

A Planning Application by
CROUDACE HOMES LIMITED

In respect of
**Roundwood GA1 Development,
STEVENAGE**

Transport Assessment

January 2025



Document Management

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Contents	Page
1 Introduction	1
2 Pre Application Discussions	5
3 Planning Policy	11
4 Changes in Travel Behaviour and Guidance	22
5 Existing Highways Context	24
6 Development Proposal	51
7 On-Street Car Parking	67
8 Trip Generation and Distribution	70
9 Consideration of the Access Arrangements	80
10 Future Traffic Flow Scenarios	84
11 Highway Impact Analysis	87
12 Summary and Conclusion	106

List of Drawings

2105-037 PL101 – Site access – Haybluff Drive
2105-037 PL102 – Site Access – Back Lane (North)
2105-037 PL103 – Site Access – Back Lane (South)
2105-037 PL104 – Internal Junction Locations
2105-037 PL105 – Internal Junction Arrangements 1 to 9
2105-037 PL106 – Internal Junction Arrangements 10 to 18
2105-037 PL107 – Internal Junction Arrangements 19 to 22
2105-037 PL108 – Proposed Widening of Botany Bay Lane
2105-037 SP03 – Tracking of a Single Deck Bus on Mendip Way
2105-037 PL100 – General Arrangement Internal Road Layout Dimension Plan
2105-037 PL109 – Site Overview With Speed Limit Changes
2105-037 VS01 – Junction Visibility Plan
2105-037 VS02 – Junction Approach Visibility and Forward Visibility
2105-037 SP01 – Tracking of a Refuse Collection Vehicle (Site Layout North)
2105-037 SP02 – Tracking of a Refuse Collection Vehicle (Site Layout South)
2105-037 PL110 – Construction Car Parking Restrictions
2105-037 PL111 – Bus Route Car Parking Restrictions

List of Tables

Table 1.1	GA1 Housing Allocation
Table 3.1	Residential Parking Standards
Table 5.1	Summary of Local Bus Services
Table 5.2	Summary of Local Services And Facilities
Table 5.3	2011 Census method of travel to work
Table 5.4	Census 2021 car ownership per household
Table 5.5	Summary of 2023 On-Street Parking Survey Results
Table 5.6	Summary of 2024 On-Street Parking Survey Results
Table 5.7	Parking Court Survey Results
Table 5.8	Canterbury Way / Martins Way (east) / Grace Way / Martins Way (west) 4-arm Roundabout – Surveyed (2022) Modelling Results
Table 5.9	Great Ashby Way (West) / Orwell Avenue / Greate Ashby Way (East) Priority Junction – Surveyed (2022) Modelling Results
Table 5.10	Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout – Surveyed (2022) Modelling Results
Table 5.11	Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout – Surveyed (2022) Modelling Results
Table 5.12	Gresley Way (North) / Gresley Way (South) / Martins Way 3-Arm Roundabout – Surveyed (2022) Modelling Results
Table 5.13	Orwell Avenue/Calder Way – Surveyed (2022) Modelling Results
Table 5.14	Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Surveyed (2022) Modelling Results
Table 5.15	B197 High Street / Church Lane Priority Junction – Surveyed (2022) Modelling Results
Table 6.1	Dwelling Mix
Table 6.2	Residential Cycle Parking Standards
Table 6.3	Residential Car Parking Standards
Table 7.1	Available Parking for Displaced Vehicles
Table 8.1	TRICS residential vehicle trip rates
Table 8.2	Surveyed Vehicle Movements and Derived Local Trip Rates
Table 8.3	Comparison of TRICS and Local Trip Rates
Table 8.4	Proposed Residential Vehicle Trips
Table 8.5	Estimation of the Development Modal Share – Calculated from Census 2011 Journey To Work Data
Table 8.6	Average Modal Share Proportions By Purpose - Calculated From NTS England 2015-2019
Table 8.7	2011 Census Journey to Work Distribution
Table 8.8	Percentage of Northbound Traffic From Great Ashby Using Calder Way
Table 8.9	Use of Calder Way by Development Traffic from Haybluff Drive
Table 8.10	Use of Back Lane North from Haybluff Drive Access
Table 8.11	Use of Back Lane (West) from Haybluff Drive Access
Table 8.12	Distribution of traffic to Calder Way from Back Lane Access
Table 8.13	Distribution of traffic to Back Lane (north) from Back Lane Access

Table 8.14	Distribution of traffic to Back Lane (west) from Back Lane Access
Table 8.15	Total Number of Additional Trips on Calder Way
Table 8.16	Number of additional trips on Back Lane (north)
Table 8.17	Number of additional trips on Back Lane (west)
Table 9.1	Total development traffic on Back Lane and Haybluff Drive
Table 9.2	Comparison of Survey Flows on Back Lane – Morning Peak – 07:45 to 08:45
Table 9.3	Comparison of Survey Flows on Back Lane – Evening Peak – 17:00 to 18:00
Table 9.4	Difference in Surveyed Flows on Back Lane – Morning Peak
Table 9.5	Difference in Surveyed Flows on Back Lane – Evening Peak
Table 9.6	Comparison of Surveyed Flows on Calder Way – Morning Peak
Table 9.7	Comparison of Surveyed Flows on Calder Way – Evening Peak
Table 10.1	TEMPro Growth Factors
Table 11.1	Canterbury Way / Martins Way (East) / Grace Way / Martins Way (West) 4-Arm Roundabout – Future Year Modelling Results
Table 11.2	Canterbury Way / Martins Way (East) / Grace Way / Martins Way (West) 4-Arm Roundabout – Cumulative Future Year Modelling Results
Table 11.3	Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction – Future Year (2031) Modelling Results
Table 11.4	Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction – Cumulative Future Year Modelling Results
Table 11.5	Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout – Future Year Modelling Results
Table 11.6	Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout - Cumulative Future Year Modelling Results
Table 11.7	Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout – Future Year Modelling Results
Table 11.8	Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout – Cumulative Future Year Modelling Results
Table 11.9	Gresley Way (North) / Gresley Way (South) / Martins Way 3-Arm Roundabout – Future Year (2031) Modelling Results
Table 11.10	Gresley Way (north) / Gresley Way (south) / Martins Way 3-arm Roundabout – Cumulative Future Year (2031) Modelling Results
Table 11.11	Orwell Avenue / Calder Priority Junction – Future Year Modelling Results
Table 11.12	Orwell Avenue / Calder Priority Junction – Cumulative Future Year Modelling Results
Table 11.13	Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Future Year Modelling Results
Table 11.14	Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Cumulative Future Year Modelling Results
Table 11.15	B197 High Street / Church Lane Priority Junction – Future Year Modelling Results
Table 11.16	B197 High Street / Church Lane Priority Junction – Cumulative Future Year Modelling Results
Table 11.17	Site Access/Back Lane Priority Junction – Future Year Modelling Results

List of Figures

Figure 3.1	Stevenage Cycling and Walking Strategy Plan – Route 2
Figure 5.1	Indicative Site Location Plan
Figure 5.2	Extract from the Stevenage Cycle Map
Figure 5.3	Bus Route Plan
Figure 5.4	Distance to Existing Bus Stops
Figure 5.5	Local Services and Facilities
Figure 5.6	Walking Isochrone Plan
Figure 5.7	Cycling Isochrone Plan
Figure 5.8	Plan of Mid-Layer Super Output Areas Stevenage 001 and 002
Figure 5.9	January 2023 On-Street Parking Survey Extents
Figure 5.10	May 2024 – On-Street Parking Survey Extent
Figure 5.11	Location Of Rear Parking Courts
Figure 5.12	Surveyed (2022) Traffic Flows – Morning Peak (0745-0845)
Figure 5.13	Surveyed (2022) Traffic Flows – Evening Peak (1700-1800)
Figure 6.1	Internal Pedestrian and Cycle Routes
Figure 6.2	Proposed SB12 Bus Route
Figure 6.3	Street Hierarchy
Figure 6.4	Construction Traffic Route
Figure 8.1	Proposed Development Traffic Flows – Morning Peak
Figure 8.2	Proposed Development Traffic Flows – Evening Peak
Figure 10.1	Forecast Base (2026) Traffic Flows – Morning Peak
Figure 10.2	Forecast Base (2026) Traffic Flows – Evening Peak
Figure 10.3	Forecast Base (2031) Traffic Flows – Morning Peak
Figure 10.4	Forecast Base (2031) Traffic Flows – Evening Peak
Figure 10.5	GA2 Development Traffic Flows – Morning Peak
Figure 10.6	GA2 Development Traffic Flows – Evening Peak
Figure 10.7	Total Forecast (2026) Traffic Flows – Morning Peak
Figure 10.8	Total Forecast (2026) Traffic Flows – Evening Peak
Figure 10.9	Total Forecast (2031) Traffic Flows – Morning Peak
Figure 10.10	Total Forecast (2031) Traffic Flows – Evening Peak
Figure 10.11	Cumulative Total Forecast (2026) Traffic Flows – Morning Peak
Figure 10.12	Cumulative Total Forecast (2026) Traffic Flows – Evening Peak
Figure 10.13	Cumulative Total Forecast (2031) Traffic Flows – Morning Peak
Figure 10.14	Cumulative Total Forecast (2031) Traffic Flows – Evening Peak

List of Appendices

A	Highways Consultation Responses On Planning Application 23/02492/FUL
B	Previous On-Street Parking Plans
C	Survey Results And Location Of Parked Vehicles From The January 2023 and May 2024 Parking Surveys
D	Personal Injury Crash Locations
E	MCC Survey Results
F	Peak Hour Analysis
G	Canterbury Way / A1072 Martins Way (East) / Grace Way / A1072 Martins Way (West) 4-arm roundabout –Modelling output report and geometric parameter drawing
H	Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction – Modelling Output Report And Geometric Parameter Drawing
I	Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout – Modelling Output Report and Geometric Parameter Drawing
J	Mendip Way / Great Ashby Way East / Whitehorse Lane / Great Ashby Way West 4-arm Roundabout – Modelling Output Report And Geometric Parameter Drawing
K	Gresley Way (North) / Gresley Way (South) / Martins Way 3-Arm Roundabout –Modelling Output Report And Geometric Parameter Drawing
L	Orwell Avenue/Calder Way Priority Junction – Modelling Output Report And Geometric Parameter Drawing
M	Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Modelling Output Report and Geometric Parameter Drawing
N	B197 High Street / Church Lane Priority Junction - Modelling Output Report And Geometric Parameter Drawing
O	Proposed Site Layout
P	Proposed SB12 Bus Timetable
Q	Car Parking Location Plan
R	TRICS Residential Trip Rate Report
S	Census Journey to Work – Vehicle Trip Analysis
T	Back Lane and Calder Way 2024 Survey Data
U	GA2 Traffic Flows
V	Back Lane/Site Access Modelling Output Report and Geometric Parameter Drawing

1 Introduction

- 1.1 Land at Roundwood (The Site) is allocated for development within the North Hertfordshire Local Plan in Policy GA1 for 330 homes. The allocation policy outlines a series of criteria that must be complied with to support the delivery of the allocation, which are set out in Table 1.1 below:

Table 1.1 GA1 Housing Allocation

Ref	Local Housing Allocations and site specific policy criteria	Dwelling Estimate
	Land at Roundwood (Graveley parish)	330 homes
Policy GA1	Detailed drainage strategy identifying water infrastructure required and mechanism(s) for delivery	
	Sensitive integration into existing settlement in terms development layout and building orientation	
	Principal vehicular access taken from existing residential streets within Great Ashby	
	Provision for sustainable modes of transport having regard to the Stevenage Mobility Strategy	
	Maintain general integrity of Weston Road. Including as a through route for pedestrians.	
	Integration of Footpath Graveley 010 as a perimeter feature around the north of the site.	

- 1.2 The allocation within the Local Plan confirms that the principle of a residential in this location is acceptable, subject to meeting the criteria in Policy GA1.
- 1.3 This Transport Assessment has been prepared by Transport Planning Associates (**TPA**) to support a full planning application on the Site for the:

"Erection of 281 dwellings and associated roads, parking, drainage, landscaping, open space and servicing facilities"

- 1.4 The National Planning Policy Framework (**NPPF**) includes a presumption in relation to sustainable development and also indicates that developments that accord to an up-to-date development plan should be approved without delay.
- 1.5 The Transport Assessment has been prepared with reference to the NPPF Framework to demonstrate that the highways aspect of the proposed development is in accordance with the criteria of Policy GA1, with vehicular access from the streets within Great Ashby, with access points via Haybluff Drive and

Calder Way/Back Lane. (Back Lane being an alternative name for the road referred to in Policy GA1 as Weston Road).

- 1.6 The provision for sustainable transport has been fully considered with the scheme design including provision for pedestrians and cyclists in accordance with local highway design standards, with direct links to the surrounding footway and cycleway network. A contribution to the wider sustainable transport network will also be made under the guidance contained in Hertfordshire County Council Guide to Developer Infrastructure Contributions (2021), which will include the support of local bus services.
- 1.7 The construction of a new alignment for Back Lane which will serve a total of 96 dwellings will allow the section of the existing Back Lane between Calder Way and Haybluff Drive to be stopped up for vehicles, allowing this to be redesigned as a car free pedestrian and equestrian route along the boundary of the eastern and southern side of the development. This section of the road will be converted to a greenway, ensuring that the integrity of Back Lane has been maintained as a through route for equestrians, pedestrians and cyclists. The Site is also well connected to Footpath Graveley 010. Traffic previously using this section of Back Lane will be able to re-route via the internal road through the development.
- 1.8 Further to this, the Transport Assessment describes the Site in the context of the local highway network and outlines the existing opportunities that are available to residents for travel on foot, by bicycle and by public transport, as part of their daily journeys to local schools, shopping facilities and places of work.
- 1.9 The Transport Assessment considers how the Site is located in relation to amenities and facilities within Great Ashby and will further demonstrate that the proposed development has been designed with focus on sustainable and active modes of transport.
- 1.10 A support for local bus services will be provided allowing better access to public transport for residents of the proposed development and Great Ashby alike. Planning obligations will be provided to also improve the pedestrian and cycle links to the town centre, to extend the Beryl bike scheme into the Great Ashby area and to introduce car club facilities into the development area. Improvements to the cycling provision on Botany Bay Lane will also be made.
- 1.11 The Transport Assessment will present the forecast trip generation and the distribution of trips associated with the development and analyse the impact of the additional development on the local highway network. Consideration for the calculation of background traffic growth and committed development, including the Local Plan GA2 site is also presented.

- 1.12 This assessment will further demonstrate that the internal highway network has been designed in accordance with local design guidelines and provides information on key local issues such as the necessary alterations to on-street-car parking necessary to accommodate public transport connections to the Site.

Planning History

- 1.13 An initial planning application for the Site was submitted in 2010 (application reference 10/00583/1), followed by a second application in 2016 (application reference 16/01713), both of which were supported by a Transport Assessment, prepared by Wormald Burrows Partnership Limited. It is understood that a level of agreement was reached with Hertfordshire County Council on highway matters, subject to a number of planning conditions and a Section 106 contribution. These applications were withdrawn following the submission of a third planning application in 2023.
- 1.14 A third planning application on the site was submitted in 2023 (reference 23/02492/FP). This application was supported by a Transport Assessment (TPA Report Reference: 2105-037/TA/01) and a Travel Plan (TPA Report Reference: 2105-037/TP/01) prepared by TPA. Following this submission consultation responses were received from both Hertfordshire County Council (**HCC**) and North Hertfordshire District Council (**NHDC**) which are contained within **Appendix A**.
- 1.15 These consultation responses raised a number of observations in relation to the highway aspects of the development and the proposed site layout as follows:
- Vehicular access arrangements should not induce additional 'rat running' via Back Lane through Graveley and Weston;
 - The connection within the site between Haybluff Drive and Back Lane would allow 'rat running' to be made more easily than the existing route along Calder Way;
 - The proposed diversion of bus SB7 should be reviewed, with the preference for a service that would extend the whole length of Mendip Way;
 - The proposed parking alterations necessary to accommodate the bus service would need to be further reviewed; and,
 - The level of parking within the development should be reviewed.
 - Similar comments were also received from the parish councils of Graveley, Great Ashby and Weston and members of the public which made reference to transport matters.
- 1.16 Following further comments received on the proposed site layout, in relation to the access arrangements and the identification of some of the woodland adjoining the site as being ancient woodland, requiring a 15m buffer zone, it was decided not to pursue the 2023 application. Instead, a Planning Performance Agreement (PPA) to be entered into with the planning authority, which would look to resolve the outstanding matters associated with the proposed development to be resolved.

Report Structure

1.17 The remainder of this report is structured in the following manner:

- Chapter 2: Pre Application Discussions;
- Chapter 3: Planning Policy;
- Chapter 4: Changes in Travel Behaviour and Guidance;
- Chapter 5: Existing Highway Context;
- Chapter 6: Development Proposal;
- Chapter 7: On Street Car Parking;
- Chapter 7: Trip Generation and Distribution;
- Chapter 8: Future Traffic Flow Scenarios;
- Chapter 9: Highway Impact Analysis; and
- Chapter 10: Summary and Conclusion.

2 Pre Application Discussions

2.1 Following the comments received on the 2023 planning application, Croudace Homes Limited (**the applicant**) entered into a Planning Performance Agreement (**PPA**) with North Hertfordshire District Council (**NHDC**), which has allowed extensive discussions with NHDC and HCC to take place to develop the Masterplan for the scheme and allow the principles of the development to be established. These details have included the development of a revised Masterplan for the scheme including the revised access arrangements for the site.

2.2 From a highways perspective the key highways issues discussed were as follows:

- The internal site layout should provide direct links for pedestrians and cyclists and priority within the development for active travel users;
- The proposed access arrangements in relation to the amount of development that can be served off each access point;
- The use of Back Lane and the additional traffic assigned to the road;
- The capacity of Calder Way to cater for additional development traffic; and,
- The impact on on-street car parking associated with the development of a bus route on Mendip Way and the use of the road for construction traffic.

2.3 The planning performance agreement included a number of workshop sessions between officers of NHDC and HCC and the project design team. These workshops discussed the design of the proposed development, with separate meetings held to address the highways matters that were outstanding from the previous planning application. The schedule of meetings held were as follows:

- | | |
|-----------------------------------|---------------------------|
| ▪ 21 st May 2024 | Inception meeting |
| ▪ 4 th June 2024 | Croudace Presentation |
| ▪ 26 th June 2024 | Workshop 1 |
| ▪ 10 th July 2024 | Workshop 2 |
| ▪ 19 th July 2024 | Highways Meeting |
| ▪ 24 th July 2024 | Workshop 3 |
| ▪ 30 th July 2024 | Energy and Sustainability |
| ▪ 11 th September 2024 | Workshop 4 |
| ▪ 2 nd October 2024 | Workshop 5 |
| ▪ 6 th November 2024 | Workshop 6 |
| ▪ 25 th November 2024 | Highways Meeting |

Access Arrangements

- 2.4 One of the key matters that was discussed in the early stages of these workshop sessions was the vehicular access arrangements into the site. In the consultation responses received from the 2023 planning application, that it was clear that the view of both the highway authority (HCC) and NHDC was that providing a link between Haybluff Drive and Back Lane within the Site, would encourage existing residents of Great Ashby to 'rat run' on Back Lane. These trips would be to destinations to the north of Stevenage, such as Baldock, Letchworth, the A1 (M) north and the A505, producing an unacceptable increase in traffic flows through the villages of Weston and Graveley.
- 2.5 In initial discussion with HCC and NHDC on the 2023 application, an indirect route through the development site was considered to link Haybluff Drive to Back Lane. This would increase travel time along the route and was originally suggested by HCC in their consultation response to the pre-application submission for the 2023 planning application.
- 2.6 However, following further comments from NHDC and HCC, it became clear that their preferred approach would be to not provide any vehicular link between Back Lane and Haybluff Drive within the development site.
- 2.7 This would mean that any traffic utilising Back Lane to access Weston and destinations to the north of Stevenage, would have to utilise the existing signed route via Calder Way, rather than route along Haybluff Drive.
- 2.8 The route of the re-aligned Back Lane through the Site was also discussed during the workshop sessions. It was also agreed that site constraints, including the 15m buffer around the edge of the site from the ancient woodland, would not allow Back Lane to be re-routed around the western edge of the development, whilst maintaining a reasonable area for development on the site. It was also considered beneficial to reduce the traffic flow increase on Haybluff Drive as far as possible.
- 2.9 It was therefore agreed that the alignment should be routed through the western portion of the development, allowing some of development to be served off the road, whilst recognising that there would be a limit on the number of units that could be accessed off Calder Way and Back Lane in relation to the ability of Calder Way to cater for the peak hour traffic flows.
- 2.10 When considering the number of units that would be accessed from both access points a number of factors were considered:
- The number of units that can safely be accessed off a single access;
 - The capacity of Calder Way to cater for additional development traffic; and

- The impact on Back Lane and through the villages of Weston and Graveley.

- 2.11 Following discussions within the workshop sessions, it was agreed that development being split between the two access points, with a smaller proportion of the proposed development (96 homes) being accessed off Calder Way and Back Lane and a larger part of the proposed development being accessed off Haybluff Drive (185 homes). No vehicular link, other than emergency access, within the development will be provided between the two sides of the development.
- 2.12 An increase in traffic on Back Lane is an inevitable consequence of additional development in the Great Ashby area as allocated in the Local Plan. Providing direct access onto Back Lane, will allow some residents onto Back Lane, without having to pass along Calder Way, but the proportion of traffic looking to travel to the north and west would be relatively small. It was considered that proposed access arrangement would limit the increase of traffic on Back Lane as far as reasonably practicable, which was the primary concern of the highway authority.
- 2.13 These matters are further discussed later in this Transport Assessment.

Public Transport

- 2.14 It is generally accepted that public transport services should be available within a 400m walking distance for residents of new developments. With the closest existing bus service (SB7) operates on Great Ashby Way which would not provide a bus service would need to this guidance.
- 2.15 The need for a bus service close to the development is also supported by Policy 2 of the Local Transport Plan which states:
- 'The county council will encourage the location of new development in areas served by, or with the potential to be served by, high quality passenger transport facilities so they can form a real alternative to the car'.*
- 2.16 The need for a public transport service within 400m of the Site has been reinforced by officers of both NHDC and SCC, within the workshop sessions and within a subsequent meeting which was held on 25th November 2024, where officers of SCC indicated that without the provision of a bus service operating along Mendip Way the proposals could not be supported.
- 2.17 Given the position of HCC, it is considered that it will be necessary to provide public transport services within 400m of the majority of residents living within the site to ensure that the proposed development conforms to sustainable transport policy.

- 2.18 To provide public transport services with 400m of the residents of the site, it is necessary to route buses along Bray Drive and Mendip Way, with the service initially turning back at the Haybluff Drive roundabout, with the longer term aspiration to provide bus services along the whole length of Mendip Way, once the GA2 development is also constructed.
- 2.19 Further discussions have been undertaken with the local bus operator regarding the suitability of Bray Drive and Mendip Way to accommodate the proposed bus route, and they have indicated that due to the current amount of on-street car parking on sections of Mendip Way, they would not be prepared to operate a bus service along the road, despite the road being initially designed to accommodate bus services.
- 2.20 Therefore, to make the development acceptable in planning terms measures would need to be undertaken to restrict the amount of on-street parking that is permitted on Bray Drive and Mendip Way.

On-Street Parking

- 2.21 On-street car parking on the roads within the Great Ashby area has been a longstanding local issue. This is primarily the result of the residential properties within this area being constructed when restrictions on the levels of residential car parking were part of national planning policy.
- 2.22 Whilst there are no bus services operating on Mendip Way at present, the road was designed to a standard that could accommodate public transport services, but the existing level of car parking on sections of Bray Drive and Mendip Way would prevent the necessary public transport services operating along the road.
- 2.23 The displacement of car parking on Bray Drive and Mendip Way is necessary to accommodate both the proposed bus service along Mendip Way and construction traffic for the GA1 development was also extensively discussed in the pre-application workshop sessions.
- 2.24 It has been the long term aspiration of the applicant to maintain as many car parking spaces as possible for local residents. The 2016 planning application proposed 'in verge' parking bays on both sides of Mendip Way to accommodate parking for residents along the bus route.
- 2.25 The agreed scheme for the 2016 planning application is presented in drawings 946 /104 and 946/105 prepared by Croudace Homes, which are presented in **Appendix B**. This design proposed a total of 55 'in verge' car parking bays along Mendip Way/Bray Drive and Haybluff Drive. A number of schemes were proposed with the 2023 planning application, which include a combination of 'in verge' parking bays and parking restrictions. These schemes are also presented in **Appendix B**.

- 2.26 However, the introduction of Hertfordshire's Local Transport Plan 4 (**HLTP4**), adopted by the county council in 2018, has resulted in a change in local transport planning policy since 2016, so that the loss of the verges necessary to accommodate the 'in verge' bays is not considered, by HCC or NHDC, to be policy compliant. HCC have also indicated that as Mendip Way was originally designed as a bus route, this should not be compromised by the presence of residential on-carriageway parking.
- 2.27 The local transport policy dictates that the loss of highway verge to provide car parking bays should only be considered as a last resort.
- 2.28 Without the provision of 'in verge' parking bays, it is inevitable that any parking restrictions will reduce the number of vehicles that can be parked on Bray Drive and Mendip Crescent.
- 2.29 To reduce the number of spaces that are lost, it has been agreed in pre-application discussions, that a 'manage and monitor' approach to the implementation of the necessary car parking restrictions This would result in the following:
- The initial implementation of parking restrictions would be implemented in areas which would directly impact on the route of both the proposed bus service and on construction traffic. This would initially involve temporary parking restrictions being imposed on the southern side of Mendip Way and the eastern side of Bray Drive, on the Haybluff Drive roundabout and on Haybluff Drive, to allow construction traffic to enter and exit the Site.
 - Monitoring would then be implemented to determine the impact of these parking restrictions on parking on the surrounding streets.
 - Following a review of impacts of these parking restrictions, either the temporary parking restrictions on one side of road would be made permanent or additional measures would be introduced to manage the impact of these restrictions. This could involve the provision of 'in verge' parking bays to provide additional parking, but given the policy position in relation to this provision of these bays, this would be considered a last resort.
- 2.30 The applicant will provide funding to the highway authority, to implement the Traffic Regulation Orders that would be necessary to implement the parking restrictions and would provide additional funding to monitor the impact of the parking restrictions on the level of parking on the surrounding streets and within the parking courts.
- 2.31 A number of sustainable travel measures will also be implemented, that would be available to local residents, both within the proposed development and within the wider Great Ashby area, which would encourage sustainable travel. The measures would include the new bus route, the provision of car club spaces within the development and the extension of the Beryl bike scheme into the Great Ashby area.
- 2.32 Further details of the restrictions that will be introduced are discussed in Chapter 6 of this report.

Site Plan

- 2.33 The primary purpose of the workshop sessions was to develop a site Masterplan that would be acceptable to all disciplines. In relation to the highways element of the site plan, these discussions have included:
- The form of the access junctions and connections to Back Lane and Haybluff Drive;
 - The route of the proposed diversion of Back Lane;
 - The form of the existing alignment of Back Lane once this is stopped up for vehicles;
 - The form of cycle and pedestrian connections within the site and to connectivity to the surrounding areas;
 - The design of the internal highway junctions;
 - The hierarchy of roads within the site; and
 - Cycle and car parking numbers and location of cycle parking within each plot.
- 2.34 This Transport Assessment has been prepared to reflect the discussions that were carried out within the workshops that have been carried out in accordance with the PPA.

3 Planning Policy

- 3.1 This chapter of the Transport Assessment sets out the national and local planning policies that relate to the proposed development insofar as they concern transport matters.

National Planning Policy Framework

- 3.2 The latest version of the National Planning Policy Framework ("**NPPF**"), which was published in December 2024, sets out the Government's planning policies for England and the application thereof, providing a framework within which local authorities can produce plans for development. In transport terms the thrust of NPPF is a "*presumption in favour of sustainable development*" (paragraph 10).
- 3.3 The NPPF defines a sustainable transport mode as follows:

"Any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, ultra-low and zero emission vehicles, car sharing and public transport"¹.

- 3.4 Regarding sustainability, it states in Paragraph 7 that:

"The purpose of the planning system is to contribute to the achievement of sustainable development, including the provision of homes, commercial development and supporting infrastructure in a sustainable manner. At a very high Level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own need".

- 3.5 Regarding transport assessments, statements and travel plans, it states in Paragraph 118:

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

- 3.6 According to the NPPF (Paragraph 117), applications for development should:

"a) give priority First to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality

¹ Annex 2, Glossary, p. 76

public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations”.

3.7 Importantly, Paragraph 116 states that:

“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network following mitigation would be severe, taking into account all reasonable scenarios”.

3.8 The Transport Assessment will demonstrate that

- there are no specific highway safety matters in the vicinity of the application site; and
- The local road network has the capacity to cater for the cumulative impact of development in the area.

3.9 The proposed development seeks to conform with the policy outlined in the NPPF, being designed in a manner that promotes sustainable travel through the provision of new walking and cycling routes that connect efficiently with the surrounding area.

Hertfordshire Local Transport Plan 4

3.10 The Hertfordshire Local Transport Plan 4 (**HLTP4**) is the overarching transport policy document for the area is the Hertfordshire and provides the framework for achieving better transport systems in Hertfordshire for the plan period 2018-2031. The HLPT4 was adopted in 2018 and covers all modes of transport including walking, cycling, public transport, car-based travel, reducing road freight movements and making provision for those with mobility impairments.

3.11 The HLTP4 sets out the Council's vision for how transport can help deliver a positive future for Hertfordshire as well as outlining how safe and efficient travel can be achieved in the county. The plan covers the period up to 2031. The overall approach to transport is that the plan looks to provide a transition from a car based transport strategy to a more balanced approach that caters for all forms of transport and seeks to encourage a switch from the private motor car to sustainable transport.

3.12 The HLTP4 looks to deliver nine transport objectives which strongly relate to the sense of prosperity, place and people elements of the vision of Hertfordshire as a whole. The nine objectives are presented below:

- Improve access to international gateways and regional centres outside Hertfordshire;
- Enhance connectivity between urban centres in Hertfordshire;
- Improve accessibility between employers and their labour markets;
- Enhance journey reliability and network resilience across Hertfordshire;
- Enhance the quality and vitality of town centres;
- Reserve the character and quality of the Hertfordshire environment;
- Reduce carbon emissions;
- Make journeys and their impacts safer and healthier; and
- Improve access and enable participation in everyday life through transport.

3.13 Across the objectives the plan promotes 4 principles which should be features common to all activities to manage and improve the transport system. These principles are:

- Integration of land use and transport planning;
- Application and adoption of technology;
- Cost effective delivery and maintenance; and
- Modal shift and encouraging active travel Hertfordshire.

3.14 In Policy 1 the HLTP4 sets out a clear hierarchy in relation to the users of the highway network in relation to the design of highway schemes:

"To support the creation of built environments that encourage greater and safer use of sustainable transport modes, the county council will in the design of any scheme and development of any transport strategy consider in the following order:

- *Opportunities to reduce travel demand and the need to travel*
- *Vulnerable road user needs (such as pedestrians and cyclists)*
- *Passenger transport user needs*
- *Powered two wheeler (mopeds and motorbikes) user needs*
- *Other motor vehicle user needs"*

3.15 In relation to development management Policy 5 states:

"The county council will to work with development promoters and the district and borough councils to:

a) Ensure the location and design of proposals reflect the LTP Transport User Hierarchy and encourage movement by sustainable transport modes and reduced travel demand.

b) Ensure access arrangements are safe, suitable for all people, built to an adequate standard and adhere to the county council's Highway Design Standards.

c) Consider the adoption of access roads and internal road layouts where they comply with the appropriate adoption requirements and will offer demonstrable utility to the wider public. Where internal roads are not adopted the county council will expect suitable private management arrangements to be in place.

d) Secure developer mitigation measures to limit the impacts of development on the transport network, and resist development where the residual cumulative impact of development is considered to be severe.

e) Require a travel plan for developments according to the requirements of 'Hertfordshire's Travel Plan Guidance'.

f) Only consider new accesses onto primary and main distributor roads where special circumstances can be demonstrated in favour of the proposals.

g) Resist development that would either severely affect the rural or residential character of a road or other right of way, or which would severely affect safety on rural roads, local roads and rights of way especially for vulnerable road users. This should include other routes which are important for sustainable transport or leisure.

h) Ensure that any new parking provision in new developments provides facilities for electric charging of vehicles, as well as shared mobility solutions such as car clubs and thought should be made for."

3.16 In relation to managing travel demand Policy 13 New Roads and Junctions indicates that:

"Future capacity that may be required beyond this could be safeguarded but should not be released until necessary to avoid inducing demand."

- 3.17 This policy indicates that increasing road network capacity should not be considered as the default option as providing additional capacity would encourage a greater number of vehicles onto the network, this inducing additional traffic growth.

North Hertfordshire Local Plan 2011 - 2031

- 3.18 The North Hertfordshire Local Plan 2011-2031 was adopted on 8th November 2022. The plan outlines the District Council's strategy for ensuring that growth is delivered in the right place and is of the right quality and character.
- 3.19 This Local Plan sets out the long-term vision for the district by identifying how and where new homes, jobs and infrastructure will be delivered. The plan encourages high-quality sustainable design and consideration for the natural environment.
- 3.20 In 2019 North Hertfordshire District Council declared a climate emergency and committed to take action to address the causes of climate change across the district. An overarching principle of the Local Plan is to achieve sustainable development.
- 3.21 In relation to transport and infrastructure Policy SP6 relates to sustainable development which indicates:

"We will deliver accessibility improvements and promote the use of sustainable transport modes insofar as reasonable and practicable. We will:

a) Comply with the NHDC Transport Strategy and the provisions of the Local Transport Plan and other supporting documents as relevant;

b) Encourage development in locations which enable sustainable journeys to be made to key services and facilities;

c) Work with Hertfordshire County Council, neighbouring authorities, Highways England and service providers to ensure that a range of sustainable transport options are available to all potential occupants or users. This may involve new or improved pedestrian, cycle and passenger transport (including rail and/or bus) links and routes;

d) Seek the earliest reasonable opportunity to implement sustainable travel infrastructure on Strategic Housing Sites and other development sites in order to influence the behaviour of occupiers or users, along with supporting Travel Plans in order that sustainable travel patterns become embedded at an early stage;

e) Assess development proposals against the parking standards set out in this Plan and having regard to relevant supplementary advice;

f) Require applicants to provide assessments, plans and supporting documents to demonstrate the safety and sustainability of their proposals; and

g) Protect existing rights of way, cycling and equestrian routes and, should diversion be unavoidable, require replacement routes to the satisfaction of the Council."

