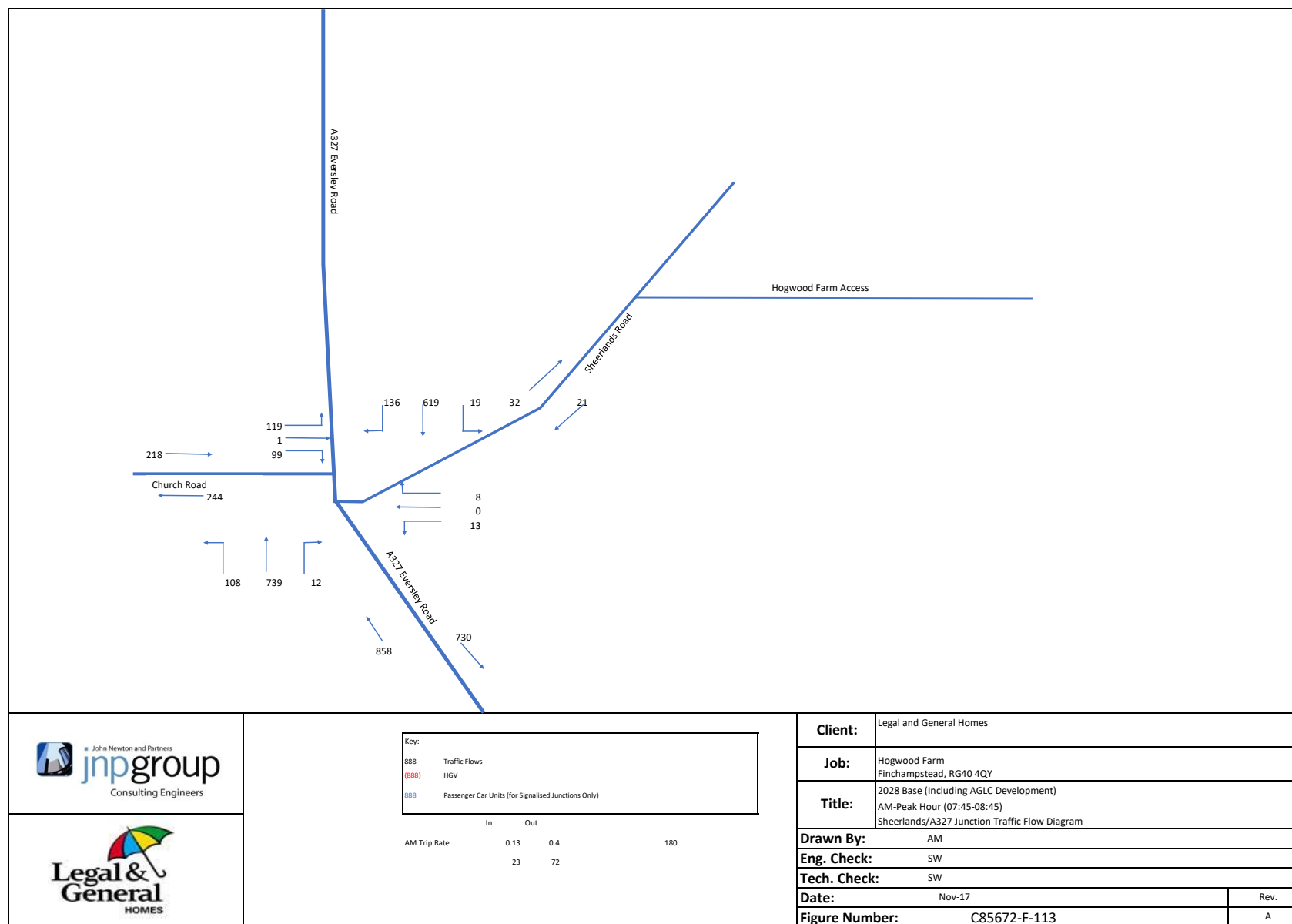


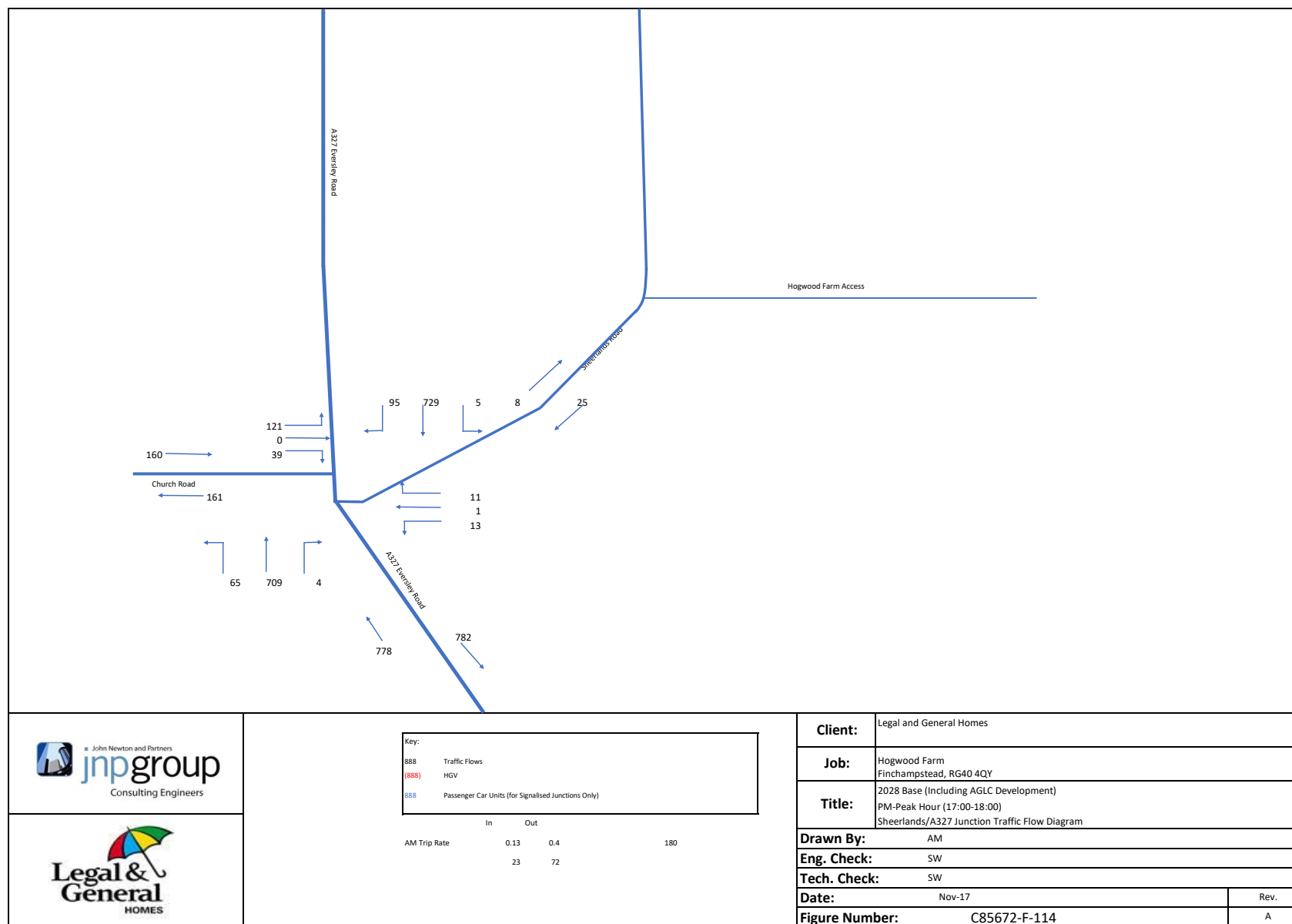
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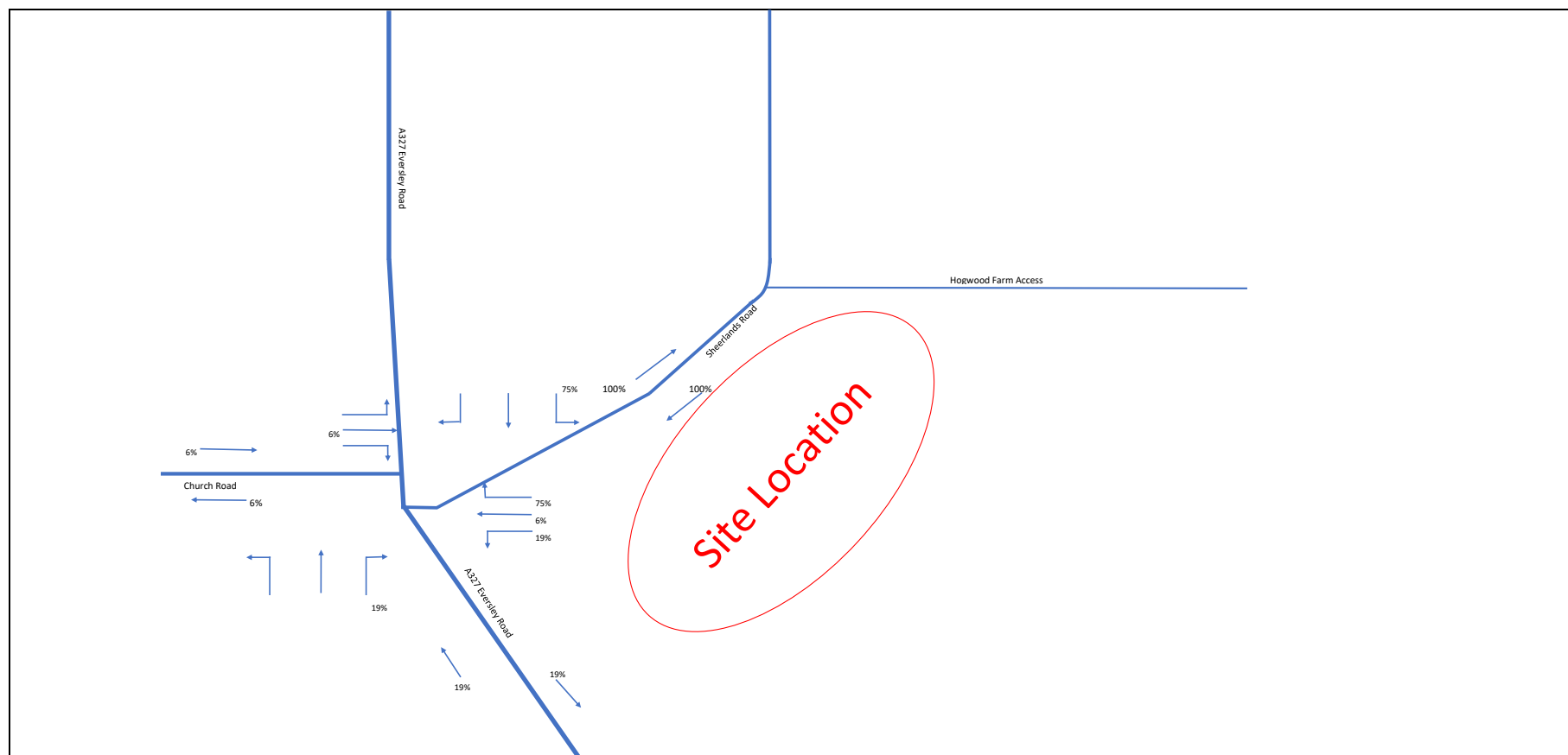


