

Technical Note

Introduction & Scope of Assessment

- 1.1 This Technical Note (TN) on highways and transport has been prepared on behalf of Domusea Developments to consider highways matters relating of the proposed residential development under Use Class C3 comprising 8 detached houses on land at Old Cottage in Lidsey, West Sussex.
- 1.2 The development site is located adjacent to the A29 Lidsey Road, between the settlements of Woodgate to the north and Shripney to the south. On the opposite side of the A29 is Lidsey Caravan Park. The site is currently occupied by two dwellings; Old Cottage and Bridge Cottage, which will be retained as part of the development proposals.
- 1.2 The site in relation to the regional and local highway network is illustrated at **Figure 1.1** and **Figure 1.2** respectively.
- 1.1 The site was previously subject to an outline planning application (reference AL/20/18/OUT) for the development of up to 27 dwellings with the vehicular accesses to the site consolidated into a single access and some localised widening on the A29 to improve forward visibility for right turning traffic into the site. This application was subsequently refused by Arun District Council, as Local Planning Authority, and the five reasons for refusal were outlined in the decision notice dated 13th December 2018.
- 1.2 The third reason for refusal came from an objection by the Highway Authority (HA), West Sussex County Council (WSCC) and this stated:

'Adequate information has not been submitted to satisfy the Highway Authority that the proposal is acceptable in terms of road/junction layout, carriageway (and lane) width/s and visibility splays (including forward visibility/stopping sight distance splays) and would therefore give rise to increased hazards to highway users contrary to Policy T SP1 and the National Planning Policy Framework.'
- 1.3 This TN seeks to address the above issues raised by WSCC with reference to the proposed development scheme.

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Development Proposals

- 1.4 The proposals include 8 detached houses, consisting of two, three, four and five-bed dwellings (two of each) including highways and landscaping alterations. The dwellings would be accessed via 4.8m wide shared surface roads. The architects' proposals in drawing 1042/SK03 are included within this TN in **Appendix A**.

Parking Provision

- 1.5 Policy T SP1 of the Adoption Arun Local Plan (July 2018) indicates that WSCC standards are to be used for residential developments to determine appropriate levels of parking and the parking requirements of the site have therefore been assessed against WSCC standards.
- 1.6 WSCC have produced the 'West Sussex Residential Parking Demand Calculator', an Excel-based tool for determining the parking requirements of a site, alongside a guidance note 'Guidance for Parking in New Residential Developments' (2010).
- 1.7 The parking demand calculator requires inputs of the number of dwellings of each size, and the number of parking bays allocated to each of these dwellings, and outputs a total parking demand, split between allocated and unallocated bays. As allocated bays are input, the parking calculator primarily advises on the number of additional unallocated bays required to meet demand at the site.
- 1.8 Based on the parking provision indicated above for the development, the WSCC parking demand calculator indicates that 1.7 unallocated residential and 1.6 unallocated visitor bays are required, totalling 3 unallocated spaces in addition to the proposed 16 allocated bays. The calculator output is provided in **Appendix B**.
- 1.9 Each dwelling will be provided with two dedicated car parking spaces (16 in total), bike and bin storage with 3 unallocated car parking spaces provided within the site. The proposed provision therefore complies with standards and the estimated demand for car parking.

Delivery & Servicing Arrangements

- 1.10 In relation to refuse collection, swept path analysis of a refuse collection vehicle is presented in **Figures 1.3 and 1.4** showing the refuse vehicle entering and exiting the site in a forward gear and reversing within the site using turning heads provided. Bins for the residential units will be stored within the curtilage of each dwelling and as outlined within Manual for Streets (MfS) bin stand locations would result in an operative carry distance no greater than 25 metres.
- 1.11 As emergency and delivery vehicles are smaller than the refuse vehicle used in the swept path analysis in **Figures 1.3 and 1.4**, it can be inferred that the site is accessible by emergency and delivery vehicles.
- 1.12 Given the size of the proposed development, the number of deliveries would be low and restricted to a weekly collection of refuse plus occasional home delivery services.

Site Access Arrangements

- 1.13 As with the previous planning application for 27 dwellings, the proposed development will be accessed from a single priority junction with the A29 with some localised widening to improve visibility for right turning traffic into the site. However, for this earlier application, the HA felt that insufficient detail was provided on site access arrangements and raised an objection. This section seeks to try and overcome these concerns with respect to the proposed scheme by considering the following elements:
- ✧ Assessment of impact of the development access arrangements on the A29;
 - ✧ Site access visibility; and
 - ✧ Forward visibility on the A29 at the development access junction.