- 3.22 The Site is allocated within the emerging North Hertfordshire Local Plan in Policy GA1 for 330 homes. The Site's policy criteria are shown in Table 1.1 in the introduction to this report.

North Hertfordshire - Vehicle Parking at New Development Supplementary Planning Document (SPD)

- 3.23 Vehicle Parking at New Development SPD adopted in September 2011 is an updated version of the 2006 SPD reflecting the national and local policy changes at that time.
- 3.24 This SPD sets out the car and cycle parking Standards for new residential developments as shown in Table 3.1.

Table 3.1 Residential Parking Standards

Class Use C3	Car Parking Standard	Minimum Cycle Parking Standard
1 bedroom	1 space per dwelling minimum	1 secure covered space per dwelling. None if garage or secure area provided within curtilage of dwelling
2–3 bedrooms	2 spaces per dwelling minimum	
Visitor / unallocated	Between 0.25 and 0.75 spaces per dwelling (rounded up to nearest whole number) with the higher standard being applied where there are no garages in the schemes and the lower standard applied where every dwelling in the scheme is to be provided with a garage	For above C3 general housing - if no garage or secure area is provided within curtilage of dwelling then 1 covered and secure space per dwelling in a communal area for visitors

Hertfordshire County Council Guide to Developer Infrastructure Contributions (2021)

- 3.25 The guide provides a Hertfordshire overview of obligations which may be sought as part of the planning process followed by a focus on those obligations which might be sought by the county council to mitigate the impact of development.
- 3.26 Technical Appendix 1 identifies the county council's methodology for the calculation of appropriate contributions to mitigate the highway impact of developments.
- 3.27 The document identifies a two-strand approach to transport contributions, with the first stand being based on the immediate and specific impact that larger developments would have on the highway network in the immediate vicinity of the development site. These improvements would be established and designed via a Transport Assessment in the conventional way. The second strand would address the cumulative impacts of all development, large and small, facilitating delivery and enhancement of the necessary active and sustainable transport networks. This second strand contribution is intended to help implement broader transport measures in the catchments of new development from which contributions are secured. The need for second stand contributions will be balanced against the level of first strand contributions and any other relevant planning matters.
- 3.28 For residential developments, second strand contribution are currently calculated using a tariff of £6,826 per dwelling. However, it is considered that Stand 2 obligations should only be utilised to development sustainable travel infrastructure that relates directly to the proposed development. This is to ensure that these contributions are consistent with the guidance on planning obligations contained in the NPPF.

Stevenage Mobility Strategy (2016)

- 3.29 Stevenage Borough Council's report 'Mobility Strategy for Stevenage' presents initiatives in relation to mobility and behaviour, that look to not only mitigate Local Plan growth but to accelerate the more efficient use of transport infrastructure within the town. It enables growth in active travel, not just for this Local Plan period but beyond, with the growth in active transport corresponding with a reduced reliance on the car.
- 3.30 The strategy looks to prioritise mobility and looks to provide a more attractive choice in movement than already exists, committing funds to physical improvements to the higher capacity cycle network and in public transport.
- 3.31 The strategy also indicates that Stevenage Borough Council will place a high priority on active travel. For the purposes of the Local Plan period and beyond, it will plan on the basis that the proportion of travel by active travel will increase, that commuter peak car demand will remain broadly static and therefore that the proportion of travel by car driver will decrease.
- 3.32 The strategy further encourages this shift through the creation of an active travel /car differential whereby it is more attractive to cycle for short journeys than drive.

Future Town, Future Transport Strategy (2019)

- 3.33 The Strategy sets out the Stevenage Borough Council's approach to delivering sustainable transport for better living conditions. There are four key themes throughout the strategic objectives:
- Connectivity – improving connections between the residential network to jobs, services and business;
 - Liveable Streets – restoring neighbourhood streets to places the community is proud of;
 - Active and Healthy Travel – Achieve a greater modal split for active travel through reducing the need for private vehicle trips; and
 - Green Travel – reducing the carbon footprint of Stevenage's travel movements to improve air quality.
- 3.34 Stevenage was originally planned with strong pedestrian and cycle links, with the strategy identifying opportunities for Local Enterprise Partnerships (LEPs) funding to help support improvements to further connect local residents to employment and retail sites.

- 3.35 The short-term action plan has been split across two parts, which cover the first 12 months of the plan (2019-2020) which generally include schemes that are underway or have allocated funding; and the second part covering the following two-year period (2020-2022).

Local Cycling & Walking Infrastructure Plan

- 3.36 The Stevenage Local Cycling and Walking Infrastructure Plan (**LCWIP**) brings together the existing evidence on potential improvements to the walking and cycling networks within Stevenage, and provides a methodology for improvements including:

- Improving the cycling network to reduce the need to travel by private vehicle and increase active travel;
- Identifying and prioritising walking opportunities to increase the number of walking trips to local destinations;
- Ensuring that new development complements and connects to the existing and planning walking and cycling network; and
- Helping the County Council to bid for funding to improve the existing network.

- 3.37 Stevenage covers an area of approximately 27km², spanning less than 9km north to south and 5.5km east to west. Given that cycling has the potential to replace trips by other modes of up to 10km, it would be possible to cycle within this distance, to/from destinations within the whole of the Stevenage Borough Council authority area.

- 3.38 The plan contains the results of a study that has been undertaken to determine the existing travel patterns and journey routes of cyclists within Stevenage which has led to the identification of a number of key routes, which could be developed within the town. These routes include:

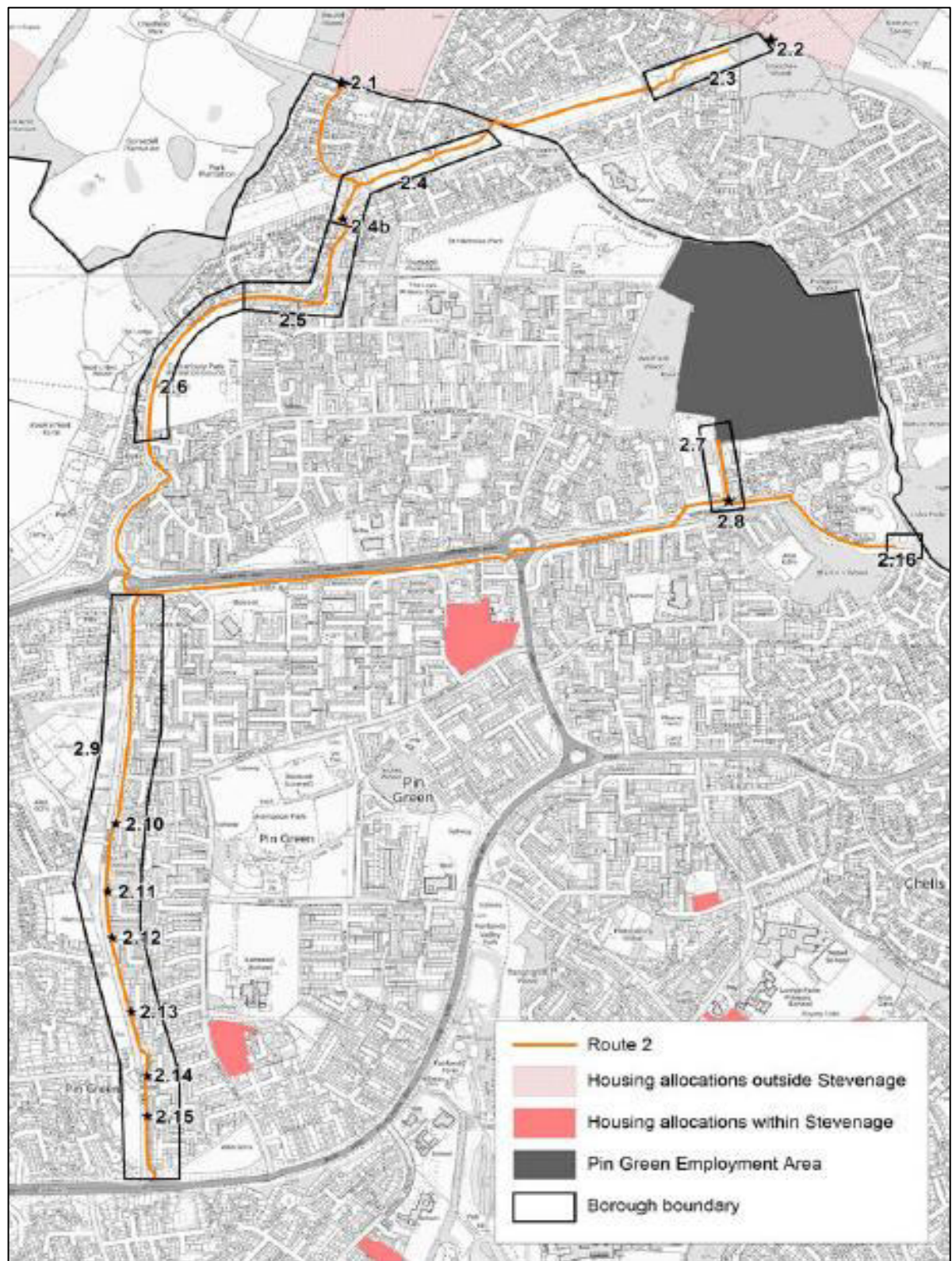
- Route 1: North Stevenage to Stevenage Central;
- Route 2: Great Ashby to Stevenage Central / Gunnels Wood;
- Route 3: East Stevenage to Stevenage Central;
- Route 4: Southeast Stevenage to Stevenage Central;
- Route 5: West of Stevenage to Stevenage Central;
- Route 6: East Stevenage orbital;
- Route 7: West Stevenage orbital; and
- Route 8: Stevenage Central.

- 3.39 Route 2 connects the northeast of the town to the town centre. There are two key origins / destinations within this area; two new housing allocations within North Hertfordshire and Pin Green Employment Area as follows.

- Route 2a: From the proposed housing allocations in Great Ashby to the town centre.
- Route 2b: From Pin Green Employment Area to the town centre.

3.40 Route 2a would therefore provide a cycleway link from the Site to the town centre, with the alignment of this route presented in **Figure 3.1**.

Figure 3.1 Stevenage Cycling and Walking Strategy – Route 2



4 Changes in Travel Behaviour and Guidance

- 4.1 In addition to National and Local Planning Policy, it is also relevant to consider the emerging transport context and changes in travel behaviour when designing for new or expanded communities. As outlined in HLTP4, climate change has focussed attention on sustainable transport options in preference to the reliance on the private car.
- 4.2 On 21st May 2019, the North Hertfordshire District Council passed a climate emergency motion. This declaration asserted the council's commitment toward climate action beyond current government targets and international agreements. This is currently being implemented through the Council's Climate Change Strategy 2021-2026.
- 4.3 The key objectives outlined within this Climate Change Strategy are:
- achieve Carbon Neutrality for the Council's own operations by 2030;
 - ensure all operations and services are resilient to the impacts of climate change;
 - achieve a Net Zero Carbon district by 2040; and
 - become a district that is resilient to unavoidable impacts of climate change.

Healthy Living

- 4.4 The need to promote healthy communities it is important that new developments are accessible by all modes of transport. In providing sustainable access, new developments will assist in meeting the climate change objectives and will help to move towards a low carbon economy.
- 4.5 The Chartered Institution of Highways and Transport (**CIHT**) document *Better Planning, Better Transport, Better Places* published in August 2019, in collaboration with the Transport Planning Society (**TPS**) and the Royal Town Planning Institute (RPTI), promotes better place making by integrating planning and transport.
- 4.6 The guidance also indicates that our quality of life depends on transport for easy access to jobs, shopping, leisure facilities, and services. It also indicates that an integrated planning and transport system is important to reduce carbon emissions.
- 4.7 Policy 1 of the HLTP4 indicates that vehicular traffic should be treated at the bottom of the hierarchy when considering development and highways improvement. However, the 'Predict and Provide' model, has continued to be utilised with this focusing on providing infrastructure to support access by car.

- 4.8 The 'Predict and Provide' model prioritises the convenience of car commuters. Therefore, this approach cannot be considered as sustainable as it results in bigger roads and junctions which effectively work to increase traffic volumes.
- 4.9 To move away from the 'Predict and Provide' approach, a 'Vision and Validate' or 'Decide and Provide' approach has been developed. This approach looks at defining how developments should be designed then assessing the impact of a development. In traffic terms this may mean not providing any more road capacity and using capacity as a tool to limit peak demands. This move away from the 'Predict and Provide' approach is supported in the DfT guidance on Decarbonising Transport and also by the principles of the HLTP4, which support the move away from the 'Predict and Provide' approach in preference to setting an outcome communities want to achieve and provides the transport solutions to deliver those outcomes."
- 4.10 By providing development(s) which are planned to minimise car use, promote sustainable transport choices, and provide access to existing public transport infrastructure development may become more acceptable.
- 4.11 The TRICS database provides a trip generation evidence base for the development and auditing of Transport Assessments and also provided guidance and papers on traffic generation at new developments.
- 4.12 TRICS outlines a similar theme in their 'TRICS Guidance Note: On the Practical Implementation of the Decide and Provide Approach' published in February 2021. This note indicates that if we continue to forecast traffic impacts based on previous travel behaviour, it is inevitable that transport planning will continue to seek to provide infrastructure that meets previously predicted needs, rather than meeting, and indeed shaping, the transport needs of the future.

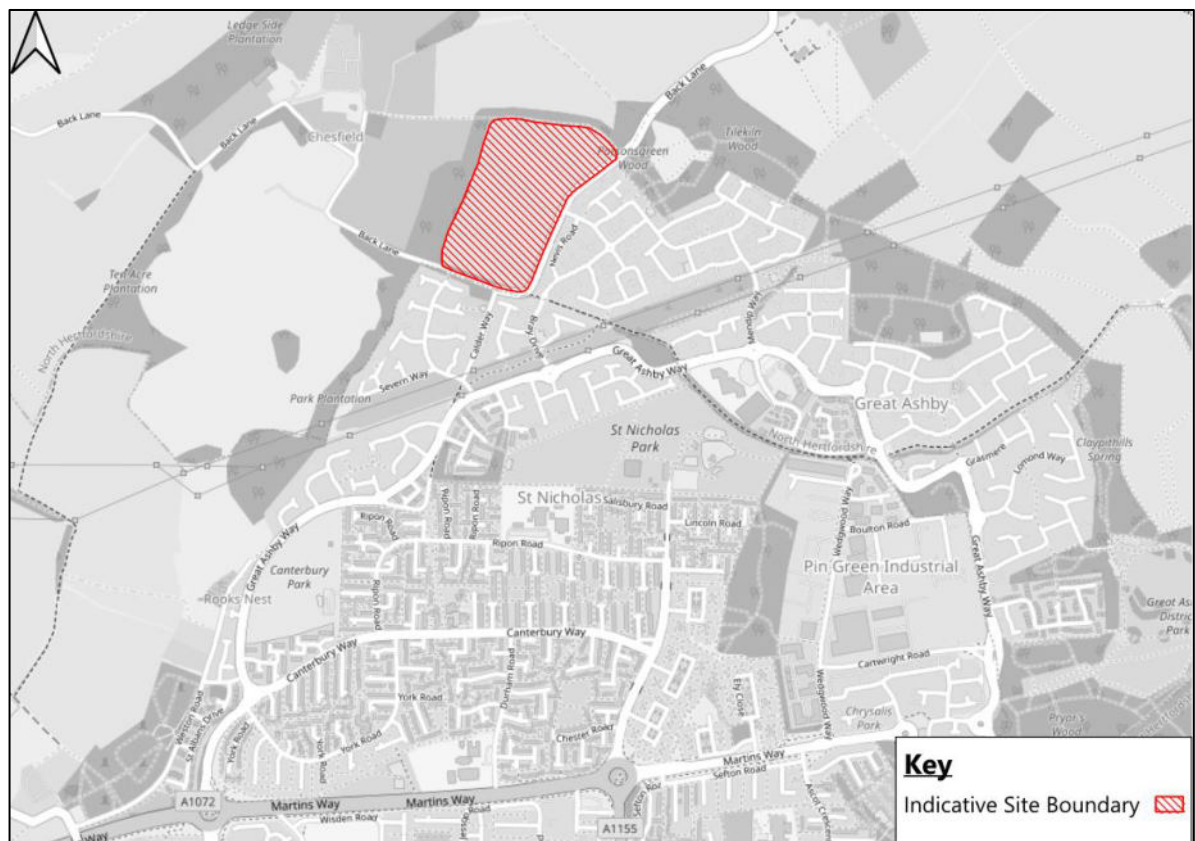
5 Existing Highways Context

- 5.1 This chapter of the Transport Assessment outlines the existing sustainable travel opportunities for pedestrians, cyclists and public transport users and describes the site in the context of the local highway network.
- 5.2 A summary of local services and facilities is provided, as well as information in relation to local travel to work pattern of those residing locally.

Site Location

- 5.3 The site is located to the northeast of Stevenage, within the Great Ashby area. To the south and east, the site is bound by Back Lane, and to the north and west by open fields.
- 5.4 The location of the site is presented in **Figure 5.1**.

Figure 5.1 Indicative Site Location Plan



Pedestrian and Cycle Accessibility

- 5.5 As the existing site is greenfield there are no pedestrian connections through the site. However, the pedestrian and cycle facilities in the residential developments close to the site are generally well developed.
- 5.6 Within the vicinity of the site, there are no pedestrian facilities on Back Lane to the immediate south-west and east of the site, with the road being of rural character along the entire length of the site boundary. Similarly, Calder Way does not benefit from a footway on either side of the road, with the single lane carriageway being fronted by mature hedgerows.
- 5.7 Pedestrian accessibility to Back Lane to the south is provided by a dedicated pedestrian and cycle route, which links the road to the pedestrian / cycleway facilities on Orwell Avenue. A second pedestrian / cycle route is present from Back Lane towards the south-eastern corner of the site, which links through to Mendip Way and beyond. This route provides a pedestrian / cycle route through to the Round Diamond School and the adjoining Great Ashby neighbourhood shops and community centre via the old Botany Bay Lane. This route also operates as a bridleway with crossing corrals to equestrian standards present across both Mendip Way and Great Ashby Way.
- 5.8 On the western side of Orwell Avenue the footway is approximately 1.8m in width. On the eastern side of the road there is a shared use footway/cycleway as designated on the Stevenage Cycle Map, this shared use path is approximately 3m in width. An extract from the Stevenage Cycle Map is presented in **Figure 5.2**.

Figure 5.2 Extract from the Stevenage Cycle Map



- 5.9 To the south of Orwell Avenue the pedestrian routes link to a cycleway which runs along an east-west orientation in the parkland under the electricity pylons. This route extends to the east, between the short section of cycleway that runs between the end of Calder Way and Great Ashby Road, across Bray Drive, to link to the cycleway on Botany Bay Lane in the east, with an additional connection north to Swale Close.
- 5.10 To the east of the site Haybluff Drive benefits from footways on both sides of the road, which are separated from the carriageway by grass verges. There is no pedestrian connection through to Back Lane.
- 5.11 To the south of Haybluff Drive, Mendip Way and Bray Drive benefit from a footway on the northern side of the road, with a shared-use footway/cycleway on the southern side, with this footway/cycleway widening on eastern side of Bray Drive, to the south of the Botany Bay Lane crossing, where the footway becomes separated from the carriageway by a wide grass verge.
- 5.12 The Hertfordshire Way is a 166 mile circular walking route along the public rights-of-way in Hertfordshire and borders the northern edge of the site. The route is divided into legs, with the section that passes to the north of the site running between Wallington and Willian (Letchworth) via Weston,

Graveley and Clothall. It provides walking access to Chesfield Park and Tilekiln Wood, and links to a number of other countryside public footpaths to the north, east and west of the site. To the north of the site, the Hertfordshire Way is formed by Public Right of Way 10, which is designated as a Bridleway, which would mean that the route could be used by cyclists as indicated on the Stevenage Cycle Map.

- 5.13 The wide footpaths along Great Ashby Way link to a cycleway alongside Canterbury Way, which provides access to the extensive off-road cycleway network which runs through the centre of the town, with grade separated cycling facilities being present beneath the Martins Way/Canterbury Way roundabout.
- 5.14 The shared foot/cycleways link to the segregated footway and cycleway that runs along the A1072 Martins Way.

Public transport

Bus

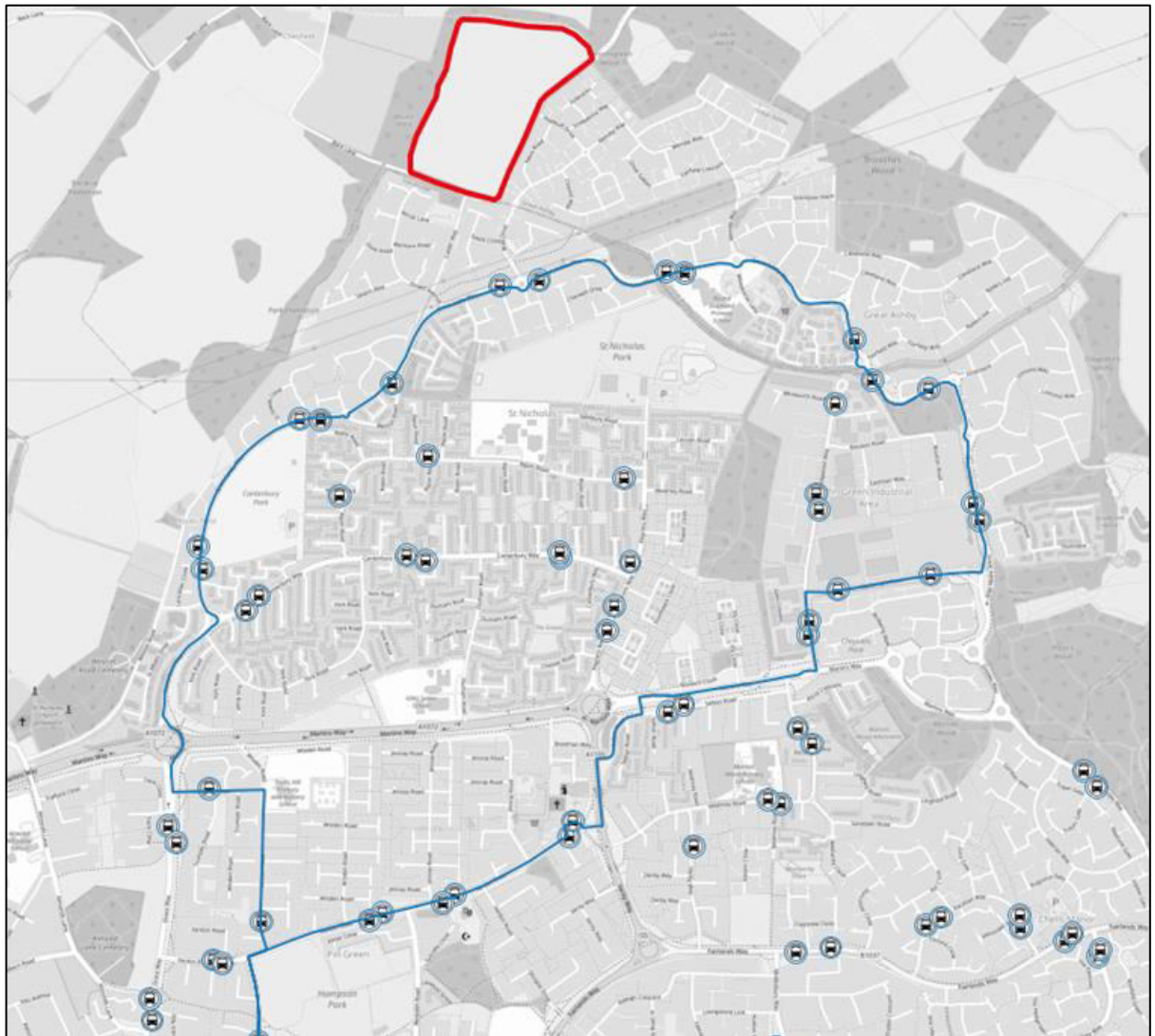
- 5.15 The closest bus stops are located approximately 450m south and southeast of the site access junction from Haybluff Drive, on either side of Great Ashby Way. The bus stop on the westbound side of the carriageway benefits from a bus stop flag, timetable information board and shelter with associated seating. The bus stop on the eastbound side of the carriageway benefits from a layby and a bus stop flag.
- 5.16 Table 5.1 summarises the bus timetable information for the local service that can be boarded from the stops on Great Ashby Way.

Table 5.1 Summary of Local Bus Services

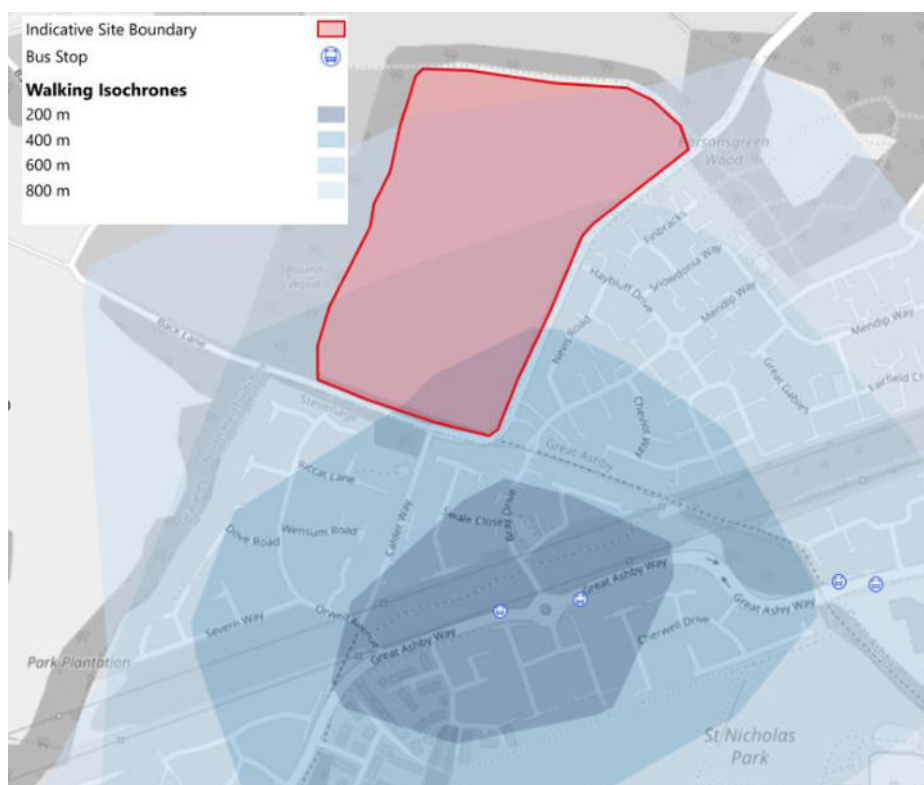
Service No.	Route	Frequency		
		Monday - Friday	Saturday	Sunday
SB7	Great Ashby – Stevenage via Pin Green	Every 30 minute First 05:26 Last 22:51	Every 30 minute First 06:51 Last 22:51	Hourly First 09:10 Last 23:10

- 5.17 The information presented in Table 5.1 indicates that bus service number SB7 can be boarded from the stops on Great Ashby Way throughout the week. The SB7 bus route along with wider Stevenage's bus services are illustrated in **Figure 5.3**.

Figure 5.3 Bus Route Plan



- 5.18 However, the bus stop would not be located within a 400m distance of all residents of the Site as indicated in **Figure 5.4** below and therefore would be outside the 400m ideal recommended guidance in relation to the access to public transport services.

Figure 5.4 – Distance to Great Ashby Bus Stops

Rail

- 5.19 Stevenage railway station is located approximately 5.3km southwest of the site. It is managed by Great Northern. The train station provides services to destinations such as London King's Cross, Hatfield, Welwyn Garden City, Hitchin, Cambridge and Peterborough, with approximately 8 services per hour connecting the station to London at peak times. The station is also served by East Coast Mainline inter-city services operated by London North Eastern Railway from London to the north-east of England and Scotland.
- 5.20 The station is accessible within an 18-minute cycle journey or via the SB7 bus service within a 9-minute journey.

Local services and amenities

- 5.21 The Site is within walking and cycling distance to a wide variety of local facilities and amenities that are required on a daily basis. These facilities are shown in **Figure 5.5**, with further details provided in Table 5.2.

Figure 5.5 Local Services and Facilities

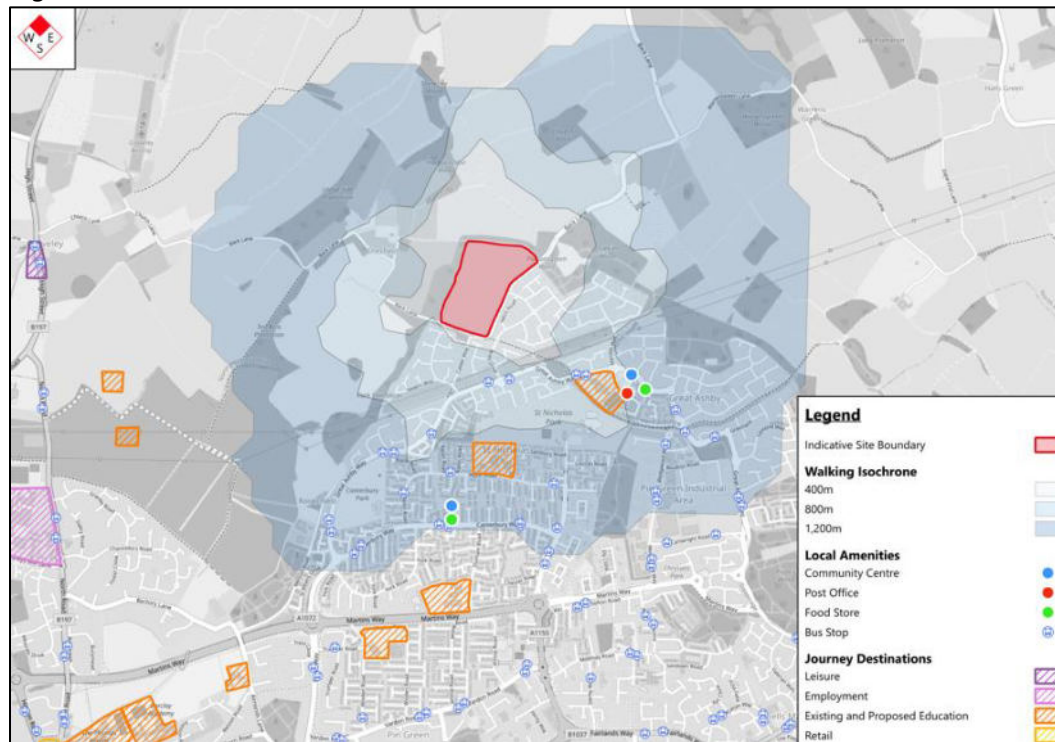


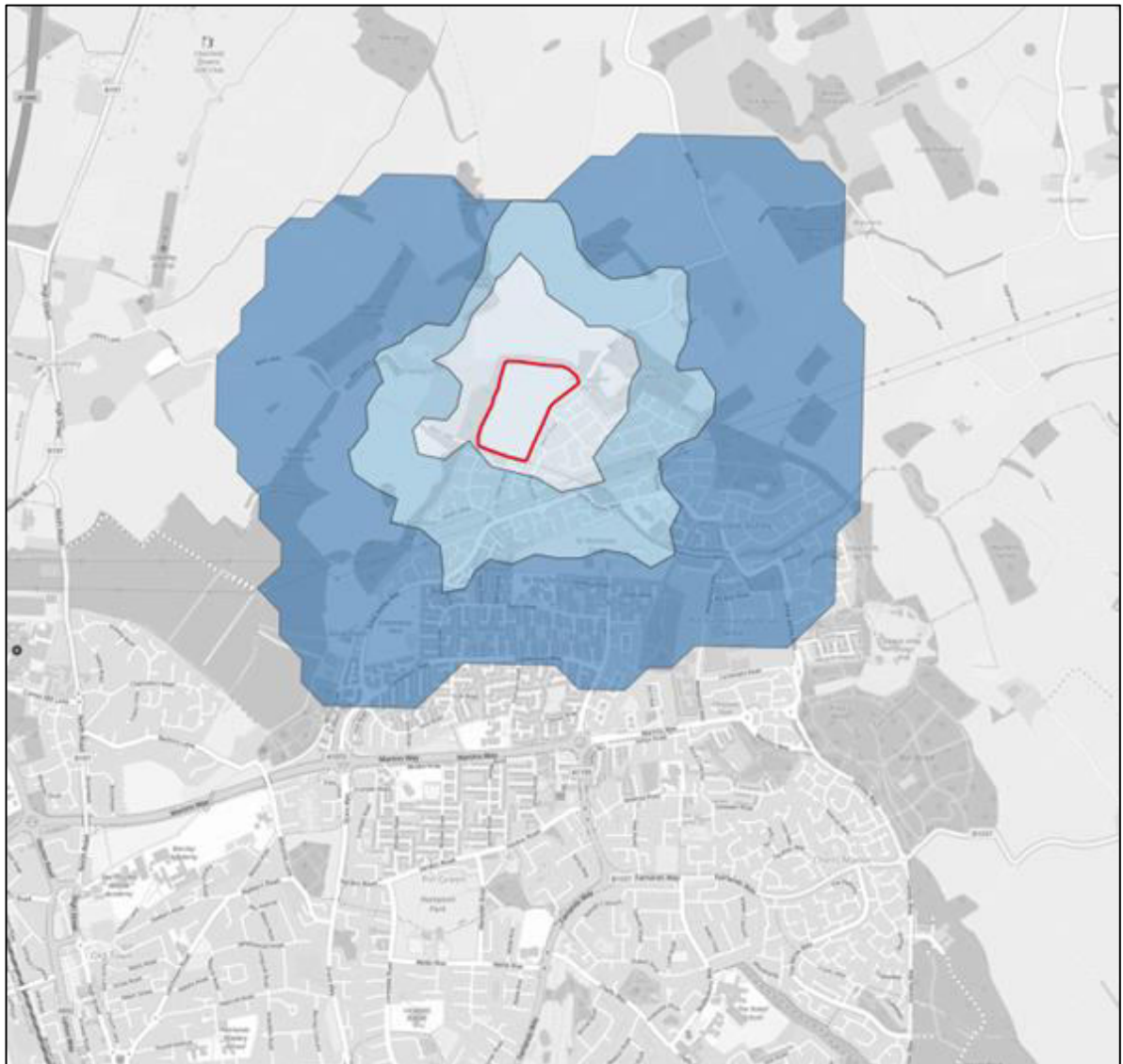
Table 5.2 Summary of Local Services And Facilities

Facility Type	Name	Distance (metres)	Approximate Travel Time*	
			Walking (minutes)	Cycling (minutes)
Public Transport	Bray Drive bus stop	450	5	-
	Stevenage railway station	5,300	-	18
Education	Pilgrims Way school	1,100	14	5
	Round Diamond Primary school	700	9	3
	Barclay Academy	2,800	34	9
Food Store	Budgens	950	11	4
	Morrisons Daily	1,100	14	4
Post Office	Whitehorse Lane Post Office	1,000	12	4
Community Centre	Great Ashby Community centre	1,000	11	4
Leisure/Sports	Saint Nicholas Park	1,000	12	3
	Mendip Way park	1,000	11	4
Healthcare	St Nicholas Health Centre	1,200	14	4
	Jhoots pharmacy	1,000	12	4
Restaurant	Smoky Boys	1,400	17	5

*Based on an average walking speed of 3mph, and an average cycling speed of 10mph

5.22 The locations of such services are identified within the pedestrian isochrone, which is presented in **Figure 5.6**, identifying walking distances of 400m, 800m and 1,200m from the centre of the site.

