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Proposed Residential Redevelopment of 5 Dwellings Brighstone, Botley Road, Horton Heath, SO50 7DT

Introduction

This Highway Technical Note has been commissioned by Alderbury Homes Ltd in support of a planning application submission to Eastleigh Borough Council for a residential redevelopment of 5 dwellings on land at Brighstone, Botley Road, Horton Heath. The location of the site is shown below.



The site is located on the western side of Botley Road, a classified public highway with the identification number B3354. To the north the road runs through Horton Heath and Fair Oak, whilst to the south, the road links Boorley Green with Botley.

Botley Road is a two-lane carriageway with pedestrian footways on both sides of the road, it also benefits from street lighting and is subject to a 30mph speed limit.

The site is currently accessed from an existing access in the form of a dropped footway crossing, which is shared by the existing dwelling to the north known as Neerome. Visibility at this access is good, given the presence of the footway across the site frontage.

Proposed Development

This application seeks to demolish the existing bungalow on the site and to provide a residential development of 5 dwellings together with associated car parking with a revised access onto Botley Road. The details of the development are shown on drawing numbered 20/001/1000, included as **Appendix 1** to this Note.

Access and Visibility

Botley Road is subject to a 30mpg speed limit, and it is proposed to utilise the existing wide dropped footway crossing, in a slightly modified form. At present the access is shared with the dwelling to the north, and it is proposed to divide this, so that the application site and the adjoining plot have separate access arrangements.

Advice on the provision of visibility at accesses for smaller development such as this is given within the Hampshire County Council Document Technical Guidance 3 – Stopping Sight Distance and Visibility Splays.

The access is in the form of a footway crossing, therefore in accordance with advice contained within thin TG3, a visibility X distance of 2.0m can be employed, whilst a Y distance of 43.0m would be required to the north and the south, based on the posted 30mph speed limit.

Drawing numbered NJC-001 is included as [Appendix 2](#) to this Note which shows the location of the proposed access which is to take the form of a dropped footway crossing and has a width of 5.0m to allow for appropriate ingress and egress by domestic vehicles.

Drawing numbered NJC-002 s included as [Appendix 3](#) to this Note which shows the ability of two large cars to enter and leave the site simultaneously, thus avoiding a car waiting within the carriageway for a second vehicle to depart.

Traffic Impact

In order to determine the likely traffic impact that the development would have on the highway network, the TRICS database v7.10.1 has been interrogated. The development results in a net increase of 4 dwellings, therefore in selecting suitable comparison sites, the following criteria was used.

- Land Use – Residential – Privately Owned Houses
- Size of Development – 6 to 23 Units
- Date Range - 01/01/13 to 06/06/23
- Location – Edge of Town

The table below provides the TRICS trip rates together with the vehicular traffic that the additional 4 dwellings are likely to generate.

Brighstone – Residential – Privately Owned Houses									
Mode	AM Peak (0800 – 0900)			AM Peak (1700 – 1800)			Daily		
	Arrival	Depart	2-Way	Arrival	Depart	2-Way	Arrival	Depart	2-Way
Vehicles	0.24	0.41	0.65	0.29	0.16	0.46	2.49	2.61	5.11
Traffic Based on 4 Additional Dwellings									
Vehicles	0.96 (1)	1.64 (2)	3	1.16 (1)	0.64 (1)	2	10	10	20

From the above, it can be seen that should the residential development proceed, the site is likely to generate 3 additional vehicle movements in the AM peak and just 2 vehicle movements in the PM peak. During the course of the day, the development would generate a total of some 20 vehicle movements. The TRICS Data is included as [Appendix 4](#) to this Note.

Car Parking

The requirement for car parking for new developments is contained within the Eastleigh Borough Council Document Residential Parking Standards 2008.

The development consists of 3 number three-bedroom dwellings and 2 number 4 bed, therefore, to accord with the adopted standards, the development would require 12 parking spaces. These are to be provided on an allocated basis with 2 open spaces per unit for the smaller dwellings and in the form of double garages and forecourt spaces for the larger units.

In addition, two visitor parking spaces are to be provided to cater for the parking needs of any visitors to the site.

Secure and undercover cycle parking is to be provided in the form of sheds located within the rear gardens for the smaller units, whilst the double garages can easily accommodate the cycle parking for the larger dwellings.

The car and cycle parking is therefore fully in accordance with the adopted parking standards.