Development Access Impact Assessment

- 1.14 The existing two accesses onto A29 Lidsey Road that serve the site will be consolidated into a single access. This includes some localised widening of the A29 Lidsey Road at the development access junction to increase the carriageway width from 7m to 8m to both enhance forward visibility for traffic turning right into the development and improve lane widths for through-traffic on the A29 Lidsey Road. **Figure 1.5** shows the proposed access arrangements with layout dimensions and extent of new highway as a result of the localised widening. The existing extent of highway land in the vicinity of the development access is shown in **Appendix C**.

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- 1.15 In their consultation response dated 1st October 2018 to planning application reference AL/20/18/OUT, the HA have recommended that the bellmouth of the new junction has a radii of 9m on both sides to avoid over-sailing of the centre line of the A29 Lidsey Road when large vehicles enter and exit the development site. **Figure 1.5** shows the layout of the proposed junction with bellmouth radii of 9m and **Figure 1.6** shows the swept path of a large refuse vehicle entering and exiting the site in both directions to show that a left turn in and out manoeuvre would not oversale the centre line of the A29 Lidsey Road.
- 1.16 The proposed widening of the A29 Lidsey Road in the vicinity of the development access, will provide increased road space for through traffic and this is demonstrated in **Figures 1.7 and 1.8**, which shows two 16.5m articulated vehicles travelling in opposite directions on the A29 Lidsey Road for both the existing and proposed scenarios respectively. This swept path analysis indicates that the existing road alignment has the potential for large vehicles to conflict whereas the localised widening proposed in the vicinity of the development access will improve this situation.

Site Access Visibility

- 1.17 In respect of the inter-visibility between vehicles emerging from proposed residential development and traffic on the A29 Lidsey Road, the two key elements to be assessed are the setback distance, or 'x' distance, along the minor arm and the distance a driver can see along the major road (i.e. A29 Lidsey Road when exiting, or 'y' distance). The 'x' distance is regarded as a function of capacity. The shorter the distance, the slower traffic will approach a give-way line. The longer the distance, the more opportunities there will be for approaching drivers to look for gaps in traffic on the major road and therefore enable them to approach at a higher speed.
- 1.18 At an 'x' distance of 2.4 metres, an approaching driver will have to slow to a virtual stop at the give way line to observe traffic on the major road without encroaching onto it. Consequently, only one vehicle at a time can safely exit from the minor road under these operating conditions. It is evident that the volume of traffic emerging from the new access way will be low and therefore a 2.4 metre 'x' distance is appropriate.
- 1.19 The 'y' distance is based upon Stopping Site Distances (SSD's) of traffic approaching on the major arm of a junction. The recorded speed of traffic will be used to determine the appropriate visibility or 'y' distances to the left and right along A29 Lidsey Road for the proposed site access junctions.

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- 1.20 To accord with recorded traffic speeds, in their consultation response dated 20th August 2018, the HA has previously stated a SSD of 67m on the northbound approach and 68m on the eastbound approach. Visibility splays of 2.4m x 67m to the left and 2.4m x 68m to the right have been applied to the proposed development access along with the visibility to carriageway tangent point to the left and to the right to identify the full visibility zone, as shown in **Figure 1.9**. This demonstrates that adequate junction visibility can be achieved within the site boundary or highway land.

Forward Visibility

- 1.21 In previous correspondence relating to planning application reference AL/20/18/OUT, WSCC have requested that forward visibility SSD be demonstrated for drivers of vehicles turning right and left into the site and for through-traffic on the A29 Lidsey Road coming across vehicles turning into the development.
- 1.22 **Figure 1.10** shows the forward visibility SSD relating to a vehicle turning right into the development to show the following:
- ⌘ 68m SSD forward visibility to an oncoming eastbound vehicle for a vehicle waiting to turn right;
 - ⌘ 68m SSD forward visibility to a vehicle waiting to turn right for an oncoming eastbound vehicle; and
 - ⌘ 67m SSD forward visibility to a vehicle waiting to turn right for an oncoming northbound vehicle.
- 1.23 **Figure 1.11** shows the forward visibility SSD relating to a vehicle turning left into the development to show the following:
- ⌘ 68m SSD forward visibility to a vehicle waiting to turn left for an oncoming eastbound vehicle.
- 1.24 **Figures 1.10 and 1.11** demonstrate that that adequate forward visibility can be achieved within the site boundary or highway land.