Figure 5.6 Walking Isochrone Plan

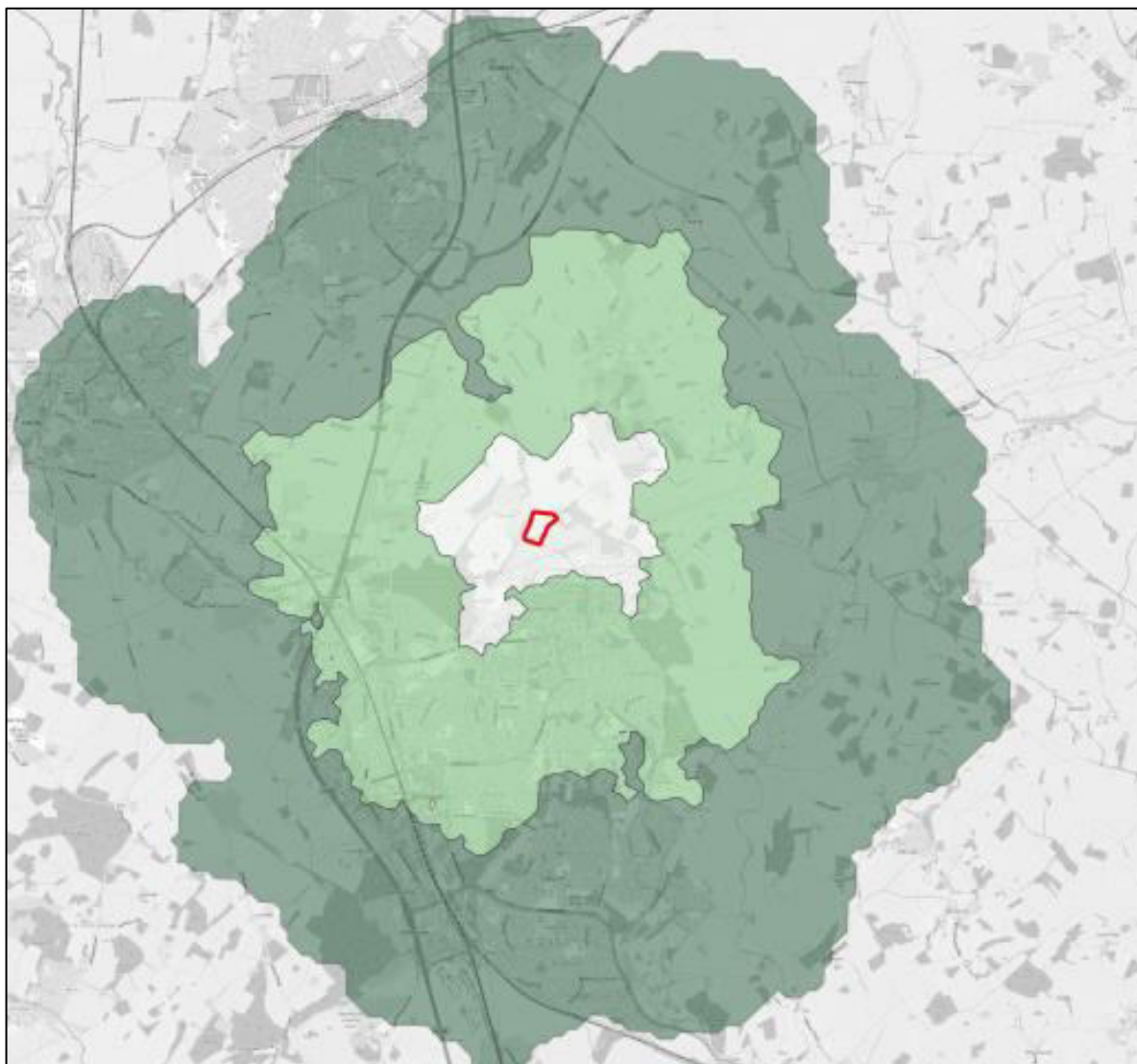


Walkable Neighbourhood

- 5.23 There is no agreed or defined limit to a walkable distance, but it is reasonable to say that the attractiveness of travelling by foot (or by wheel, for those unable to travel by foot) reduces by distance and by time. Minimising journey distance and time is therefore key to maximising the potential for people to walk.
- 5.24 Research conducted by ARUP in their document 'Delivering Sustainably Walkable Neighbourhood' indicates that around 80% of journeys under 1km are likely to be made on foot and for journeys of around 1.5-1.6km this would fall to 50%.

- 5.25 Given this the data presented in Table 5.2 would indicate that there are a wide variety of facilities and services that would be with a distance where there is a high probability that trips would be made on foot.
- 5.26 In addition, **Figure 5.7** presents a cycling distance isochrone of 2km and 5km from the application site, corresponding to journey times of approximately 7 and 15 minutes respectively. The cycling isochrone demonstrates that 2km distance incorporates a wide range of facilities such as schools, food stores, a post office and a pharmacy.

Figure 5.7 Cycling Isochrone Plan

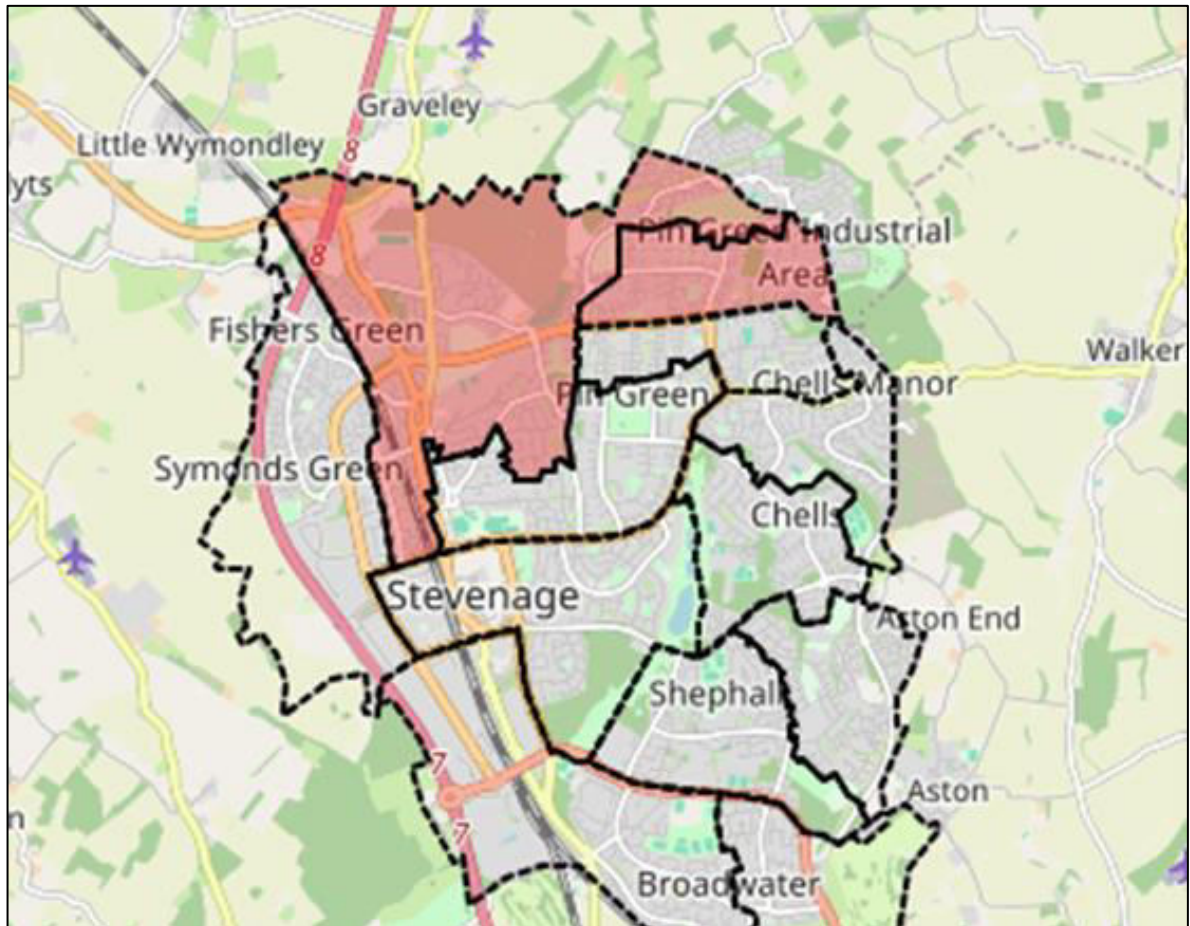


Local Travel Patterns

- 5.27 To understand the travel patterns of existing residents, travel to work information has been obtained from the 2011 Census. Data from the 'Stevenage 001' and 'Stevenage 002' mid-layer super output

areas (MSOAs), which the application site borders. These areas correspond to the residential areas to the north of Stevenage as presented in **Figure 5.8**.

Figure 5.8 Plan of Mid-Layer Super Output Areas Stevenage 001 and 002



5.28 These areas have been used to identify the modal share characteristics of journeys to work of residents from the local area.

5.29 A summary of the modal share characteristics is presented in Table 5.3.

Table 5.3 2011 Census method of travel to work

Method Of Travel To Work	Proportions		
	'Stevenage 001'	'Stevenage 002'	Combined
Rail	6.3%	11.0%	9.3%
Bus, minibus or coach	8.8%	3.0%	5.1%
Driving a car or van	66.2%	64.0%	64.8%
Passenger in a car or van	7.1%	5.5%	6.1%
Bicycle	2.6%	2.5%	2.5%
On foot	7.1%	12.3%	10.5%
Other method of travel	1.9%	1.7%	1.7%

- 5.30 The results presented in Table 5.3 indicate that journeys by private car account for the most significant proportion of journeys to work, accounting for the 64.8% of trips from the two MSOAs. Journeys undertaken by active travel modes account for 13.0% of journeys to work, primarily comprising journeys on foot.

Car Ownership

- 5.31 Further data has been obtained from the 2021 Census to identify the car ownership of households within the vicinity of the site. Data has been obtained for the 'Stevenage 002F' lower-layer super output area, which covers the Great Ashby Area, as presented in Table 5.4.

Table 5.4 Census 2021 car ownership per household

Car Ownership per household	Proportion
No cars or vans	9.9%
1 car or van	39.9%
2 cars or vans	40.7%
3 or more cars or vans	9.5%

- 5.32 The results presented in Table 5.4 indicate that the largest proportion of households (40.7%) owns two vehicles, with a further 39.9% of households owning a single vehicles.

- 5.33 Further analysis of car ownership in the Stevenage 001 area indicates that 28% of those living in flats do not own a car.

Local Highway Network

- 5.34 Along the southern site frontage, Back Lane is a two-way single carriageway road, which runs from Graveley to Weston in an east-west orientation. Adjacent to the site, Back Lane has an average width of 4.6m and is subject to the national speed limit. The carriageway width however narrows to a single lane in places to the west of the site becoming unsuitable for HGVs. The road continues north and runs along the eastern boundary of the Site before extending to the village of Weston, which is located approximately 3km to the north of the Site.
- 5.35 To the east of the Site, Haybluff Drive is a cul-de-sac with a width of approximately 5.5m. To the north the road terminates immediately to the south of Back Lane, without providing through access. Whilst to the south Haybluff Drive connects to Mendip Way and Cotswold Drive via a 4-arm roundabout.
- 5.36 Mendip Way is a single carriageway residential road with a width of approximately 6.7m. The road forms a crescent through the Great Ashby residential estate, linking to Bray Drive to the west before connecting to Great Ashby Way via a roundabout. To the east, Mendip Way also connects to Great Ashby Way at a roundabout. Along its length, priority junctions provide access to the adjacent residential area.
- 5.37 There is extensive residential on carriageway parking on Mendip Way, Haybluff Drive and Bray Drive, which effectively narrows the available carriageway width in places.
- 5.38 To the south of the site, Calder Way intersects Back Lane. Calder Way is a single carriageway with an average width of 4m, benefitting from traffic calming in the form of traffic humps along its length.
- 5.39 Calder Way intersects Orwell Avenue at its southern extent. Orwell Avenue is residential in character and provides access to residential housing to the north-west and to Great Ashby Way to the south-east.
- 5.40 Great Ashby Way is a single carriageway local distributor road with a nominal width of between 6.5m and 7.3m. At its western extent, Great Ashby Way connects to Canterbury Way via a 3-arm roundabout and at its eastern extent connects with Gresley Way and Glanville Crescent via a 3-arm roundabout. There are several roundabout junctions along its length providing access to the wider residential network and the Pin Green Industrial Estate.

- 5.41 At its western end, Great Ashby Way intersects with Canterbury Way at a 3-arm roundabout. To the south of this Canterbury Way intersects with A1072 Martins Way and Grace Way at a 4-arm roundabout. At its eastern end Great Ashby Way joins Gresley Way before it intersects with A1072 Martins Way via a 3-arm roundabout.
- 5.42 The A1072 Martins Way is a distributor road that runs east-west from the A602 Hitchin Road in the east to Gresley Way in the west. In the vicinity of the junction with Canterbury Way, Martins Way is a dual-carriageway road with 7.6m carriageway width and a 3.5m wide kerbed central reserve.

Car Parking Surveys

On Street Car Parking

- 5.43 On-street car parking on the roads within the Great Ashby area has been a longstanding local issue. This on-carriageway parking effectively narrows the available carriageway width on the roads surrounding the site.
- 5.44 To determine the extent of the on-street car parking in the area, car parking surveys were originally conducted in January 2023 on the full extent of Mendip Way, Bray Drive, Haybluff Drive and Nevis Road. These surveys were conducted in accordance with the Lambeth methodology, which indicates that the surveys should be conducted when the maximum number of residents would be expected to be at home (between 00:30 and 05:30) and on two separate weekday nights. To understand parking patterns at weekends an additional survey was carried out on a Saturday night.
- 5.45 with the survey area presented in **Figure 5.9**, with Mendip Way being split into 4 sub-sections as indicated on the plan. A summary of the number of vehicles recorded during the surveys is presented in Table 5.5.

Figure 5.9 January 2023 On-Street Parking Survey Extents



Table 5.5 Summary of 2023 On-Street Parking Survey Results

	Surveyed parking			
	Number of Available Spaces	Tuesday 17 th January	Wednesday 18 th January	Saturday 20 th January
Haybluff Drive	20	18	18	17
Mendip Way 1	38	36	33	35
Bray Drive	41	17	18	16
Nevis Road	16	19	23	20
Mendip Way 2	22	11	10	13
Mendip Way 3	66	46	48	48
Mendip Way 4	73	16	25	27
Total	276	163	175	176

- 5.46 Following the 2023 application, additional survey were conducted in May 2024 on the streets surrounding Mendip Way. These extent of these surveys is presented in **Figure 5.10**, with a summary of the results presented in Table 5.6.

Figure 5.10 May 2024 – On-Street Parking Survey Extent



Table 5.6 Summary of 2024 On-Street Parking Survey Results

Street Name	Number Of Kerbside Parking Spaces	Surveyed Parking					
		Tuesday 14 th May		Wednesday 15 th May		Saturday 18 th May	
		Vehicles Parked	Stress	Vehicles Parked	Stress	Vehicles Parked	Stress
Swale Close 1	3	2	67%	5	167%	4	133%
Swale Close 2	13	16	123%	15	115%	15	115%
Swale Close 3	6	10	167%	11	183%	9	150%
Swale Close 4	4	5	125%	5	125%	5	125%
Windrush Close 1	15	3	20%	2	13%	4	27%
Windrush Close 2	6	11	183%	12	200%	10	167%
Cheviot Way 1	9	13	144%	12	133%	13	144%
Cheviot Way 2	8	14	175%	13	163%	14	175%
Cotswold Drive 1	9	16	178%	16	178%	17	189%
Cotswold Drive 2	4	16	400%	13	325%	15	375%
Cotswold Drive 3	0	6	100%	8	100%	8	#DIV/0!
Finbracks 1	9	6	67%	6	67%	6	67%
Finbracks 2	7	9	129%	9	129%	9	129%
Snowdonia Way	13	19	146%	20	154%	20	154%
Great Gables 1	4	5	125%	7	175%	5	125%
Great Gables 2	8	10	125%	9	113%	11	138%
Fairfield Cres 1	23	16	70%	15	65%	16	70%
Fairfield Cres 2	9	5	56%	8	89%	4	44%
Whernside Drive	21	16	76%	16	76%	16	76%
Benbroke Place 1	9	10	111%	8	89%	9	100%
Benbroke Place 2	7	4	57%	4	57%	7	100%
Mendip Way	7	9	129%	12	171%	9	129%
Merrick Close 1	18	22	122%	22	122%	18	100%
Merrick Close 2	7	5	71%	6	86%	6	86%
Merrick Close 3	9	10	111%	10	111%	12	133%
Car Park Access	2	0	0%	1	50%	1	50%
Cromdale Walk	4	0	0%	0	0%	1	25%

- 5.47 The full survey results and plans indicating the position of the parked cars recorded in the survey are presented in **Appendix C**.
- 5.48 The results indicate that extensive on-street parking is present on the proposed bus route, with this most prevalent on Mendip Way between the pedestrian crossing at the point Mendip Way becomes Bray Drive and the Haybluff Drive roundabout. The location of the parked vehicles indicate that in some cases these cars are parked close to priority junctions and on the approaches to the Haybluff Drive roundabout in locations that are considered unsuitable for parking.
- 5.49 The results of the May 2024 surveys indicate that the streets surrounding Mendip Way and Bray Drive also have extensive overnight parking. The residential nature of the some of the roads means that conventional the parking stress calculations does not reflect the areas available for parking, as

parking regularly is observed on pavements, which would allow parking on both sides of the road, where the parking stress calculation would only permit parking on one side of the road.

- 5.50 It is evident, however, that the street surrounding the development would have some capacity to cater for displaced parking from Mendip Way and Bray Drive, with some available parking on Windrush Close, which would allow some displacement of parking to occur, with kerbside space for around 12 vehicles to park.

Car Parking Courts

- 5.51 Additional survey of the rear parking courts which are located close to the Haybluff Drive / Mendip Way roundabout was carried out on Tuesday 28th March 2024 at 20:00 hours. The location of the parking courts surveyed are presented in **Figure 5.11**.

Figure 5.11 Location of Rear Parking Courts



5.52 The results of the parking court surveys are presented in Table 5.7 below.

Table 5.7 Parking Court Survey Results

Parking Court	Total Provision	Occupancy	
		Vehicles	Proportion
A	5	1	20%
B	16	12	75%
C	11	8	73%
D	8	0	0%
E	10	5	50%
F	12	5	42%
Total	62	31	50%

5.53 The results of the parking court survey indicate that the maximum occupancy was recorded in Parking Court B and C with approximately 75% occupancy recorded. Whilst the survey indicates that there would be some space within the parking courts in most instance these spaces are assigned to specific flats.

5.54 Car ownership for residents of flats as indicated in the 2021 Census for Stevenage indicates that approximately 72% of residents in flats would typically own a car. Therefore, it would be expected that as the majority of car parking spaces in these courts are assigned to flats, a proportion of these spaces would not be utilised.

5.55 However, it would also be possible that some residents of the flats find it more convenient to park on-street rather than in the parking courts, which may include some of the vehicles observed to park on Mendip Way.

Highway Safety

5.56 A review of CrashMap has been undertaken to determine whether any Personal Injury Accidents (**PIAs**) that have occurred within the vicinity of the application site, during the most recent available five-year period.

5.57 Within the most recently available five-year period, there have been no PIAs recorded along the site boundaries along Back Lane.

- 5.58 To the west of the site, two accidents were recorded along Back Lane. Both of these accidents were classified as slight, with one accident involving a collision between a car and cyclist. No accidents resulting in injury that involved equine use of the road have been recorded on CrashMap.
- 5.59 To the southwest of the site, a single slight accident was recorded on Windrush Close, in the vicinity of the junction with Bray Drive. This accident involved a collision between a car and cyclist, resulting in the cyclist sustaining minor injuries.
- 5.60 There have been no PIAs recorded at the roundabout of Great Ashby Way with Orwell Avenue. With two slight accidents recorded along Great Ashby Way between the junction with Orwell Avenue and roundabout with Canterbury Way, involving collisions between car drivers with a motorcyclist or pedal cyclist.
- 5.61 Further to the southwest, there were 7 slight accidents recorded at the roundabout of Canterbury Way and Martins Way, these were generally the result of drivers failing to give way, or as the result of rear end shunts, with no consistent pattern to the causes of the accidents.
- 5.62 The location of the accidents recorded are presented in the plans within **Appendix D**.
- 5.63 Within the vicinity of the site, there are no immediate clusters of accidents that identify a perceived weakness of the local highway network. It is therefore considered that the proposed development will not result in a detrimental impact on the local highway network in regards to highway safety.

Existing Junction Operation

- 5.64 To understand the existing operational characteristics of the local highway network, Manual Classified Count (**MCC**) surveys were undertaken on Wednesday 25th May 2022 between the hours of 06:00 – 10:00 and 15:00 – 19:00 to cover both morning and evening peak hour periods.
- 5.65 The study area utilised, was determined from the scope of the assessment included in the Transport Assessment prepared by Wormald Burrows Partnership Limited for the previous submitted planning application (planning reference: 16/01713/1), which has been reviewed and approved by Hertfordshire County Council, with the scope of the surveys agreed in the meeting with the County Council held on 24th October 2022.
- 5.66 The following junctions were included in the surveys:
- A1072 Martins Way / Grace Way / Canterbury Way 4-Arm Roundabout;

- Great Ashby Way (West) / Orwell Avenue / Greater Ashby Way (East) Priority Junction;
- Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout;
- Great Ashby Way / Mendip Way / Whitehorse Lane 4-Arm Roundabout;
- Gresley Way / Martins Way 3-Arm Roundabout;
- Orwell Avenue / Calder Way Priority Junction;
- Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout; and
- B197 High Street / Church Lane Priority Junction (Located In Graveley).

5.67 The survey results are contained in **Appendix E**.

5.68 To determine the highway peak hour periods, the total number of vehicles that pass through the network was calculated for each hour across the survey periods. The morning peak hour period has been identified as 07:45-08:45, whereas the evening peak hour period is identified as 17:00-18:00. This analysis is contained as **Appendix F**.

5.69 The surveyed (2022) traffic flows are presented in **Figure 5.12** and **Figure 5.13** for the morning and evening peak hour periods respectively.

Existing Junction Capacity

5.70 To understand the existing operational capacity of the surveyed junctions, the most critical junctions in the network have been modelled under the loading of the current surveyed traffic flows using Junctions 11 software, with the ARCADY module uses for roundabout junctions and the PICADY module for priority junction.

5.71 The junctions selected for analysis has been confirmed via an email received from HCC on 19th November 2024.

5.72 The results of the capacity assessment undertaken of the local highway network present the worst 15-minute period across the hour.

Canterbury Way / Martins Way (east) / Grace Way / Martins Way (west) 4-Arm Roundabout

5.73 The full modelling output report and geometric parameter drawing are contained in **Appendix G** and a summary of the modelling results is contained in Table 5.8.

Table 5.8 Canterbury Way / Martins Way (east) / Grace Way / Martins Way (west) 4-arm Roundabout – Surveyed (2022) Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Canterbury Way	0.52	1	1	0.43	1	1
Martins Way (east)	0.41	1	1	0.32	1	1
Grace Way	0.19	0	1	0.27	0	1
Martins Way (west)	0.37	1	0	0.58	1	0

*Average surveyed queue across all lanes of each approach

- 5.74 The results presented in Table 5.8 indicate that the junction operates within theoretical capacity during the morning and evening peak hour. The modelled queues are considered representative of the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction

- 5.75 The full modelling output report and geometric parameter drawing are contained in **Appendix H** and a summary of the modelling results is contained in Table 5.9.

Table 5.9 Great Ashby Way (West) / Orwell Avenue / Greate Ashby Way (East) Priority Junction – Surveyed (2022) Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Left from Orwell Avenue	0.07	0	2	0.12	0	1
Right from Orwell Avenue	0.37	1		0.18	0	
Great Ashby Way (east)	0.22	0	0	0.15	0	0

*Average surveyed queue across all lanes of each approach

- 5.76 The modelling results presented in Table 5.9Table 5.8 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The modelled is forecasting minimal queueing, which is considered representative of the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout

- 5.77 The full modelling output report and geometric parameter drawing are contained in **Appendix I**, with a summary of the Surveyed (2022) modelling results contained in Table 5.10.

Table 5.10 Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout – Surveyed (2022) Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Bray Drive	0.27	0	0	0.16	0	0
Great Ashby Way (East)	0.47	1	0	0.35	1	0
Wansbeck Close	0.06	0	0	0.02	0	0
Great Ashby Way (West)	0.34	1	0	0.49	1	0

*Average surveyed queue across all lanes of each approach

- 5.78 The results presented in Table 5.10 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The low volume of queueing within the models is considered appropriate to reflect the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout

- 5.79 The full modelling output report and geometric parameter drawing are contained in **Appendix J** and a summary of the modelling results is contained in Table 5.11.

Table 5.11 Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout – Surveyed (2022) Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Mendip Way	0.13	0	0	0.12	0	1
Great Ashby Way (east)	0.28	0	1	0.23	0	0
Whitehorse Lane	0.16	0	1	0.23	0	0
Great Ashby Way (west)	0.25	0	0	0.38	1	1

*Average surveyed queue across all lanes of each approach

- 5.80 The results presented in Table 5.11 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The low volume of queueing within the models is considered appropriate to reflect the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Gresley Way (North) / Martins Way 3-Arm Roundabout

- 5.81 The modelling output report and geometric parameter drawing are contained in **Appendix K** and summary of the modelling results is contained in Table 5.12.

Table 5.12 Gresley Way (North) / Gresley Way (South) / Martins Way 3-Arm Roundabout – Surveyed (2022) Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Gresley Way (north)	0.57	1	0	0.37	1	0
Gresley Way (south)	0.38	1	1	0.38	1	0
Martins Way	0.17	0	0	0.26	0	0

*Average surveyed queue across all lanes of each approach

- 5.82 The results presented in Table 5.12 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The low volume of queueing within the models is considered appropriate to reflect the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Orwell Avenue/Calder Way Priority Junction

- 5.83 The full modelling output report and geometric parameter drawing are contained in **Appendix L** and a summary of the modelling results is contained in Table 5.13 *Orwell Avenue/Calder Way – Surveyed (2022) Modelling Results*.

Table 5.13 *Orwell Avenue/Calder Way – Surveyed (2022) Modelling Results*

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Left to Orwell Avenue (South)	0.07	0	0	0.13	0	0
Right to Orwell Avenue (North)	0.01	0		0.02	0	
Right to Calder Way	0.39	1	0	0.17	0	0

*Average surveyed queue across all lanes of each approach

- 5.84 The modelling results presented in Table 5.13 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The modelled is forecasting minimal queueing, which is considered representative of the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout

- 5.85 The modelling output report and geometric parameter drawing are contained in **Appendix M**, with a summary of the Surveyed (2022) modelling results contained in Table 5.14.

Table 5.14 Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Surveyed (2022)
Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Haybluff Drive	0.05	0	1	0.02	0	0
Mendip Way (East)	0.06	0	0	0.05	0	0
Cotswold Drive	0.05	0	0	0.02	0	0
Mendip Way (West)	0.04	0	0	0.08	0	0

*Average surveyed queue across all lanes of each approach

- 5.86 The modelling results presented in Table 5.14 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The modelled is forecasting minimal queueing, which is considered representative of the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

B197 High Street / Church Lane Priority Junction (In Graveley)

- 5.87 The full modelling output report and geometric parameter drawing are contained in **Appendix N**, with a summary of the Surveyed (2022) modelling results contained in Table 5.15.

Table 5.15 B197 High Street / Church Lane Priority Junction – Surveyed (2022) Modelling Results

Arm	Morning Peak			Evening Peak		
	Max RFC	Max Queue	Surveyed Queue*	Max RFC	Max Queue	Surveyed Queue*
Left to High Street (South)	0.08	0	0	0.04	0	0
Right to High Street (North)	0.27	0		0.08	0	
Right to Church Lane	0.06	0	1	0.06	0	0

*Average surveyed queue across all lanes of each approach

- 5.88 The modelling results presented in Table 5.15 indicate that the junction operates well within theoretical capacity during both morning and evening peak hour periods. The modelled is forecasting minimal

queueing, which is considered representative of the surveyed queueing conditions and therefore the model is considered appropriate to assess the future year traffic scenarios.

Existing Surveyed Capacity Summary

- 5.89 The surveyed modelling results indicate that the junctions across the local highway network operate within theoretical capacity throughout both morning and evening peak hour periods, generally reflecting the on-street queueing observations. It is therefore considered that the models are appropriate for the assessment of change in RFC and queuing in the future year scenarios as part of the assessment of the impact of the proposed development.

6 Development Proposal

- 6.1 This chapter of the Transport Assessment outlines the proposed development and proposed means of access.

Development Schedule

- 6.2 The development proposals are for a full planning application for a residential development of 281 dwellings, with access achieved from an extension to Haybluff Drive to the east and via Back Lane and Calder Way to the south. The proposed Site Layout is presented in **Appendix O**.
- 6.3 The proposed development will be a combination of 1 and 2 bedroom flats and 2 to 5 bedroom houses, with the dwelling mix being presented in Table 6.1 below.

Table 6.1 Dwelling Mix

	Homes	
	Bedrooms	Number
Private	1	8
	2	21
	3	95
	4	39
	5	6
	Total	169
Affordable	1	40
	2	55
	3	12
	4	5
	Total	112

- 6.4 As indicated the proposed layout has been developed following Croudace Homes entering into a PPA with NHDC, with the final Masterplan designed following workshop sessions and extensive discussion with officers of NHDC and HCC. The internal layout and access arrangements associated with the Site,

were on of the primary focuses of these discussions. Vehicular access will be achieved from both Back Lane/Calder Way and from Haybluff Drive, with only emergency vehicle access between the two sides of the development. Pedestrian priority will be maintained throughout the development, with continuous pavements included across all junctions throughout the development, where pedestrian movements are expected.

Access Principles

- 6.5 The principles of access by all modes of transport have been extensively discussed in the workshop sessions. These have been developed with regard to Hertfordshire County Council guidance contained in "Place & Movement Planning and Design Guidance" and seek to ensure that the development is highly permeable for non-motorised users and that the access arrangements and internal road layout conform to the principles contained in the guidance.
- 6.6 Footways and cycleways will be provided throughout the internal layout with the access locations, optimally positioned to take into consideration likely pedestrian and cyclist desire lines towards off-site attractors.

Vehicle Access

- 6.7 The proposed development will have three access points:
- From a continuation of Haybluff Drive to the east;
 - From Back Lane, one towards the north of the Site; and
 - To the south of the site onto Back Lane, to the west of the existing junction with Calder Way.
- 6.8 The final layout has been developed in a manner than means that the Haybluff Drive access will serve 185 dwellings and the two access points of Back Lane will serve a further 96 dwellings. An emergency vehicular connections within the Site will be provided with no vehicular link between the sides of the development, meaning that for vehicles the Haybluff Drive and Back Lane access points would operate independently of each other.
- 6.9 When designing the access arrangements into the site a number of factors were considered:
- The developable site area;
 - The number of dwellings that can be served off a single access point;
 - The level of additional traffic that would be assigned to Back Lane and Haybluff Drive; and
 - The capacity of Calder Lane to cater for additional development traffic.

- 6.10 These considerations are further discussed in Chapter 8 of this report, which discusses the distribution of the traffic that would be generated by the proposed development. This indicates that a high proportion of the traffic generated by the proposed development would remain within the Stevenage area, with around 20% of development traffic expected to head to destinations to the north of Stevenage.

Haybluff Drive Access

- 6.11 The main vehicular access point will be via an extension to Haybluff Drive which will cross Back Lane, which will subsequently be stopped, with the access road narrowed at this point to promote priority for pedestrians and equestrians using the new greenway. Within the Site, this road will be 6.1m wide with a 2m footway on the northern side of the road and a 3m shared use footway/cycleway on the southern side of the road.
- 6.12 From this road, access will be gained to the majority of the homes within the eastern side of the development, via number of secondary north/south roads, which will predominantly be formed as shared space, with the main carriageway formed of flush tarmac, with block paved pedestrian/cycle routes alongside these routes. Further access to the residential areas would be via a number of private drives, which would be formed of shared space, with a block paved construction.
- 6.13 In the centre of the Site this road turns to the north-west providing a pedestrian and cycle route to Footpath 10 which runs to the north of the Site, with the emergency access route onto the re-aligned Back Lane also taken from this road.

Back Lane Access

- 6.14 The northern access from Back Lane would be formed by a simple extension of Back Lane into the site, whilst for the southern access would be formed by a raised table priority junction, with the priority provided to vehicles entering the development from the east, with traffic arriving from the west on Back Lane having to give way.
- 6.15 The two access points on Back Lane will be linked by a route which runs north from the southern access road, providing access to the residential properties on the western side of the road, before the road turns east, providing access to the properties to the north of the road via a number of private drives.
- 6.16 The proposed access arrangements are presented in our drawing **2105-037 PL101** for the access from Haybluff Drive. The northern access is presented in and in our drawing **2105-037 PL102** for the access

from Back Lane (north), with the southern access presented in drawing **2105-037 PL103**. These drawings are presented in the Drawing Appendix at the end of this report.