Servicing

It is intended that refuse will be collected from the kerbside as happens at present and a refuse collection point is provided at the site access junction with Botley Road to ensure that bins can be stored within the site in collection days. For more regular deliveries, it is likely that transit type vehicles will be generated and drawing numbered NJC-003 is included as [Appendix 5](#) which shows the ability of such a vehicle to enter the site and drive to the western end where it can then turn and leave in forward gear.

With regards emergency vehicles, drawing numbered NJC-004 is included as [Appendix 6](#) to this Note which shows the ability of a fire appliance to be able to enter the site, drive to the western end of the site where it can turn, so as to leave in forward gear.

Summary and Conclusion

This Highway Technical Note has been commissioned by Alderbury Homes Ltd in support of a planning application submission to Eastleigh Borough Council for a residential redevelopment of 5 dwellings on land at Brighstone, Botley Road, Horton Heath.

Visibility is to be provided in accordance with advice contained within the HCC Technical Guidance 3 document, and access is to be amended to provide separate accesses for this site and the adjoining single residential property to the north.

The likely additional traffic impact will be minimal with the development likely to generate just 3 traffic movement in the AM peak and 2 in the PM peak period and around 20 daily two-way traffic movements.

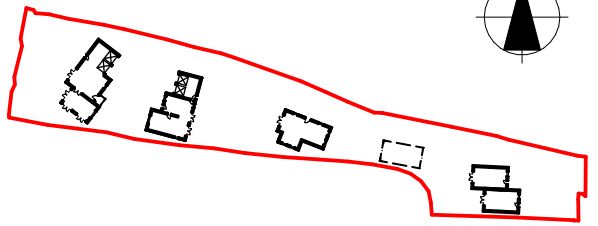
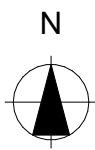
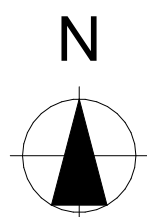
Car and cycle parking is to be provided in accordance with adopted standards and the development is to accommodate the on-site turning requirements of a transit sized grocery delivery van as well as a Fire Appliance.

The development is therefore considered to be acceptable from a highway point of view.

Nick Culhane May 2023

Appendix 1

Site Plan



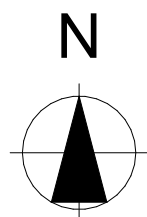
Key Plan



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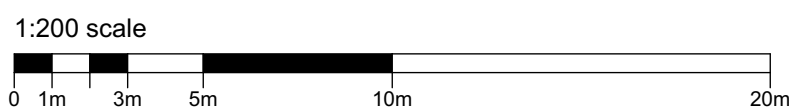


OS Plan
1:1250



Site Plan
1:200

ACCOMMODATION SCHEDULE		
Plot No.	Bed no.	INTERNAL AREA
1	3 Bed	84m ² / 904ft ²
2	3 Bed	84m ² / 904ft ²
3	3 Bed	142m ² / 1528ft ²
4	4 Bed	187m ² / 2012ft ²
5	5 Bed	212m ² / 2282ft ²



PLANNING APPROVAL			
P3	Updated to client's comment	04.05.23	PR
P2	Updated to client's comment	24.04.23	PR
P1	Preliminary Issue	14.04.23	PR
Revision	Description	Date	Drawn

Designer :



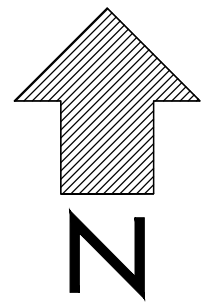
Project :
Brighstone, Botley Road
Proposed Residential development

Drawing :
Proposed Site Plan

Date : April 2023	Scale : 1:200, 1:1250 @ A1	Revision:
Drawing No. : 20 / 001 / 100	Status : PRELIMINARY	P3

Appendix 2

Access and Visibility



Client



Project

RESIDENTIAL DEVELOPMENT AT
BRIGHSIDE, BOTLEY ROAD

Drawing Title

ACCESS AND VISIBILITY

Drawing Status

FOR INFORMATION

Date
MAY 2023

Scale
1:200

Size
A1

Drawing No.