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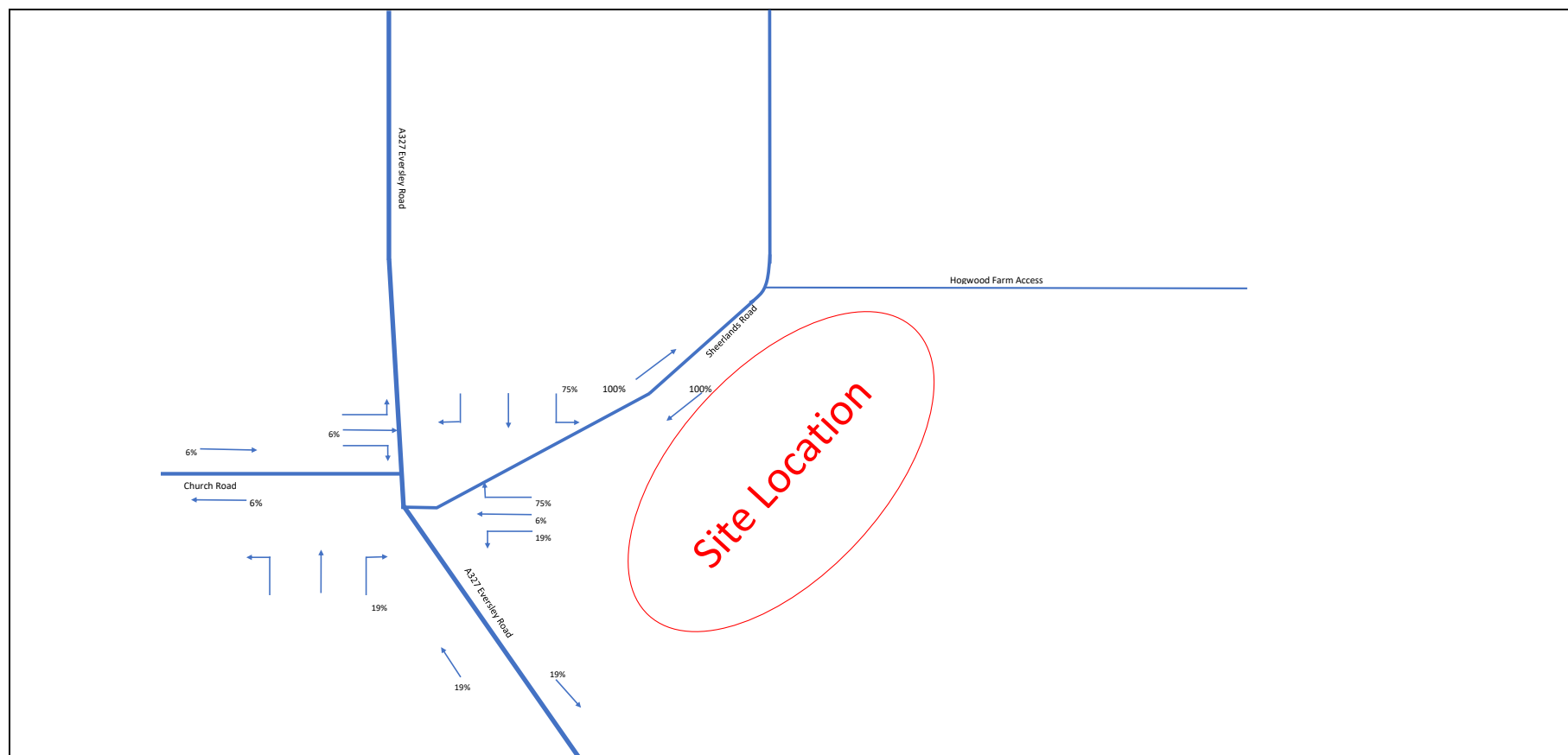




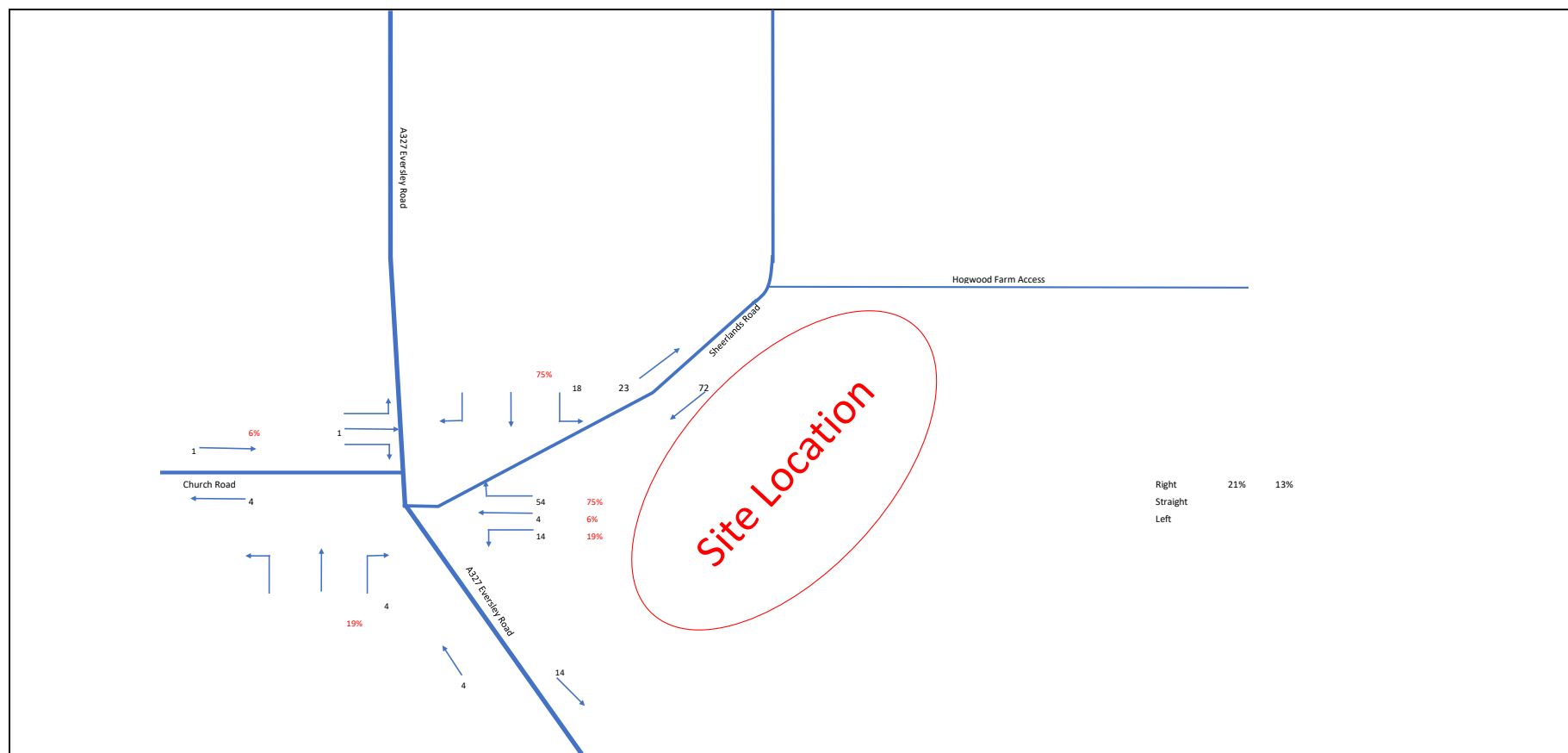




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Job:	Hogwood Farm Finchampstead, RG40 4QY		
Title:	2014 Observed Flow Distributions AM-Peak Hour (07:45-08:45) Sheerlands/A327 Junction Traffic Flow Diagram		
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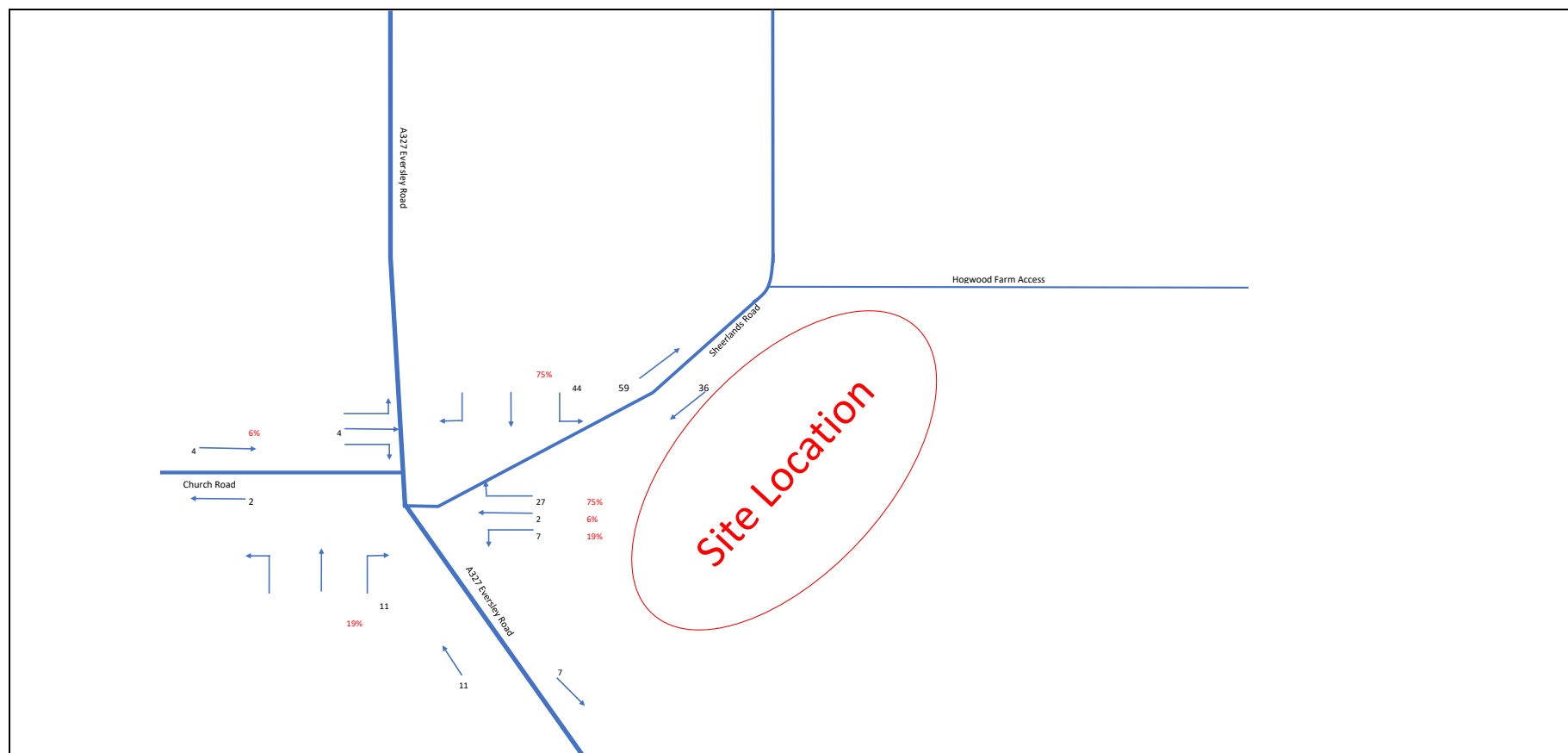
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Eng. Check:	SW	
Tech. Check:	SW	
Date:	Nov-17	Rev.
Figure Number:	C85672-F-116	A



Key:	
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(888)	HGV
888	Passenger Car Units (for Signalised Junctions Only)