Internal Junctions

- 6.17 The location of the internal junctions within the site are presented in **2105-37 PL104**, which is contained in the Drawing Appendix.
- 6.18 Continuous pavement crossing will be provided across the minor arms of all internal priority junction with the design these junctions presented in our drawing numbers **2105-037 PL105**, **2105-037 PL106** and **2105-037 PL107**.
- 6.19 Cycle parking will be provided on plot for the residential houses and in cycle stores associated with the blocks of flats within the development and will be provided in accordance with the standards contained in North Hertfordshire - Vehicle Parking at New Development Supplementary Planning Document.

Pedestrian and Cycle Access

- 6.20 The permeability of the Site for pedestrians and cyclists was a primary consideration in the design of the scheme, with pedestrian access being provided to the key off offsite route, with pedestrian/cycle access provided at the following locations:
- At the vehicular access point onto Haybluff Drive;
 - To the south-west of the site onto Back Lane, linking to the existing shared used footway/cycleway along Orwell Avenue;
 - To the south-east of the Site; via the existing footway/cycleway link to Mendip Way and Botany Bay Lane; and
 - Access is provided to Footpath Graveley 010 via a separate pedestrian access point in the north-west corner of the Site.
- 6.21 In addition to the footway and cycleway access points an off-road perimeter pedestrian path will be provided around the site, which connects the pedestrian/cycle access points and provides a traffic free route around the site.
- 6.22 The existing alignment of Back Lane on the eastern and southern side of the development will be 'converted to a footpath/equestrian footpath, which will allow pedestrian and equestrian movements between the northern access point into the development from Back Lane to Calder Way.

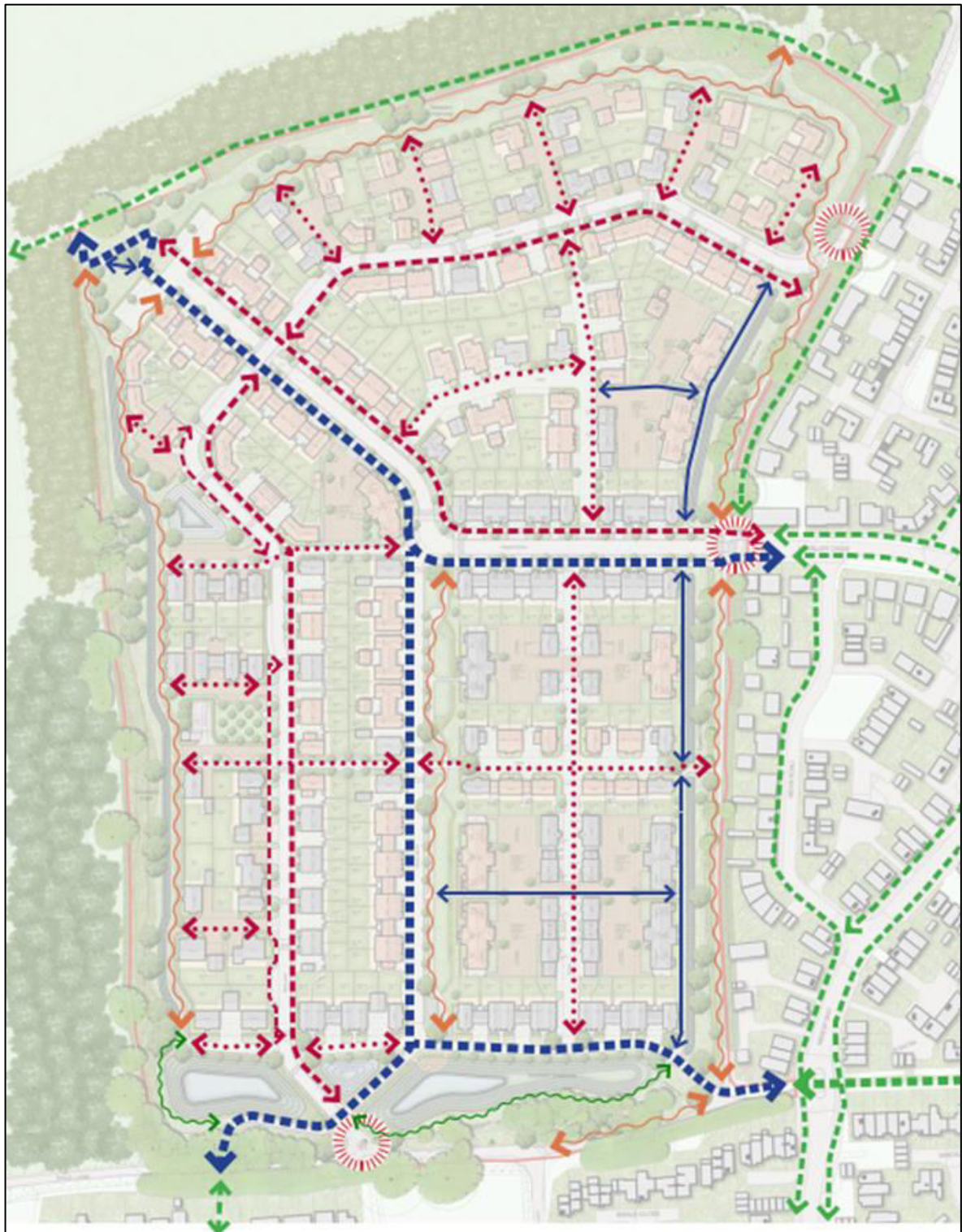
Mobility Strategy

- 6.23 Policy 1 of Hertfordshire County Council's Local Transport Plan 4 presents a clear hierarchy of transport modes that will be supported in relation to the creation of built environments, with the hierarchy presented as follows:
- Opportunities to reduce travel demand and the need to travel;
 - Vulnerable road user needs (such as pedestrians and cyclists);
 - Passenger transport user needs;
 - Powered two wheeler (mopeds and motorbikes) user needs; and
 - Other motor vehicle user needs.
- 6.24 To effectively promote the Site for residential development, it will be important to promote active and sustainable modes of transport as far as possible. This will minimise the impact of vehicular traffic as far as possible.
- 6.25 A mobility strategy for the Site has therefore been prepared which will encompass the following elements:
- The internal design of the development will include pedestrian/cycle facilities that are designed in accordance with Local Transport Note 1/20 and the Place and Movement Planning Guidance;
 - The existing section of Back Lane to the south and east of the Site will be stopped up for vehicular traffic to create a traffic free cycle path/footway around the southern and eastern side of the development;
 - Continuous pavement crossings will be provided at all internal junctions within the development;
 - Direct pedestrian connections will be provided to the existing pedestrian facilities on Haybluff Drive.
 - A recreational pedestrian route will be provided around the perimeter of the Site to encourage the use of the leisure routes surrounding the site including the Hertfordshire Way;
 - Pedestrian and cycles access points will be provided in the south-east corner of the site onto Botany Bay Lane and to the south of the site immediately opposite the cycleway link to Orwell Avenue as indicated on the site plan;
 - Pedestrian connection northwest of the site to link with existing public footpath (FP10) which forms part of the Hertfordshire Way Long distance walking route;
 - Cycle parking will be provided in accordance with the standards contained within North Hertfordshire Supplementary Planning Document – "Vehicle Parking in New Developments" September 2011;
 - Improvement of Botany Bay Lane between Mendip Way will be carried and provision of low level lighting along this section of the route.

- Contribution towards of a new bus service (SB12) which will link Great Ashby to Lister Hospital and the town centre and the provision of two new bus stops on Mendip Way to allow access to this service;
- The development of a Residential Travel Plan that will offer residents free bus travel within the Stevenage area for a 1 year period following occupation;
- S106 Contribution towards the extension of the existing Beryl Bike service into the development;
- The provision of 2 car club spaces at a location to be agreed within the development and S106 contribution towards the implementation of the car club; and
- S106 Contribution provided under Hertfordshire County Council's Infrastructure Funding Prospectus 2018-2031. These contributions will only be considered for schemes that have a direct link to the proposed development and would therefore be in accordance with the guidance contained in the NPPF. Suitable schemes might include the following:
 - The provision of the new SB12 bus service;
 - Further improvements and lighting on Botany Bay Lane;
 - Pedestrian/Cycle/Equine crossings of Great Ashby Way; and
 - Improvements to Cycle Route 2, between the Site and Martins Way and as identified in the Stevenage Local Cycling and Walking Infrastructure Plan 2019.

6.26 The internal pedestrian and cycle routes internal to the site are presented in **Figure 6.1**.

Figure 6.1 Internal Pedestrian and Cycle Routes



- 6.27 The improvements of Botany Bay Lane is presented in TPA drawing **2105-037 PL108**. These works would also include alterations to the crossing of Mendip Way, subject to further discussions with the HCC to confirm the design of the crossing. These improvements would be considered to be a Strand 1 obligations.

Public Transport Access

- 6.28 The closest existing bus service (SB7) the Site operates along Great Ashby Way, with the closest bus stop located approximately 450m from the site access onto Haybluff Drive.
- 6.29 As part of the mitigation agreed with Hertfordshire County Council in relation to the 2016 application on the Site it was agreed that a £300,000 S106 contribution would be provided towards the cost of extending the existing SB7 bus service, so that the service would be diverted onto Mendip Way to turn at the Mendip Way/Haybluff Drive roundabout. This contribution was phased with trigger points of the completion of 108, 180 and 270 dwellings requiring £100,000 contributions.
- 6.30 However, following discussions with HCC it has been determined that the most appropriate improvement to public transport services would be to provide a financial contribution, through a Section 106 agreement, towards new bus service to serve the development that would extend along Mendip Way. This service would be named SB12, with the bus timetable presented in **Appendix P** and plan of the proposed bus route presented in **Figure 6.2**. Initially, this service would travel from the west on Mendip Way as far as the Haybluff Drive roundabout and U-turn, before returning back along Mendip Way. The longer term aspiration for this service would be to continue the service along the full length of Mendip Way to serve the GA2 development.

Figure 6.2 Proposed Route of SB12 Bus Service



- 6.31 Two additional bus stops will be provided on Mendip Way, one northbound immediately to the south of the Haybluff Drive/Mendip Way roundabout and one to the south of the pedestrian/cycle equestrian crossing of Mendip Way (old Botany Bay Lane).

Travel Plan

- 6.32 Should the development proposal be granted permission, a Travel Plan will be implemented across the site. The Travel Plan will seek to set out a range of measures and initiatives to influence the travel patterns of future residents.

- 6.33 A Framework Travel Plan has been submitted in conjunction with this Transport Assessment, (Transport Planning Associates report ref: 2105-037/TP02). It is suggested that the Final Travel Plan for the development be secured by way of an appropriately worded condition.
- 6.34 The Travel Plan will include comprehensive measure to promote sustainable transport for the residents of the site. These will include:
- Appointment of a Travel Plan Coordinator;
 - Travel Pack to all first residents promoting sustainable travel;
 - Bus vouchers contained within the Travel Pack;
 - Promotion of local bus services;
 - Promotion of car sharing;
 - Promotion of on-site car club;
 - Promotion of Beryl bike scheme;
 - Provision of on-site car club spaces
 - Promotion of cycle schemes and the provision of cycle parking; and
 - Provision of travel information within the development.

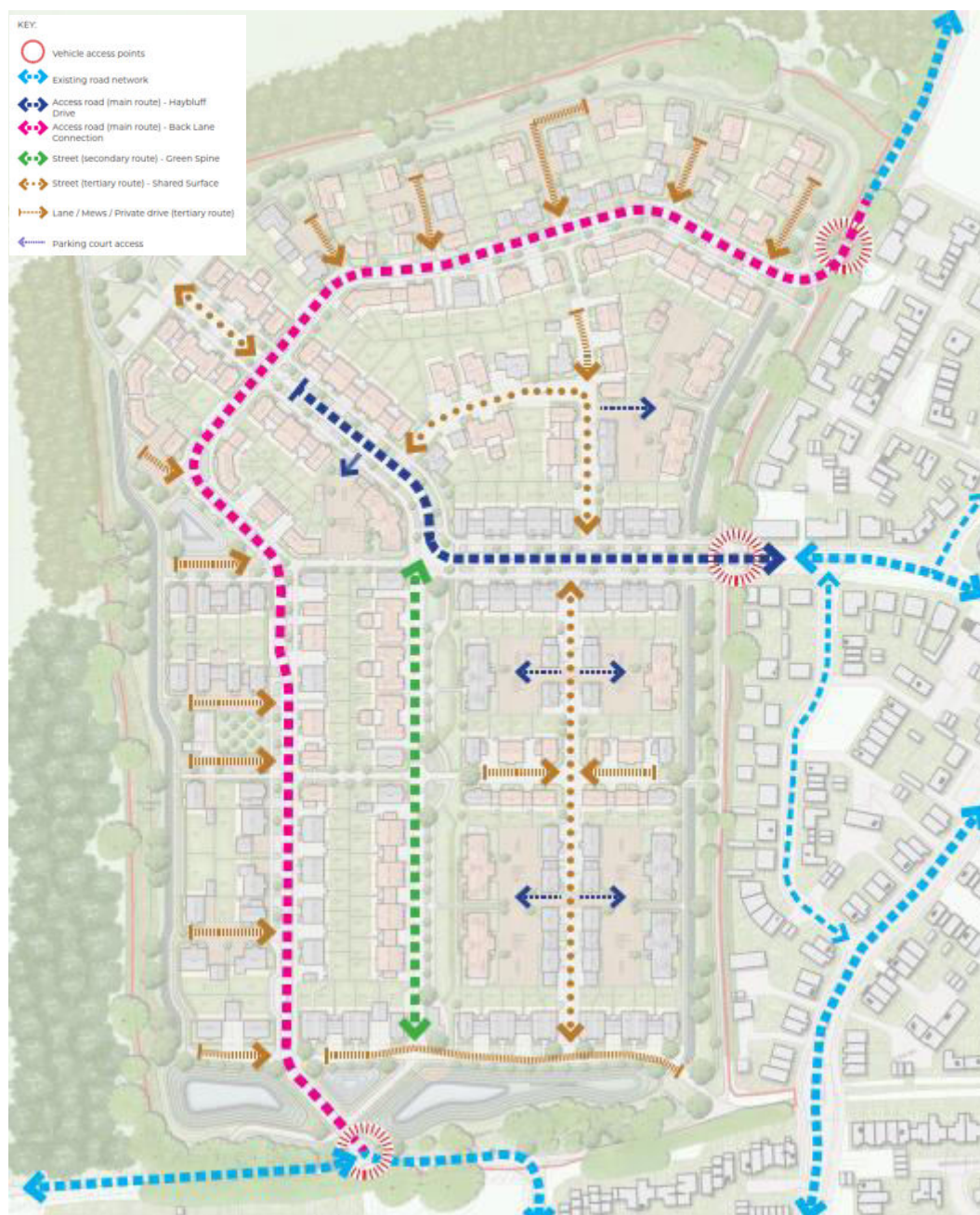
Public Transport Tracking

- 6.35 Swept path analysis for the diversion of the SB12 bus route along Mendip Way including the around the Mendip Way / Haybluff Drive roundabout is presented in our drawing **2105-037 SP03** which is contained within the Drawing Appendix.

Street Hierarchy

- 6.36 When considering the hierarchy of streets within the development, the function of the roads was carefully considered with routes for pedestrians and cyclists are afforded greater, priority than vehicular traffic. The internal network of streets has been designed in accordance with the guidance contained in the emerging Hertfordshire County Council guidance contained in "Place & Movement Planning and Design Guidance".

6.37 The hierarchy of streets within the site is presented in **Figure 6.3**.



Extension to Haybluff Drive

6.38 The primary access from Haybluff Drive will be designed as a tree lined street, with a 6.1m carriageway width and verges of 3m on northern side of the road and 2m on the other, which would accommodate highway trees. This road would provide direct frontage access to the residential properties that line the street, with a 2.5m defensible zone between the frontages of the properties and the footway. A 2m footway would be accommodated on the northern side of the road and a 3m shared use footway and cycleway would be provided on the southern side of the road. This route has therefore been

designed as the primary route through the development in accordance with design standards for a 20 mph Residential Distributor Road.

Street (Secondary Route) Green Spine

- 6.39 This route would run alongside the linear park and would be designed as a 6.3m wide shared space, with 4.8m of the shared surface delineated for vehicles and an additional 1.5m of carriageway width with contrasting surfacing to accommodate pedestrians.

Street (tertiary route) – Shared Surface

- 6.40 These routes have been designed with a 5m carriageway width, with an additional 1.5m and an additional 1.5m of carriageway width with contrasting surfacing to accommodate pedestrians.

Back Lane Connection

- 6.41 The link road between the two Back Lane access points would serve the western side of the development and would be formed of a 5m conventional carriageway, with a 2m footway on the both sides of the road along the majority of the north-south section of the road, with a 2m footway on the southern side of the east-west section of the road. This road would also facilitate frontage access.

Lanes / Mews / Private Drives (tertiary routes)

- 6.42 These roads will be designed as shared space, with street widths of 4.1m for informal streets of less than 5 dwellings or 4.8m for Mews Streets, each design benefits from an and an additional 1.5m of carriageway width with contrasting surfacing to accommodate pedestrians. Informal Streets have been designed with a 10 mph design speed and a 11m forward visibility splay, whilst Mews Streets have been designed with a 20 mph design speed and 25m forward visibility.

General Arrangement Plan

- 6.43 The general arrangement plan for the internal roads within the development are presented in our drawings **2105-037 PL100**. This drawing is contained in the Drawing Appendix at the end of this report. These plans indicate the dimensions of the proposed internal road network.
- 6.44 It is proposed that the speed limit on Back Lane and Weston Road adjacent to the site will be reduced to 30mph. Our drawing **2105-037 PL109** provides an overview of the access works and

indicates the locations where the speed limits will be reduced either side of the access junction locations.

Internal Visibility

- 6.45 The visibility plays at the junctions within the development are presented in our drawings **2105-037 VS01**. Approach and forward visibility plays are presented in our drawing **2105-037 VS02**.
- 6.46 These drawings are contained in the Drawing Appendix at the end of this report and presents the junction and forward visibility plays for the internal road network.

Refuse Collection

- 6.47 To demonstrate the suitability of the internal road network, swept path analysis of a 12.205m refuse collection vehicle has been undertaken with the analysis presented within our drawings **2105-037 SP01** and **2105-037 SP02**. These plans are contained within the Drawing Appendix.

Parking

- 6.48 Cycle and car parking across the development has been determined with consideration to local parking standards, developer aspirations and effective site operations.
- 6.49 Cycle parking will be provided for short and long stay users which will be in accordance with North Hertfordshire District Council (**NHDC**) minimum cycle parking standards as is presented in Table 6.2.

Table 6.2 Residential Cycle Parking Standards

Class Use	Long Stay		Short Stay (Visitor/unallocated)
C3	1 bedroom	1 secure covered space per dwelling. None if garage or secure area provided	For above C3 general housing - if no garage or secure area is provided within curtilage of dwelling then 1 covered and secure space per dwelling in a communal area for visitors
	2 – 3 bedrooms	within curtilage of dwelling	

- 6.50 Car parking will be provided in accordance with NHDC design standards. The minimum car parking standards for residential developments in North Hertfordshire are summarised in Table 6.3.

Table 6.3 Residential Car Parking Standards

Class Use	Long Stay		Short Stay (Visitor/unallocated)
C3	1 bedroom	1 space per dwelling	Between 0.25 and 0.75 spaces per dwelling (rounded up to nearest whole number) with the higher standard being applied where there are no garages in the schemes and the lower standard applied where every dwelling in the scheme is to be provided with a garage
	2 – 3 bedrooms	2 spaces per dwelling	
	Retirement Development (e.g. warden assisted independent living accommodation)	1 space dwelling	

6.51 Overall, 591 allocated car parking spaces will be provided as indicated on the Car Parking Location Plan contained in **Appendix Q**.

6.52 514 (87%) of these spaces are allocated to homes, with:

- 15 within Double / Large Single Garages;
- 20 within Garage under Coach House;
- 186 spaces within Car Ports;
- 6 spaces On-Street Allocated;
- 159 spaces On-Plot; and
- 128 spaces within Courtyards.

6.53 77 spaces are unallocated for visitors, including:

- 27 spaces in Courtyards (Visitor);
- 35 spaces on Street (Visitor); and
- 15 spaces On-Plot (Visitor)

Construction Access

6.54 Construction traffic will need to access the Site to undertake infrastructure work and to supply the materials necessary to construct the residential units. These works would commence with

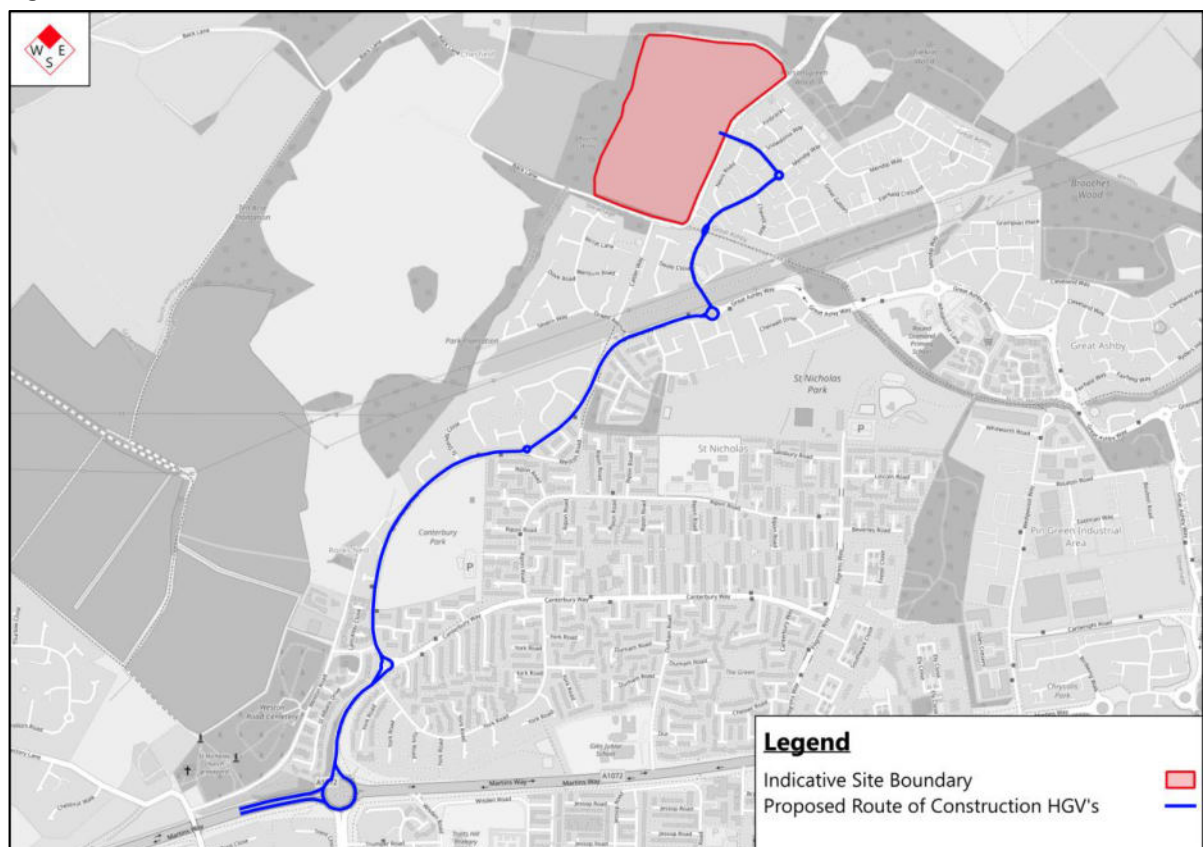
infrastructure works, with housing completions commencing approximately 9 months later. It would be anticipated that construction would take approximately 4 years and 4 months to complete.

6.55 During this period a range of vehicles would be utilised to transport materials to and from the site, these vehicles may include:

- 10m Rigid Heavy Goods Vehicles;
- 13.6m Small Articulated Vehicles;
- 9.4m Concrete Mixers;
- 12m Rigid Heavy Goods Vehicles;
- 12.3m Large Mobile Cranes ; and
- Transit Vans

6.56 It would be proposed that construction vehicles would be routed from Martins Way, onto Canterbury Way, Great Ashby Way, Bray Drive, Mendip Way and Haybluff Drive as presented in **Figure 6.4**.

Figure 6.4 Construction Traffic Routes



6.57 It would be anticipated that the provision of construction traffic would be controlled by a Construction Traffic Management Plan (CTMP), which would control construction hours, the routing

of construction vehicles and arrival and departure procedures. The production of the CTMP would be the subject of an appropriately worded planning condition.

7 On-Street Car Parking

- 7.1 It is proposed that a new service (SB12) will eventually run along the full length of Bray Drive and Mendip Way and will link Great Ashby to Lister Hospital and the town centre. This service will initially be introduced to terminate at the Haybluff Drive roundabout, with the service turning at the roundabout before returning on Mendip Way and Bray Drive.
- 7.2 To allow for the new bus service and also to facilitate construction vehicles to access the site from Haybluff Drive, restriction in parking will be required to allow both the bus and construction traffic to route along Bray Drive and Mendip Way.
- 7.3 The development of 'in verge' parking bays has previously been proposed to reduce the impact on the loss of the on-road parking. However, HCC and NHDC do not consider that the loss of highways verge to accommodate parking bays would be in accordance with the current local transport policies contained in HLTP4 and therefore the provision of these bays will only be considered as last resort.
- 7.4 Therefore, the applicant will provide funding through a Section 106 agreement with HCC, for the making and implementation of TRO's and subsequent monitoring surveys to implement the necessary parking restrictions on Bray Drive, Mendip Crescent and Haybluff Drive to facilitate both construction movements and the proposed bus service. The monitoring will determine the amount of displaced car parking that can be accommodated both on the surrounding streets and within the existing parking courts.
- 7.5 The first stage of parking controls will be to impose temporary parking restrictions to facilitate constructions movements into the site. As previously discussed, the construction vehicle route is proposed to be via Great Ashby Road, Bray Drive, Mendip Way and Haybluff Drive, with construction vehicle movements only operating during the day, when the number of vehicles parked on-street would be reduced. It would be anticipated that the restrictions on car parking imposed by the temporary TRO would also allow the bus service to commence at an agreed trigger point within the construction period.
- 7.6 The indicative proposals that would be introduced during the construction phase of the development is presented in TPA drawing **2105-037 PL110**. These restrictions will be implemented prior to construction commencing and would be accompanied by increase parking enforcement.
- 7.7 The vehicles that would be displaced from the January 2023 surveys are indicated in red on the plan, with 29 vehicles displaced, with the vehicles that could still park, represented in green.

- 7.8 The temporary nature of this TRO will allow monitoring of the impact of the parking restrictions before a permanent TRO would be implemented to allow the bus to operate once the construction stage of the development had completed. Whilst the precise nature of this scheme will be determined based on the results of the monitoring. It would be expected that it would also include parking restrictions in the southern side of Mendip Way and Bray Drive and on the Haybluff Drive roundabout, with a indicative scheme presented in TPA drawing **2105-037 PL111**.
- 7.9 Vehicles displaced from the January 2023 surveys are again represented in red, with the vehicles retained in green. This would result in the displacement of 27 parking spaces.
- 7.10 To determine the number of displaced vehicles that could park 'on-street' within a reasonable distance of Mendip Way and Bray Drive, the results of the January and May 2024 car parking surveys have been utilised, with the average number of vehicles parked on each road section across the 3 survey days presented in Table 7.1, together with the length of available car parking, following the implementation of the parking restriction and the corresponding number of car that would be able to park.

Table 7.1 Available Parking for Displaced Vehicles

Street Section	Average surveyed number of vehicles parked	Available Length of parking following restrictions (bus)	Number of available spaces following bus restrictions	Available Length of parking following restrictions (construction)	Number of available spaces following Construction restrictions
Bray Drive	17	114	19	114	19
Mendip 1	35	90	15	90	15
Mendip 2	11	72	11	72	11
Haybluff Drive	18	105	16	93	14
Windrush Close	3	106	15	106	15
Total	84	487	76	572	74

- 7.11 The information in Table 7.1 indicate that of the 84 vehicles that were recorded to be parked in the parking surveys within the area considered, all but 8 would be able to re-locate to an on-street car parking space within a reasonable walking distance.

Parking Courts

- 7.12 Whilst it is understood that not all of the available spaces within the parking courts would be available to accommodate displaced vehicles, the information contained within Table 5.7, indicates that 31 spaces were available within these courts. Even if a small proportion of these available spaces were utilised by those who currently park on-street, this would reduce the number of displaced vehicles looking to park on-street further.
- 7.13 In their consultation response to the 2023 planning application the NHDC transport policy officer indicated that the existing parking courts may be able absorb approximately 13 displaced cars. This figure was calculated using average car ownership for flats in the Stevenage 001 Mid-layer super output area from the 2021 Census, which indicates 72% of the owners of flats in the area have access to a car. This would indicate that if all residents of the flats parked in the parking courts, 72% of the spaces would be occupied. compared to the existing 50% occupancy of the parking courts recorded in the survey data.

Sustainable travel measures

- 7.14 As outlined in the Mobility Strategy for the development, there will be a number of sustainable and active travel measures introduced which will benefit both the new residents of the site and those living in the Mendip Way and Great Ashby areas. These measure will include the introduction of the new bus service, improvements to pedestrian and cycle links, the introduction of car club vehicles and the extension of the Beryl bike scheme into Great Ashby.
- 7.15 These measures should allow residents of the Great Ashby area to reduce their dependence on owning a second car, reducing car ownership levels in the Great Ashby area. This would lead to a reduction in the number of vehicles that would need to be parked on the road.
- 7.16 The proposed 'manage and monitor' process following the implementation of the car parking restrictions, will allow the highway authority to implement further measures should on-street parking still remain an issue, with the 'last resort' implementation of car parking bays being considered to provide additional car parking if necessary.

8 Trip Generation and Distribution

- 8.1 This chapter of the Transport Assessment considers the quantum of trips that may be generated by the proposed development and the proposed distribution of trips on the local highway network. Given that Mendip Way forms a crescent, which serves predominantly residential uses, it is possible to provide a comparison of between the number of trips that would be generated using TRICS trip rates and those derived from local survey data.

Trip Generation

TRICS Trip Rates

- 8.2 The TRICS database has been interrogated under land use code 03 – *Residential*, subcategory A – *Houses Privately owned* to derive trip rates for sample of sites considered representative of the proposed development.
- 8.3 The following selection criteria was applied:
- Multi-modal surveys;
 - Weekday surveys only;
 - Sites in Greater London, Ireland, Scotland and Wales omitted;
 - Sites with dwelling numbers ranging between 200 and 800.
- 8.4 The residential TRICS output report is contained in **Appendix R**.
- 8.5 Table 8.1 presents the vehicle trip rates derived from TRICS during the morning and evening peak periods.

Table 8.1 TRICS residential vehicle trip rates

	Morning peak		Evening peak	
	Arrive	Depart	Arrive	Depart
TRICS total vehicle trip rate per dwelling	0.140	0.407	0.380	0.155

Local Trip Rates

- 8.6 Utilising the May 2022 survey data, local trip rates have been derived using the arrivals and departures recorded into and out of Bray Drive and Mendip Way at the junctions Great Ashby Way.
- 8.7 A total of 781 dwellings are accessed via Mendip Way from the junctions from Great Ashby Way. Whilst there are a small number of other non-residential facilities which are also accessible from Great Ashby Way, these facilities are not considered to attract significant traffic volumes during the morning and evening peak hour periods.
- 8.8 The surveyed arrivals and departures at each junction are summarised in Table 8.2, with the surveyed movements divided by the total dwelling numbers of 781 dwellings to derive a localised trip rate per dwelling.

Table 8.2 Surveyed Vehicle Movements and Derived Local Trip Rates

Vehicles	Morning peak		Evening peak	
	Arrive	Depart	Arrive	Depart
Surveyed vehicle movements	135	352	270	216
Vehicle trip rate per dwelling	0.173	0.451	0.346	0.277

- 8.9 A comparison between the surveyed trip rates against the TRICS trip rate is presented within Table 8.3.

Table 8.3 Comparison of TRICS and Local Trip Rates

	Morning peak		Evening peak	
	Arrive	Depart	Arrive	Depart
TRICS	0.140	0.407	0.380	0.155
Localised trip rates	0.173	0.451	0.346	0.277
Comparison	+0.033	+0.044	-0.034	+0.122

- 8.10 As demonstrated in Table 8.3, the surveyed trip rates are comparable with those derived from the TRICS database. The local trip rates derived from the surveys are considered to be more representative

of existing local travel patterns and therefore have been utilised to determine the likely traffic attraction of the proposed development.

Proposed Traffic Generation

- 8.11 The application of the localised trip rates to the proposed development of 185 dwellings being accessed from Haybluff Drive and 96 dwellings from Back Lane is presented within Table 8.4.

Table 8.4 Proposed Residential Vehicle Trips

Location	Morning peak		Evening peak	
	Arrive	Depart	Arrive	Depart
Vehicle trip rate per dwelling	0.173	0.451	0.346	0.277
Forecast vehicle trips Haybluff Drive Access	32	84	64	51
Forecast vehicle trips Back Lane Access	17	43	33	27
Total Traffic Generation	49	127	97	78

- 8.12 The results presented in Table 8.4 indicate that the proposed development will generate a total of 176 two-way vehicle trips in the morning peak and 175 two vehicle trips during the evening peak hour. As the trip rates have been derived from existing traffic flow movements, this is considered that they represent a robust assessment of the trips that may be generated by the development, with sustainable travel measures, both implemented by the development and across Stevenage as a whole, encouraging a shift away from private car use in the future.

Total Person Trip Forecast

- 8.13 Census 2011 mode share information has been obtained from middle layer super output areas 'E02004944 Stevenage 001' and 'E02004945 Stevenage 002', which has previously been presented in Table 8.5.
- 8.14 In order to derive an indication of the number of person trips associated with the development the number of vehicle trips has been applied to the modal share for obtained from the Census data to derive the number of trips associated with all modes of transport.

Table 8.5 Estimation of the Development Modal Share – Calculated from Census 2011 Journey To Work Data

Mode	Proportion	Morning peak		Evening peak	
		Arrive	Depart	Arrive	Depart
Rail	9.3%	7	18	13	11
Bus, minibus or coach	5.1%	4	10	8	6
Driving a car or van	64.8%	49	127	97	78
Passenger in a car or van	6.1%	5	12	9	7
Bicycle	2.5%	2	5	4	3
On foot	10.5%	8	21	16	13
Other method of travel	1.7%	1	3	3	2
Total	100.0%	76	196	150	120

- 8.15 The results in Table 8.5 identify that the proposed development is forecast to attract a total of 272 total person trips during the morning peak hour and 270 total person trips are anticipated during the evening peak hour.