NJC-001

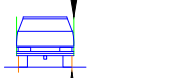
Rev

-

Appendix 3

Access and Swept Path Tracking



VEHICLE DETAILS:	
	Green line shows body
	Orange line shows axle/wheels
4.8m CAR	
Overall Length	4800mm
Overall Width	1793mm
Overall Body Height	1502mm
Min Body Ground Clearance	287mm
Track Width	1700mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6200mm
Design speed 5kph for all Forward movements	
Design speed 2.5kph for all Reverse movements	

Client		
		
Project		
RESIDENTIAL DEVELOPMENT AT BRIGHSIDE, BOTLEY ROAD		
Drawing Title		
ACCESS SWEEP PATH TRACKING		
Drawing Status		
FOR INFORMATION		
Date	Scale	Size
MAY 2023	1:150	A1
Drawing No.	Rev	
NJC-002	-	

Appendix 4

TRICS Data

Calculation Reference: AUDIT-405201-230425-0450

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	BC BOURNEMOUTH CHRISTCHURCH & POOLE	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 10 to 36 (units:)
Range Selected by User: 10 to 36 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 18/10/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	1 days
Wednesday	3 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town	7
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	6
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	X days - Selected
Servicing vehicles Excluded	7 days - Selected

Secondary Filtering selection:

Use Class:

C3	7 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	4 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	7 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	7 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

The 'browse and select' feature in TRICS was used to choose the sites to be included in this selected set. The TRICS user browsed the full list of sites for this land use category and selected directly from this list.

1	BC-03-A-02	BUNGALOWS	BOURNEMOUTH CHRISTCHURCH & POOLE
	HURSTDENE ROAD		
	BOURNEMOUTH		
	CASTLE LANE WEST		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	28	
	Survey date: MONDAY	24/03/14	Survey Type: MANUAL
2	LC-03-A-31	DETACHED HOUSES	LANCASHIRE
	GREENSIDE		
	PRESTON		
	COTTAM		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	32	
	Survey date: FRIDAY	17/11/17	Survey Type: MANUAL
3	NF-03-A-03	DETACHED HOUSES	NORFOLK
	HALING WAY		
	THETFORD		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	10	
	Survey date: WEDNESDAY	16/09/15	Survey Type: MANUAL
4	NT-03-A-08	DETACHED HOUSES	NOTTINGHAMSHIRE
	WIGHAY ROAD		
	HUCKNALL		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	36	
	Survey date: MONDAY	18/10/21	Survey Type: MANUAL
5	NY-03-A-07	DETACHED & SEMI DET.	NORTH YORKSHIRE
	CRAVEN WAY		
	BOROUGHBRIDGE		
	Edge of Town		
	No Sub Category		
	Total No of Dwellings:	23	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
6	SF-03-A-05	DETACHED HOUSES	SUFFOLK
	VALE LANE		
	BURY ST EDMUNDS		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	18	
	Survey date: WEDNESDAY	09/09/15	Survey Type: MANUAL
7	ST-03-A-08	DETACHED HOUSES	STAFFORDSHIRE
	SILKMORE CRESCENT		
	STAFFORD		
	MEADOWCROFT PARK		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	26	
	Survey date: WEDNESDAY	22/11/17	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	25	0.040	7	25	0.179	7	25	0.219
08:00 - 09:00	7	25	0.116	7	25	0.289	7	25	0.405
09:00 - 10:00	7	25	0.121	7	25	0.254	7	25	0.375
10:00 - 11:00	7	25	0.208	7	25	0.162	7	25	0.370
11:00 - 12:00	7	25	0.197	7	25	0.237	7	25	0.434
12:00 - 13:00	7	25	0.249	7	25	0.197	7	25	0.446
13:00 - 14:00	7	25	0.191	7	25	0.156	7	25	0.347
14:00 - 15:00	7	25	0.173	7	25	0.197	7	25	0.370
15:00 - 16:00	7	25	0.254	7	25	0.249	7	25	0.503
16:00 - 17:00	7	25	0.318	7	25	0.145	7	25	0.463
17:00 - 18:00	7	25	0.301	7	25	0.150	7	25	0.451
18:00 - 19:00	7	25	0.231	7	25	0.104	7	25	0.335
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.399			2.319			4.718

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected:

10 - 36 (units:)

Survey date date range:

01/01/11 - 18/10/21

Number of weekdays (Monday-Friday):

7

Number of Saturdays:

0

Number of Sundays:

0

Surveys automatically removed from selection:

0

Surveys manually removed from selection:

0

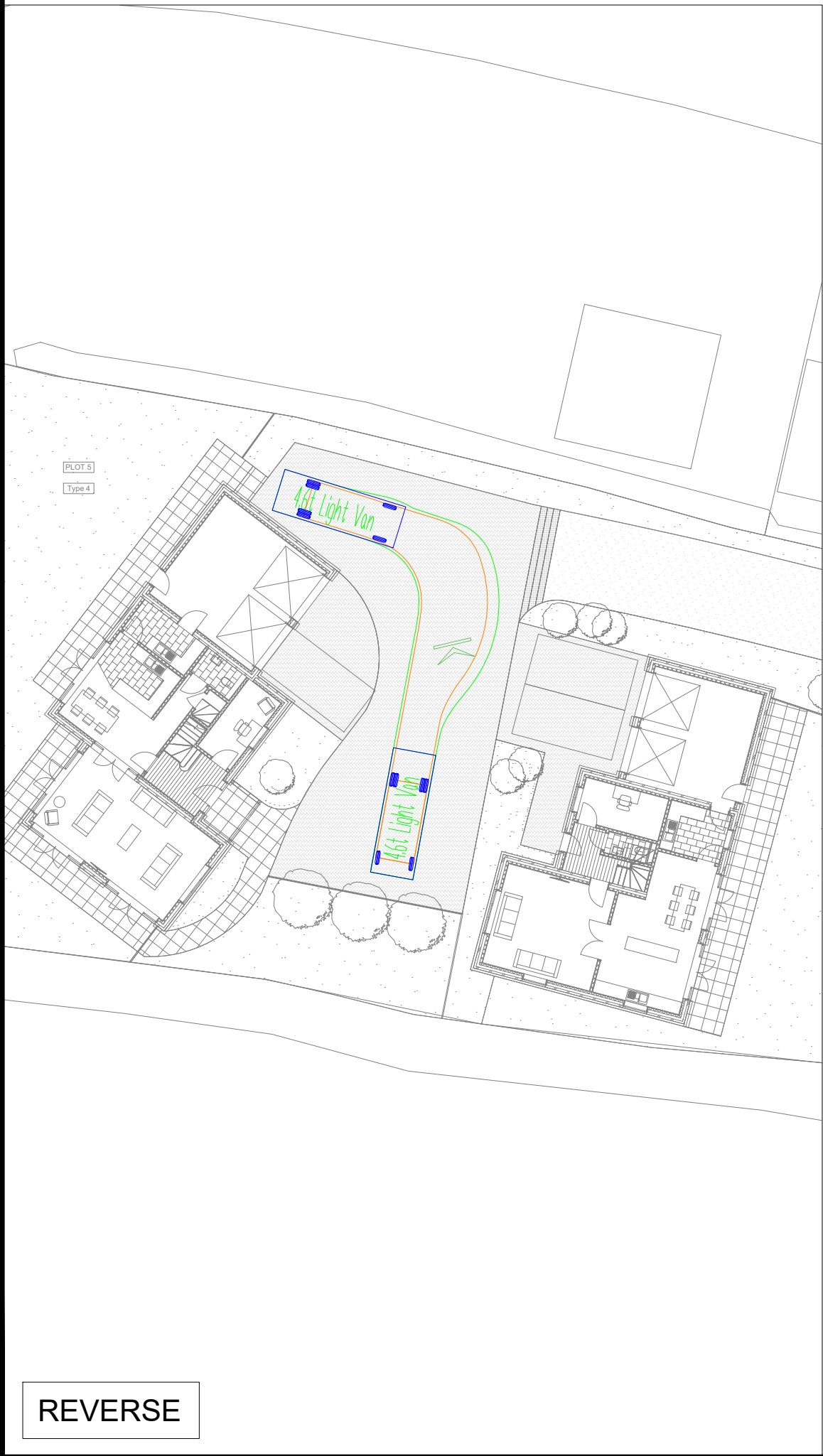
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix 5

Swept Path Tracking – Service Vehicle



INGRESS

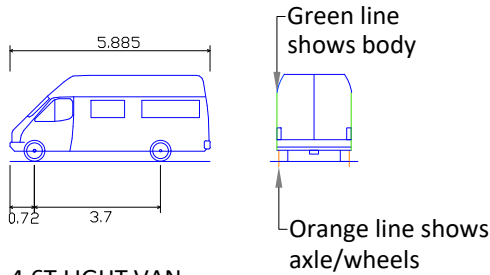


REVERSE



EGRESS

VEHICLE DETAILS:



4.6T LIGHT VAN

Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.239m
Track Width	1.765m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.000m

Design speed 5kph for all Forward movements
Design speed 2.5kph for all Reverse movements