	In	Out	
AM Trip Rate	0.13	0.4	180
	23	72	

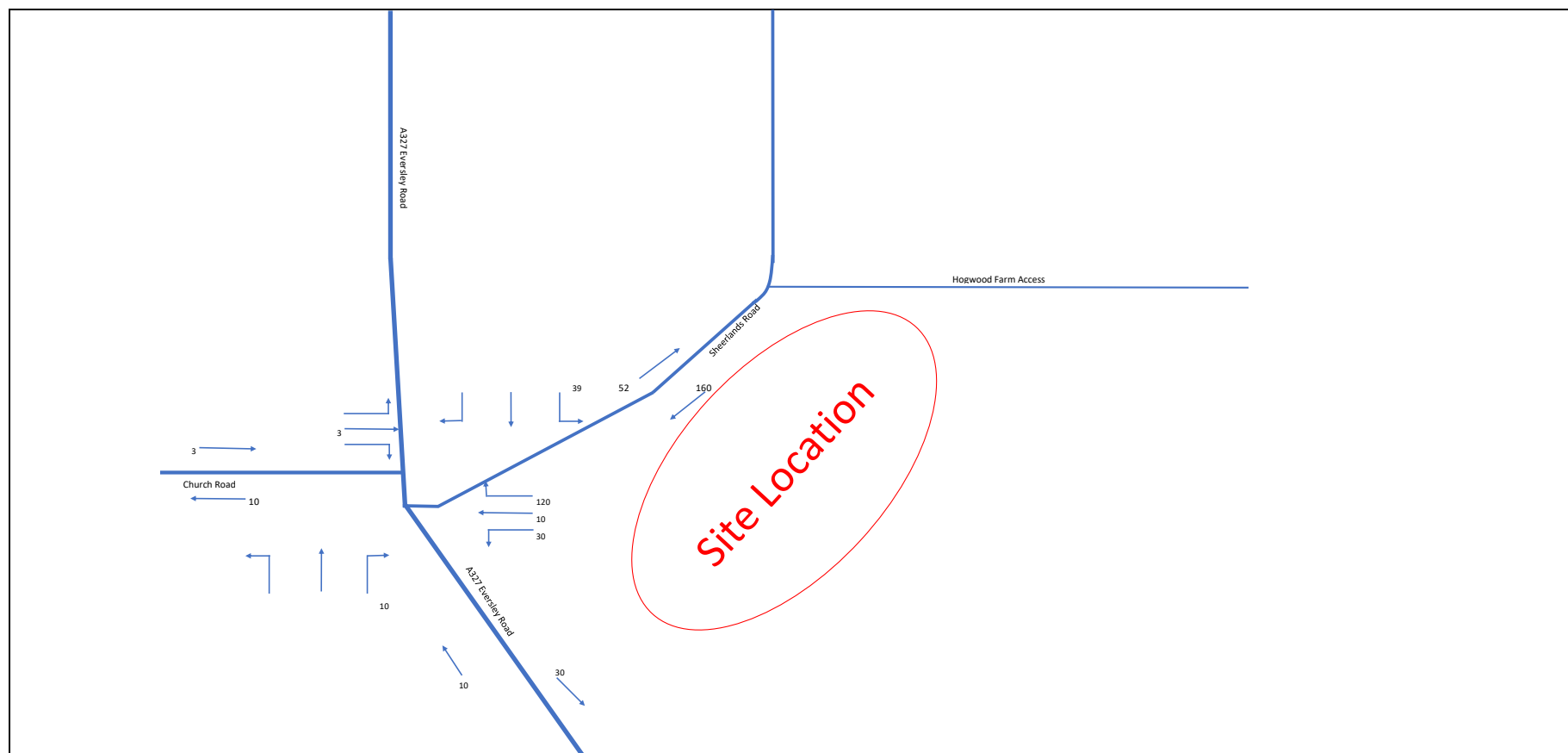
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Job:	Hogwood Farm Finchampstead, RG40 4QY		
Title:	Parcel 1 Distributed Flows AM-Peak Hour (07:45-08:45) Sheerlands/A327 Junction Traffic Flow Diagram		
Drawn By:	AM		
Eng. Check:	SW		
Tech. Check:	SW		
Date:	Nov-17		Rev.
Figure Number:	C85672-F-117		A



Key:	
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(888)	HGV
888	Passenger Car Units (for Signalised Junctions Only)

	In	Out	
PM Trip Rate	0.33	0.2	178
	59	36	

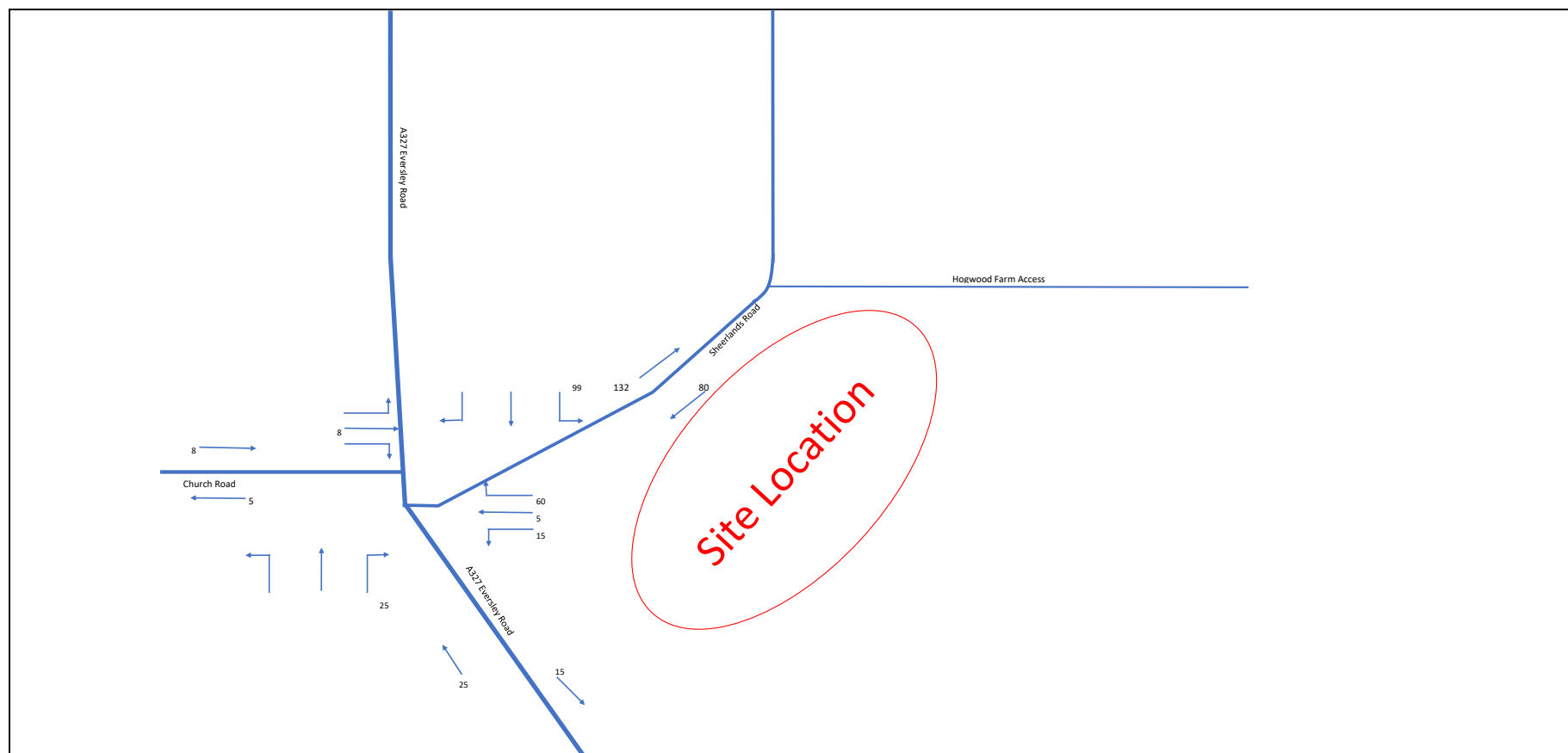
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Date:	Nov-17	Rev.
Figure Number:	C85672-F-118	A



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(888)	HGV
888	Passenger Car Units (for Signalised Junctions Only)