Modal Share Utilising National Travel Surveys (NTS)

- 8.16 To identify the mode of travel by journey purpose data from National Travel Survey (NTS) was extracted. The average percentages of the data presented within NTS0409a between 2015-2019 were calculated to determine the potential development modal share by purpose. The results are presented in Table 8.6.

Table 8.6 Average Modal Share Proportions By Purpose - Calculated From NTS England 2015-2019

Mode	Journey Purpose				
	Work Related	Education	Shopping/Leisure	Other	All Purposes
Walk	11.2%	41.8%	24.6%	38.0%	25.6%
Bicycle	3.5%	1.5%	2.0%	0.5%	1.7%
Car / Van Driver	57.1%	21.3%	32.3%	36.8%	40.3%
Car / Van Passenger	7.6%	22.7%	29.6%	19.6%	21.2%
Motorcycle	1.0%	0.0%	0.2%	0.1%	0.3%
Other	1.2%	2.1%	1.4%	0.5%	1.0%
Bus	7.1%	8.3%	5.8%	3.0%	5.6%
Rail	10.5%	1.7%	2.6%	0.8%	3.3%
Taxi	0.8%	0.6%	1.5%	0.7%	1.1%
All Modes	100.0%	100.0%	100.0%	100.0%	100.0%

- 8.17 A comparison of the modal share for work related trips obtained from the National Travel Survey and from the Census 2011 data indicates a reasonable correlation for work related trips. However, the data from the National Travel Survey indicates that number of peak hour person trips forecast from the development would be underestimated when only using the Census data, especially in the morning peak period, when it would be expected that a high proportion of trips would be being undertaken for education purposes.
- 8.18 It would therefore be expected that the peak hour modal share of car trips would be below that forecast solely from Census to Work data. Travel planning and sustainable and active transport improvements would also reduce the dependency on single journey car trips.

Traffic Distribution and Assignment

Census Data Distribution

- 8.19 To provide an indication of the likely distribution of trips from the proposed development 2011 Census Journey to Work data from the 'Stevenage 001', 'Stevenage 002' and 'Stevenage 004' mid-layer super output areas has been utilised to determine the percentage of vehicle trips to work of existing

residents of Great Ashby. The full analysis is contained in **Appendix S**. With a summary of the destinations presented in Table 8.7 below.

Table 8.7 2011 Census Journey to Work Distribution

Route	Destination	Census Area			Combined	Proportion	Dir
		001	003	004			
1	A1 (M) south	495	233	645	1373	23.43%	South
2	Gunnels Wood Rd	302	295	145	742	12.66%	Stevenage
3	Lister Hospital	176	167	153	496	8.46%	Stevenage
4	Grace Way	125	99	0	224	3.82%	Stevenage
5	A1155	153	428	470	1051	17.94%	Stevenage/ West
6	Pin Green Estate	56	49	56	161	2.75%	Stevenage
7	Gresley Way	132	125	284	541	9.23%	East
8	Letchworth Gate	68	60	85	213	3.63%	North
9	A602 West	199	180	222	601	10.26%	West
10	A505 East	65	81	78	224	3.82%	North
11	London Rd (Baldock)	14	8	19	41	0.70%	North
12	A1 (M) north	30	17	21	68	1.16%	North
13	Stevenage Rd (toward Walkern)	0	3	29	32	0.55%	East
14	Internal to area	0	29	64	93	1.59%	Stevenage
Total		1815	1774	2271	5860	100.0%	

8.20 The information within Table 8.7 indicates that approximately 44% of trips to work remain within Stevenage, with the largest proportion of work trips outside of the town being to the south with 23.43% of trips in that direction. Approximately 9.3% of work trips are to the north, with a similar percentage of trips to the west and the east of the town.

Use of Calder Way and Back Lane

8.21 As indicated from the Census data, approximately 10% of the development traffic be to destinations to the north of Stevenage, based on journey to work data. Assuming a similar level of traffic to the north would be generated by trips to schools or other traffic in the peak periods, this would indicate that approximately 20% of the development traffic would be to the north.

Haybluff Drive Access

- 8.22 To determine the amount of traffic travelling to the north of the town that might use Calder Way and Back Lane, the existing number of peak hour trips on Calder Way has been compared to the number of peak hour trips from the Great Ashby area that are currently utilising the A1 (M) and B197 for northbound journeys.
- 8.23 To determine the number of trips utilising the A1 (M), the total number of trips departing to the west on Martins Way has been derived from the 2022 survey data. The turning proportions at the Martins Way roundabout and at Junction 8 roundabout ion have then been utilised to estimate the proportions of trips exiting Martins Way that then head north on the A1 (M).
- 8.24 The number of trips heading north on the A1 (M) have then been compared to the number of northbound trips on Calder Way, to determine the percentage of northbound traffic from the Haybluff Drive access that might utilised Calder Way.
- 8.25 This analysis is presented in Table 8.8.

Table 8.8 Percentage of Northbound Traffic From Great Ashby Using Calder Way

Movement	Number/Percentage
Surveyed Traffic departing area on Martins Way	976
Turning proportion to the north at Martins Way to A602 roundabout	62.30%
Total travelling to J8	608
Turning proportion onto A1 (M) north and High Street (Graveley) at Junction 8	56.40%
Traffic volume travelling up A1(M) & High Str	343
Surveyed northbound traffic on Back Lane (north)	164
Total northbound traffic in morning peak	507
Percentage of northbound traffic using Calder Way	32.35%

- 8.26 Application of the 32.35% to the 20% of the development traffic flows that head north, would indicate that 6.47% of the development traffic from Haybluff Drive would be expected to utilise Calder Way to travel to/from the north.
- 8.27 These distributions would result in the number of additional trips on Calder Way from the Haybluff Drive access are presented in Table 8.9.

Table 8.9 Use of Calder Way by Development Traffic from Haybluff Drive

Route	Morning Peak		Evening Peak	
	Southbound	Northbound	Southbound	Northbound
Calder Way	2	5	4	3

- 8.28 Assuming that the development traffic from Haybluff Drive would be equally split on Back Lane between the north and the west. This would give the total amount of additional traffic on Back Lane from the Haybluff Drive access to be as presented in Table 8.10 for the Back Lane (north) and Table 8.11 Back Lane (west)

Table 8.10 Use of Back Lane North from Haybluff Drive Access

Route	Morning Peak		Evening Peak	
	Southbound	Northbound	Southbound	Northbound
Back Lane (north)	1	2	1	2

Table 8.11 Use of Back Lane (West) from Haybluff Drive Access

Route	Morning Peak		Evening Peak	
	Eastbound	Westbound	Eastbound	Westbound
Back Lane (west)	1	3	2	2

Back Lane Access

- 8.29 For the Back Lane Access, it has been assumed that all 20% of the traffic travelling to the north would utilise Back Lane through either Graveley or Weston, with the remaining 80% of traffic using Calder Way to access destinations in Stevenage or to the south and east of the town. This would result in the split of vehicles from the Back Lane Access presented in Table 8.12 for Calder Way, Table 8.13 for Back Lane (north) and Table 8.14 for Back Lane (west)

Table 8.12 Distribution of traffic to Calder Way from Back Lane Access

Route	Morning Peak		Evening Peak	
	Northbound	Southbound	Southbound	Northbound
Calder Way (80%)	14	34	26	22

Table 8.13 Distribution of traffic to Back Lane (north) from Back Lane Access

Route	Morning Peak		Evening Peak	
	Northbound	Southbound	Southbound	Northbound

Back Lane (north) (10%)	1	4	3	3
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Table 8.14 Distribution of traffic to Back Lane (west) from Back Lane Access

Route	Morning Peak		Evening Peak	
	Eastbound	Westbound	Eastbound	Westbound
Back Lane (west) (10%)	2	4	3	3

Total Use of Calder Way and Back Lane by Development Traffic

8.30 The total number of additional trips on Calder Way would therefore be as presented in Table 8.15.

Table 8.15 Total Number of Additional Trips on Calder Way

Access	Morning Peak		Evening Peak	
	Southbound	Northbound	Southbound	Northbound
Haybluff Drive	2	5	4	3
Back Lane	34	14	22	26
Total	36	19	26	29

8.31 Similarly, the total number of development trips on Back Lane would be as presented in Table 8.16 for Back Lane (north) and in Table 8.17 for Back Lane (west).

Table 8.16 Number of additional trips on Back Lane (north)

Route	Morning Peak		Evening Peak	
	Southbound	Northbound	Southbound	Northbound
Back Lane (north)	3	7	6	4

Table 8.17 Number of additional trips on Back Lane (west)

Route	Morning Peak		Evening Peak	
	Eastbound	Westbound	Eastbound	Westbound
Back Lane (west)	3	7	5	5

8.32 As presented in Table 8.16 and Table 8.17, the maximum number of additional vehicles through Weston and Graveley would be of 10 two-way trips in the morning and evening peak hours, which would equate to one additional trip every 6 minutes. Assuming that vehicles are travelling at 30mph (13.41 m/s) along the road, this would result in the vehicle being approximately 4.8km apart.

Development Traffic Distribution

- 8.33 Once on the wider highway network, it is considered that the development traffic would be distributed as the existing traffic flows within Great Ashby. Therefore, the development traffic has been predominantly distributed in relation to the existing turning movements of traffic from the 2022 traffic surveys.
- 8.34 The distribution has also been informed by the following:
- The distribution of trips identified from census 2011 journey to work data;
 - The likely origin / destination of trips to / from the Site. This has included the location of local retail, leisure and educational facilities and the routes to the wider highway network for trips to work; and,
 - The existing turning movements of traffic identified in the 2022 traffic surveys.
- 8.35 The vehicular trips associated with the development have been assigned across the network with reference the methodology identified above, with the resultant distribution of the trips identified in Table 8.4 is presented in **Figure 8.1** and **Figure 8.2**.

9 Consideration of the Access Arrangements

- 9.1 One of the main objections that both HCC and NHDC had to the 2023 planning application were that the access arrangements on proposed that the extension of Haybluff Drive would link directly to Back Lane.
- 9.2 As previously discussed, the 2023 planning application was not pursued, in order to allow further discussions in relation to access to be undertaken within the workshops arranged under the PPA. The assumption that the access arrangements into the site should be split was re-iterated by the County Council and NHDC within the workshop sessions and therefore formed the basis that the design of the proposed layout should be progressed.
- 9.3 When determining the number of units that should be served off each access point a number of factors were considered as follows:
- The number of dwellings that can be served off a single access point;
 - The level of additional traffic that would be assigned to Back Lane and Haybluff Drive; and
 - The capacity of Calder Lane to cater for additional development traffic.
- 9.4 Each of these factors is considered in in the sections below:

Level of Additional Traffic on Back Lane and Haybluff Drive

- 9.5 Analysis of the traffic flow distribution presented in the previous section of this report indicates that the number of additional trips on Back Lane and Haybluff Drive would be as presented Table 9.1.

Table 9.1 Total development traffic on Back Lane and Haybluff Drive

Route	Morning Peak		Evening Peak	
	Arrive	Depart	Arrive	Depart
Back Lane (north) towards Weston	3	7	6	4
Back Lane (west) towards Graveley	2	7	5	4
Haybluff Drive	32	84	64	51

- 9.6 HCC have indicated that the increase in traffic flows through Weston and Graveley is a primary consideration in relation to determining the access strategy of the development. Therefore, the

increase in traffic flows on Back Lane (north) and west has been further investigated in relation to the increase in traffic flows on Back Lane that resulted from the recent closure of North Road to facilitate the access works into the HO3 development.

- 9.7 The traffic flows on Back Lane have been monitored during the period that North Road was closed. This monitoring was carried out utilising an additional turning count survey at the Back Lane/Calder Way and the Calder Way/Orwell Avenue junctions, which was conducted on Wednesday 15th May 2024, when North Road was closed. The full survey data recorded in this survey is presented in **Appendix T**.

- 9.8 A comparison of the peak hour traffic flows on Back Lane between the May 2022 survey and those recorded in the 2024 survey is presented in Table 9.2 for the morning peak and Table 9.3 for the evening peak.

Table 9.2 Comparison of Survey Flows on Back Lane – Morning Peak – 07:45 to 08:45

Date	Back Lane (w)			Back Lane (n)		
	Eastbound	Westbound	Total	Northbound	Southbound	Total
May-22	5	65	70	107	32	139
May-24	68	67	135	124	41	165

Table 9.3 Comparison of Survey Flows on Back Lane – Evening Peak – 17:00 to 18:00

Date	Back Lane (w)			Back Lane (n)		
	Eastbound	Westbound	Total	Northbound	Southbound	Total
May-22	25	17	42	50	54	86
May-24	23	66	89	97	61	201

- 9.9 The comparison indicates that the closure of North Road resulted in an increase in traffic flows, with the May 2024 traffic flows significantly higher than those recorded in May 2022. The difference in surveyed flows is contained in Table 9.4 for the morning peak and Table 9.5 for the evening peak.

Table 9.4 Difference in Surveyed Flows on Back Lane – Morning Peak

Date	Back Lane (w)			Back Lane (n)		
	Eastbound	Westbound	Total	Northbound	Southbound	Total
May-22	-63	-2	-65	-17	-9	-26

Table 9.5 Difference in Surveyed Flows on Back Lane – Evening Peak

Date	Back Lane (w)			Back Lane (n)		
	Eastbound	Westbound	Total	Northbound	Southbound	Total
May-22	2	-49	-47	-47	-7	-54

- 9.10 The addition of the development traffic flows on Back Lane (presented in Table 9.1) would not increase traffic flows on Back Lane to the May 2024 levels. Therefore, therefore it is considered that traffic flow conditions on Back Lane would be no worse than has previously been occurring at the time of the closure of North Road. This in conjunction with the increase in traffic flows on Back Lane being around one vehicle every 6 minutes is considered to indicate that the 96 dwellings that would be accessed off Back Lane is considered to be acceptable.

Level of Additional Traffic on Calder Way

- 9.11 The capacity of Calder Way presents a constraint on the number of vehicles that can pass between Great Ashby and Back Lane in the peak hours. However, to demonstrate that the road has the capacity to serve the proposed development of 96 homes, a similar comparison of the survey traffic flows on Calder Way has also been made.
- 9.12 The recorded traffic flows on Calder Way presented in Table 9.6 for the morning peak and Table 9.7 in the evening peak, together with the differences in surveyed flows from the May 2024 maximum flows.

Table 9.6 Comparison of Surveyed Flows on Calder Way – Morning Peak

Date	Calder Way					
	Flows			Difference from May'24		
	Northbound	Southbound	Total	Northbound	Southbound	Total
May-22	164	32	196	-20	-70	-90
May-24	184	102	286	0	0	0

Table 9.7 Comparison of Surveyed Flows on Calder Way – Evening Peak

Date	Calder Way					
	Flows			Difference from May'24		
	Northbound	Southbound	Total	Northbound	Southbound	Total
May-22	60	72	132	-100	-9	-109
May-24	160	81	241	0	0	0

- 9.13 It can be again demonstrated that the number of additional development trips on Calder Way (presented in Table 8.15) would not increase traffic flows on Calder Way above the May 2024 levels, which have been recorded to pass along the road at that time. Therefore it is considered that the additional peak hour development traffic can be accommodated below the levels of traffic that have previously been observed to pass along the road.
- 9.14 It should also be noted that increasing the southbound traffic on Calder Way into morning peak and the northbound traffic in the evening peak, is likely to reduce opposing traffic flows along the road. This may reduce the number of vehicles utilising Calder Way and Back Lane to route to/from destinations to the north of Stevenage, which may reduce the level of 'rat-running' from existing residents.

Number of Dwellings From a Single Access Point

- 9.15 It is considered desirable to limit the number of dwelling that should be accessed from a single access point, which would limit the number of dwellings that should be accessed from Haybluff Drive. As emergency access will be provided onto the re-aligned Back Lane, it is considered that 185 dwellings is appropriate for the single vehicle access from Haybluff Drive.

10 Future Traffic Flow Scenarios

- 10.1 This chapter of the Transport Assessment considers the future year scenarios for which the capacity of the local highway network will be assessed.

Background Traffic Growth

- 10.2 To derive the local growth factors, TEMPro version 7.2c has been utilised to identify the level of traffic growth that is anticipated within the local area. Origin and destination data for the 'Stevenage 001' & 'Stevenage 002' MSOAs was derived for car drivers between 2022 and 2026 and 2022 to 2031, which represents the end of local plan period.
- 10.3 These local factors have been adjusted using the National Traffic Model (NTM) (NRTP 2022 Core) for Principal road types. The growth factors are summarised in Table 10.1.

Table 10.1 TEMPro Growth Factors

Area	Origin		Destination		NTM Adjusted	
	Morning peak	Evening peak	Morning peak	Evening peak	Morning peak	Evening peak
2026						
Stevenage 001	1.031	1.0270	1.0275	1.0293	1.0168	1.0158
Stevenage 002	1.0341	1.0470	1.0497	1.0360	1.02934	1.0289
Average	1.03255	1.037	1.0386	1.03265	1.023092	1.0224
2031						
Stevenage 001	1.0499	1.0501	1.0529	1.0479	1.0588	1.0564
Stevenage 002	1.0530	1.0750	1.0787	1.0574	1.0734	1.0737
Average	1.0515	1.0626	1.0658	1.0527	1.0661	1.0651

- 10.4 The average of the NTM adjusted growth factors presented in Table 10.1 has been applied to the surveyed (2022) traffic flows in each respective peak period to derive the Forecast Base (2026) traffic flows and the Forecast Base (2031) traffic flows.
- 10.5 The Forecast Base (2026) traffic flows are presented in **Figure 10.1** and **Figure 10.2** for the morning and evening peak hours respectively.

- 10.6 The Forecast Base (2031) traffic flows are presented in **Figure 10.3** and **Figure 10.4** for the morning and evening peak hours respectively.

Other Local Plan Development

- 10.7 In addition to the background traffic growth, derived from TEMPro, a review has also been undertaken to determine whether any other development sites should also be considered in deriving the traffic flows.
- 10.8 To provide a comprehensive indication of the proposed Local Plan growth in the Great Ashby area, the impact of the allocated GA2 Site *Land Northeast of Great Ashby* has been considered. This site has an allocation of 600 dwellings, which would be accessed from Mendip Way to the east of the Site.
- 10.9 Forecast traffic flows for the GA2 development have been obtained from Woods Hardwick, who are the highways consultants for that scheme, with the traffic flows obtained contained in **Appendix U** and distributed onto the study area, associated with this study.
- 10.10 The distribution of these trips are presented in **Figure 10.5** and **Figure 10.6** for the morning and evening peak hours respectively.

Total Forecast Traffic Flows

- 10.11 As the development of the GA2 scheme would be somewhat later than the current GA1 development timetable. The highway impact analysis presented in this assessment will consider the impact of the GA1 development in isolation, with an additional test to consider the cumulative impact of both developments.
- 10.12 The Total Forecast (2026) traffic flows, considering the GA1 development in isolation are presented in **Figure 10.7** and **Figure 10.8** for the morning and evening peak hours respectively.
- 10.13 The Total Forecast (2031) traffic flows, considering the GA1 development in isolation are presented in **Figure 10.9** and **Figure 10.10** for the morning and evening peak hours respectively.

Cumulative Total Forecast traffic flows

- 10.14 The cumulative Total Forecast traffic flows include the impact of the GA2 development and are the sum of the Total Forecast traffic flows and the GA2 traffic flows.

- 10.15 The cumulative Total Forecast (2026) traffic flows are presented in **Figure 10.11** and **Figure 10.12** for the morning and evening peak hours respectively.
- 10.16 The cumulative Total Forecast (2031) traffic flows are presented in **Figure 10.13** and **Figure 10.14** for the morning and evening peak hours respectively.

11 Highway Impact Analysis

11.1 This chapter of the Transport Assessment sets out the results of the future year capacity analysis to understand the impact of the proposed development on the local highway operation.

11.2 The junctions have been modelled under the following future year traffic scenarios:

- Forecast Base (2026) Traffic Flows – No Development;
- Total Forecast (2026) Traffic Flows – GA1 Development Only;
- Cumulative Total Forecast (2026) Traffic Flows – GA1 And GA2 Developments;
- Forecast Base (2031) Traffic Flows – No Development;
- Total Forecast (2031) Traffic Flows – GA1 Development Only; and
- Cumulative Total Forecast (2031) Traffic Flows – GA1 And GA2 Developments.

Canterbury Way / Martins Way (east) / Grace Way / Martins Way (west) 4-arm Roundabout

11.3 The operation of this roundabout has been modelled under the loading of the Forecast Base traffic flows, Total Forecast traffic flows and the cumulative Total Forecast traffic flows using the ARCADY module within Junctions 11.

11.4 The modelling results output report is contained in **Appendix G**, and a summary of the modelling results is presented in Table 11.1 for the GA1 development and in Table 11.2 for the cumulative impact of the GA1 and GA2, presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

**Table 11.1 Canterbury Way / Martins Way (East) / Grace Way / Martins Way (West) 4-Arm
Roundabout – Future Year Modelling Results**

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Canterbury Way	0.54	1	0.44	1	0.58	1	0.47	1
Martins Way (East)	0.42	1	0.33	1	0.43	1	0.34	1
Grace Way	0.20	0	0.28	0	0.20	0	0.29	0
Martins Way (West)	0.38	1	0.59	1	0.38	1	0.61	2
2031								
Canterbury Way	0.56	1	0.46	1	0.61	2	0.50	1
Martins Way (East)	0.44	1	0.35	1	0.45	1	0.35	1
Grace Way	0.21	0	0.30	0	0.22	0	0.31	0
Martins Way (West)	0.39	1	0.62	2	0.40	1	0.64	2

Table 11.2 Canterbury Way / Martins Way (East) / Grace Way / Martins Way (West) 4-Arm Roundabout – Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning peak		Evening peak	
	RFC	Queue	RFC	Queue
2026				
Canterbury Way	0.82	4	0.53	1
Martins Way (east)	0.49	1	0.35	1
Grace Way	0.25	0	0.35	1
Martins Way (west)	0.45	1	0.69	2
2031				
Canterbury Way	0.85	5	0.56	1
Martins Way (east)	0.52	1	0.36	1
Grace Way	0.26	0	0.37	1
Martins Way (west)	0.47	1	0.72	3

- 11.5 The results presented in Table 11.1 indicate that the junction will continue to operate well within theoretical capacity during both morning and evening peak hour periods under the loading of the Total Forecast traffic flows.
- 11.6 Under the loading of the cumulative Total Forecast 2031 traffic flows in Table 11.2, the junction will operate at theoretical capacity in the morning peak, however in reviewing the modelling output report, this RFC value of 0.85 is only present for one 15 minute period, before returning to an RFC of 0.67 in the following 15 minute period and remaining below capacity thereafter.
- 11.7 The proposed development is forecast to result in modest increases in RFC, however, this will not result in a material impact on queueing conditions. The impact of the proposed development is therefore not considered to be severe.

Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction

- 11.8 The operation of this priority junction has been modelled under the loading of the Forecast Base , Total Forecast traffic flows and the cumulative Total Forecast traffic using the PICADY module within Junctions 11.
- 11.9 The modelling output report is contained in **Appendix H**, and a summary of the modelling results is presented in Table 11.3 for the GA1 development and Table 11.4 for the cumulative impact of the GA1 and GA2, presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.3 Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction – Future Year (2031) Modelling Results

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Left from Orwell Avenue	0.07	0	0.12	0	0.09	0	0.14	0
Right from Orwell Avenue	0.39	1	0.18	0	0.52	1	0.25	0
Great Ashby Way (east)	0.23	0	0.15	0	0.24	0	0.18	0
2031								
Left from Orwell Avenue	0.08	0	0.13	0	0.09	0	0.15	0
Right from Orwell Avenue	0.41	1	0.20	0	0.56	1	0.26	0
Great Ashby Way (east)	0.24	0	0.16	0	0.26	0	0.18	0

Table 11.4 Great Ashby Way (West) / Orwell Avenue / Great Ashby Way (East) Priority Junction – Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning peak		Evening peak	
	RFC	Queue	RFC	Queue
2026				
Left from Orwell Avenue	0.28	0	0.19	0
Right from Orwell Avenue	0.87	4	0.33	1
Great Ashby Way (east)	0.34	1	0.27	0
2031				
Left from Orwell Avenue	0.58	1	0.20	0
Right from Orwell Avenue	0.96	6	0.36	1
Great Ashby Way (east)	0.35	1	0.28	0

- 11.10 The results presented in Table 11.3 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of the Total Forecast traffic flows. The proposed development is forecast to result in negligible changes in RFC and queuing
- 11.11 Under the loading of the cumulative Total Forecast as shown in Table 11.4, the Orwell Avenue Arm will be over theoretical Capacity yet under the overall capacity for the junction in the morning peak. However, in reviewing the modelling output report, this RFC value of 0.96 in 2031 is only present for one 15 minute period, before returning to an RFC of 0.44 in the following 15 minute period and remaining below capacity thereafter.
- 11.12 The cumulative impact of the GA1 and GA2 developments is therefore not considered to be severe.

Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout

- 11.13 The operation of this roundabout has been modelled under the loading of the Forecast Base traffic flows, Total Forecast traffic flows and the cumulative Total Forecast traffic flows using the ARCADY module within Junctions 11.
- 11.14 The modelling results output report is contained in **Appendix I** and a summary of the modelling results is presented in Table 11.1 for the GA1 development and in Table 11.2 for the cumulative impact of the GA1 and GA2, presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.5 Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout – Future Year
Modelling Results

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Bray Drive	0.28	0	0.16	0	0.34	1	0.21	0
Great Ashby Way (East)	0.48	1	0.35	1	0.50	1	0.36	1
Wansbeck Close	0.06	0	0.02	0	0.06	0	0.02	0
Great Ashby Way (West)	0.35	1	0.51	1	0.37	1	0.54	1
2031								
Bray Drive	0.29	0	0.17	0	0.35	1	0.22	0
Great Ashby Way (East)	0.50	1	0.37	1	0.52	1	0.38	1
Wansbeck Close	0.06	0	0.02	0	0.07	0	0.02	0
Great Ashby Way (West)	0.36	1	0.52	1	0.38	1	0.56	1

Table 11.6 Great Ashby Way / Bray Drive / Wansbeck Close 4-Arm Roundabout - Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning peak		Evening peak	
	RFC	Queue	RFC	Queue
2026				
Mendip Way	0.38	1	0.23	0
Great Ashby Way East	1.00	15	0.48	1
Whitehorse Lane	0.10	0	0.02	0
Great Ashby Way West	0.63	2	0.74	3
2031				
Mendip Way	0.39	1	0.25	0
Great Ashby Way East	1.02	19	0.50	1
Whitehorse Lane	0.11	0	0.02	0
Great Ashby Way West	0.64	2	0.76	3

- 11.15 The results presented in Table 11.5 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of the Total Forecast traffic flows. The proposed development is forecast to result in modest increases in RFC, however, this will not result in a material impact on queueing conditions. The impact of the proposed development is therefore not considered to be severe.
- 11.16 Table 11.6 outlines that the Cumulative Total Forecast, accounting for traffic from GA2, would push the junction slightly over capacity in the morning peak. However, in reviewing the modelling output report, this RFC value of 1.02 in 2031 is only present for one 15 minute period, before returning to an RFC of 0.62 in the following 15 minute period and remaining below capacity thereafter.

Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout

- 11.17 The operation of this roundabout has been modelled under the loading of the Forecast Base traffic flows, Total Forecast traffic flows and the cumulative Total Forecast traffic flows using the ARCADY module within Junctions 11.
- 11.18 The modelling output report is contained in **Appendix J**, and a summary of the modelling results is presented in Table 11.7 and Table 11.8 presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.7 Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout – Future Year Modelling Results

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Mendip Way	0.13	0	0.12	0	0.17	0	0.15	0
Great Ashby Way East	0.29	0	0.23	0	0.30	0	0.26	0
Whitehorse Lane	0.16	0	0.23	0	0.17	0	0.25	0
Great Ashby Way West	0.25	0	0.39	1	0.26	0	0.39	1
2031								
Mendip Way	0.14	0	0.13	0	0.18	0	0.15	0
Great Ashby Way East	0.30	0	0.25	0	0.31	0	0.26	0
Whitehorse Lane	0.17	0	0.24	0	0.18	0	0.26	0
Great Ashby Way West	0.27	0	0.41	1	0.27	0	0.42	1

Table 11.8 Mendip Way / Great Ashby Way (East) / Whitehorse Lane / Great Ashby Way (West) 4-Arm Roundabout – Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning peak		Evening peak	
	RFC	Queue	RFC	Queue
2026				
Mendip Way	0.65	2	0.28	0
Great Ashby Way East	0.41	1	0.31	0
Whitehorse Lane	0.22	0	0.28	0
Great Ashby Way West	0.52	1	0.63	2
2031				
Mendip Way	0.66	2	0.29	0
Great Ashby Way East	0.43	1	0.32	1
Whitehorse Lane	0.23	0	0.29	0
Great Ashby Way West	0.53	1	0.65	2

- 11.19 The results presented in Table 11.7 and Table 11.8 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of both Total Forecast traffic flows. The proposed development is forecast to result in modest increases in RFC, however, this will not result in a material impact on queueing conditions. The impact of the proposed development is therefore not considered to be severe.

Gresley Way (north) / Martins Way 3-arm Roundabout

- 11.20 The operation of this roundabout has been modelled under the loading of the Forecast Base (2031), Total Forecast (2031) traffic flows and the cumulative Total Forecast (2031) traffic flows using the ARCADY module within Junctions 11.

- 11.21 The modelling output report is contained in **Appendix K**, and a summary of the modelling results is presented in Table 11.9 and Table 11.10, presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.9 Gresley Way (North) / Gresley Way (South) / Martins Way 3-Arm Roundabout – Future Year (2031) Modelling Results

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Gresley Way (north)	0.57	1	0.37	1	0.61	2	0.39	1
Gresley Way (south)	0.38	1	0.38	1	0.40	1	0.40	1
Martins Way	0.17	0	0.26	0	0.18	0	0.27	0
2031								
Gresley Way (north)	0.61	2	0.39	1	0.64	2	0.41	1
Gresley Way (south)	0.41	1	0.41	1	0.42	1	0.42	1
Martins Way	0.19	0	0.27	0	0.19	0	0.28	0

Table 11.10 Gresley Way (north) / Gresley Way (south) / Martins Way 3-arm Roundabout – Cumulative Future Year (2031) Modelling Results

Arm	Cumulative Total Forecast			
	Morning peak		Evening peak	
	RFC	Queue	RFC	Queue
2026				
Gresley Way (north)	0.69	2	0.41	1
Gresley Way (south)	0.42	1	0.42	1
Martins Way	0.19	0	0.28	0
2031				
Gresley Way (north)	0.72	2	0.42	1
Gresley Way (south)	0.44	1	0.44	1
Martins Way	0.20	0	0.29	0

- 11.22 The results presented in Table 11.9 and Table 11.10 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of both Total Forecast traffic flows. The proposed development is forecast to result in modest increases in RFC, however, this will not result in a material impact on queueing conditions. The impact of the proposed development is therefore not considered to be severe.

Orwell Avenue / Calder Way Priority Junction

- 11.23 The operation of this priority junction has been modelled under the loading of the Forecast Base (2026 and 2031) Total Forecast (2026 and 2031) traffic flows and the cumulative Total Forecast (2026 and 2031) traffic using the PICADY module within Junctions 11.
- 11.24 The modelling output report is contained in **Appendix L** and a summary of the modelling results is presented in Table 11.11 and Table 11.12, outlining the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.11 Orwell Avenue / Calder Priority Junction – Future Year Modelling Results

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Left to Orwell Avenue (South)	0.07	0	0.14	0	0.14	0	0.18	0
Right to Orwell Avenue (North)	0.01	0	0.02	0	0.02	0	0.03	0
Right to Calder Way	0.40	1	0.17	0	0.44	1	0.25	0
2031								
Left to Orwell Avenue (South)	0.07	0	0.14	0	0.14	0	0.18	0
Right to Orwell Avenue (North)	0.01	0	0.02	0	0.02	0	0.03	0
Right to Calder Way	0.42	1	0.18	0	0.47	1	0.26	0

Table 11.12 Orwell Avenue / Calder Priority Junction – Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning Peak		Evening Peak	
	RFC	Queue	RFC	Queue
2026				
Left to Orwell Avenue (South)	0.16	0	0.20	0
Right to Orwell Avenue (North)	0.02	0	0.03	0
Right to Calder Way	0.51	1	0.30	1
2031				
Left to Orwell Avenue (South)	0.16	0	0.20	0
Right to Orwell Avenue (North)	0.02	0	0.03	0
Right to Calder Way	0.53	1	0.31	1

- 11.25 The results presented in Table 11.11 and Table 11.12 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of both Total Forecast traffic flows. The proposed development is forecast to result in modest changes in RFC, however, this will result in a modest increase in an additional queueing vehicle on the Orwell Avenue arm of the junction during the worst fifteen-minute period of both peak hour periods. The impact of the proposed development is therefore not considered to be severe.

Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout

- 11.26 The operation of this roundabout has been modelled under the loading of the Forecast Base traffic flows, Total Forecast traffic flows and the cumulative Total Forecast traffic flows using the ARCADY module within Junctions 11.
- 11.27 The modelling output report is contained in **Appendix M**, and a summary of the modelling results is presented in Table 11.13 and Table 11.14 presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

**Table 11.13 Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Future Year
Modelling Results**

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Haybluff Drive	0.05	0	0.02	0	0.14	0	0.11	0
Mendip Way (East)	0.06	0	0.05	0	0.08	0	0.09	0
Cotswold Drive	0.05	0	0.02	0	0.05	0	0.02	0
Mendip Way (West)	0.04	0	0.08	0	0.05	0	0.13	0
2031								
Haybluff Drive	0.06	0	0.02	0	0.14	0	0.11	0
Mendip Way (East)	0.07	0	0.05	0	0.08	0	0.09	0
Cotswold Drive	0.05	0	0.02	0	0.05	0	0.02	0
Mendip Way (West)	0.05	0	0.09	0	0.06	0	0.13	0

Table 11.14 Mendip Way / Haybluff Drive / Cotswold Drive 4-Arm Roundabout – Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning peak		Evening peak	
	RFC	Queue	RFC	Queue
2026				
Haybluff Drive	0.14	0	0.11	0
Mendip Way (East)	0.08	0	0.09	0
Cotswold Drive	0.05	0	0.02	0
Mendip Way (West)	0.05	0	0.13	0
2031				
Haybluff Drive	0.14	0	0.11	0
Mendip Way (East)	0.08	0	0.09	0
Cotswold Drive	0.05	0	0.02	0
Mendip Way (West)	0.06	0	0.13	0

- 11.28 The results presented in Table 11.13 and Table 11.14 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of both Total Forecast traffic flows. The proposed development is forecast to result in modest increases in RFC, however, this will not result in a material impact on queueing conditions. The impact of the proposed development is therefore not considered to be severe.