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Summary and Conclusions

1.25 This Technical Note (TN) on highways and transport has been prepared on behalf of Domusea Developments to consider highways matters relating of the proposed residential development under Use Class C3 comprising of 8 detached on land at Old Cottage in Lidsey, West Sussex.

1.26 A summary of the findings within the Technical Note are provided below:

- The existing two accesses onto A29 Lidsey Road that serve the site will be consolidated into a single access with some localised widening proposed. This will both enhance forward visibility for traffic turning right into the development and improve lane widths for through-traffic on the A29 Lidsey Road;
- Required junction and forward visibility splays have been demonstrated to be in accordance with relevant guidance for the recorded speed limit and can be achieved within the site boundary or highway land;
- The proposed residential parking provision is in accordance with local parking standards and estimated demand; and
- Emergency, refuse collection and delivery vehicles can be accommodated within the proposed road layout of the development.

1.27 Therefore, based on the findings in this TN, the development proposals are unlikely to result in any adverse traffic impacts on the operation of the local highway network and it is concluded that there are no reasons why the scheme should be resisted on transport grounds.



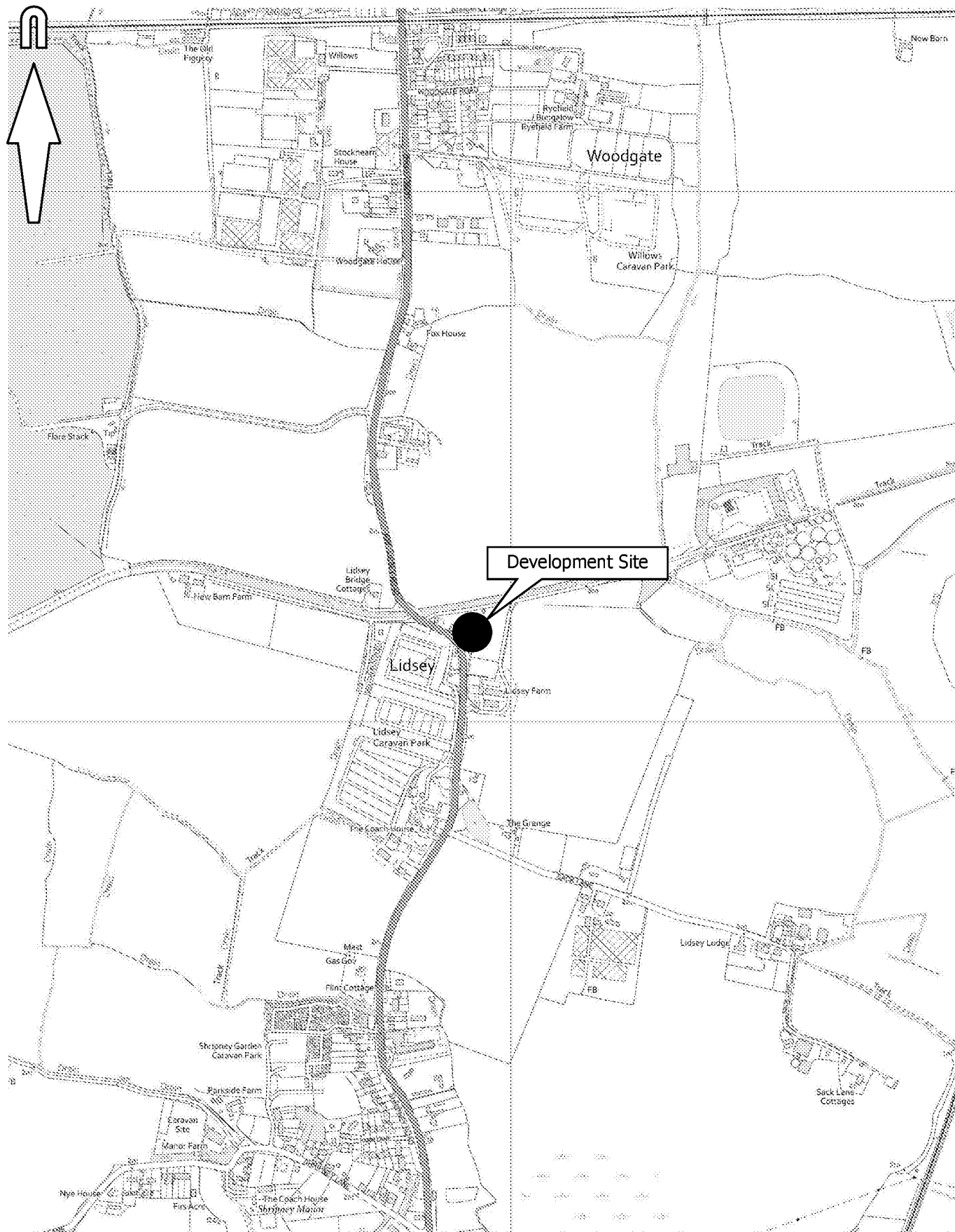
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Site in Relation to the Regional Highway Network