	In	Out	
AM Trip Rate	0.13	0.4	400
	52	160	

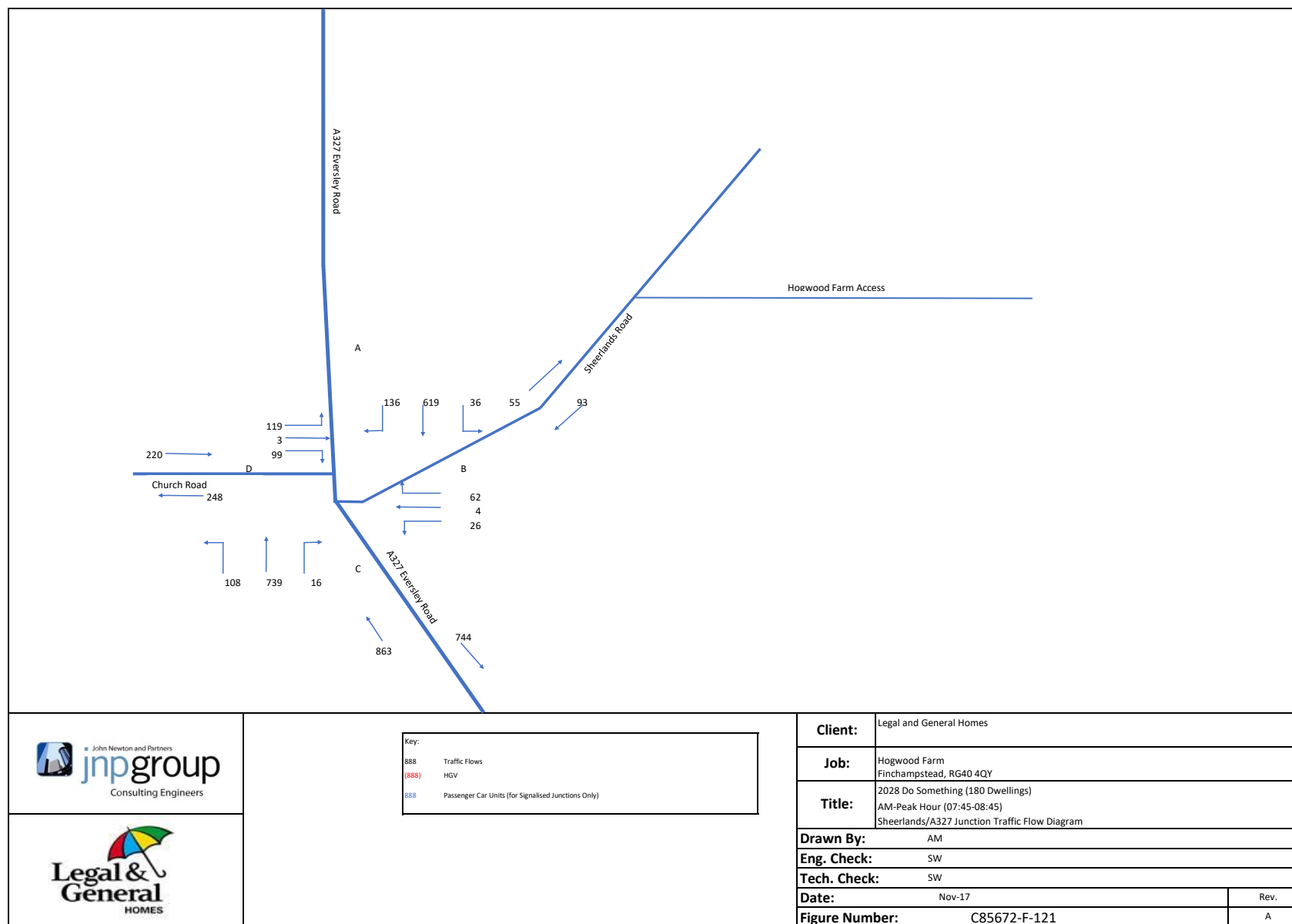
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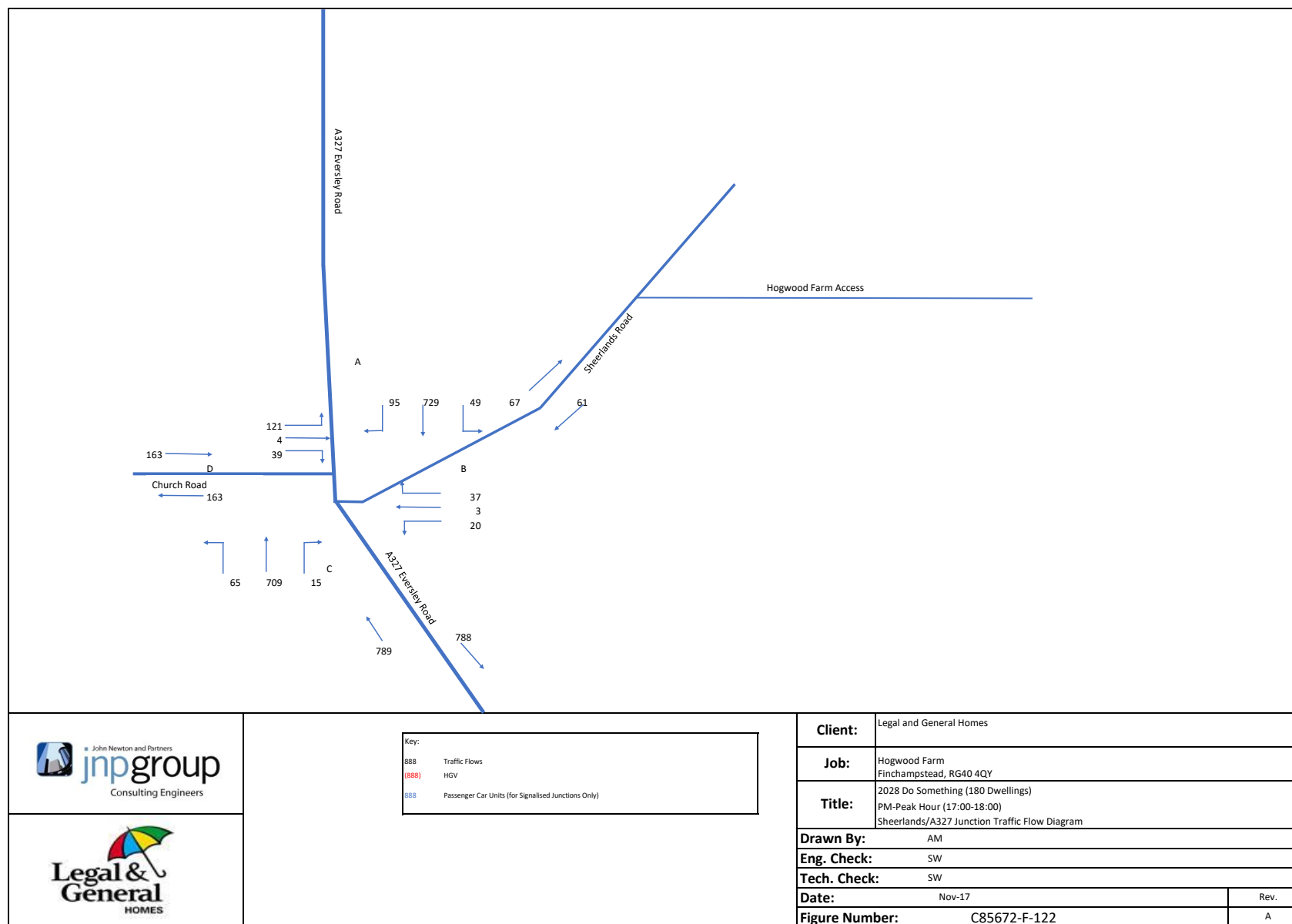


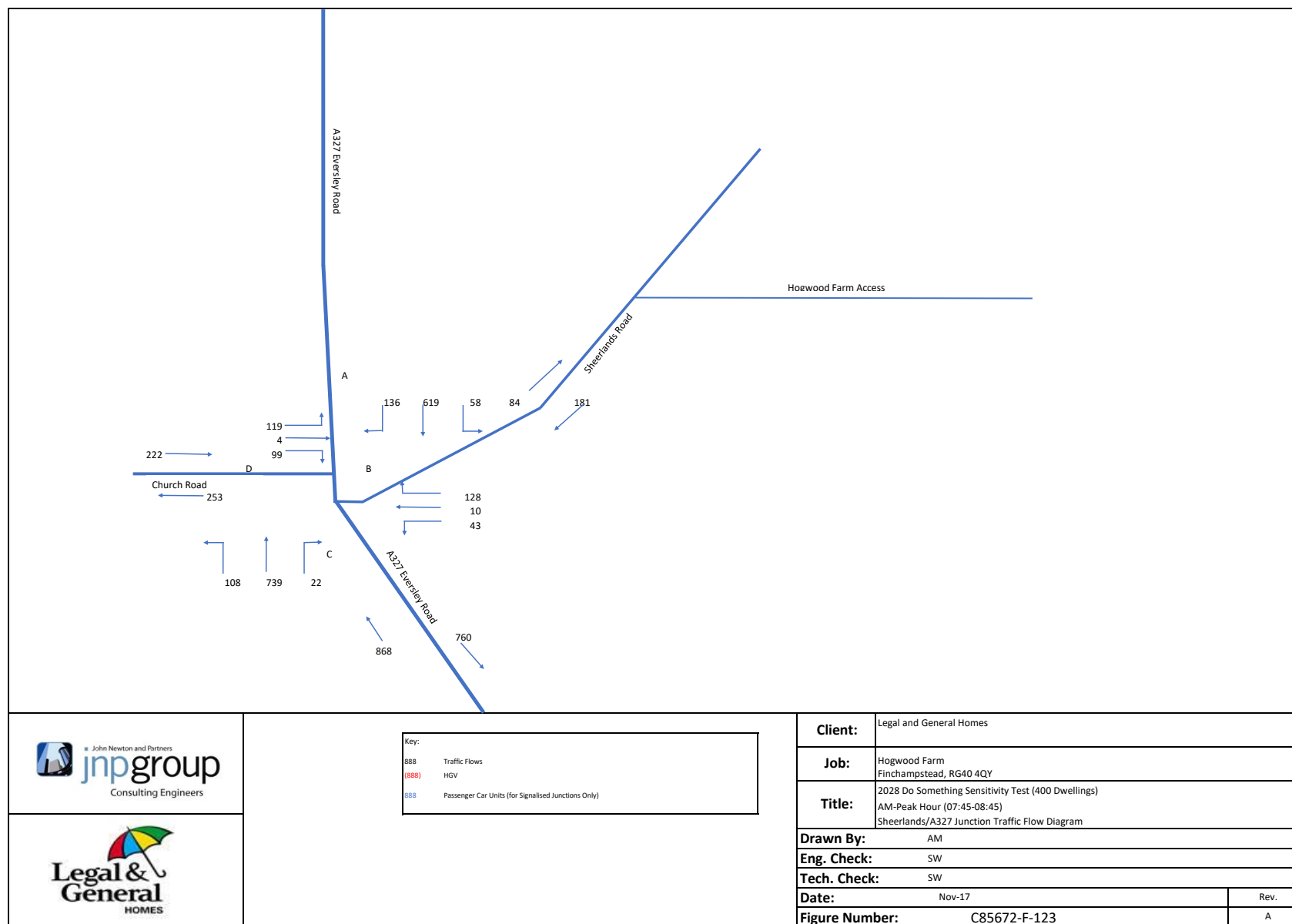
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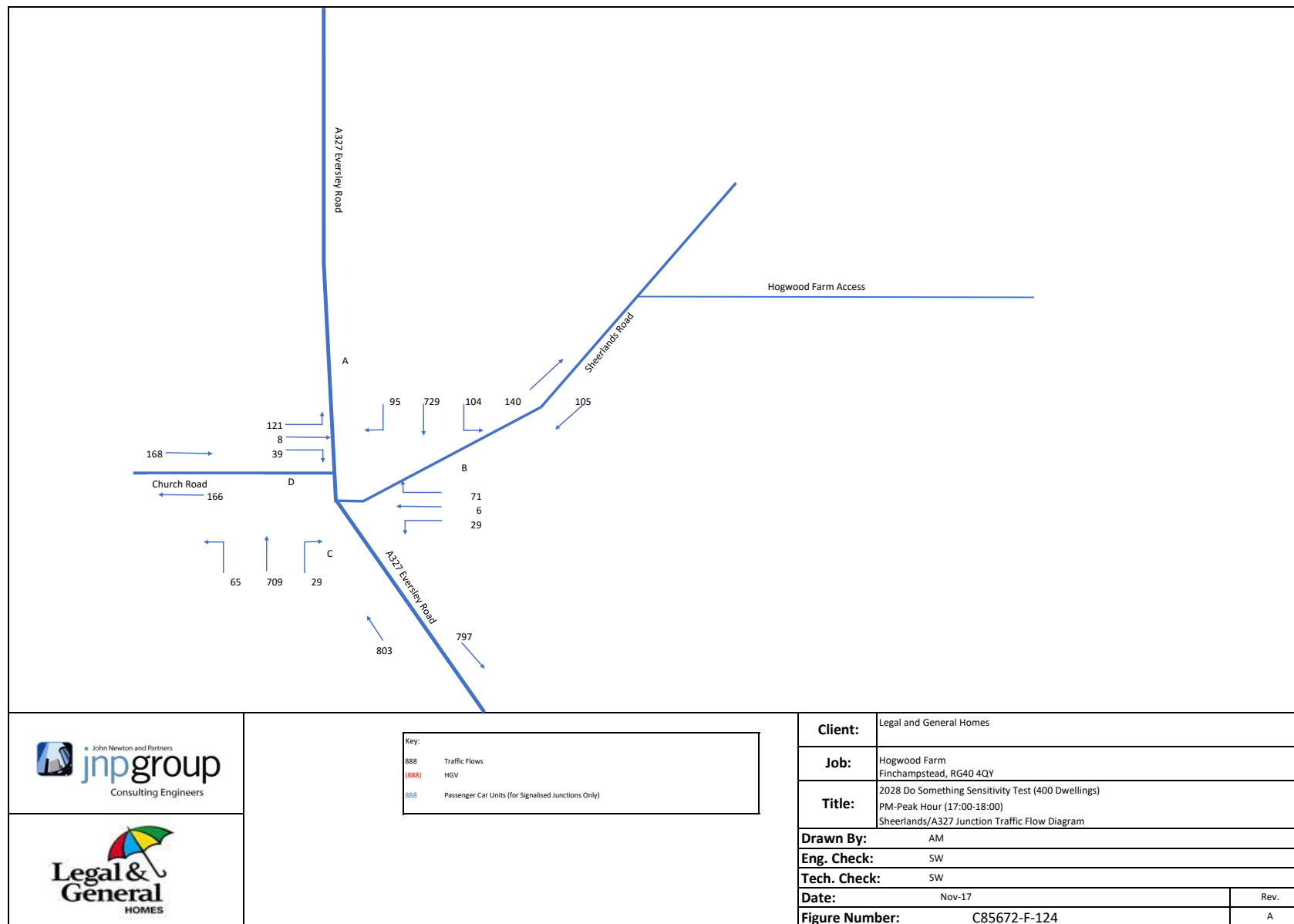
	In	Out	
PM Trip Rate	0.33	0.2	400
	132	80	