B197 High Street / Church Lane Priority Junction

- 11.29 The operation of this priority junction has been modelled under the loading of the Forecast Base (2026 and 2031) Total Forecast (2026 and 2031) traffic flows and the cumulative Total Forecast (2026 and 2031) traffic using the PICADY module within Junctions 11.

- 11.30 The modelling output report is contained in **Appendix N** and a summary of the modelling results is presented in Table 11.11 and Table 11.12, outlining the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.15 B197 High Street / Church Lane Priority Junction – Future Year Modelling Results

Arm	Forecast Base				Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Left to High Street (South)	0.08	0	0.04	0	0.09	0	0.04	0
Right to High Street (North)	0.27	0	0.08	0	0.30	0	0.09	0
Right to Church Lane	0.06	0	0.06	0	0.07	0	0.08	0
2031								
Left to High Street (South)	0.09	0	0.04	0	0.10	0	0.04	0
Right to High Street (North)	0.30	0	0.09	0	0.33	1	0.10	0
Right to Church Lane	0.07	0	0.07	0	0.07	0	0.08	0

Table 11.16 B197 High Street / Church Lane Priority Junction – Cumulative Future Year Modelling Results

Arm	Cumulative Total Forecast			
	Morning Peak		Evening Peak	
	RFC	Queue	RFC	Queue
2026				
Left to High Street (South)	0.09	0	0.04	0
Right to High Street (North)	0.32	1	0.12	0
Right to Church Lane	0.07	0	0.08	0
2031				
Left to High Street (South)	0.10	0	0.04	0
Right to High Street (North)	0.34	1	0.12	0
Right to Church Lane	0.07	0	0.08	0

- 11.31 The results presented in Table 11.15 and Table 11.16 indicate that the junction will continue to operate within theoretical capacity during both morning and evening peak hour periods under the loading of both Total Forecast traffic flows. The proposed development is forecast to result in modest increases in RFC, however, this will not result in a material impact on queueing conditions. The impact of the proposed development is therefore not considered to be severe.

Site Access/Back Lane Priority Junction

- 11.32 The proposal will introduce a new access junction on Back Lane. This junction reverses the priority to allow traffic arriving from the east and heading north priority over traffic on Back Lane heading west. This priority junction has been modelled under the loading of the Total Forecast (2026 and 2031) traffic flows and the cumulative Total Forecast (2026 and 2031) traffic flows using the PICADY module within Junctions 11.
- 11.33 The modelling output report is contained in **Appendix V** and a summary of the modelling results is presented in Table 11.17, presenting the maximum RFCs and queues within any fifteen-minute period during the modelled peak hour periods.

Table 11.17 Site Access/Back Lane Priority Junction – Future Year Modelling Results

Arm	Total Forecast				Cumulative Total Forecast			
	Morning peak		Evening peak		Morning peak		Evening peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
2026								
Left to Site Access	0.02	0	0.03	0	0.02	0	0.03	0
Right to Back Lane (East)	0.02	0	0.07	0	0.05	0	0.09	0
Right to Back Lane (West)	0.03	0	0.03	0	0.03	0	0.03	0
2031								
Left to Site Access	0.02	0	0.03	0	0.02	0	0.03	0
Right to Back Lane (East)	0.02	0	0.07	0	0.05	0	0.09	0
Right to Back Lane (West)	0.03	0	0.03	0	0.03	0	0.03	0

- 11.34 The results presented in Table 11.17 indicate that the proposed site access will operate well within theoretical capacity over both Total Forecast Scenarios for both future years. The implementation and impact of the junction would not be considered severe.

Summary

- 11.35 The results presented in this chapter demonstrate that the impact of the proposed development on the local highway network is minimal, with minor increases in RFC with no material impact on queueing conditions.
- 11.36 The proposed development will therefore not result in a detrimental impact on the local highway network and is not considered to be severe.

12 Summary and Conclusion

12.1 The Site is allocated within the North Hertfordshire Local Plan in Policy GA1 for 330 homes with the following highway requirements set out in the Policy that allocates the Site:

- Principal vehicular access taken from existing residential streets within Great Ashby;
- Provision for sustainable modes of transport having regard to the Stevenage Mobility Strategy;
- Maintain general integrity of Weston Road, including as a through route for pedestrians; and,
- Integration of Footpath Graveley 010 as a perimeter feature around the north of the site.

12.2 Full planning permission is sought for the:

"Erection of 281 dwellings and associated roads, parking, drainage, landscaping, open space and servicing facilities"

12.3 Following the decision not to pursue the 2023 planning application, extensive pre-application discussions have been undertaken with both NHDC and HCC regarding the internal site layout and access arrangements for the site, with the eastern and western sides of the development now separately accessed from Haybluff Drive and Calder Way, with only emergency access linking the two sides of the development.

12.4 The section of Back Lane to the east and south of the Site will be stopped-up to create a greenway around the perimeter of the site, which will be suitable for pedestrian and equine use, with a new link between the northern and southern extents of Back Lane being provided through the western section of the site.

12.5 The main vehicular access point will be via an extension to Haybluff Drive across the stopped-up extent of Back Lane. This access will serve 185 dwellings. A second vehicular access will be provided onto Back Lane to the south of the Site, which will connect to Calder Way to facilitate access to the south, with this access serving 96 dwellings. This demonstrates that principal access will be taken from the residential streets of Great Ashby as required by policy GA1.

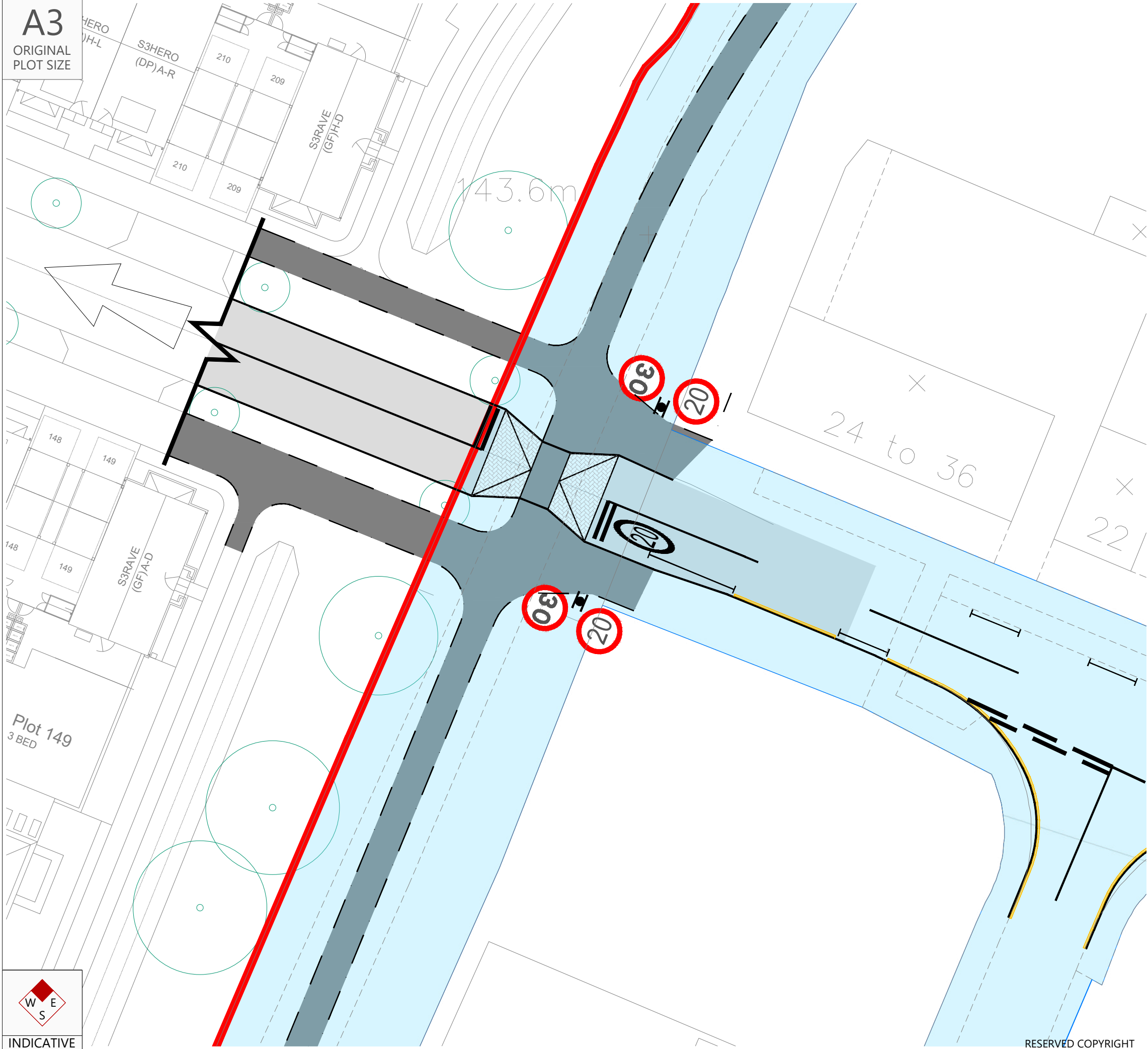
12.6 The site will be full permeable for active modes of transport with pedestrian/cycle access available via the vehicular access point onto Haybluff Drive and onto Orwell Avenue and Botany Bay Lane, with Botany Bay Lane being improved, including by the provision of low level lighting. Additional pedestrian access will be provided onto Footpath Graveley 010 which forms the public right of way to the north of the development.

- 12.7 The internal site has been designed to encourage active travel, with footpaths and cycleways alongside the internal access roads, which have been designed in accordance with the guidance contained in LTN 1/20 and the emerging Hertfordshire County Council's "Place & Movement Planning and Design Guidance". Pedestrian and cycle priority at the internal junction will be facilitated through the provision of 'Continuous Pavements' across the minor arms of the priority junctions within the site.
- 12.8 It would be proposed to provide a financial contribution to support a new bus service SB12, which will operate along Mendip Way to provide the residents of the development access to public transport services. Two new bus stops will be provided on Mendip Way which will be served by the extended service. The new bus service will link Great Ashby to Lister Hospital and both the Old Town and town centre.
- 12.9 A further financial contribution will be provided in accordance with Hertfordshire County Council Guide to Developer Infrastructure Contributions (2021). This contribution would be provided only to support schemes that directly promote access to the Site for sustainable and active modes of transport, with a contribution towards the implementation of car clubs, the extension of the Beryl Bike scheme in the Great Ashby area and the completion cycleway Route 2 as defined in the Stevenage Local Cycling & Walking Infrastructure Plan being considered the most appropriate, but other contributions would also be considered, such as improvements to the pedestrian crossings on Great Ashby Way.
- 12.10 A scheme for the relocation of on-street car parking on Bray Drive, Mendip Way and Haybluff Drive is proposed. It is demonstrated that whilst some on-street parking is displaced, there is only a net loss of 8 on-street parking spaces. It is then estimated that 13 of the displaced on-street spaces may be people with the right to use the parking courts but who currently choose to park on-street in preference. As such, whilst parking patterns will change, the overall amount of parking to serve the existing residents who currently park on street will be retained. The applicant will provide funding for the necessary TRO's and increased enforcement that would be required to deliver the parking restrictions that are required.
- 12.11 This scheme will be managed and monitored to determine the extent to which parking restrictions would need to be introduced to accommodate the proposed bus route and construction traffic.
- 12.12 The traffic attracted to the proposed development has been derived from local trips rates derived from survey data collected of the arrivals and departure into/out of Mendip Way and is therefore considered to be appropriate to consider the impact that the proposed development will have on the local highway network. It is likely that the sustainable travel improvements associated with the development will reduce trip rates below those recorded in the 2022 surveys.
- 12.13 Highway impact analysis has indicated that the proposed development will not have a severe impact on the local highway network surrounding the site.

- 12.14 It is therefore considered that the highways proposals are in accordance with the criteria outlined in Local Plan Policy GA1 and therefore there should be no highways reason why the development should not be granted planning permission.

DRAWINGS

(Part 1)



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TITLE:

Proposed
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- Haybluff Drive

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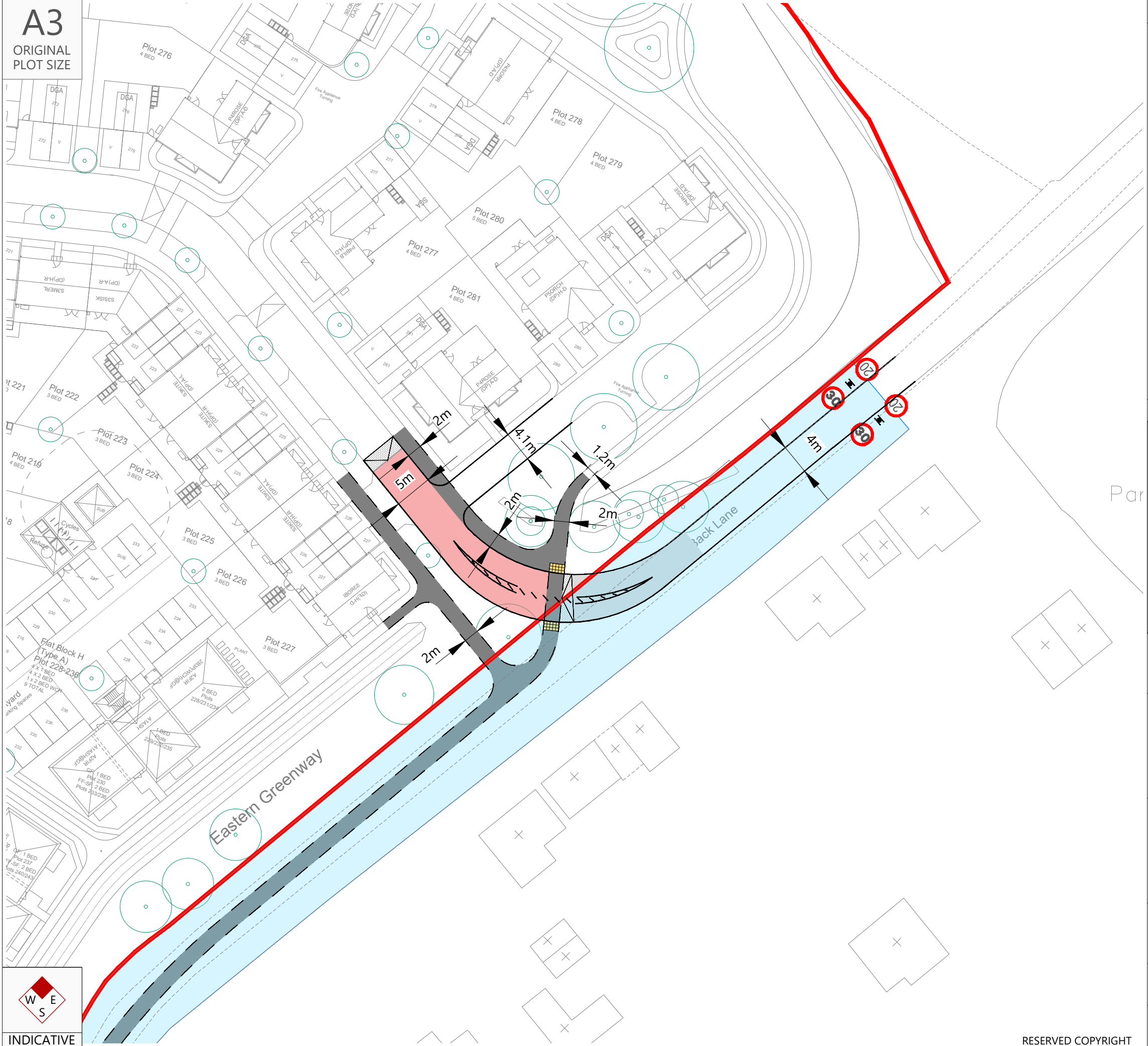
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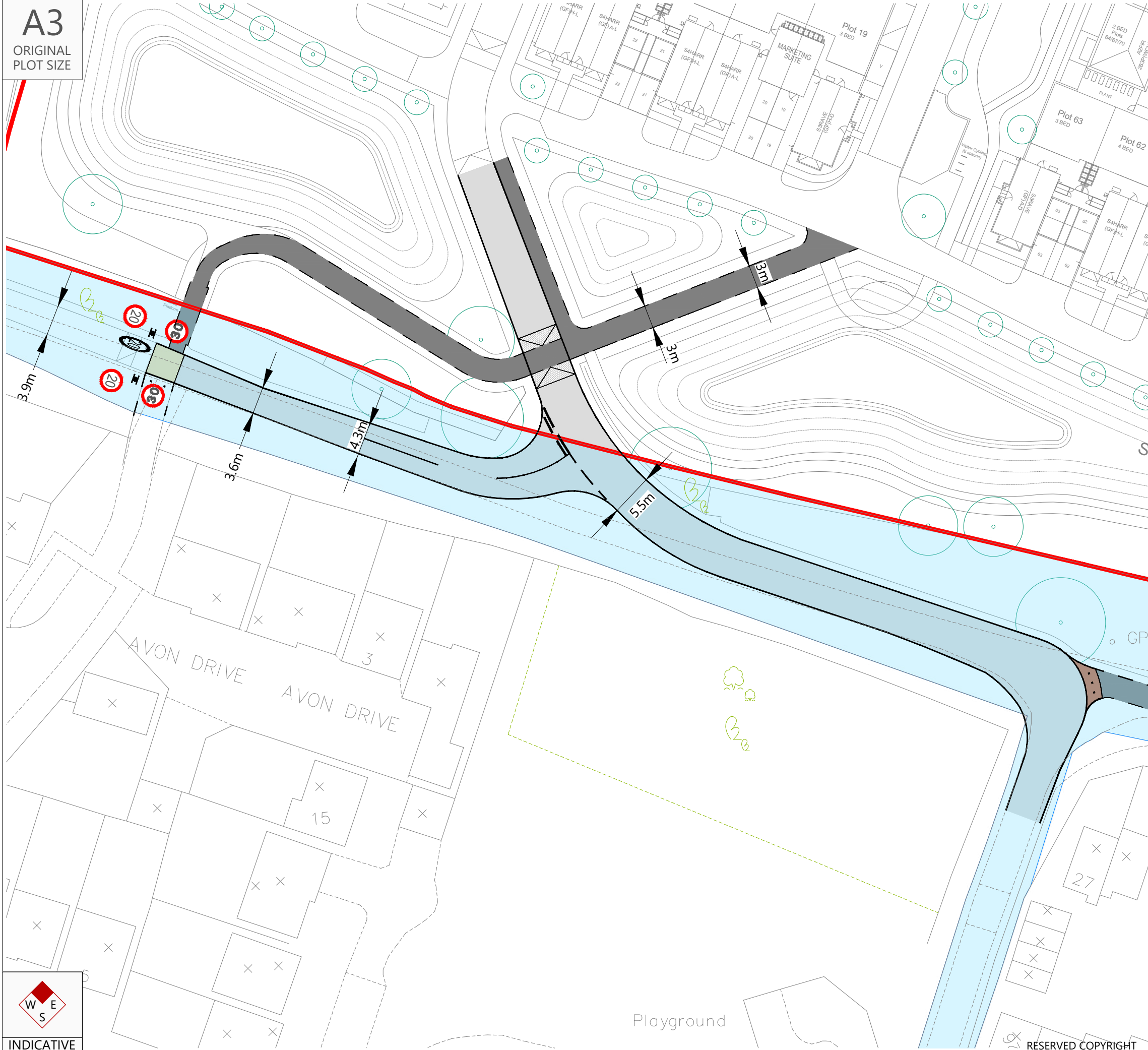
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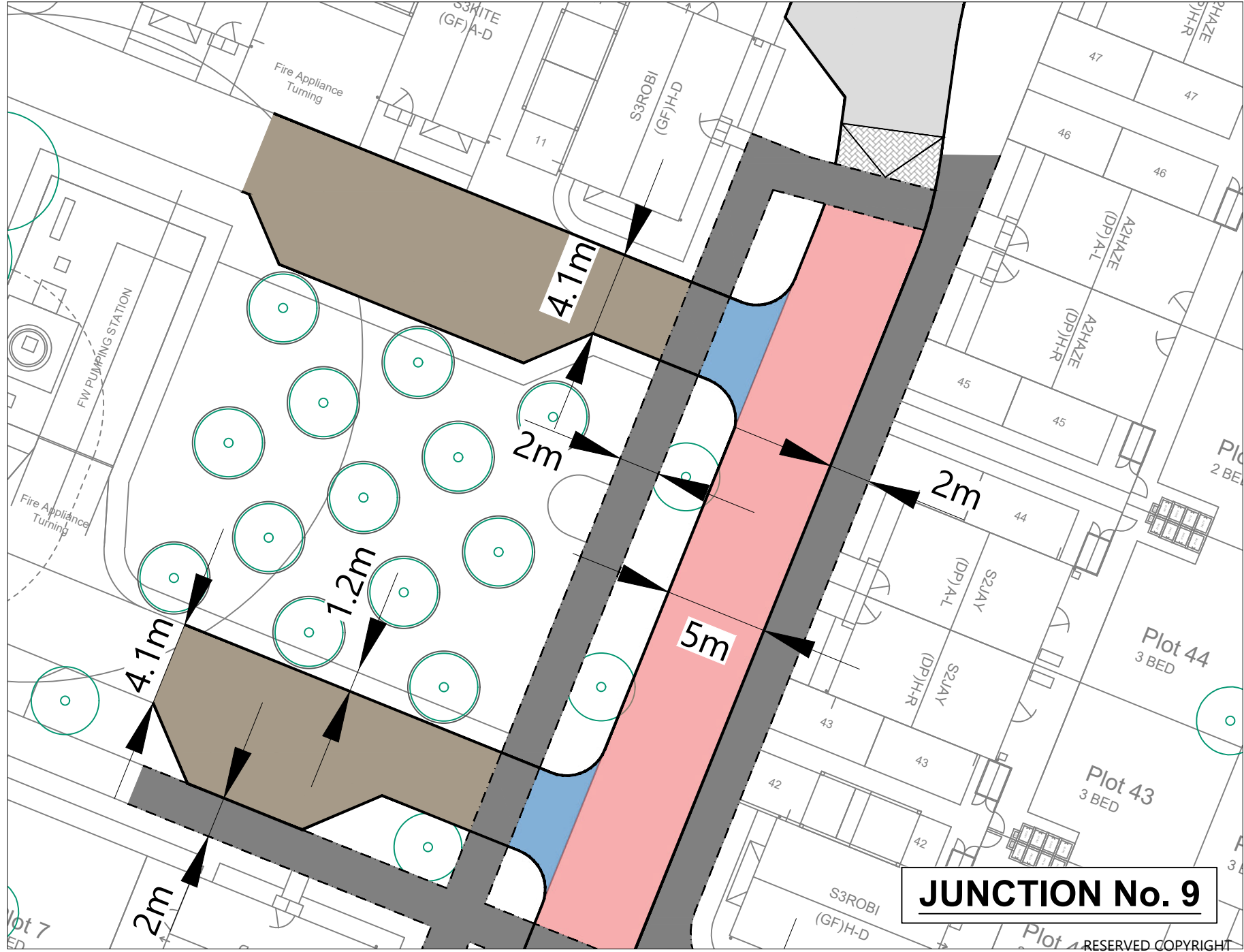
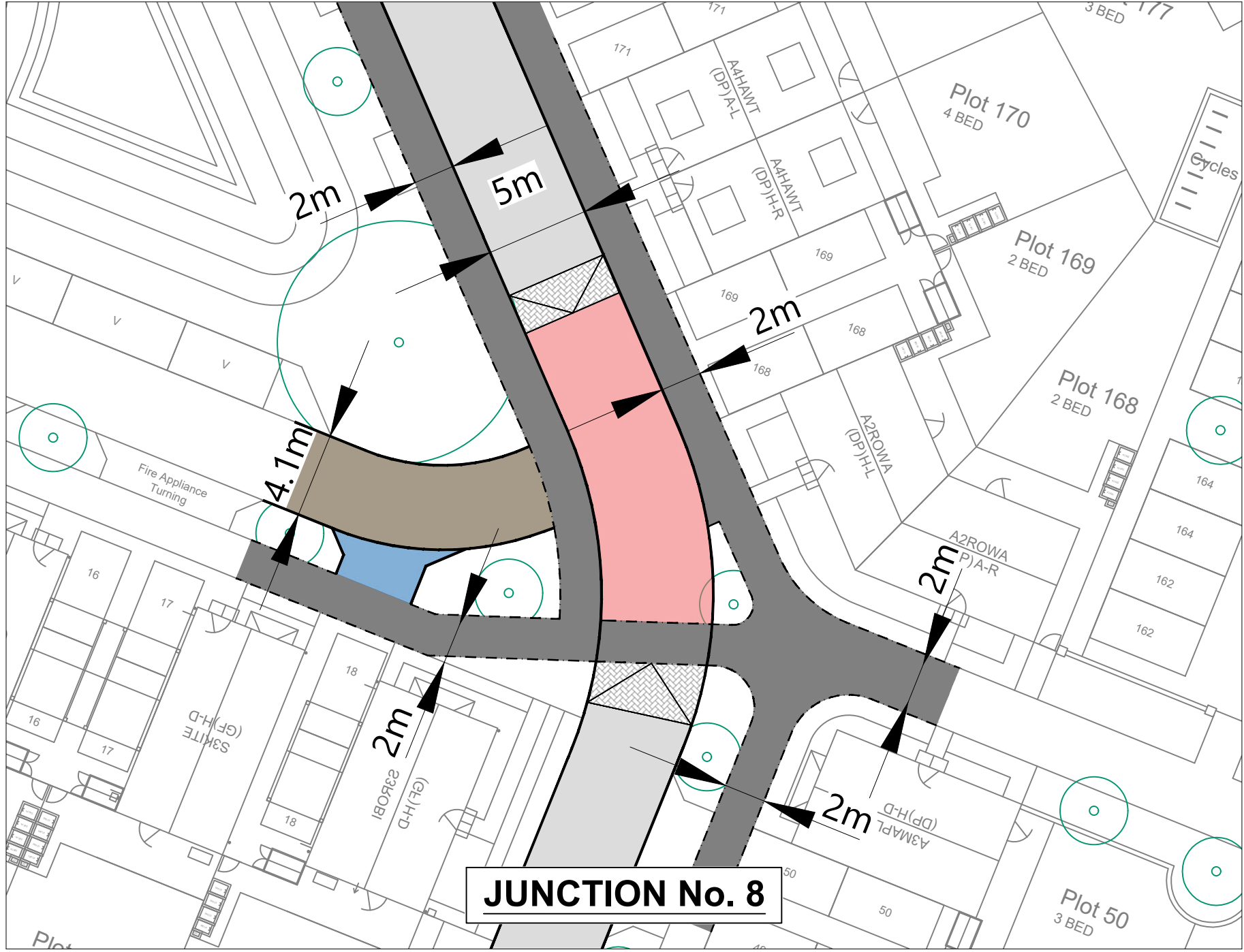
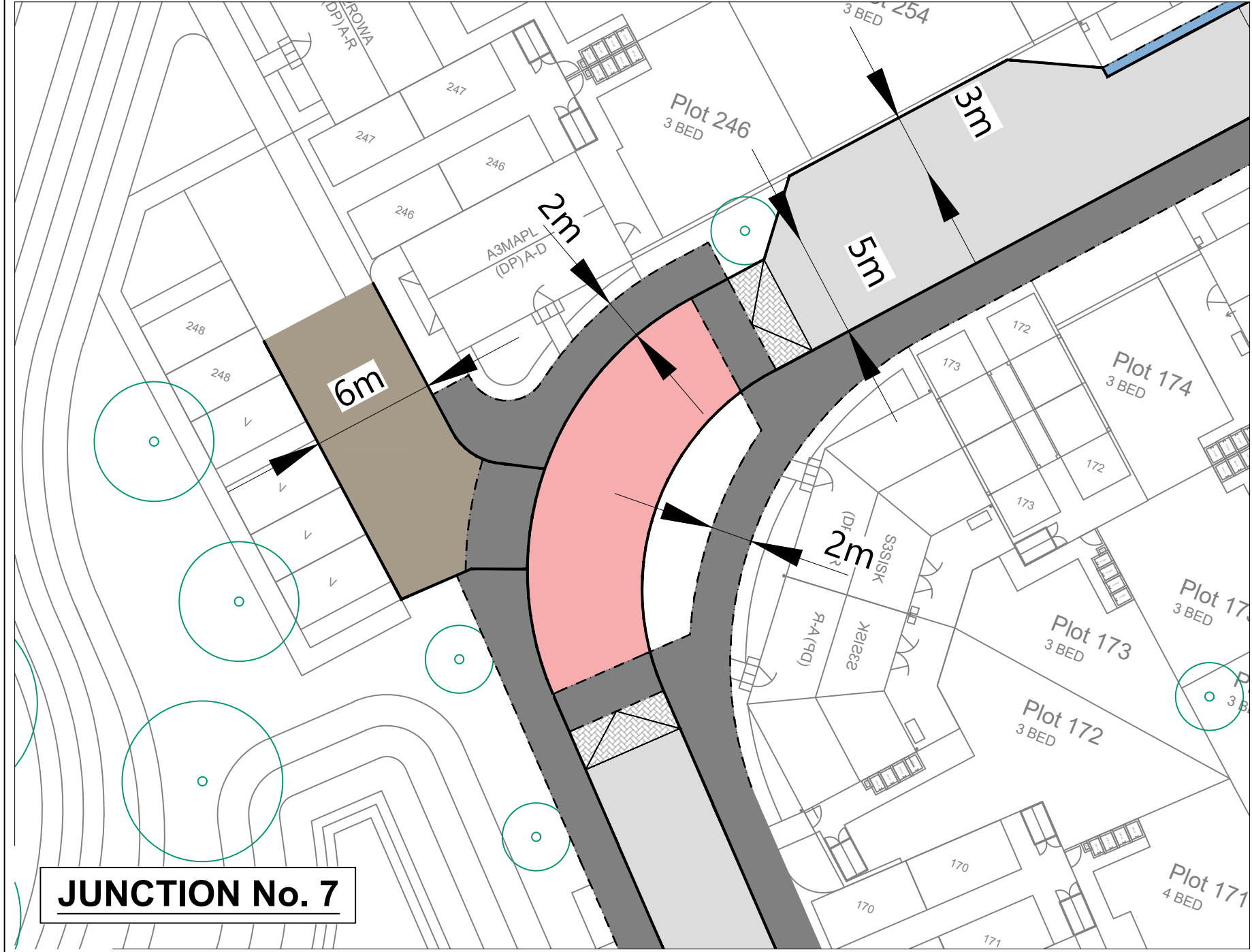
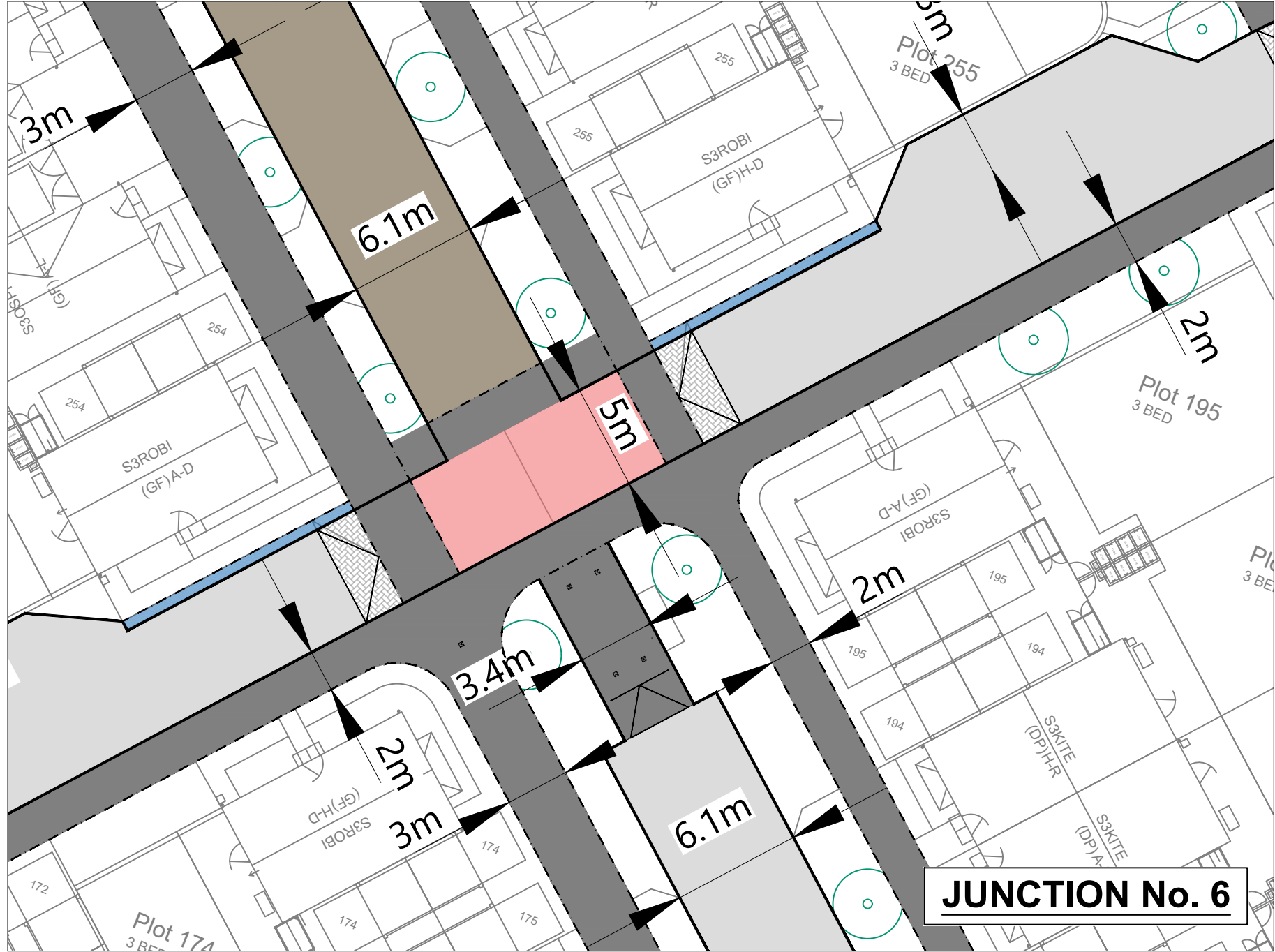
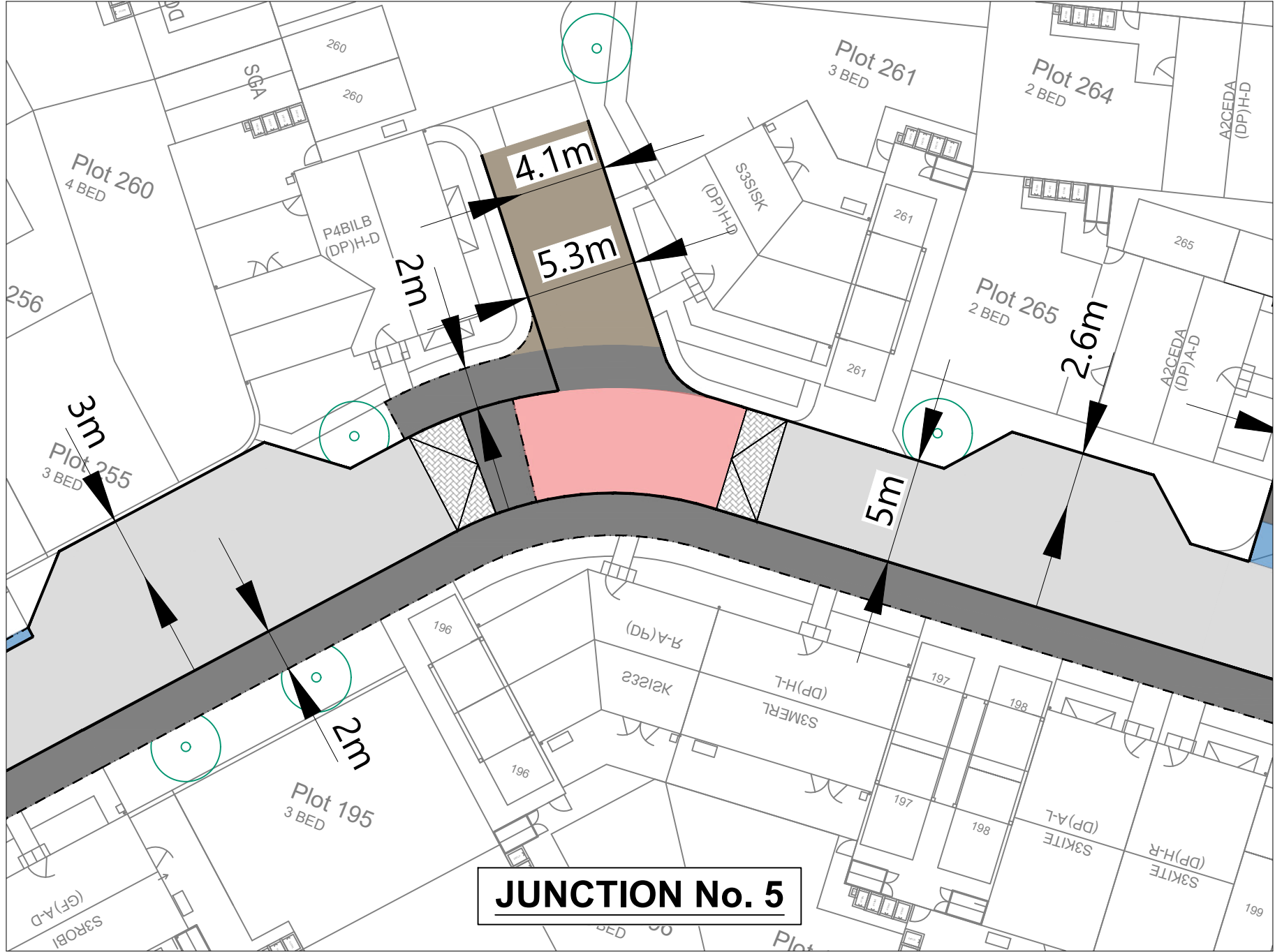
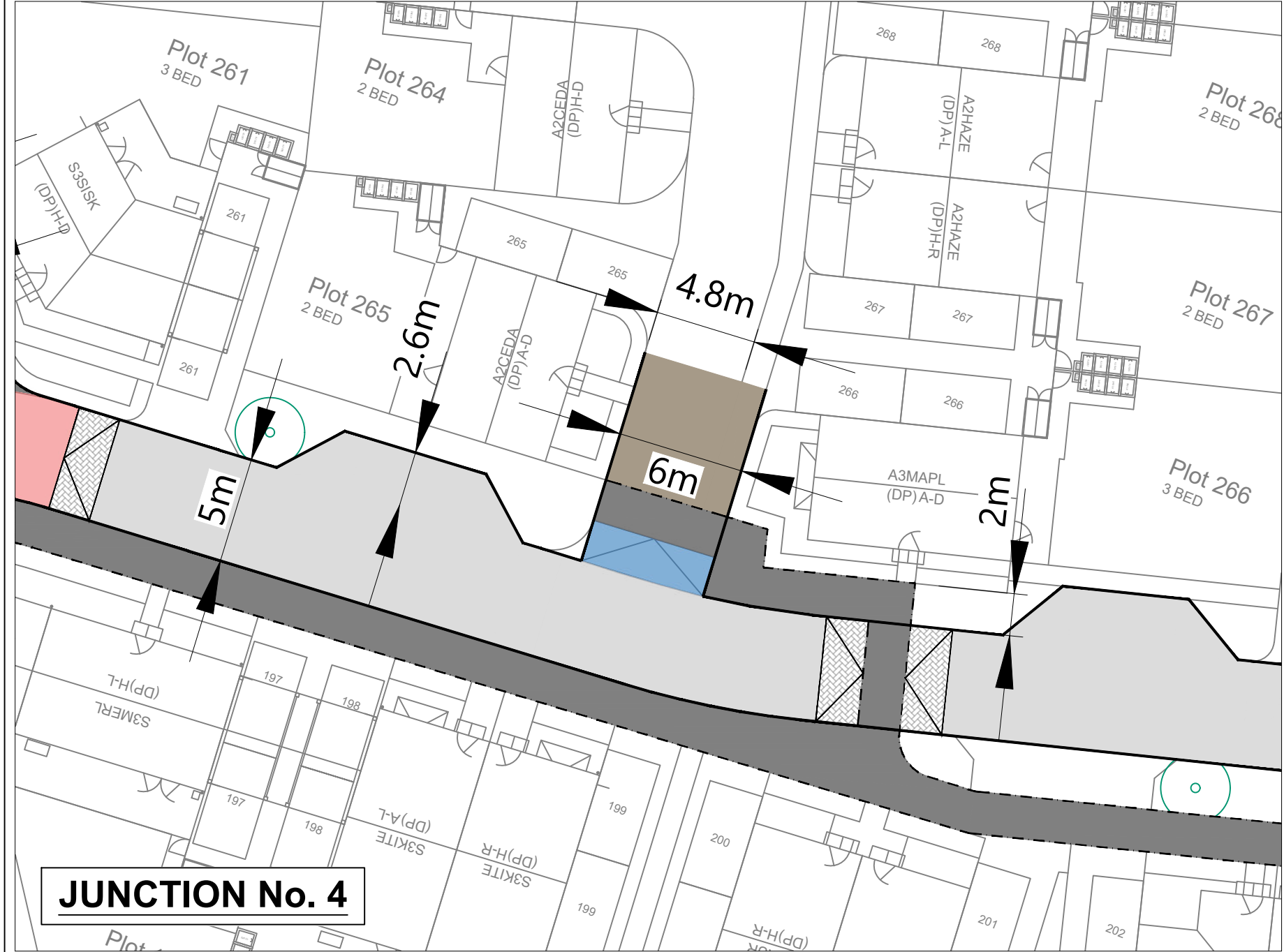
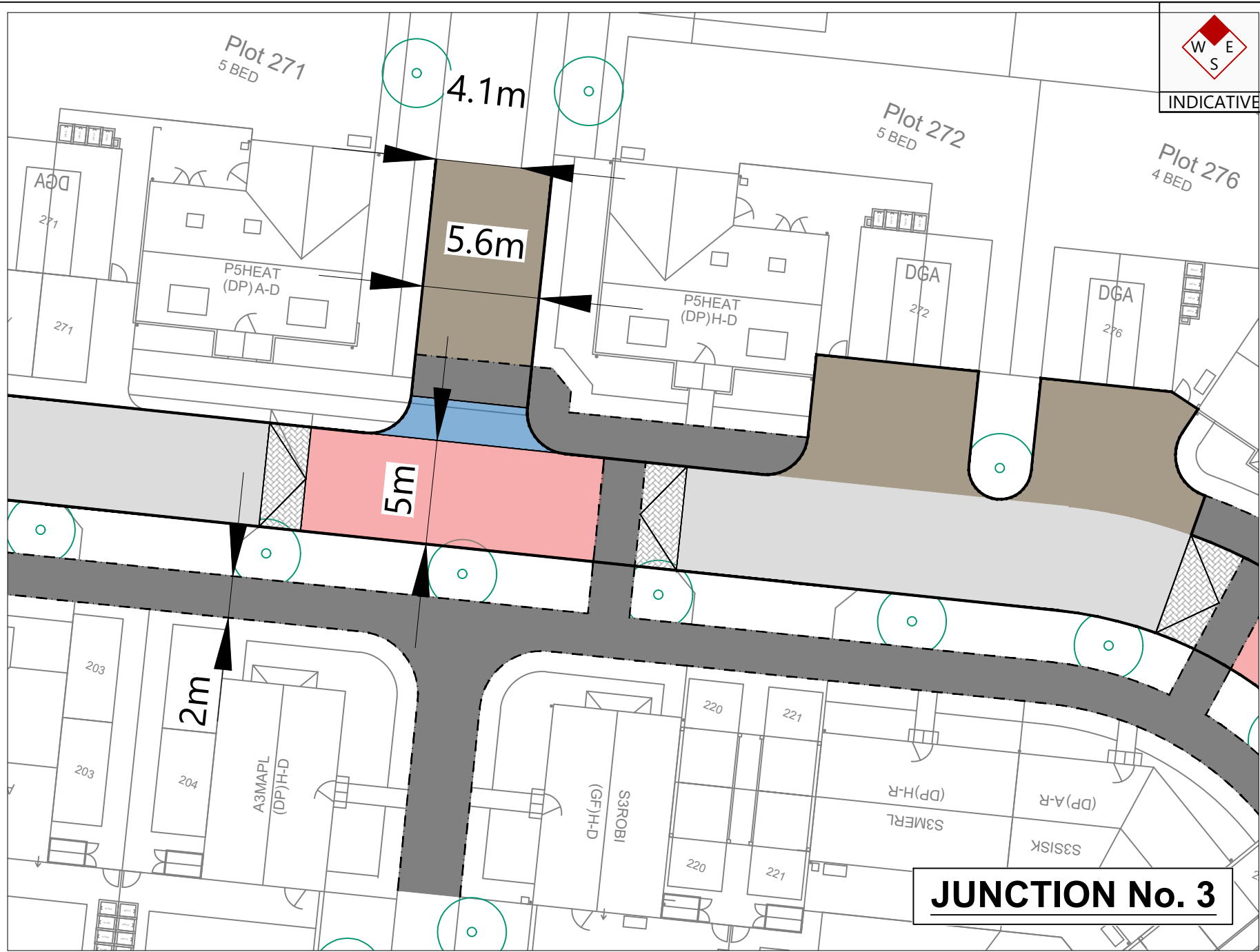
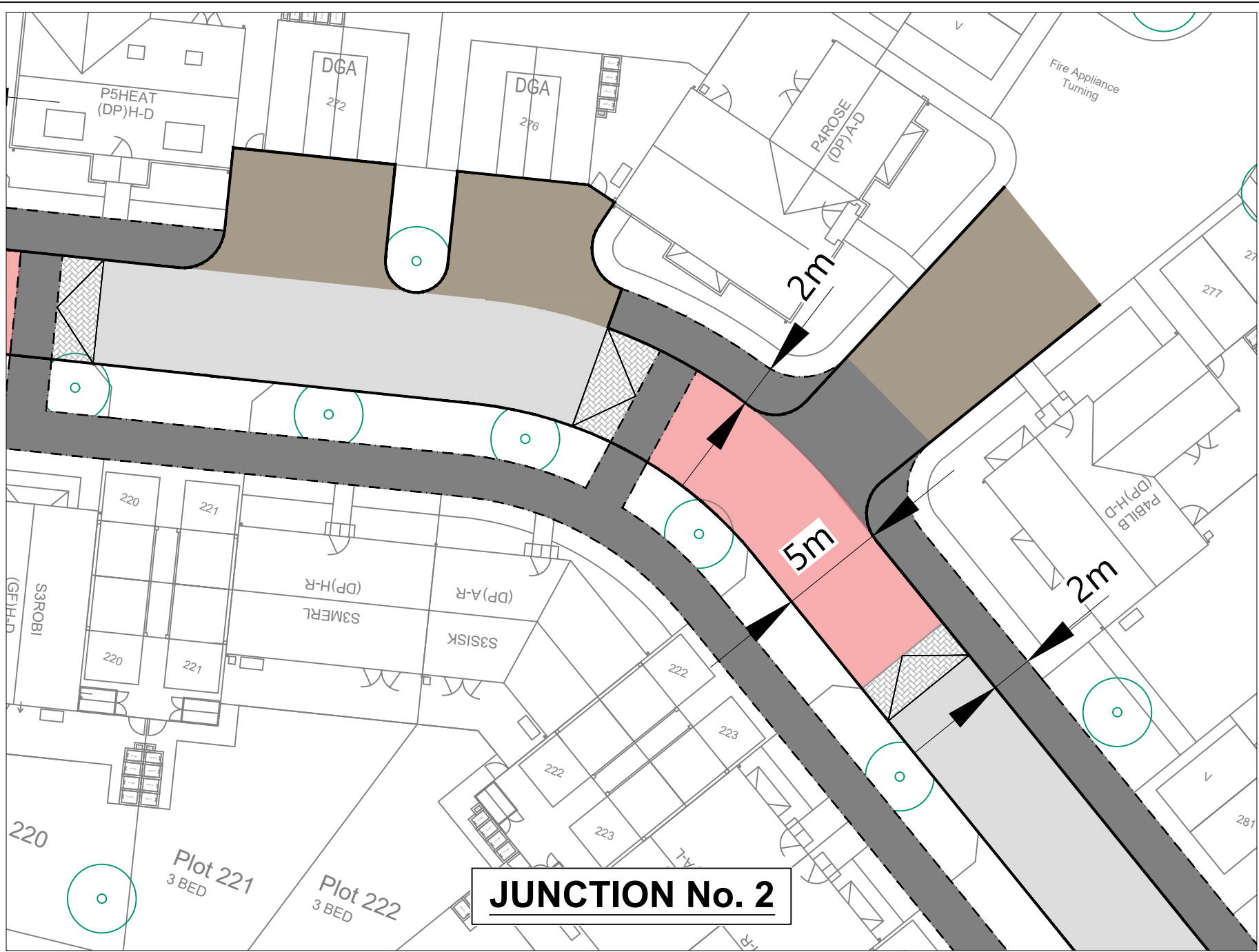
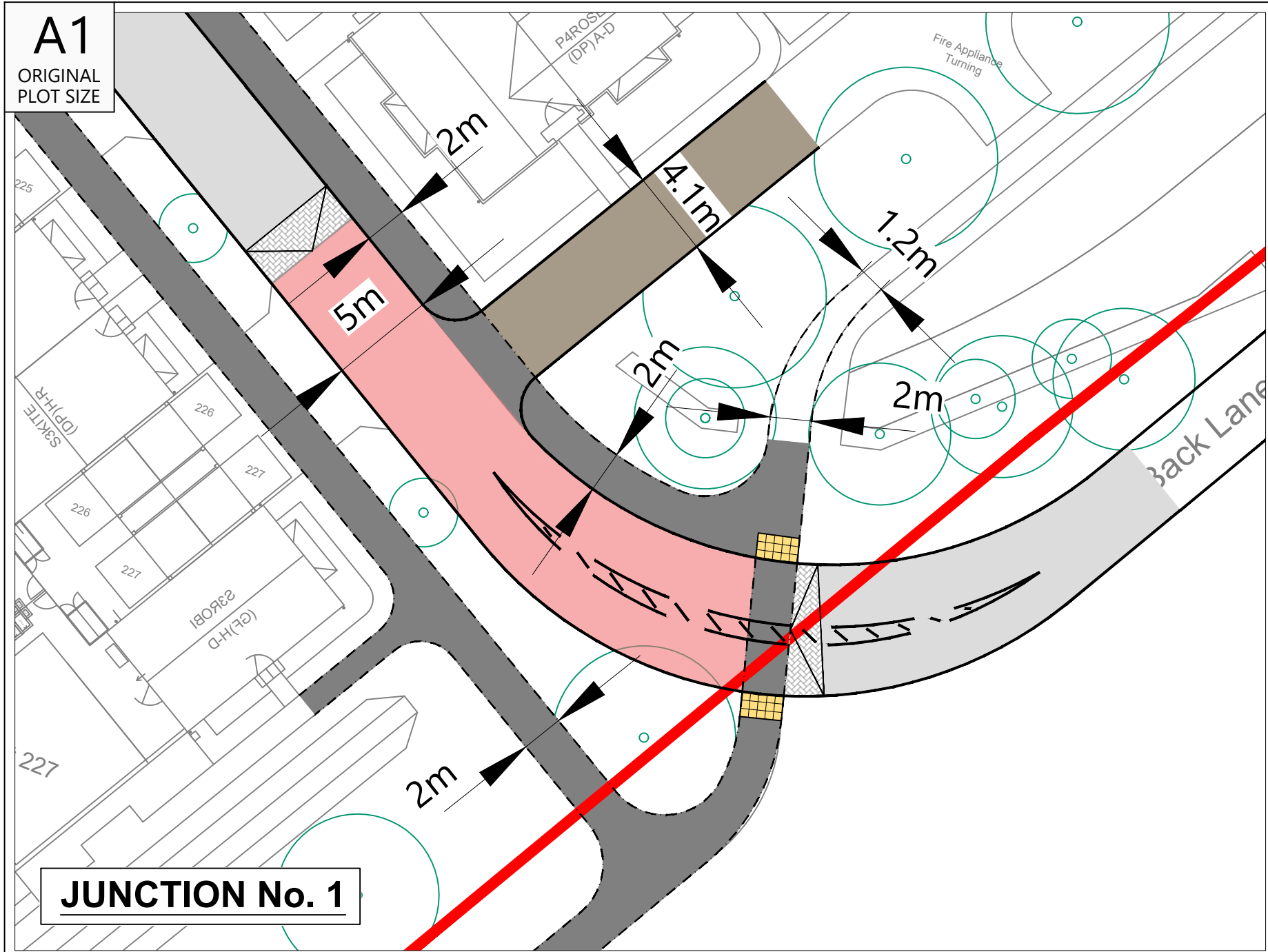
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Access Arrangement
- Back Lane (south)