Scale 1:50 000

Figure 1.1



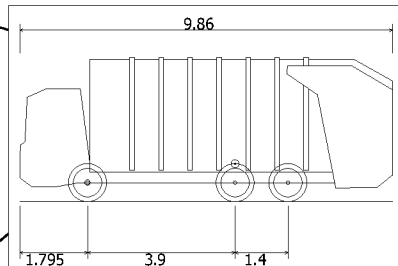
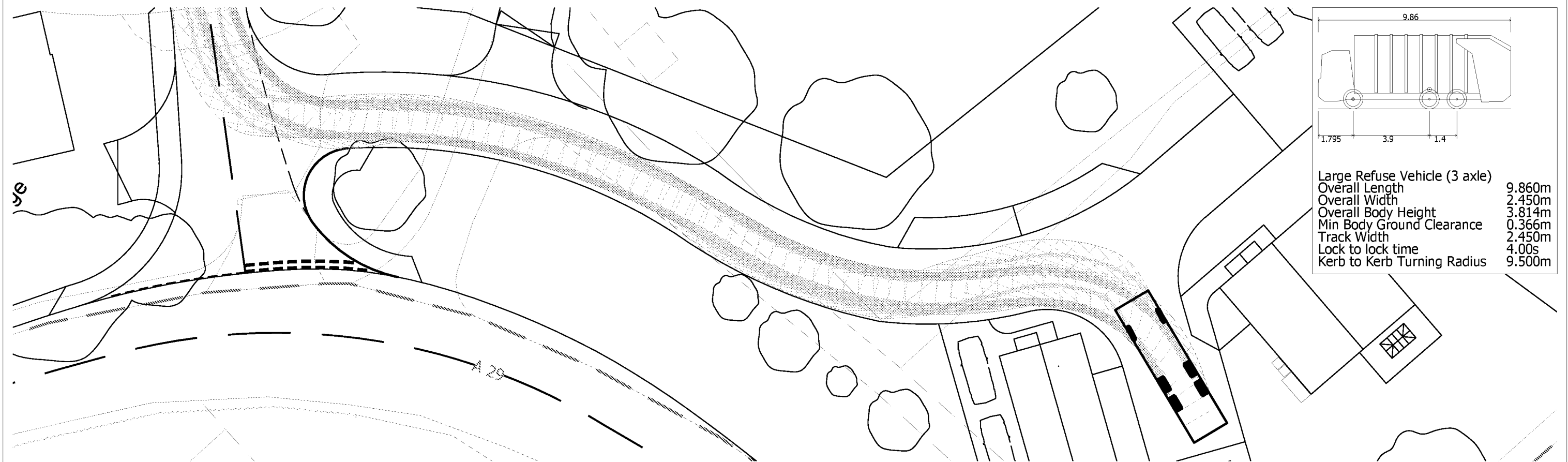
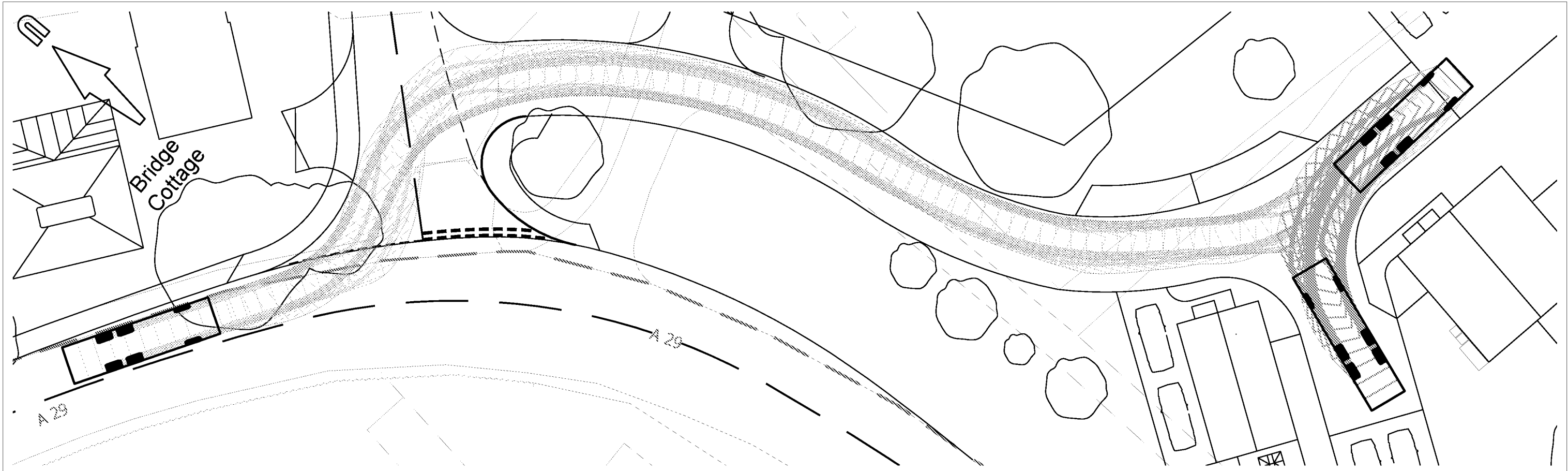
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Site in Relation to the Local Highway Network