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Eng. Check:	SW	
Tech. Check:	SW	
Date:	Nov-17	Rev.
Figure Number:	C85672-F-120	A









Appendix B

PICADY Outputs



Junctions 8				
PICADY 8 - Priority Intersection Module				
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2018				
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk				
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Sheerlands Junction 2028 Parcel 1.arc8

Path: H:\Jobs_C\85672 Hogwood Garden Village, Finchampstead, RG40 4QY\Docs JNP\PLANNING\Calcs\Junction Modelling

Report generation date: 16/08/2018 17:14:33

- » (Default Analysis Set) - 2017 Surveyed, AM
- » (Default Analysis Set) - 2017 Surveyed, PM
- » (Default Analysis Set) - 2028 AGLC, AM
- » (Default Analysis Set) - 2028 AGLC, PM
- » (Default Analysis Set) - 2028 AGLC+400, AM
- » (Default Analysis Set) - 2028 AGLC+400, PM
- » (Default Analysis Set) - 2028 AGLC+180, AM
- » (Default Analysis Set) - 2028 AGLC+180, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Surveyed				
Stream B-C	0.01	7.72	0.01	A
Stream B-AD	0.03	15.47	0.03	C
Stream A-BCD	0.25	8.37	0.20	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream D-A	0.26	10.24	0.21	B
Stream D-BC	0.62	24.48	0.39	C
Stream C-ABD	0.02	6.72	0.02	A
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-

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

"D1 - 2017 Surveyed, AM" model duration: 07:30 - 09:00

"D2 - 2017 Surveyed, PM" model duration: 16:45 - 18:15

"D5 - 2028 AGLC, AM" model duration: 07:30 - 09:00

"D6 - 2028 AGLC, PM" model duration: 16:45 - 18:15

"D7 - 2028 AGLC+400, AM" model duration: 07:30 - 09:00

"D8 - 2028 AGLC+400, PM" model duration: 16:45 - 18:15

"D9 - 2028 AGLC+180, AM" model duration: 07:30 - 09:00

"D10 - 2028 AGLC+180, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 16/08/2018 17:14:28

File summary

Title	(untitled)
Location	
Site Number	
Date	03/11/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Aron.McGill
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2017 Surveyed, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Surveyed, AM	2017 Surveyed	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	13.77	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	627.00	100.000
B	ONE HOUR	✓	10.00	100.000
C	ONE HOUR	✓	721.00	100.000
D	ONE HOUR	✓	168.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.000	16.000	511.000	100.000
	B	7.000	0.000	3.000	0.000
	C	619.000	10.000	0.000	92.000
	D	83.000	1.000	84.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.00	0.03	0.81	0.16
	B	0.70	0.00	0.30	0.00
	C	0.86	0.01	0.00	0.13
	D	0.49	0.01	0.50	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	7.72	0.01	A
B-AD	0.03	15.47	0.03	C
A-BCD	0.20	8.37	0.25	A
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.21	10.24	0.26	B
D-BC	0.39	24.48	0.62	C
C-ABD	0.02	6.72	0.02	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	2.26	2.24	0.00	518.93	0.004	0.00	6.966	A
B-AD	5.27	5.20	0.00	318.53	0.017	0.02	11.486	B
A-BCD	75.29	74.73	0.00	609.06	0.124	0.14	6.730	A
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	384.71	384.71	0.00	-	-	-	-	-
D-A	62.49	61.95	0.00	521.82	0.120	0.13	7.820	A
D-BC	63.99	63.05	0.00	330.62	0.194	0.24	13.409	B
C-ABD	7.53	7.48	0.00	603.50	0.012	0.01	6.039	A
C-D	69.26	69.26	0.00	-	-	-	-	-
C-A	466.02	466.02	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	2.70	2.69	0.00	498.20	0.005	0.01	7.264	A
B-AD	6.29	6.27	0.00	285.74	0.022	0.02	12.881	B
A-BCD	89.90	89.73	0.00	580.10	0.155	0.18	7.340	A
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	459.38	459.38	0.00	-	-	-	-	-
D-A	74.62	74.44	0.00	490.08	0.152	0.18	8.657	A
D-BC	76.41	75.98	0.00	292.73	0.261	0.35	16.573	C
C-ABD	8.99	8.98	0.00	579.74	0.016	0.02	6.306	A
C-D	82.71	82.71	0.00	-	-	-	-	-
C-A	556.47	556.47	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.30	3.30	0.00	469.54	0.007	0.01	7.721	A
B-AD	7.71	7.67	0.00	240.59	0.032	0.03	15.453	C
A-BCD	110.10	109.82	0.00	540.07	0.204	0.25	8.362	A
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	562.62	562.62	0.00	-	-	-	-	-
D-A	91.38	91.07	0.00	443.55	0.206	0.26	10.203	B
D-BC	93.59	92.52	0.00	240.56	0.389	0.61	24.141	C
C-ABD	11.01	10.99	0.00	547.11	0.020	0.02	6.714	A
C-D	101.29	101.29	0.00	-	-	-	-	-
C-A	681.53	681.53	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.30	3.30	0.00	469.28	0.007	0.01	7.725	A
B-AD	7.71	7.71	0.00	240.36	0.032	0.03	15.473	C
A-BCD	110.10	110.10	0.00	540.06	0.204	0.25	8.372	A
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	562.62	562.62	0.00	-	-	-	-	-
D-A	91.38	91.38	0.00	442.98	0.206	0.26	10.238	B
D-BC	93.59	93.54	0.00	240.46	0.389	0.62	24.479	C
C-ABD	11.01	11.01	0.00	546.83	0.020	0.02	6.717	A
C-D	101.29	101.29	0.00	-	-	-	-	-
C-A	681.53	681.53	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	2.70	2.70	0.00	497.82	0.005	0.01	7.270	A
B-AD	6.29	6.33	0.00	285.40	0.022	0.02	12.903	B
A-BCD	89.90	90.18	0.00	580.08	0.155	0.19	7.354	A
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	459.38	459.38	0.00	-	-	-	-	-
D-A	74.62	74.92	0.00	489.35	0.152	0.18	8.694	A
D-BC	76.41	77.46	0.00	292.57	0.261	0.36	16.814	C
C-ABD	8.99	9.01	0.00	579.33	0.016	0.02	6.311	A
C-D	82.71	82.71	0.00	-	-	-	-	-
C-A	556.47	556.47	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	2.26	2.26	0.00	518.57	0.004	0.00	6.971	A
B-AD	5.27	5.29	0.00	318.21	0.017	0.02	11.504	B
A-BCD	75.29	75.46	0.00	609.03	0.124	0.14	6.750	A
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	384.71	384.71	0.00	-	-	-	-	-
D-A	62.49	62.66	0.00	521.18	0.120	0.14	7.855	A
D-BC	63.99	64.46	0.00	330.36	0.194	0.24	13.564	B
C-ABD	7.53	7.54	0.00	603.12	0.012	0.01	6.046	A
C-D	69.26	69.26	0.00	-	-	-	-	-
C-A	466.02	466.02	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Surveyed, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Surveyed, PM	2017 Surveyed	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	13.73	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	623.00	100.000
B	ONE HOUR	✓	18.00	100.000
C	ONE HOUR	✓	610.00	100.000
D	ONE HOUR	✓	111.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	4.000	594.000	25.000
	B	9.000	0.000	8.000	1.000
	C	552.000	3.000	0.000	55.000
	D	33.000	0.000	78.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.01	0.95	0.04
	B	0.50	0.00	0.44	0.06
	C	0.90	0.00	0.00	0.09
	D	0.30	0.00	0.70	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	8.16	0.02	A
B-AD	0.05	15.63	0.05	C
A-BCD	0.05	6.63	0.05	A
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.08	8.25	0.08	A
D-BC	0.31	18.91	0.44	C
C-ABD	0.01	6.85	0.01	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.02	5.98	0.00	505.85	0.012	0.01	7.201	A
B-AD	7.53	7.43	0.00	319.09	0.024	0.02	11.547	B
A-BCD	18.82	18.70	0.00	630.04	0.030	0.03	5.886	A
A-B	3.01	3.01	0.00	-	-	-	-	-
A-C	447.19	447.19	0.00	-	-	-	-	-
D-A	24.84	24.65	0.00	539.61	0.046	0.05	6.989	A
D-BC	58.72	57.94	0.00	354.82	0.166	0.20	12.095	B
C-ABD	2.26	2.24	0.00	590.83	0.004	0.00	6.115	A
C-D	41.41	41.41	0.00	-	-	-	-	-
C-A	415.57	415.57	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.19	7.18	0.00	482.54	0.015	0.02	7.572	A
B-AD	8.99	8.96	0.00	286.45	0.031	0.03	12.971	B
A-BCD	22.47	22.44	0.00	605.14	0.037	0.04	6.177	A
A-B	3.60	3.60	0.00	-	-	-	-	-
A-C	533.99	533.99	0.00	-	-	-	-	-
D-A	29.67	29.61	0.00	512.24	0.058	0.06	7.459	A
D-BC	70.12	69.81	0.00	321.77	0.218	0.27	14.268	B
C-ABD	2.70	2.69	0.00	564.65	0.005	0.00	6.405	A
C-D	49.44	49.44	0.00	-	-	-	-	-
C-A	496.24	496.24	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.81	8.79	0.00	450.29	0.020	0.02	8.154	A
B-AD	11.01	10.95	0.00	241.49	0.046	0.05	15.611	C
A-BCD	27.53	27.48	0.00	570.74	0.048	0.05	6.626	A
A-B	4.40	4.40	0.00	-	-	-	-	-
A-C	654.01	654.01	0.00	-	-	-	-	-
D-A	36.33	36.25	0.00	472.96	0.077	0.08	8.240	A
D-BC	85.88	85.22	0.00	276.14	0.311	0.44	18.789	C
C-ABD	3.30	3.30	0.00	528.66	0.006	0.01	6.851	A
C-D	60.56	60.56	0.00	-	-	-	-	-
C-A	607.76	607.76	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.81	8.81	0.00	450.11	0.020	0.02	8.157	A
B-AD	11.01	11.01	0.00	241.35	0.046	0.05	15.629	C
A-BCD	27.53	27.52	0.00	570.72	0.048	0.05	6.626	A
A-B	4.40	4.40	0.00	-	-	-	-	-
A-C	654.01	654.01	0.00	-	-	-	-	-
D-A	36.33	36.33	0.00	472.63	0.077	0.08	8.250	A
D-BC	85.88	85.85	0.00	276.11	0.311	0.44	18.914	C
C-ABD	3.30	3.30	0.00	528.49	0.006	0.01	6.853	A
C-D	60.56	60.56	0.00	-	-	-	-	-
C-A	607.76	607.76	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.19	7.21	0.00	482.28	0.015	0.02	7.580	A
B-AD	8.99	9.05	0.00	286.24	0.031	0.03	12.991	B
A-BCD	22.47	22.52	0.00	605.11	0.037	0.04	6.181	A
A-B	3.60	3.60	0.00	-	-	-	-	-
A-C	533.99	533.99	0.00	-	-	-	-	-
D-A	29.67	29.75	0.00	511.80	0.058	0.06	7.468	A
D-BC	70.12	70.76	0.00	321.73	0.218	0.28	14.380	B
C-ABD	2.70	2.70	0.00	564.39	0.005	0.00	6.408	A
C-D	49.44	49.44	0.00	-	-	-	-	-
C-A	496.24	496.24	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.02	6.04	0.00	505.54	0.012	0.01	7.206	A
B-AD	7.53	7.56	0.00	318.85	0.024	0.02	11.567	B
A-BCD	18.82	18.85	0.00	630.00	0.030	0.03	5.892	A
A-B	3.01	3.01	0.00	-	-	-	-	-
A-C	447.19	447.19	0.00	-	-	-	-	-
D-A	24.84	24.90	0.00	539.12	0.046	0.05	7.003	A
D-BC	58.72	59.05	0.00	354.75	0.166	0.20	12.190	B
C-ABD	2.26	2.26	0.00	590.53	0.004	0.00	6.118	A
C-D	41.41	41.41	0.00	-	-	-	-	-
C-A	415.57	415.57	0.00	-	-	-	-	-