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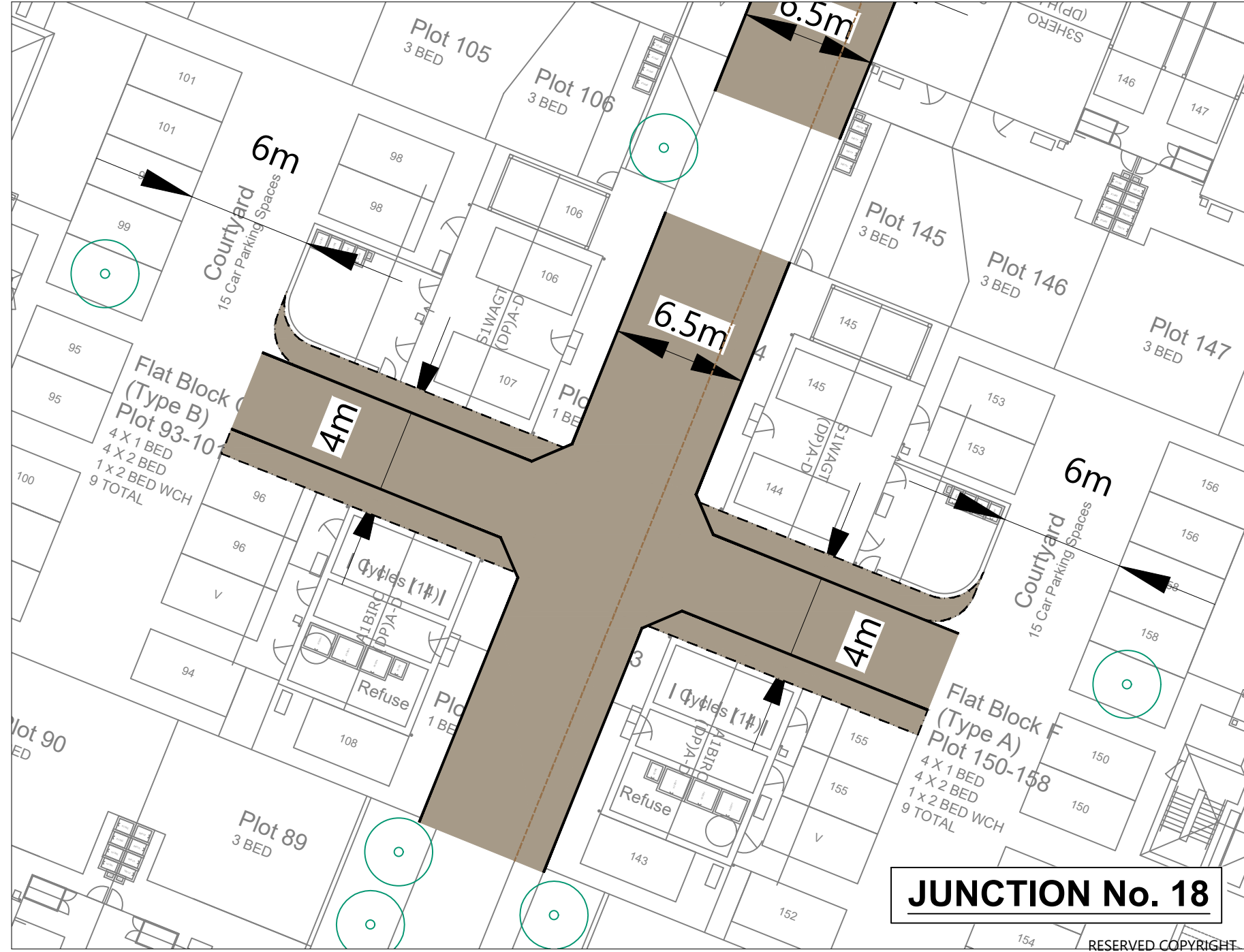
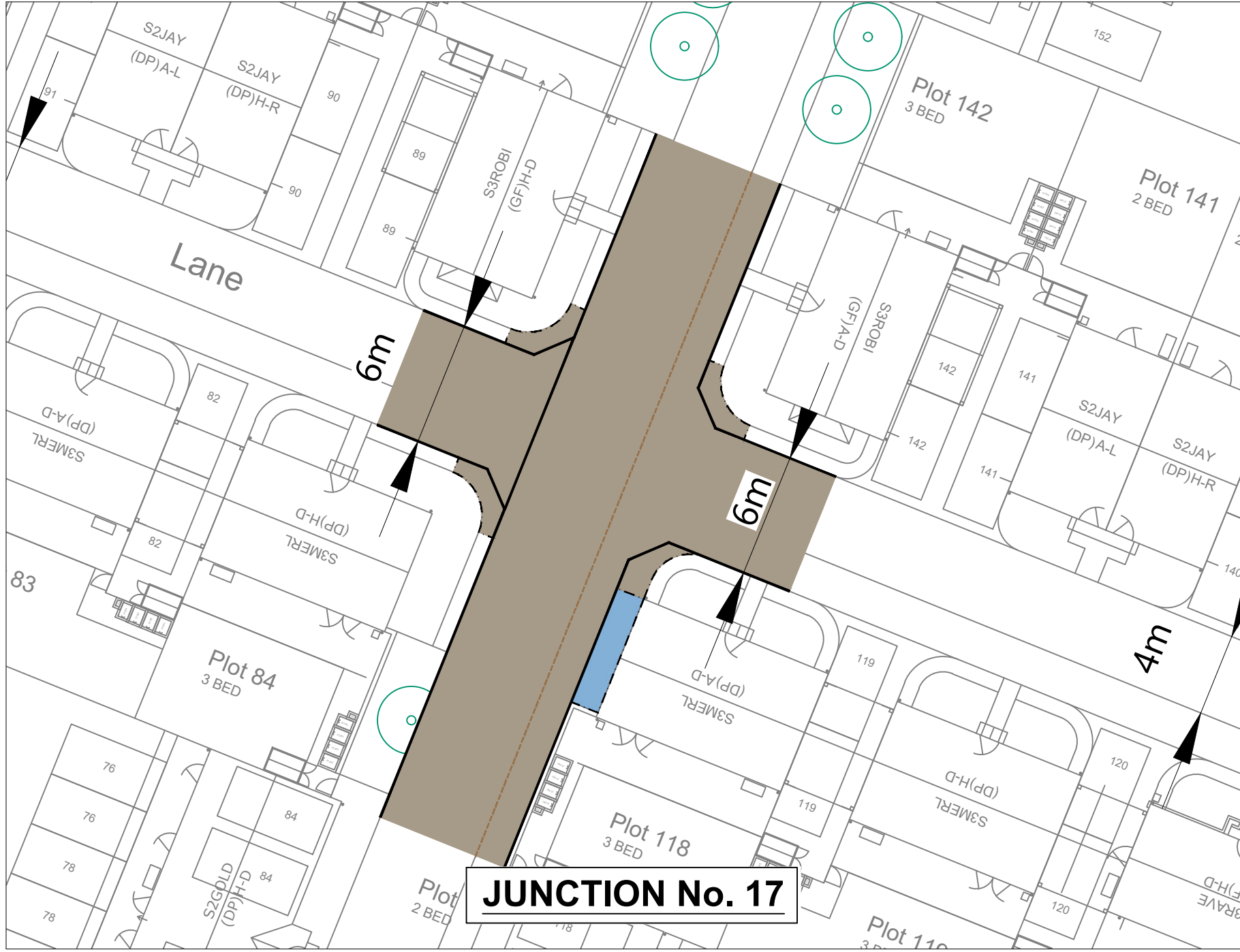
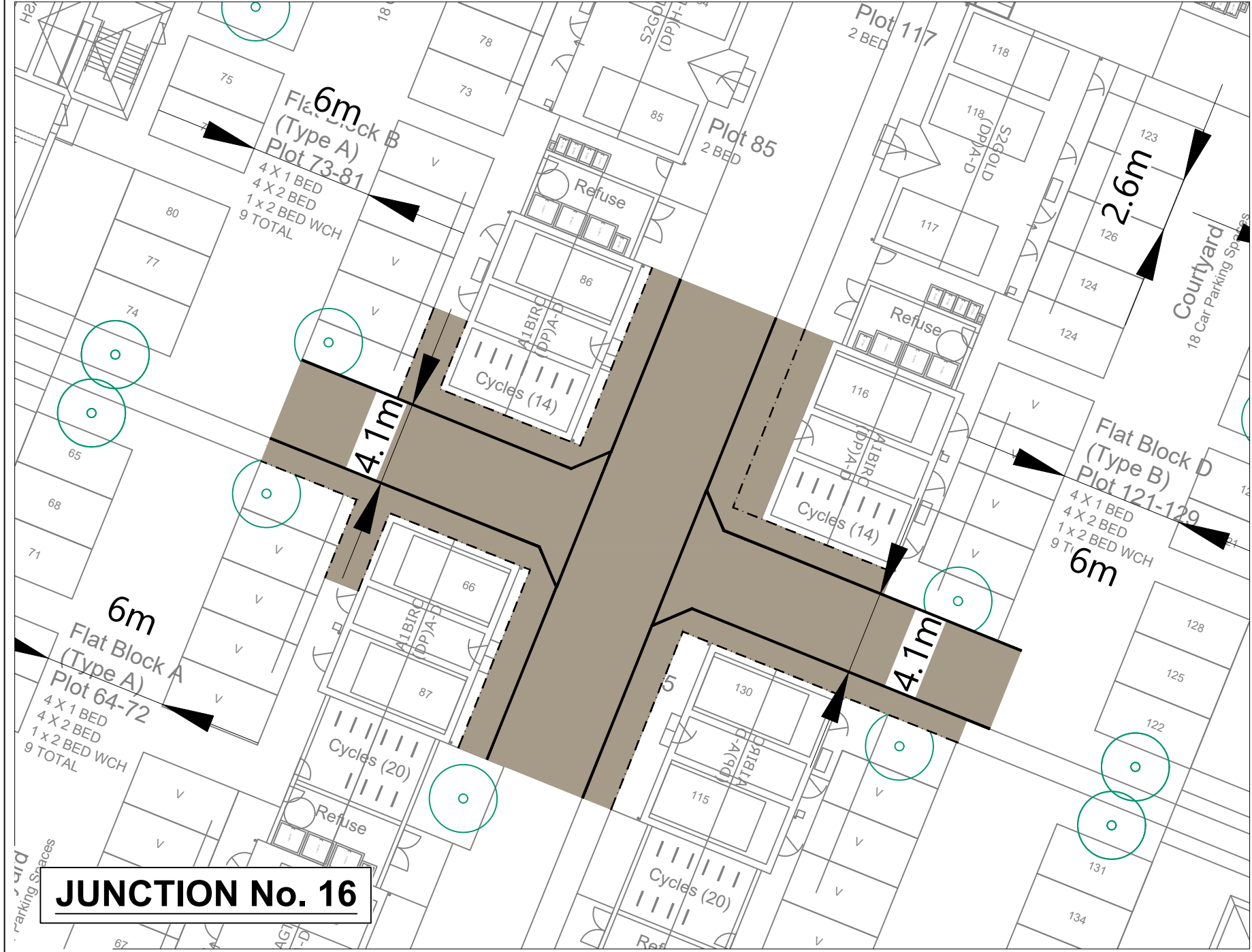
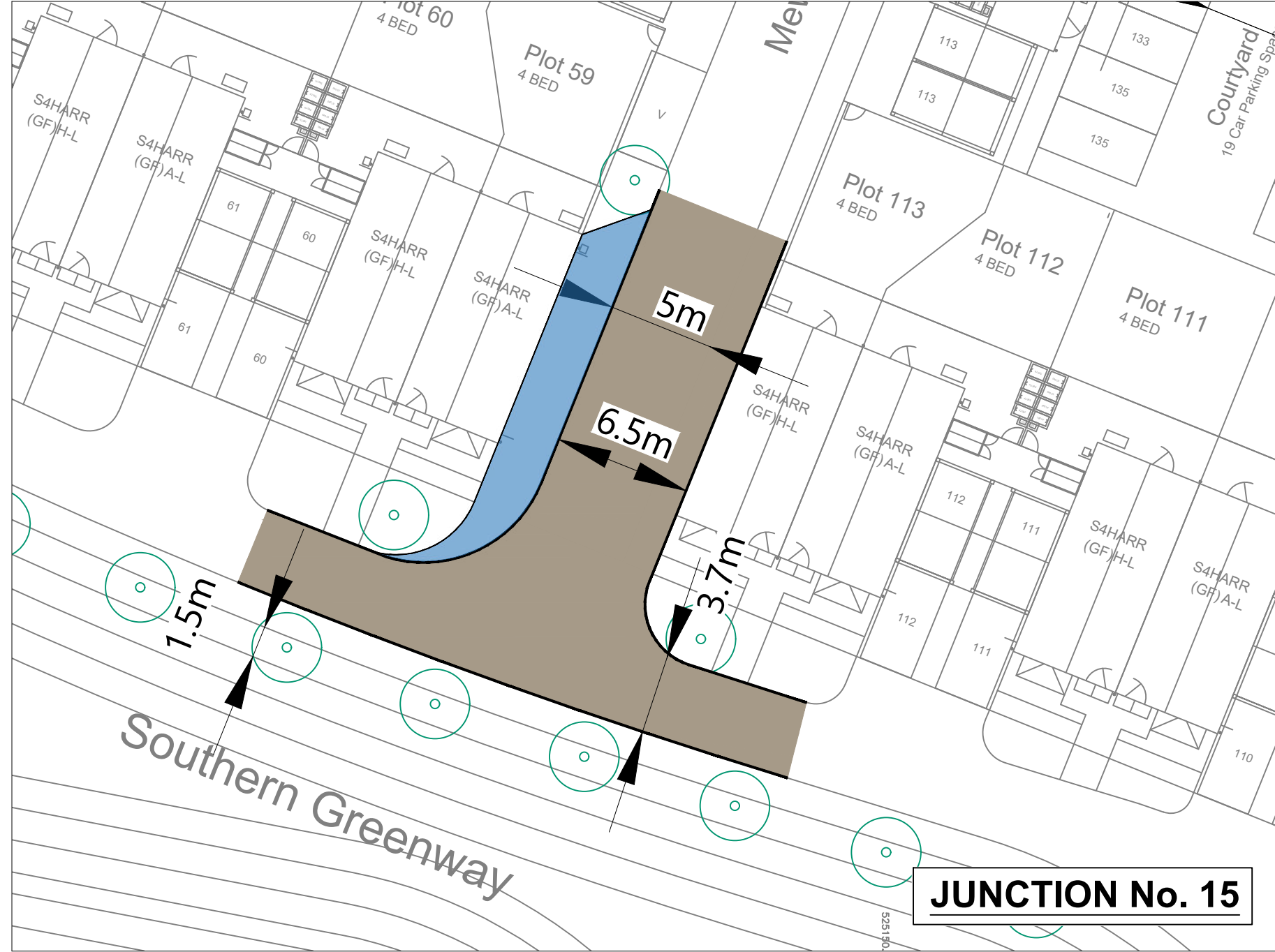
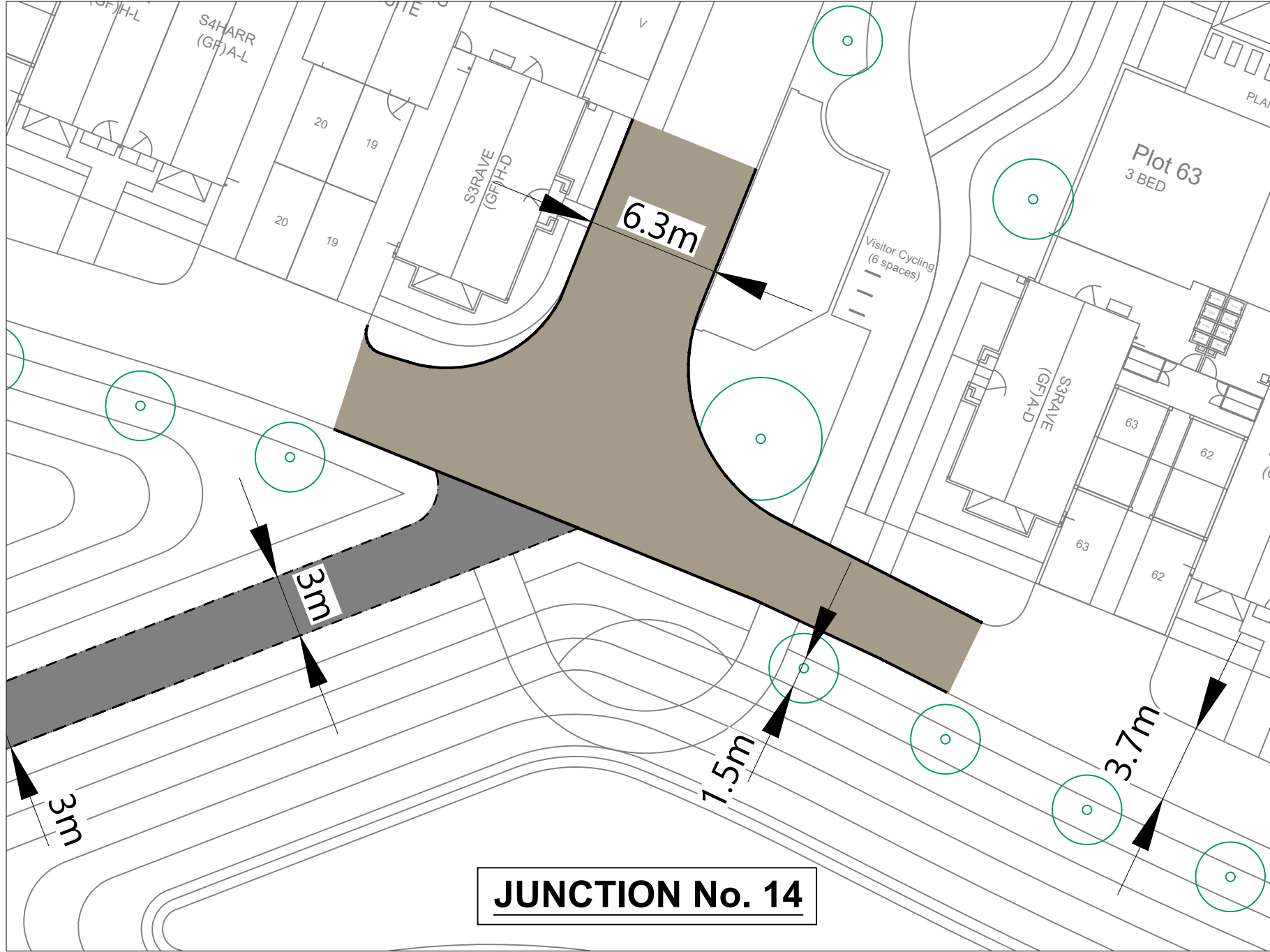
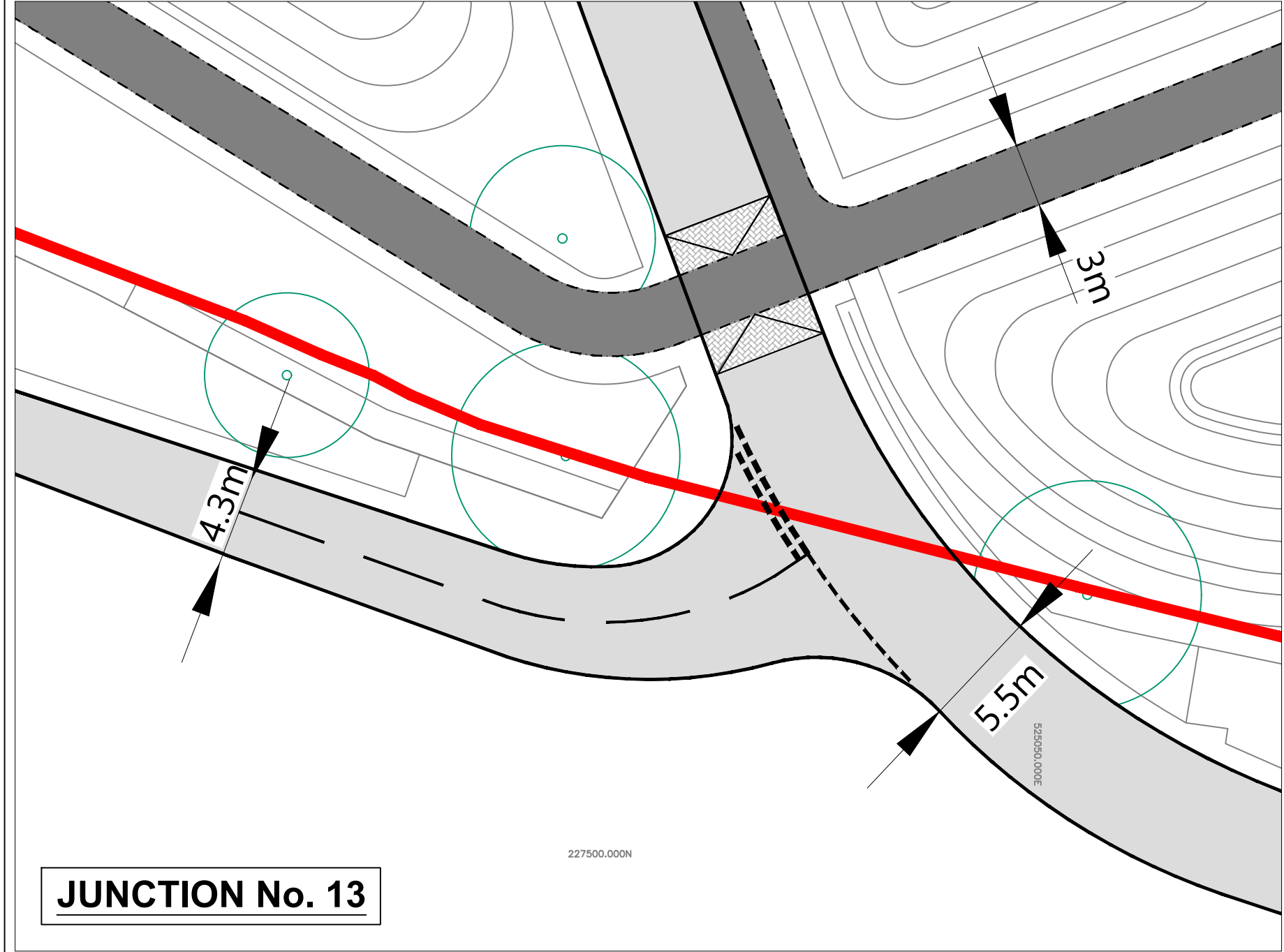
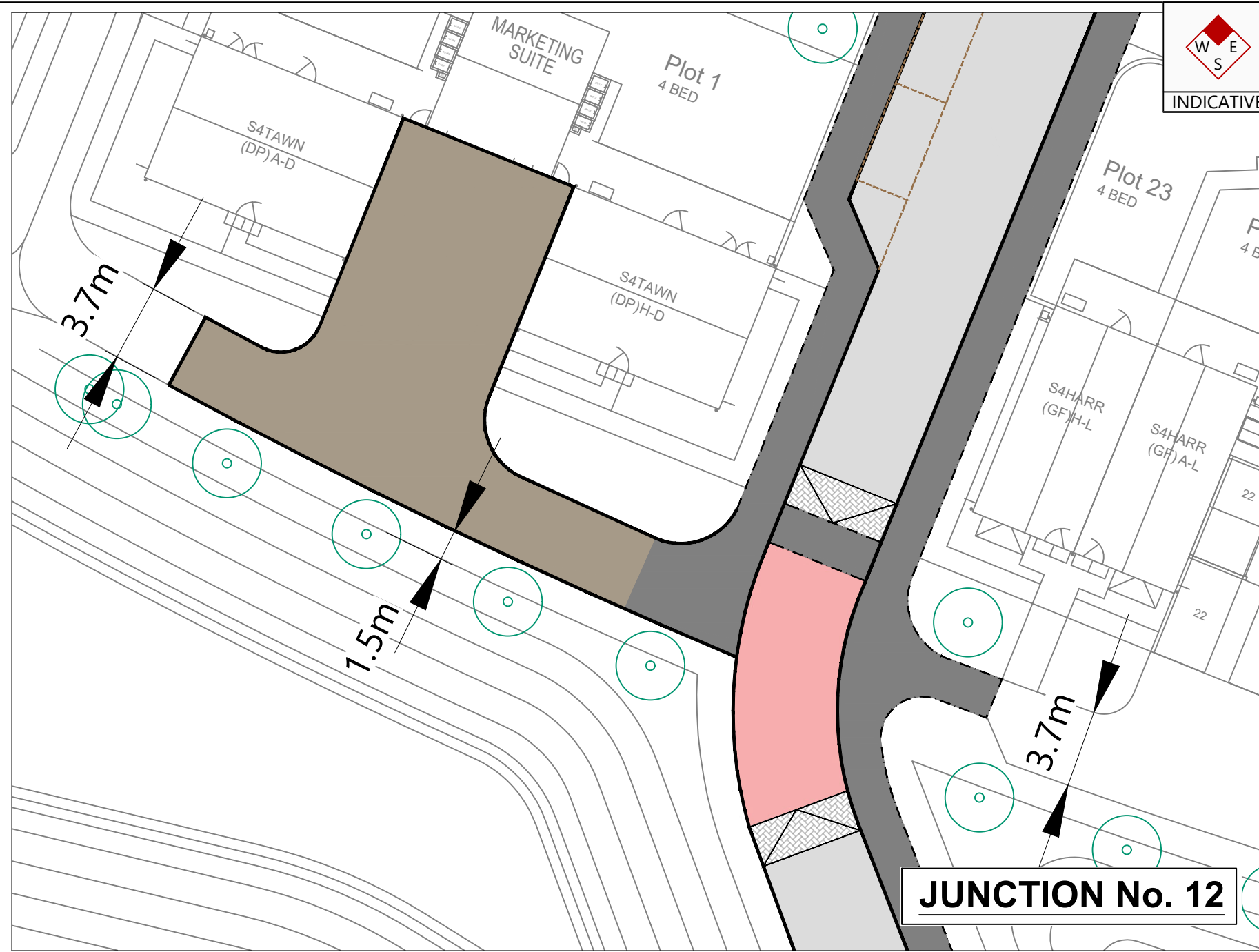
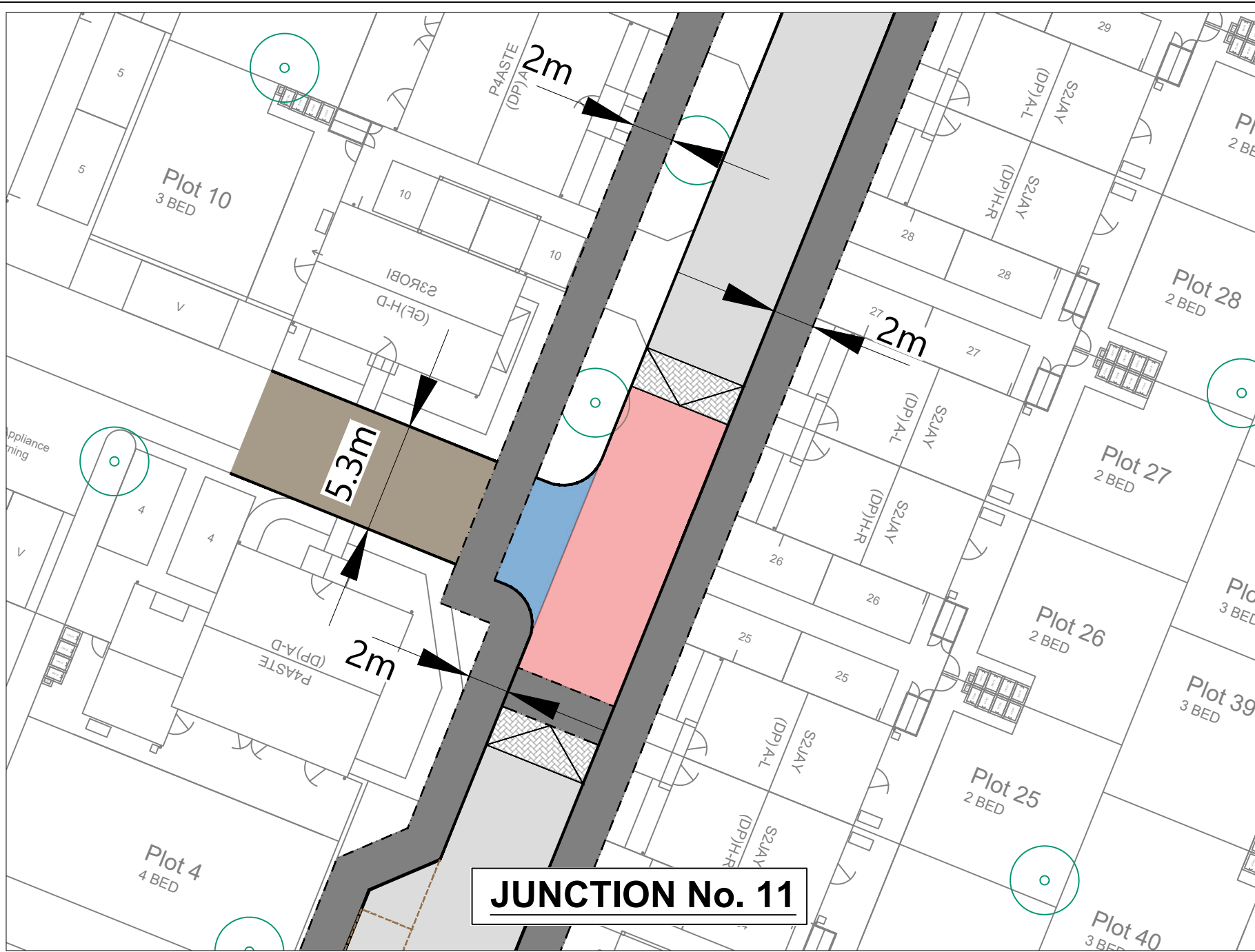
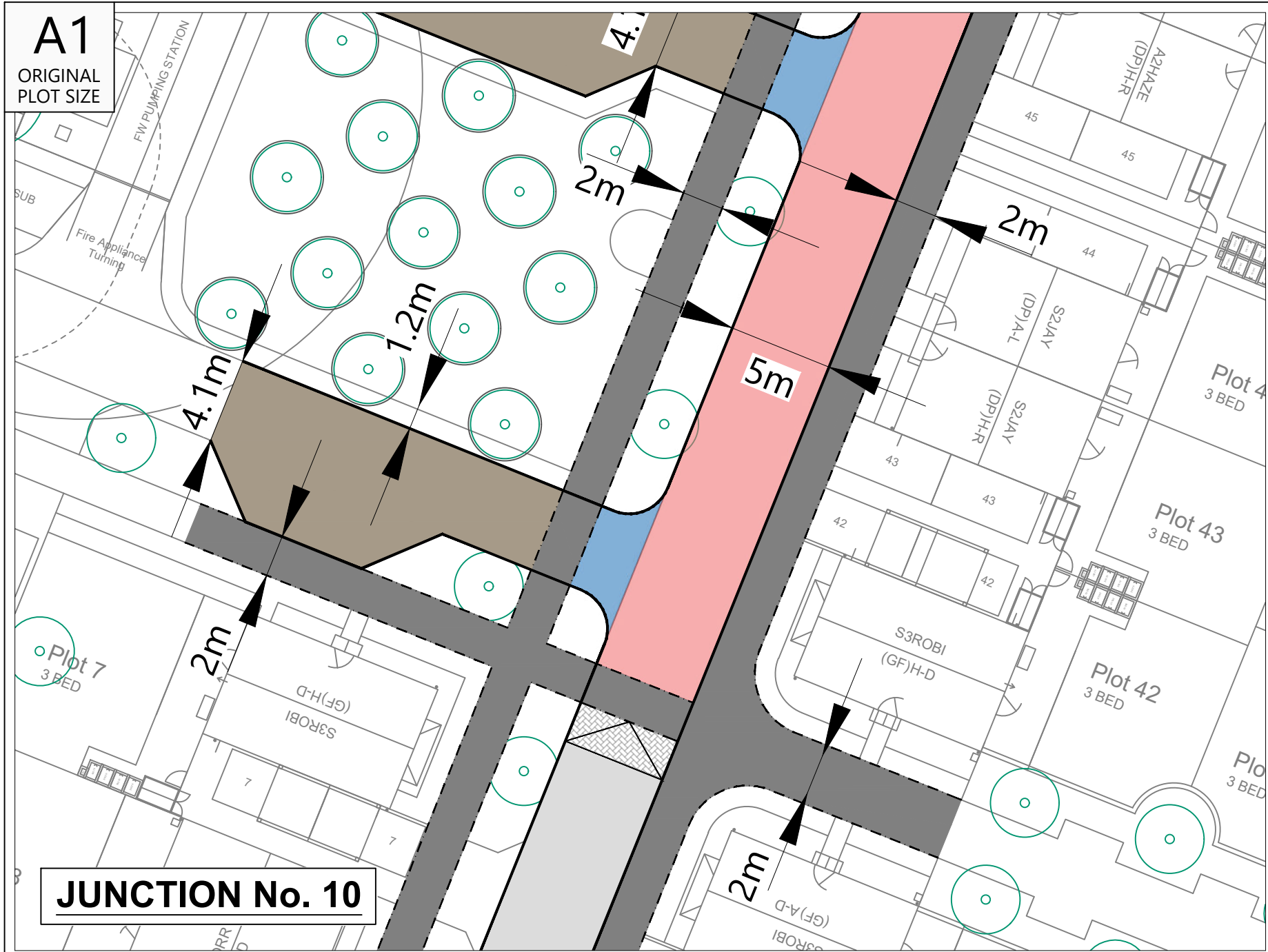
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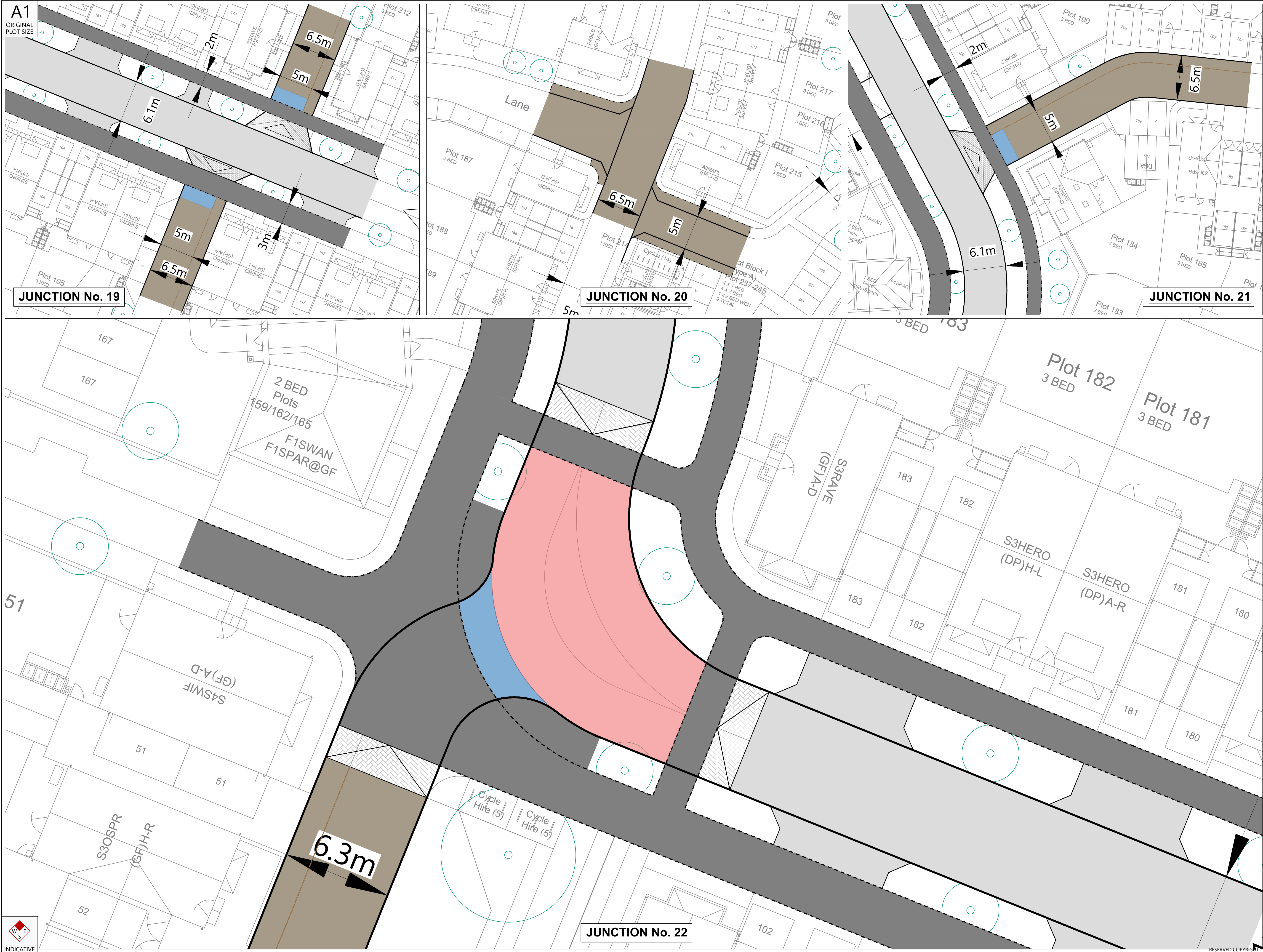
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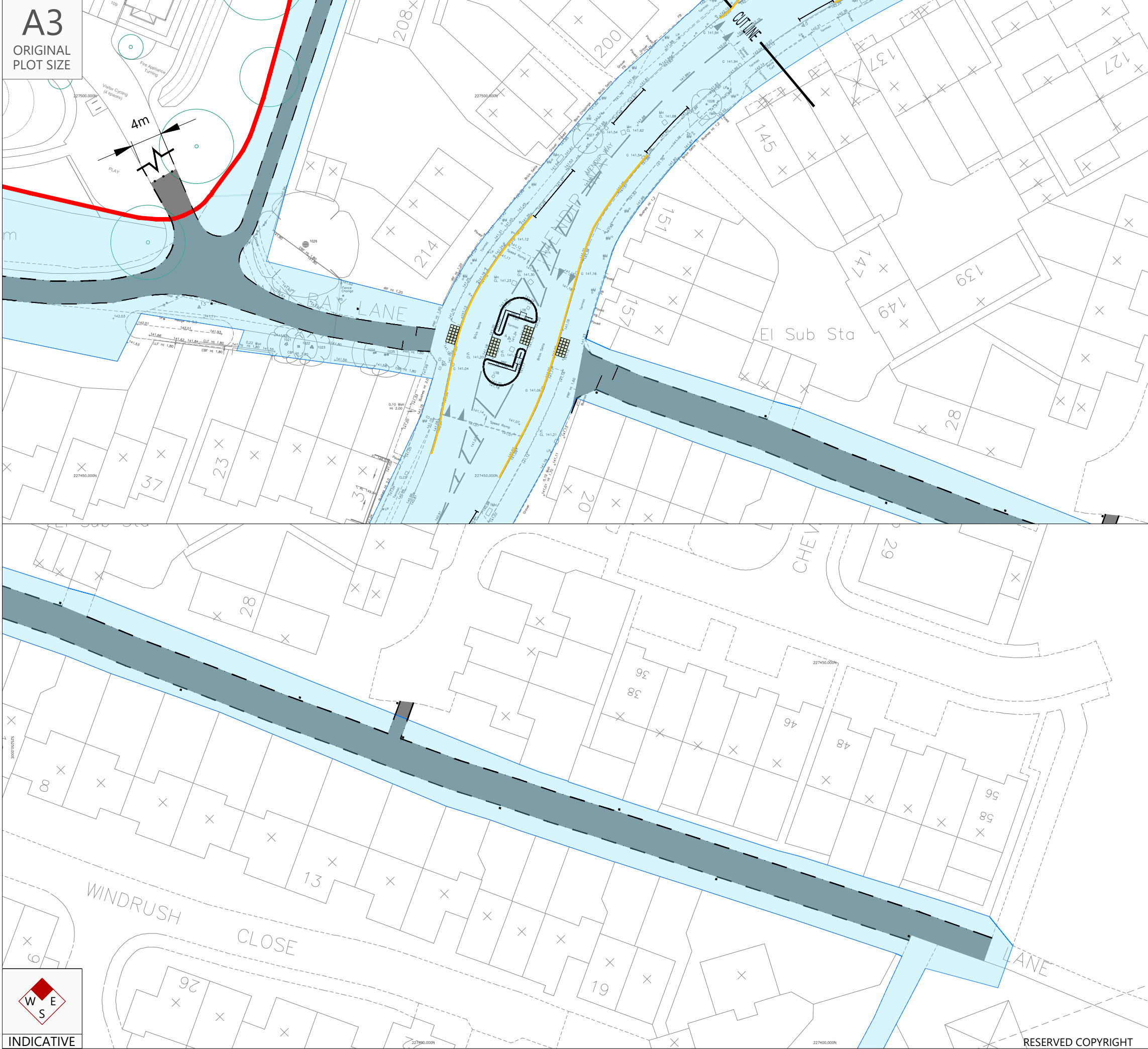
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Sheet 3 of 3