Scale 1:10 000

Figure 1.2



Large Refuse Vehicle (3 axle)	
Overall Length	9.860m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

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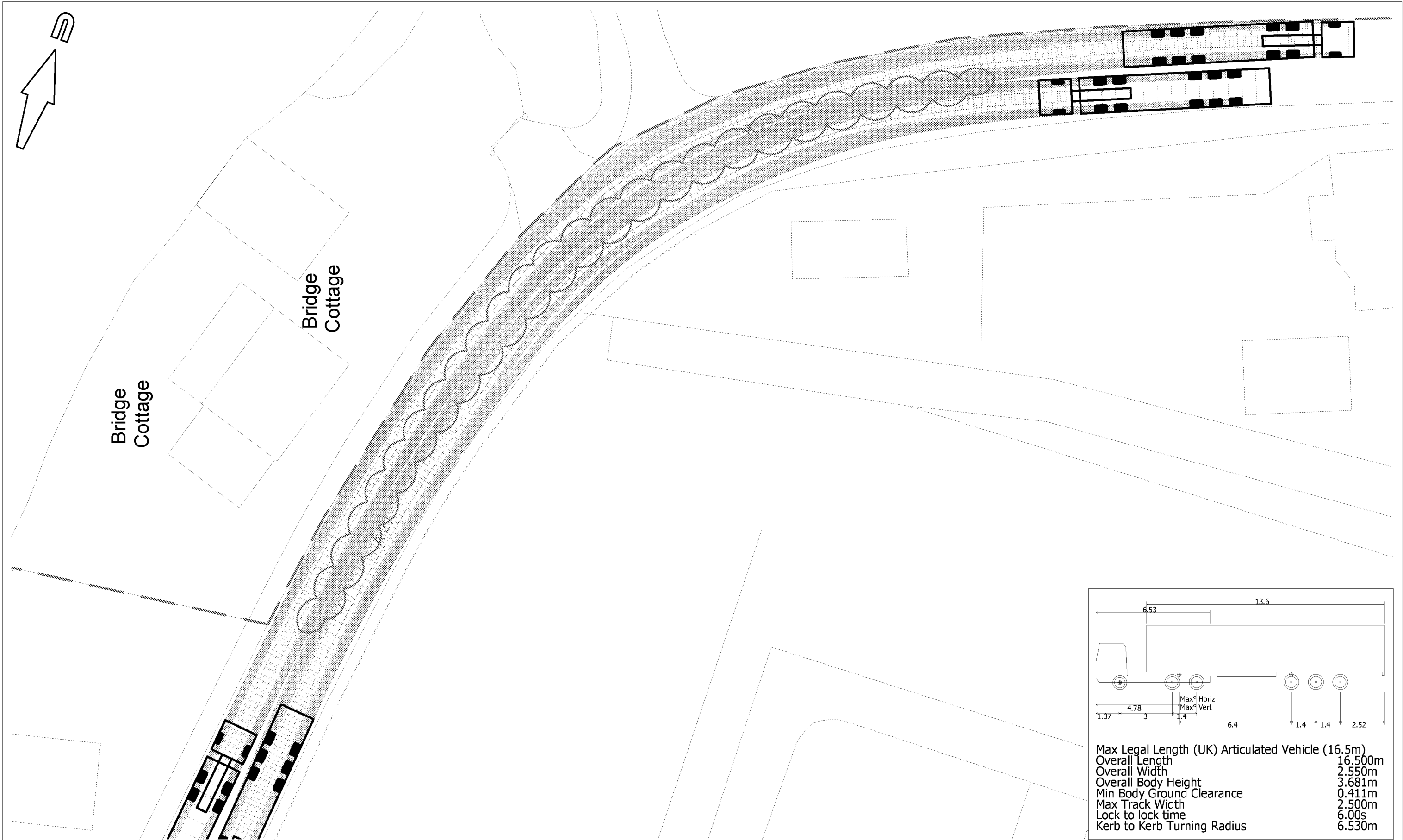
client
DOMUSEA DEVELOPMENTS