(Default Analysis Set) - 2028 AGLC, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2028 AGLC, AM	2028 AGLC	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	22.31	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	774.00	100.000
B	ONE HOUR	✓	21.00	100.000
C	ONE HOUR	✓	859.00	100.000
D	ONE HOUR	✓	219.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	19.000	619.000	136.000
	B	8.000	0.000	13.000	0.000
	C	739.000	12.000	0.000	108.000
	D	119.000	1.000	99.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.02	0.80	0.18
	B	0.38	0.00	0.62	0.00
	C	0.86	0.01	0.00	0.13
	D	0.54	0.00	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	8.53	0.03	A
B-AD	0.05	19.80	0.05	C
A-BCD	0.30	10.32	0.43	B
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.34	14.25	0.51	B
D-BC	0.62	52.00	1.51	F
C-ABD	0.03	7.25	0.03	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.79	9.71	0.00	497.29	0.020	0.02	7.383	A
B-AD	6.02	5.94	0.00	284.97	0.021	0.02	12.897	B
A-BCD	102.39	101.54	0.00	580.61	0.176	0.21	7.503	A
A-B	14.30	14.30	0.00	-	-	-	-	-
A-C	466.02	466.02	0.00	-	-	-	-	-
D-A	89.59	88.71	0.00	490.70	0.183	0.22	8.936	A
D-BC	75.29	73.91	0.00	288.16	0.261	0.34	16.806	C
C-ABD	9.03	8.97	0.00	578.56	0.016	0.02	6.320	A
C-D	81.31	81.31	0.00	-	-	-	-	-
C-A	556.36	556.36	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.69	11.67	0.00	472.10	0.025	0.03	7.818	A
B-AD	7.19	7.16	0.00	245.56	0.029	0.03	15.098	C
A-BCD	122.26	121.97	0.00	546.12	0.224	0.29	8.481	A
A-B	17.08	17.08	0.00	-	-	-	-	-
A-C	556.47	556.47	0.00	-	-	-	-	-
D-A	106.98	106.63	0.00	449.98	0.238	0.31	10.474	B
D-BC	89.90	89.00	0.00	241.93	0.372	0.57	23.398	C
C-ABD	10.79	10.77	0.00	549.84	0.020	0.02	6.677	A
C-D	97.09	97.09	0.00	-	-	-	-	-
C-A	664.35	664.35	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.31	14.28	0.00	437.08	0.033	0.03	8.515	A
B-AD	8.81	8.74	0.00	191.31	0.046	0.05	19.718	C
A-BCD	149.74	149.19	0.00	498.45	0.300	0.42	10.290	B
A-B	20.92	20.92	0.00	-	-	-	-	-
A-C	681.53	681.53	0.00	-	-	-	-	-
D-A	131.02	130.24	0.00	385.79	0.340	0.50	14.043	B
D-BC	110.10	106.69	0.00	178.32	0.617	1.42	48.160	E
C-ABD	13.21	13.19	0.00	510.40	0.026	0.03	7.239	A
C-D	118.91	118.91	0.00	-	-	-	-	-
C-A	813.65	813.65	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.31	14.31	0.00	436.26	0.033	0.03	8.531	A
B-AD	8.81	8.81	0.00	190.59	0.046	0.05	19.803	C
A-BCD	149.74	149.73	0.00	498.43	0.300	0.43	10.323	B
A-B	20.92	20.92	0.00	-	-	-	-	-
A-C	681.53	681.53	0.00	-	-	-	-	-
D-A	131.02	130.98	0.00	383.51	0.342	0.51	14.251	B
D-BC	110.10	109.75	0.00	178.13	0.618	1.51	51.998	F
C-ABD	13.21	13.21	0.00	509.50	0.026	0.03	7.252	A
C-D	118.91	118.91	0.00	-	-	-	-	-
C-A	813.65	813.65	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.69	11.72	0.00	470.99	0.025	0.03	7.840	A
B-AD	7.19	7.26	0.00	244.58	0.029	0.03	15.175	C
A-BCD	122.26	122.80	0.00	546.09	0.224	0.29	8.515	A
A-B	17.08	17.08	0.00	-	-	-	-	-
A-C	556.47	556.47	0.00	-	-	-	-	-
D-A	106.98	107.75	0.00	447.50	0.239	0.32	10.621	B
D-BC	89.90	93.47	0.00	241.63	0.372	0.62	24.830	C
C-ABD	10.79	10.81	0.00	548.62	0.020	0.02	6.693	A
C-D	97.09	97.09	0.00	-	-	-	-	-
C-A	664.35	664.35	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.79	9.81	0.00	496.68	0.020	0.02	7.396	A
B-AD	6.02	6.06	0.00	284.43	0.021	0.02	12.933	B
A-BCD	102.39	102.69	0.00	580.57	0.176	0.22	7.537	A
A-B	14.30	14.30	0.00	-	-	-	-	-
A-C	466.02	466.02	0.00	-	-	-	-	-
D-A	89.59	89.96	0.00	489.50	0.183	0.23	9.018	A
D-BC	75.29	76.30	0.00	287.75	0.262	0.36	17.104	C
C-ABD	9.03	9.05	0.00	577.91	0.016	0.02	6.327	A
C-D	81.31	81.31	0.00	-	-	-	-	-
C-A	556.36	556.36	0.00	-	-	-	-	-

(Default Analysis Set) - 2028 AGLC, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2028 AGLC, PM	2028 AGLC	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	12.60	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	829.00	100.000
B	ONE HOUR	✓	25.00	100.000
C	ONE HOUR	✓	779.00	100.000
D	ONE HOUR	✓	159.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	5.000	729.000	95.000
	B	11.000	0.000	13.000	1.000
	C	710.000	4.000	0.000	65.000
	D	120.000	0.000	39.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.01	0.88	0.11
	B	0.44	0.00	0.52	0.04
	C	0.91	0.01	0.00	0.08
	D	0.75	0.00	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	8.79	0.03	A
B-AD	0.07	19.86	0.07	C
A-BCD	0.20	8.69	0.25	A
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.30	11.62	0.42	B
D-BC	0.23	24.71	0.29	C
C-ABD	0.01	7.25	0.01	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.79	9.71	0.00	488.55	0.020	0.02	7.518	A
B-AD	9.03	8.91	0.00	286.96	0.031	0.03	12.941	B
A-BCD	71.52	70.98	0.00	594.73	0.120	0.14	6.866	A
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	548.83	548.83	0.00	-	-	-	-	-
D-A	90.34	89.51	0.00	519.56	0.174	0.21	8.355	A
D-BC	29.36	28.93	0.00	295.12	0.099	0.11	13.502	B
C-ABD	3.01	2.99	0.00	571.63	0.005	0.01	6.330	A
C-D	48.94	48.94	0.00	-	-	-	-	-
C-A	534.53	534.53	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.69	11.66	0.00	461.74	0.025	0.03	7.998	A
B-AD	10.79	10.74	0.00	248.16	0.043	0.04	15.159	C
A-BCD	85.40	85.24	0.00	562.97	0.152	0.18	7.534	A
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	655.36	655.36	0.00	-	-	-	-	-
D-A	107.88	107.59	0.00	488.23	0.221	0.28	9.451	A
D-BC	35.06	34.86	0.00	250.34	0.140	0.16	16.691	C
C-ABD	3.60	3.59	0.00	541.82	0.007	0.01	6.687	A
C-D	58.43	58.43	0.00	-	-	-	-	-
C-A	638.28	638.28	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.31	14.28	0.00	424.20	0.034	0.03	8.782	A
B-AD	13.21	13.11	0.00	194.59	0.068	0.07	19.821	C
A-BCD	104.60	104.31	0.00	519.09	0.202	0.25	8.673	A
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	802.64	802.64	0.00	-	-	-	-	-
D-A	132.12	131.57	0.00	442.26	0.299	0.42	11.566	B
D-BC	42.94	42.44	0.00	188.64	0.228	0.29	24.538	C
C-ABD	4.40	4.40	0.00	500.70	0.009	0.01	7.252	A
C-D	71.57	71.57	0.00	-	-	-	-	-
C-A	781.72	781.72	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.31	14.31	0.00	424.03	0.034	0.03	8.786	A
B-AD	13.21	13.21	0.00	194.48	0.068	0.07	19.859	C
A-BCD	104.60	104.59	0.00	519.06	0.202	0.25	8.685	A
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	802.64	802.64	0.00	-	-	-	-	-
D-A	132.12	132.11	0.00	441.91	0.299	0.42	11.618	B
D-BC	42.94	42.92	0.00	188.52	0.228	0.29	24.715	C
C-ABD	4.40	4.40	0.00	500.57	0.009	0.01	7.254	A
C-D	71.57	71.57	0.00	-	-	-	-	-
C-A	781.72	781.72	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.69	11.72	0.00	461.50	0.025	0.03	8.004	A
B-AD	10.79	10.89	0.00	248.00	0.044	0.05	15.188	C
A-BCD	85.40	85.68	0.00	562.92	0.152	0.18	7.549	A
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	655.36	655.36	0.00	-	-	-	-	-
D-A	107.88	108.42	0.00	487.81	0.221	0.29	9.503	A
D-BC	35.06	35.55	0.00	250.16	0.140	0.17	16.812	C
C-ABD	3.60	3.60	0.00	541.63	0.007	0.01	6.693	A
C-D	58.43	58.43	0.00	-	-	-	-	-
C-A	638.28	638.28	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.79	9.81	0.00	488.32	0.020	0.02	7.525	A
B-AD	9.03	9.09	0.00	286.82	0.032	0.03	12.963	B
A-BCD	71.52	71.69	0.00	594.68	0.120	0.14	6.887	A
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	548.83	548.83	0.00	-	-	-	-	-
D-A	90.34	90.64	0.00	519.20	0.174	0.21	8.405	A
D-BC	29.36	29.58	0.00	294.85	0.100	0.11	13.583	B
C-ABD	3.01	3.02	0.00	571.46	0.005	0.01	6.332	A
C-D	48.94	48.94	0.00	-	-	-	-	-
C-A	534.53	534.53	0.00	-	-	-	-	-