Client



Project

RESIDENTIAL DEVELOPMENT AT
BRIGHSIDE, BOTLEY ROAD

Drawing Title

SERVICE SWEEP PATH TRACKING

Drawing Status

FOR INFORMATION

Date	Scale	Size
MAY 2023	1:250	A1

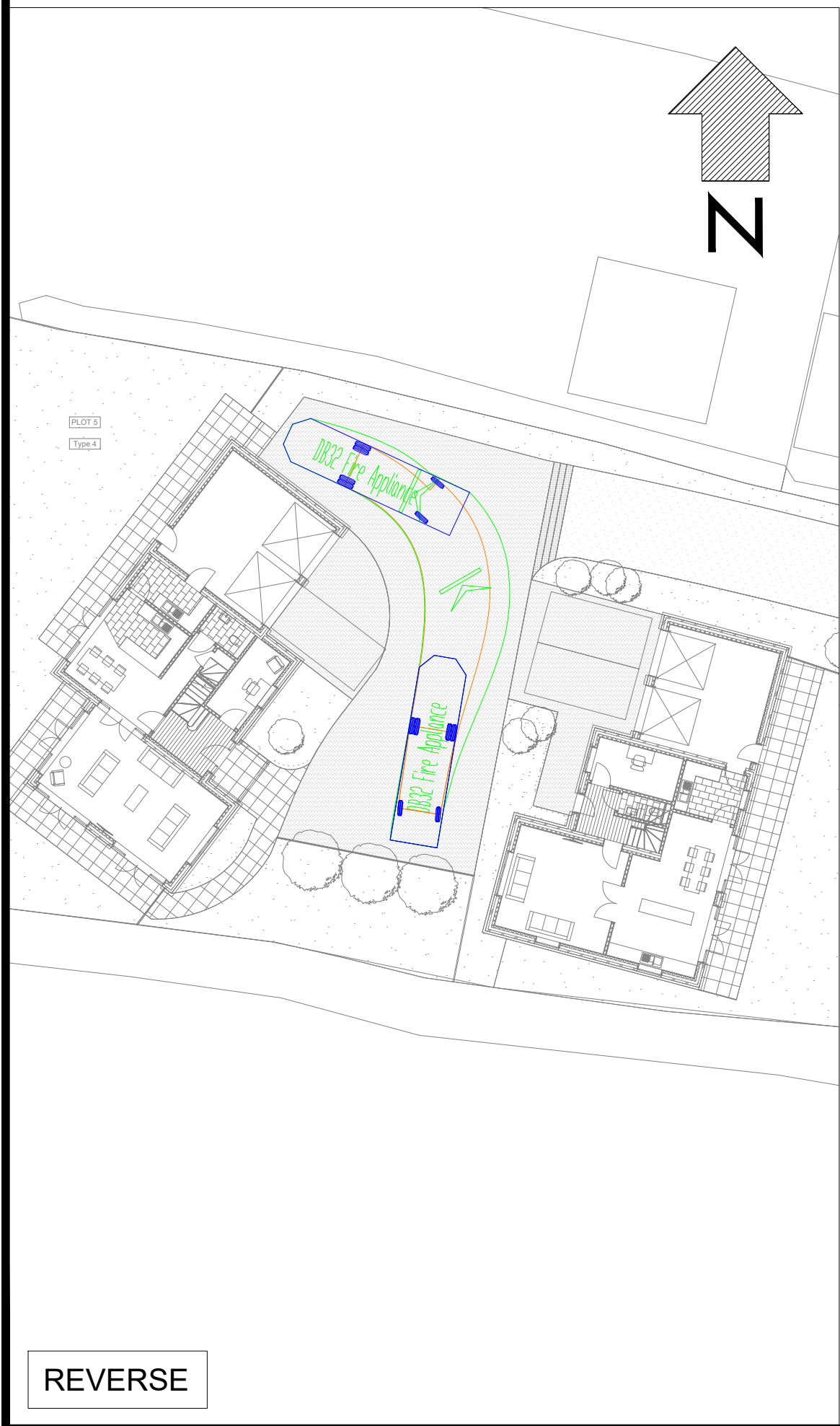
Drawing No.	Rev
NJC-003	-

Appendix 6

Swept Path Tracking – Fire Appliance



INGRESS



REVERSE



EGRESS

VEHICLE DETAILS:

Green line shows body
Orange line shows axle/wheels

DB32 Fire Appliance

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

Design speed 5kph for all Forward movements
Design speed 2.5kph for all Reverse movements

Client

 Nick Culhane
Highway Consultant

Project

RESIDENTIAL DEVELOPMENT AT
BRIGHSIDE, BOTLEY ROAD

Drawing Title

FIRE APPLIANCE SWEEP PATH TRACKING

Drawing Status

FOR INFORMATION

Date	Scale	Size
MAY 2023	1:250	A1

Drawing No.	Rev
NJC-004	-