project
LAND AT OLD COTTAGE, LIDSEY

title
**SWEPT PATH ANALYSIS
LARGE REFUSE VEHICLE ENTERING/EXITING SITE**

scale 1:250 @ A3	drawn by JME	checked by KC
date AUGUST 2019	cad file FIGURE	suitability P1
drawing number		

FIGURE-1.3



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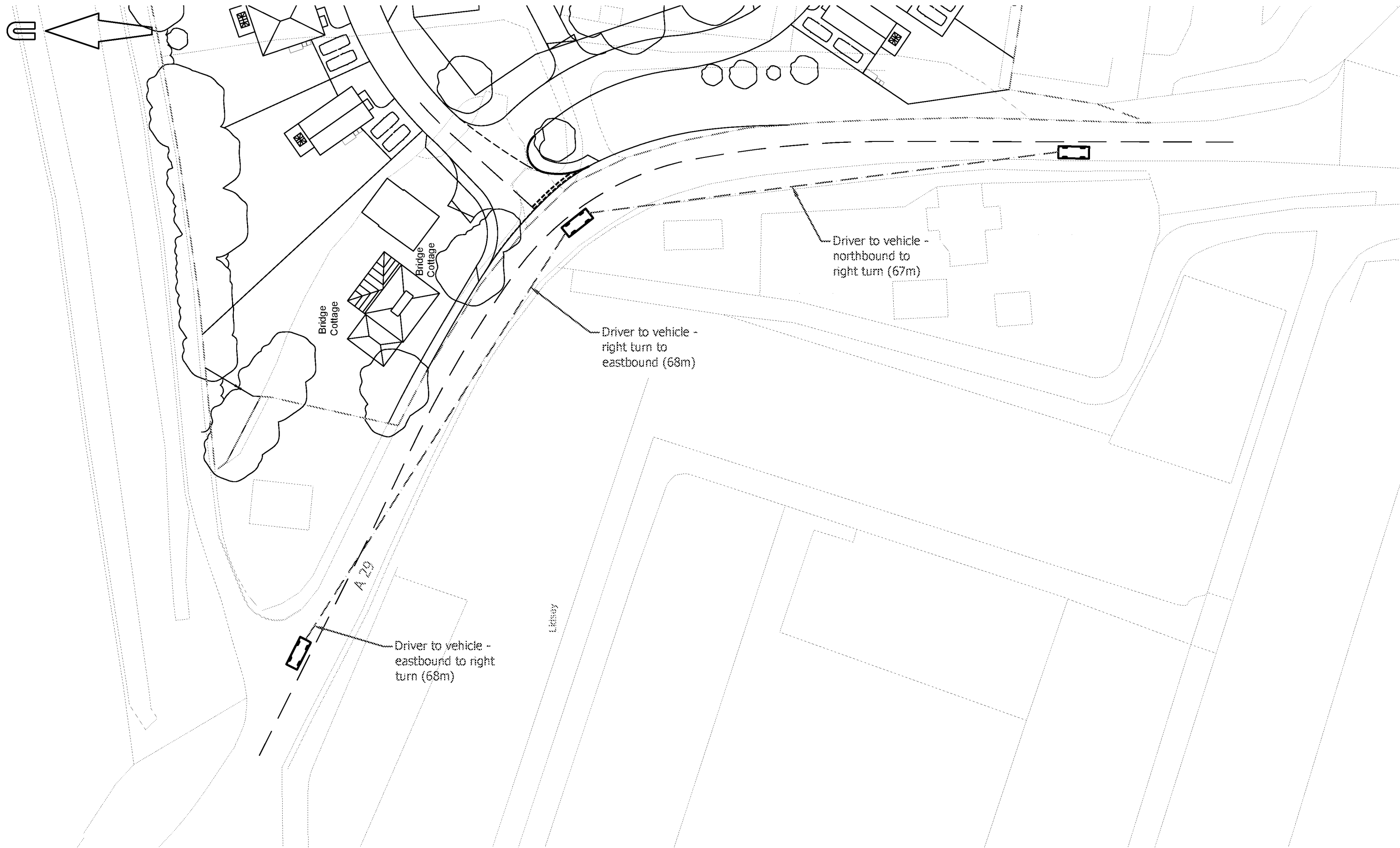
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client	DOMUSEA DEVELOPMENTS
project	LAND AT OLD COTTAGE, ALDINGBOURNE