(Default Analysis Set) - 2028 AGLC+400, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2028 AGLC+400, AM	2028 AGLC+400	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	53.61	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	813.00	100.000
B	ONE HOUR	✓	181.00	100.000
C	ONE HOUR	✓	869.00	100.000
D	ONE HOUR	✓	222.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	58.000	619.000	136.000
	B	128.000	0.000	43.000	10.000
	C	739.000	22.000	0.000	108.000
	D	119.000	4.000	99.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.07	0.76	0.17
	B	0.71	0.00	0.24	0.06
	C	0.85	0.03	0.00	0.12
	D	0.54	0.02	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.14	12.40	0.16	B
B-AD	0.83	98.08	3.78	F
A-BCD	0.33	11.77	0.48	B
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.40	18.35	0.65	C
D-BC	0.82	117.04	3.35	F
C-ABD	0.05	7.63	0.05	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	32.37	32.07	0.00	451.01	0.072	0.08	8.587	A
B-AD	103.89	101.62	0.00	280.09	0.371	0.57	19.935	C
A-BCD	102.39	101.49	0.00	553.61	0.185	0.22	7.944	A
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	466.02	466.02	0.00	-	-	-	-	-
D-A	89.59	88.65	0.00	465.19	0.193	0.24	9.537	A
D-BC	77.54	75.92	0.00	262.79	0.295	0.41	19.108	C
C-ABD	16.56	16.44	0.00	570.24	0.029	0.03	6.498	A
C-D	81.31	81.31	0.00	-	-	-	-	-
C-A	556.36	556.36	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	38.66	38.55	0.00	409.97	0.094	0.10	9.691	A
B-AD	124.06	122.31	0.00	239.67	0.518	1.01	30.238	D
A-BCD	122.26	121.92	0.00	513.27	0.238	0.31	9.192	A
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	556.47	556.47	0.00	-	-	-	-	-
D-A	106.98	106.56	0.00	416.83	0.257	0.34	11.589	B
D-BC	92.59	91.26	0.00	211.15	0.439	0.74	29.693	D
C-ABD	19.78	19.75	0.00	539.85	0.037	0.04	6.921	A
C-D	97.09	97.09	0.00	-	-	-	-	-
C-A	664.35	664.35	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	47.34	47.13	0.00	345.16	0.137	0.16	12.070	B
B-AD	151.94	143.24	0.00	184.02	0.826	3.18	76.254	F
A-BCD	149.74	149.07	0.00	457.89	0.327	0.48	11.631	B
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	681.53	681.53	0.00	-	-	-	-	-
D-A	131.02	129.90	0.00	335.93	0.390	0.62	17.378	C
D-BC	113.41	105.35	0.00	140.35	0.808	2.75	88.564	F
C-ABD	24.22	24.17	0.00	498.06	0.049	0.05	7.596	A
C-D	118.91	118.91	0.00	-	-	-	-	-
C-A	813.65	813.65	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	47.34	47.33	0.00	337.71	0.140	0.16	12.397	B
B-AD	151.94	149.53	0.00	182.36	0.833	3.78	98.075	F
A-BCD	149.74	149.71	0.00	455.49	0.329	0.48	11.771	B
A-B	63.86	63.86	0.00	-	-	-	-	-
A-C	681.53	681.53	0.00	-	-	-	-	-
D-A	131.02	130.89	0.00	326.85	0.401	0.65	18.349	C
D-BC	113.41	111.04	0.00	138.24	0.820	3.35	117.036	F
C-ABD	24.22	24.22	0.00	495.94	0.049	0.05	7.630	A
C-D	118.91	118.91	0.00	-	-	-	-	-
C-A	813.65	813.65	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	38.66	38.87	0.00	400.72	0.096	0.11	9.956	A
B-AD	124.06	134.49	0.00	237.24	0.523	1.18	37.930	E
A-BCD	122.26	122.92	0.00	509.73	0.240	0.32	9.324	A
A-B	52.14	52.14	0.00	-	-	-	-	-
A-C	556.47	556.47	0.00	-	-	-	-	-
D-A	106.98	108.14	0.00	406.80	0.263	0.36	12.098	B
D-BC	92.59	102.57	0.00	208.03	0.445	0.85	36.847	E
C-ABD	19.78	19.83	0.00	536.76	0.037	0.04	6.964	A
C-D	97.09	97.09	0.00	-	-	-	-	-
C-A	664.35	664.35	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	32.37	32.49	0.00	448.11	0.072	0.08	8.663	A
B-AD	103.89	106.15	0.00	279.34	0.372	0.61	21.042	C
A-BCD	102.39	102.75	0.00	552.31	0.185	0.23	8.015	A
A-B	43.67	43.67	0.00	-	-	-	-	-
A-C	466.02	466.02	0.00	-	-	-	-	-
D-A	89.59	90.07	0.00	462.34	0.194	0.24	9.684	A
D-BC	77.54	79.22	0.00	261.36	0.297	0.43	19.938	C
C-ABD	16.56	16.60	0.00	569.35	0.029	0.03	6.512	A
C-D	81.31	81.31	0.00	-	-	-	-	-
C-A	556.36	556.36	0.00	-	-	-	-	-

(Default Analysis Set) - 2028 AGLC+400, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2028 AGLC+400, PM	2028 AGLC+400	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	19.05	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	928.00	100.000
B	ONE HOUR	✓	106.00	100.000
C	ONE HOUR	✓	803.00	100.000
D	ONE HOUR	✓	168.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	104.000	729.000	95.000
	B	71.000	0.000	29.000	6.000
	C	709.000	29.000	0.000	65.000
	D	121.000	8.000	39.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.11	0.79	0.10
	B	0.67	0.00	0.27	0.06
	C	0.88	0.04	0.00	0.08
	D	0.72	0.05	0.23	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	10.70	0.09	B
B-AD	0.48	39.09	0.89	E
A-BCD	0.21	9.13	0.26	A
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.32	12.83	0.47	B
D-BC	0.33	34.13	0.48	D
C-ABD	0.07	8.23	0.07	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.83	21.64	0.00	459.62	0.048	0.05	8.216	A
B-AD	57.97	56.92	0.00	274.74	0.211	0.26	16.452	C
A-BCD	71.52	70.96	0.00	581.44	0.123	0.14	7.045	A
A-B	78.30	78.30	0.00	-	-	-	-	-
A-C	548.83	548.83	0.00	-	-	-	-	-
D-A	91.10	90.22	0.00	504.78	0.180	0.22	8.666	A
D-BC	35.38	34.80	0.00	274.07	0.129	0.15	15.010	C
C-ABD	21.83	21.67	0.00	550.45	0.040	0.04	6.806	A
C-D	48.94	48.94	0.00	-	-	-	-	-
C-A	533.77	533.77	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.07	26.01	0.00	423.77	0.062	0.06	9.049	A
B-AD	69.22	68.63	0.00	233.50	0.296	0.41	21.753	C
A-BCD	85.40	85.23	0.00	546.84	0.156	0.18	7.793	A
A-B	93.49	93.49	0.00	-	-	-	-	-
A-C	655.36	655.36	0.00	-	-	-	-	-
D-A	108.78	108.46	0.00	469.15	0.232	0.30	9.971	A
D-BC	42.25	41.93	0.00	225.00	0.188	0.23	19.629	C
C-ABD	26.07	26.02	0.00	516.49	0.050	0.05	7.339	A
C-D	58.43	58.43	0.00	-	-	-	-	-
C-A	637.38	637.38	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	31.93	31.82	0.00	369.55	0.086	0.09	10.656	B
B-AD	84.78	82.98	0.00	176.63	0.480	0.86	37.738	E
A-BCD	104.60	104.28	0.00	499.25	0.210	0.26	9.107	A
A-B	114.51	114.51	0.00	-	-	-	-	-
A-C	802.64	802.64	0.00	-	-	-	-	-
D-A	133.22	132.56	0.00	414.84	0.321	0.46	12.722	B
D-BC	51.75	50.79	0.00	157.53	0.329	0.46	33.433	D
C-ABD	31.93	31.85	0.00	469.65	0.068	0.07	8.222	A
C-D	71.57	71.57	0.00	-	-	-	-	-
C-A	780.62	780.62	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	31.93	31.93	0.00	368.25	0.087	0.09	10.703	B
B-AD	84.78	84.65	0.00	176.42	0.481	0.89	39.091	E
A-BCD	104.60	104.59	0.00	498.76	0.210	0.26	9.133	A
A-B	114.51	114.51	0.00	-	-	-	-	-
A-C	802.64	802.64	0.00	-	-	-	-	-
D-A	133.22	133.20	0.00	413.65	0.322	0.47	12.834	B
D-BC	51.75	51.69	0.00	157.04	0.330	0.48	34.129	D
C-ABD	31.93	31.93	0.00	469.40	0.068	0.07	8.228	A
C-D	71.57	71.57	0.00	-	-	-	-	-
C-A	780.62	780.62	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.07	26.18	0.00	422.24	0.062	0.07	9.093	A
B-AD	69.22	71.03	0.00	233.21	0.297	0.44	22.430	C
A-BCD	85.40	85.71	0.00	546.15	0.156	0.19	7.823	A
A-B	93.49	93.49	0.00	-	-	-	-	-
A-C	655.36	655.36	0.00	-	-	-	-	-
D-A	108.78	109.43	0.00	467.79	0.233	0.31	10.065	B
D-BC	42.25	43.21	0.00	224.29	0.188	0.24	19.981	C
C-ABD	26.07	26.15	0.00	516.14	0.051	0.05	7.350	A
C-D	58.43	58.43	0.00	-	-	-	-	-
C-A	637.38	637.38	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.83	21.90	0.00	458.65	0.048	0.05	8.245	A
B-AD	57.97	58.62	0.00	274.50	0.211	0.27	16.724	C
A-BCD	71.52	71.70	0.00	580.96	0.123	0.14	7.070	A
A-B	78.30	78.30	0.00	-	-	-	-	-
A-C	548.83	548.83	0.00	-	-	-	-	-
D-A	91.10	91.43	0.00	503.90	0.181	0.22	8.734	A
D-BC	35.38	35.73	0.00	273.45	0.129	0.15	15.167	C
C-ABD	21.83	21.88	0.00	550.20	0.040	0.04	6.813	A
C-D	48.94	48.94	0.00	-	-	-	-	-
C-A	533.77	533.77	0.00	-	-	-	-	-