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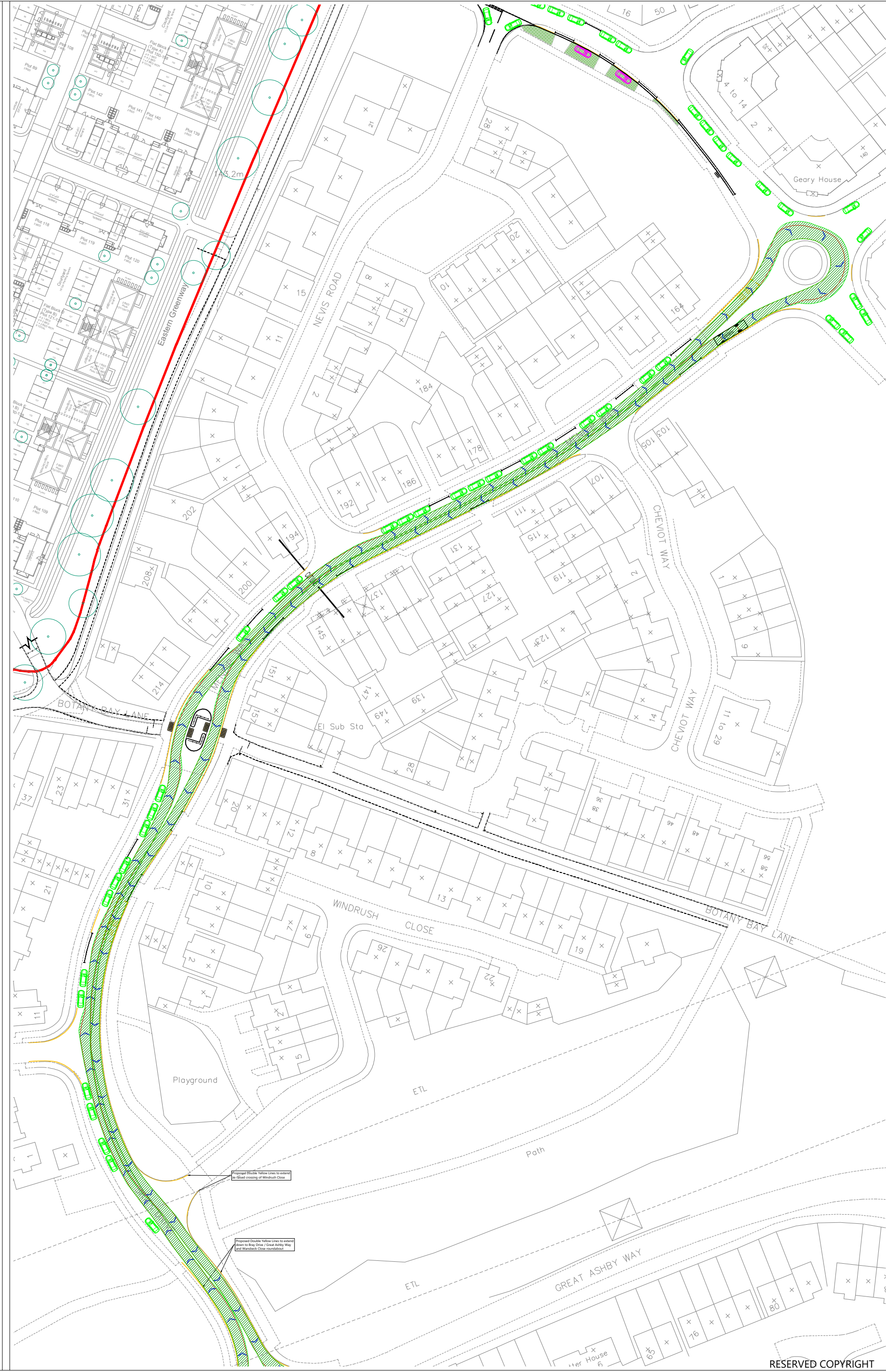
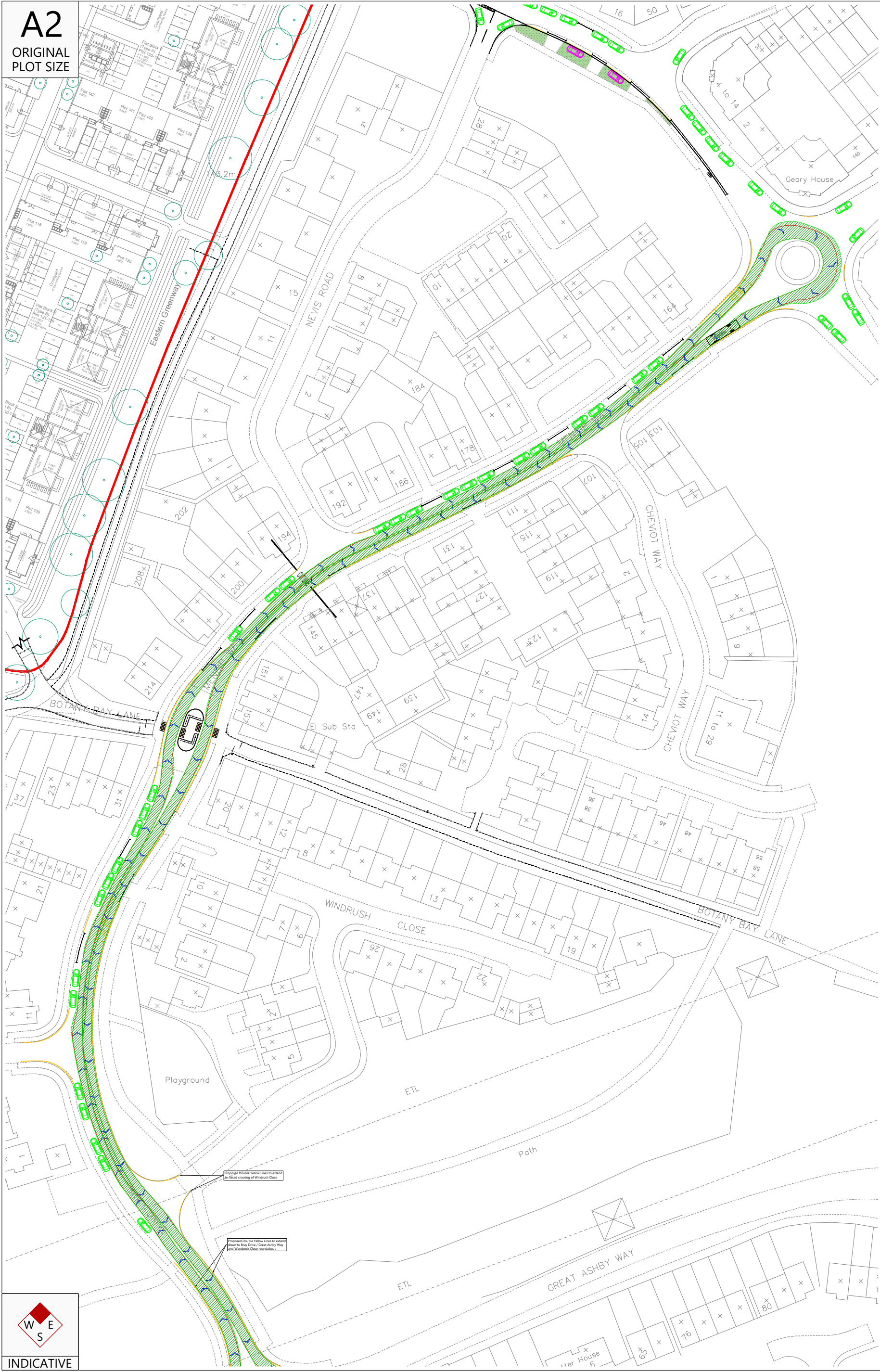
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Proposed Widening
of Botany Bay Lane

STATUS:

PLANNING

SCALE: 1:500	DATE: 16.12.24	DRAWN: NR	CHECKED: IB	APPROVED: IB
JOB NO: 2105-037	DRAWING NO: PL108	REVISION: -		



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NOTES:
1. Based on Topographical Survey and ECE Architecture Drawing No. PL-01 Rev P01.
2. Swept Path Analysis of a Single Deck Bus Vehicle (Autotrack Vehicle reference No. N/A).

KEY
- Indicative Site Boundary.

Swept Path KEY
- Swept path - Wheel Pathway.
- Swept path - Vehicle Overhang.

Single Deck Bus
Overall Length: 9.24m
Overall Width: 2.54m
Overall Height: 3.14m
Max Body Ground Clearance: 2.30m
Track Width: 2.30m
Lock to Lock: 6.50m
Max Wheel Angle: 40.00°

Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Welwyn Garden City

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Transport Planning Associates

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0117 925 9400
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CLIENT:
croudacehomes

PROJECT:
Roundwood,
Back Lane,
Stevenage

TITLE:
Swept Path Analysis
Single Deck Bus
Mendip Way

STATUS:
PLANNING

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:1,000	16.12.24	NR	IB	IB

JOB NO:	DRAWING NO:	REVISION:
2105-037	SP03	-

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