title	SWEPT PATH ANALYSIS 16.5M ARTIC PASSING ON EXISTING A29 LAYOUT
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scale	1:250 @ A3	drawn by	JME	checked by	KC
date	AUGUST 2019	cad file	FIGURE	suitability	rev.
drawing number	P1				

FIGURE-1.7



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client	DOMUSEA DEVELOPMENTS
project	LAND AT OLD COTTAGE, LIDSEY

title	FORWARD VISIBILITY - VEHICLE TURNING RIGHT INTO DEVELOPMENT
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date	AUGUST 2019	cad file	FIGURE	suitability	rev. P1
drawing number	FIGURE-1.10				



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LAND AT OLD COTTAGE, LIDSEY

title

FORWARD VISIBILITY - VEHICLE
TURNING LEFT INTO DEVELOPMENT

scale

1:500 @ A3

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date

AUGUST 2019

cad file

FIGURE

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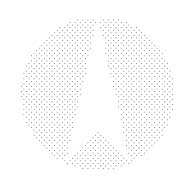
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FIGURE-1.11

APPENDIX A: Architects' Drawing 1042/SK03



APPENDIX B: WSCC Parking Demand Calculator

This parking demand tool has been compiled by West Sussex County Council. If you have queries relating to the information provided or require additional information please contact darryl.hemmings@westsussex.gov.uk.

Please input the ward name for your development location below by double clicking in the box or click box and use the drop down menu to the right of the box. The spreadsheet will automatically show the District and Ward of this location. If the ward is not known please input postcode into the Ward Finder. The tool will allow input up to 3 wards in the boxes below. Please refer to notes for more details.

Ward 1	Barnham
District	Arun
Ward 2	
District	
Ward 3	
District	
Ward Tempro Factor 2009-2026	1.052438
District Tempro Factor 2009-2026	1.067644



west
sussex
county
council

Ward Finder

Postcode		Ward	
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Note:

No special provision need be made for visitors where at least half of the total parking provision associated with a development is unallocated. In other circumstances, it may be appropriate to allow for additional demand for visitor parking of up to 0.2 spaces per dwelling.

In areas of parking constraint, levels of provision below predicted demand may be applicable.

The tool is expressed as number of Rooms (Per Unit). If data is not available in this format and number of Bedrooms is used this will need to be converted. A general guide for conversion is as follows but may differ in some cases.

Houses

1 bed = 3 rooms
2 bed = 4 rooms
3 bed = 5 rooms
4 bed = 6 rooms
5 bed = 7 rooms

Flats

Studio = 1 room
1 bed = 2 rooms
2 bed = 3 rooms
3 bed = 4 rooms
4 bed = 5 rooms

Garages will count as 1 space when allocating spaces.

Ward data used can be checked by the user by referring to the District-Ward Data Tables. The Ward Data Tables highlight if the Census data does not include data for certain dwelling sizes. In such cases car ownership values have been obtained using the nearest sized dwelling with same tenure and ward. For example, if no data is available for a private house with 1 room then data for a private house with 2 rooms has been used. The Car Ownership Data is highlighted in purple where such an approach has been used. Where Census data contains small samples for certain sized dwellings this is highlighted in red if <20, and green if <50 in the Total Demand column. In such cases, other wards should be selected to achieve a higher sample size.