(Default Analysis Set) - 2028 AGLC+180, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2028 AGLC+180, AM	2028 AGLC+180	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	27.93	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	791.00	100.000
B	ONE HOUR	✓	92.00	100.000
C	ONE HOUR	✓	863.00	100.000
D	ONE HOUR	✓	221.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	36.000	619.000	136.000
	B	62.000	0.000	26.000	4.000
	C	739.000	16.000	0.000	108.000
	D	119.000	3.000	99.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.05	0.78	0.17
	B	0.67	0.00	0.28	0.04
	C	0.86	0.02	0.00	0.13
	D	0.54	0.01	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	9.82	0.08	A
B-AD	0.39	31.37	0.62	D
A-BCD	0.31	10.89	0.45	B
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.36	15.70	0.56	C
D-BC	0.70	70.52	2.05	F
C-ABD	0.03	7.41	0.04	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.57	19.40	0.00	476.76	0.041	0.04	7.869	A
B-AD	49.69	48.85	0.00	282.88	0.176	0.21	15.330	C
A-BCD	102.39	101.52	0.00	568.56	0.180	0.22	7.695	A
A-B	27.10	27.10	0.00	-	-	-	-	-
A-C	466.02	466.02	0.00	-	-	-	-	-
D-A	89.59	88.68	0.00	479.09	0.187	0.23	9.200	A
D-BC	76.79	75.30	0.00	276.83	0.277	0.37	17.739	C
C-ABD	12.05	11.96	0.00	574.80	0.021	0.02	6.396	A
C-D	81.31	81.31	0.00	-	-	-	-	-
C-A	556.36	556.36	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	23.37	23.32	0.00	444.73	0.053	0.05	8.541	A
B-AD	59.33	58.91	0.00	243.04	0.244	0.31	19.520	C
A-BCD	122.26	121.95	0.00	531.53	0.230	0.30	8.789	A
A-B	32.36	32.36	0.00	-	-	-	-	-
A-C	556.47	556.47	0.00	-	-	-	-	-
D-A	106.98	106.60	0.00	435.03	0.246	0.32	10.952	B
D-BC	91.70	90.62	0.00	228.24	0.402	0.64	25.952	D
C-ABD	14.38	14.36	0.00	545.32	0.026	0.03	6.779	A
C-D	97.09	97.09	0.00	-	-	-	-	-
C-A	664.35	664.35	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.63	28.54	0.00	397.07	0.072	0.08	9.766	A
B-AD	72.67	71.54	0.00	188.19	0.386	0.60	30.561	D
A-BCD	149.74	149.14	0.00	480.52	0.312	0.45	10.844	B
A-B	39.64	39.64	0.00	-	-	-	-	-
A-C	681.53	681.53	0.00	-	-	-	-	-
D-A	131.02	130.11	0.00	364.03	0.360	0.55	15.342	C
D-BC	112.30	107.40	0.00	161.50	0.695	1.87	61.806	F
C-ABD	17.62	17.58	0.00	504.82	0.035	0.04	7.388	A
C-D	118.91	118.91	0.00	-	-	-	-	-
C-A	813.65	813.65	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.63	28.62	0.00	395.18	0.072	0.08	9.820	A
B-AD	72.67	72.59	0.00	187.17	0.388	0.62	31.367	D
A-BCD	149.74	149.72	0.00	480.21	0.312	0.45	10.892	B
A-B	39.64	39.64	0.00	-	-	-	-	-
A-C	681.53	681.53	0.00	-	-	-	-	-
D-A	131.02	130.97	0.00	360.22	0.364	0.56	15.700	C
D-BC	112.30	111.58	0.00	161.06	0.697	2.05	70.520	F
C-ABD	17.62	17.62	0.00	503.53	0.035	0.04	7.407	A
C-D	118.91	118.91	0.00	-	-	-	-	-
C-A	813.65	813.65	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	23.37	23.46	0.00	442.37	0.053	0.06	8.596	A
B-AD	59.33	60.46	0.00	241.64	0.246	0.33	19.988	C
A-BCD	122.26	122.85	0.00	531.08	0.230	0.30	8.832	A
A-B	32.36	32.36	0.00	-	-	-	-	-
A-C	556.47	556.47	0.00	-	-	-	-	-
D-A	106.98	107.89	0.00	430.98	0.248	0.34	11.172	B
D-BC	91.70	97.06	0.00	227.58	0.403	0.71	28.580	D
C-ABD	14.38	14.42	0.00	543.56	0.026	0.03	6.803	A
C-D	97.09	97.09	0.00	-	-	-	-	-
C-A	664.35	664.35	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.57	19.63	0.00	475.52	0.041	0.04	7.898	A
B-AD	49.69	50.15	0.00	282.26	0.176	0.22	15.540	C
A-BCD	102.39	102.71	0.00	568.19	0.180	0.22	7.740	A
A-B	27.10	27.10	0.00	-	-	-	-	-
A-C	466.02	466.02	0.00	-	-	-	-	-
D-A	89.59	90.00	0.00	477.39	0.188	0.23	9.304	A
D-BC	76.79	78.04	0.00	276.15	0.278	0.40	18.283	C
C-ABD	12.05	12.07	0.00	574.05	0.021	0.02	6.407	A
C-D	81.31	81.31	0.00	-	-	-	-	-
C-A	556.36	556.36	0.00	-	-	-	-	-

(Default Analysis Set) - 2028 AGLC+180, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2028 AGLC+180, PM	2028 AGLC+180	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	14.45	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A327 (N)		Major
B	B	Sheerlands Road		Minor
C	C	A327 (S)		Major
D	D	Church Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.40		0.00	✓	3.20	189.61	✓	14.90
C	7.46		0.00	✓	2.65	201.98	✓	11.36

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		2.75	2.75								28	25
D	Two lanes		3.59	3.59								35	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	758.178	-	-	-	0.276	0.276	0.276	-	0.276	-	-
1	B-AD	486.401	0.083	0.210	-	-	-	0.132	0.300	0.132	0.083	0.210
1	B-C	623.590	0.090	0.226	-	-	-	-	-	-	0.090	0.226
1	C-B	724.644	0.263	0.263	-	-	-	-	-	-	0.263	0.263
1	D-A	669.911	-	-	-	0.244	0.096	0.244	-	0.096	-	-
1	D-BC	524.794	0.143	0.143	0.324	0.227	0.090	0.227	-	0.090	-	-

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

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

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	869.00	100.000
B	ONE HOUR	✓	60.00	100.000
C	ONE HOUR	✓	789.00	100.000
D	ONE HOUR	✓	164.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.000	45.000	729.000	95.000
	B	37.000	0.000	20.000	3.000
	C	709.000	15.000	0.000	65.000
	D	121.000	4.000	39.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.05	0.84	0.11
	B	0.62	0.00	0.33	0.05
	C	0.90	0.02	0.00	0.08
	D	0.74	0.02	0.24	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		A	B	C	D
	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	9.49	0.06	A
B-AD	0.24	25.18	0.30	D
A-BCD	0.20	8.87	0.26	A
A-B	-	-	-	-
A-C	-	-	-	-
D-A	0.31	12.12	0.44	B
D-BC	0.27	28.05	0.36	D
C-ABD	0.03	7.64	0.03	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	14.93	0.00	476.39	0.032	0.03	7.800	A
B-AD	30.11	29.64	0.00	281.84	0.107	0.12	14.250	B
A-BCD	71.52	70.97	0.00	589.12	0.121	0.14	6.940	A
A-B	33.88	33.88	0.00	-	-	-	-	-
A-C	548.83	548.83	0.00	-	-	-	-	-
D-A	91.10	90.24	0.00	513.16	0.178	0.21	8.495	A
D-BC	32.37	31.87	0.00	286.42	0.113	0.13	14.117	B
C-ABD	11.29	11.21	0.00	562.92	0.020	0.02	6.525	A
C-D	48.94	48.94	0.00	-	-	-	-	-
C-A	533.77	533.77	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	17.94	0.00	445.89	0.040	0.04	8.412	A
B-AD	35.96	35.75	0.00	242.01	0.149	0.17	17.435	C
A-BCD	85.40	85.23	0.00	556.18	0.154	0.18	7.642	A
A-B	40.45	40.45	0.00	-	-	-	-	-
A-C	655.36	655.36	0.00	-	-	-	-	-
D-A	108.78	108.47	0.00	480.02	0.227	0.29	9.681	A
D-BC	38.66	38.41	0.00	239.87	0.161	0.19	17.848	C
C-ABD	13.48	13.46	0.00	531.40	0.025	0.03	6.950	A
C-D	58.43	58.43	0.00	-	-	-	-	-
C-A	637.38	637.38	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	21.96	0.00	401.73	0.055	0.06	9.478	A
B-AD	44.04	43.53	0.00	187.05	0.235	0.30	24.995	C
A-BCD	104.60	104.30	0.00	510.75	0.205	0.25	8.851	A
A-B	49.55	49.55	0.00	-	-	-	-	-
A-C	802.64	802.64	0.00	-	-	-	-	-
D-A	133.22	132.62	0.00	430.70	0.309	0.44	12.053	B
D-BC	47.34	46.68	0.00	175.80	0.269	0.35	27.737	D
C-ABD	16.52	16.48	0.00	487.93	0.034	0.03	7.635	A
C-D	71.57	71.57	0.00	-	-	-	-	-
C-A	780.62	780.62	0.00	-	-	-	-	-

Main results: (17:30-17:45)

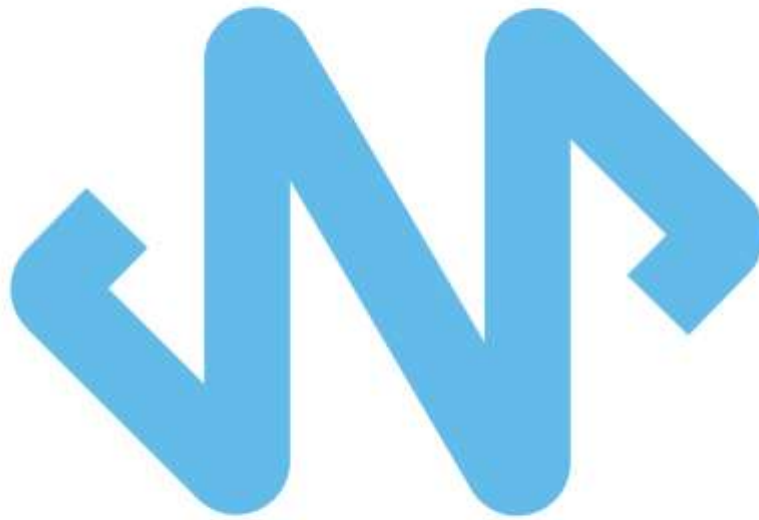
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	22.02	0.00	401.29	0.055	0.06	9.491	A
B-AD	44.04	44.02	0.00	186.91	0.236	0.30	25.185	D
A-BCD	104.60	104.59	0.00	510.61	0.205	0.26	8.866	A
A-B	49.55	49.55	0.00	-	-	-	-	-
A-C	802.64	802.64	0.00	-	-	-	-	-
D-A	133.22	133.20	0.00	430.12	0.310	0.44	12.122	B
D-BC	47.34	47.31	0.00	175.59	0.270	0.36	28.047	D
C-ABD	16.52	16.51	0.00	487.76	0.034	0.03	7.638	A
C-D	71.57	71.57	0.00	-	-	-	-	-
C-A	780.62	780.62	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	18.04	0.00	445.32	0.040	0.04	8.426	A
B-AD	35.96	36.46	0.00	241.80	0.149	0.18	17.572	C
A-BCD	85.40	85.69	0.00	555.97	0.154	0.18	7.658	A
A-B	40.45	40.45	0.00	-	-	-	-	-
A-C	655.36	655.36	0.00	-	-	-	-	-
D-A	108.78	109.36	0.00	479.33	0.227	0.30	9.747	A
D-BC	38.66	39.31	0.00	239.56	0.161	0.20	18.036	C
C-ABD	13.48	13.52	0.00	531.15	0.025	0.03	6.954	A
C-D	58.43	58.43	0.00	-	-	-	-	-
C-A	637.38	637.38	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	15.10	0.00	475.91	0.032	0.03	7.812	A
B-AD	30.11	30.34	0.00	281.65	0.107	0.12	14.339	B
A-BCD	71.52	71.70	0.00	588.92	0.121	0.14	6.964	A
A-B	33.88	33.88	0.00	-	-	-	-	-
A-C	548.83	548.83	0.00	-	-	-	-	-
D-A	91.10	91.41	0.00	512.61	0.178	0.22	8.554	A
D-BC	32.37	32.64	0.00	286.03	0.113	0.13	14.221	B
C-ABD	11.29	11.32	0.00	562.71	0.020	0.02	6.530	A
C-D	48.94	48.94	0.00	-	-	-	-	-
C-A	533.77	533.77	0.00	-	-	-	-	-



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