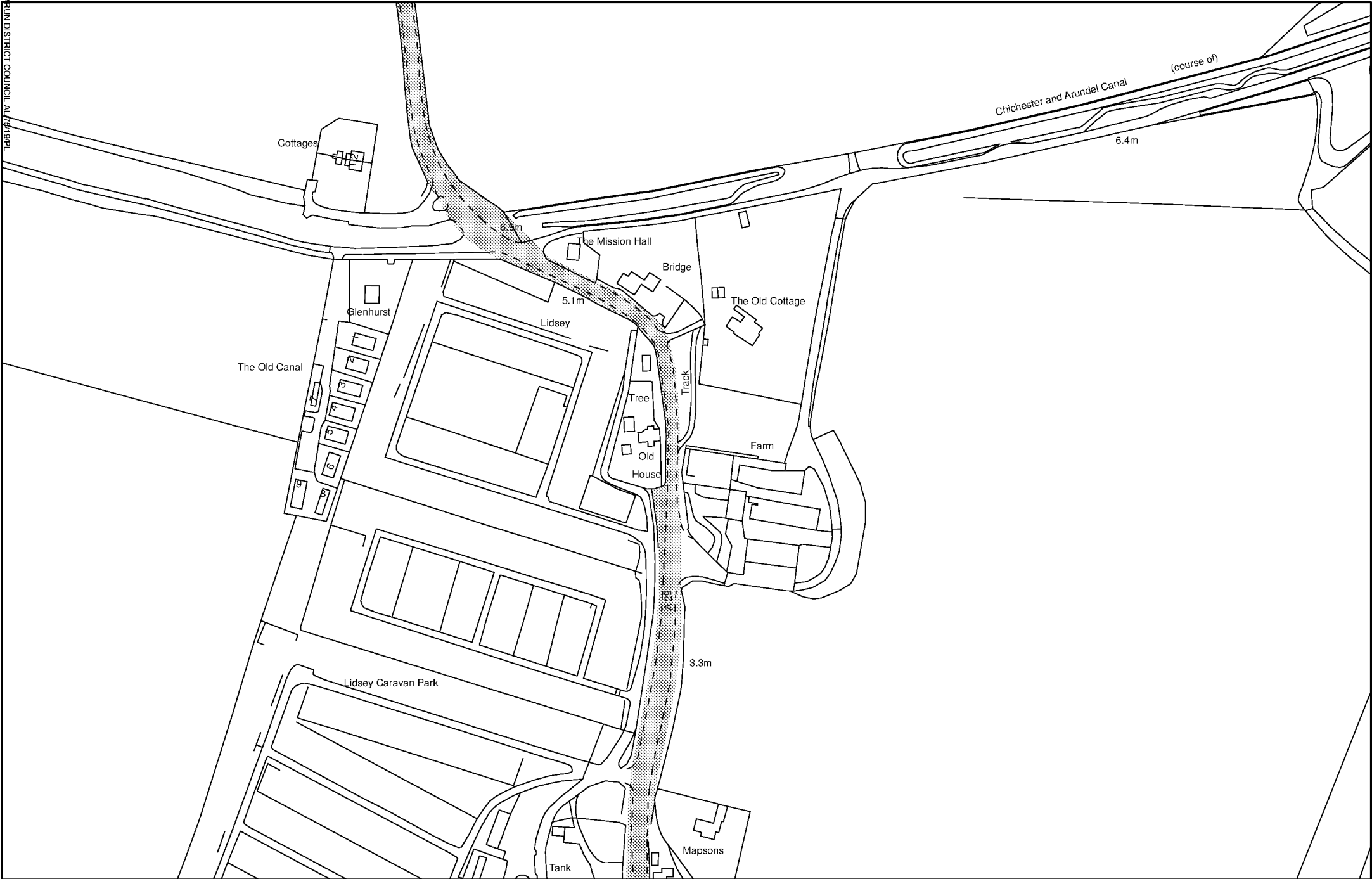
Report Summary Table

DEVELOPMENT MIX				
Ref.	Unit Type	Unit Tenure	Habitable Rooms (Per Unit)	No. of Units (Total)
A	Houses	Private	4	2
B	Houses	Private	5	2
C	Houses	Private	6	2
D	Houses	Private	7	2
E				
F				
G				
H				
I				
J				
K				
L				
M				
N				
O				
P				
Q				
R				
S				
Total				8

ALLOCATED PARKING
Spaces (Per Unit)
2
2
2
2

PARKING DEMAND					
Allocated No.	Unallocated for Residents		Unallocated for Visitors		Total Demand
	per unit	Total	per unit	Total	
4	0	0	0	0	5
4	0	0	0	0	5
4	0	0	0	0	5
4	0	1	0	0	5
16		1.69		1.60	19

APPENDIX C: Highway Boundary Plan



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Local Development
for Customers and Communities

Information about the status of a highway, and in some circumstances the extent of the highway, may be taken from a number of sources held by the County Council. Unless taken from a legal agreement the information should be regarded as guidance only.

Date: 19/07/2019

Scale: 1:2,500

