

Solstrand, Station Road, Bagshot

TRANSPORT STATEMENT

for Proposed Residential Development
on behalf of Brooklands Homes

2024/5918/TS02

January 2024

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1 INTRODUCTION

1.1 Report Context

- 1.1.1 RGP is instructed to provide transport planning and highways input in support of proposed residential development at Solstrand, Station Road, Bagshot, GU19 5AS ("the site").
- 1.1.2 The site has most recently comprised a single dwelling, with access afforded directly from the southern side of Station Road. The site falls under the jurisdiction of Surrey Heath Borough Council (SHBC) as Local Planning Authority (LPA) and Surrey County Council (SCC) as Local Highway Authority (LHA).
- 1.1.3 The proposals consist of the re-provision of the existing dwelling and the erection of a further two dwellings to the rear, hence a net increase of two dwellings. The proposed Site Plan is attached hereto at **Appendix A** for reference.
- 1.1.4 Planning application 21/1176/FFU sought "demolition of existing dwelling and all associated buildings and structures and erection of 3 detached three bedroom dwellings with associated car parking, refuse storage and collection point and landscaping" at the site, and this was approved in November 2022 with no objection on highways or transport grounds.
- 1.1.5 The latest proposals are generally consistent with those consented under the above permission, albeit with amendments to the internal layout of the site in car parking provisions and turning space.
- 1.1.6 This Transport Statement has been prepared in response to a request from SHBC for updated Transport Reports following a change of ownership of the site and minor alterations as proposed under the latest application (23/1210/PMR). The remainder of the report therefore comprises the following sections:
- **Section 2: Baseline Conditions** – provides an overview of the site in its current form, including the local highway network and accessibility via modes of travel other than the private car;
 - **Section 3: Trip Generation** – outlines a forecast of the proposed trip generation to / from the site, both by vehicles and alternative modes of travel;
 - **Section 4: Internal Layout, Access and Parking** – provides detail into the proposed layout of the development, including means of access and parking provision; and
 - **Section 5: Summary and Conclusions** – offers a concise set of conclusions and overall summary of the findings of the report.

1.2 Policy Context

- 1.2.1 The National Planning Policy Framework (NPPF) details the government's planning policies for England and how these are expected to be applied.

1.2.2 Chapter 9 (Promoting Sustainable Transport) Paragraph 108 confirms “transport issues should be considered from the earliest stages of plan-making and development proposals so that:

- *(a) the potential impacts of development on transport networks can be addressed;*
- *(b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *(c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- *(d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *(e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.”*

1.2.3 In considering development proposals Paragraph 114 states “in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensure that:

- *(a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *(b) safe and suitable access to the site can be achieved for all users;*
- *(c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*
- *(d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

1.2.4 Paragraph 116 confirms applications for development should:

- *“(a) give priority first to pedestrian and cycle movement, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment areas 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."*
- 1.2.5 Paragraph 115 states "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 would be severe."
- 1.2.6 The findings of this report demonstrate that the proposals would not generate a severe transport impact as defined in Paragraph 115.

2 BASELINE CONDITIONS

2.1 Site Location

- 2.1.1 The site is located to the northeast of Bagshot town centre on the southern side of Station Road, circa 80m east of the Station Road / A30 London Road signalised junction. The site is bounded by Station Road to the north and further residential properties to the east, south and west.
- 2.1.2 The location of the site is shown edged in red in the figure below.



Figure 1 Site Location

- 2.1.3 The site was occupied by a single dwelling (Solstrand), with access afforded directly via Station Road. The existing access to the property takes the form of a dropped kerb and is located immediately east of an existing chicane narrowing on Station Road.

2.2 Local Highway Network

- 2.2.1 Station Road is a single-carriageway primarily residential road facilitating two-way traffic. Within the vicinity of the site, the road runs in an east-west alignment from the Station Road / A30 London Road signalised junction before arcing to a north-south alignment providing access to Bagshot Railway Station approximately 160m from the site. Station Road is subject to a 30mph speed limit along its whole length.
- 2.2.2 Adjacent to the site frontage, the road features a footway along its southern side which provides passage for pedestrians between the site and the station. Station Road narrows within the vicinity of the site access, constricting the road to single-file traffic via a chicane build out and traffic travelling in an easterly direction is afforded priority at this short section. The road additionally features double-yellow parking restrictions along both of its flanks within the immediate vicinity of the site.
- 2.2.3 To the west of the site lies the A30 London Road which runs in a generally north-south alignment. The road provides access to Bagshot district centre to the south and a connection to the A322 and Staines-upon-Thames to the north. Access along the road for pedestrians is facilitated through the provision of dropped kerbs and tactile paving at key crossing points, and street lighting.

2.3 Highway Safety Appraisal

- 2.3.1 To assess the local highway safety record, collision data has been reviewed in line with current Department for Transport (DfT) guidance. The range of analysis is 2018 to 2022 with data sourced from www.crashmap.co.uk.
- 2.3.2 A road collision is classified as one that involved personal injury and took place on the public highway, in summary, road collisions can include:
- Collisions which commence on the highway, but which involve casualties off the highway;
 - Collisions involving the boarding and alighting of buses and collisions in which passengers already aboard a bus / coach are injured, whether another vehicle or pedestrian is involved;
 - Collisions with pedal cyclists or horse riders, where they injure themselves or another road user.
- 2.3.3 It is noted some local authorities refer to road collisions as road accidents or road crashes.
- 2.3.4 For this Transport Statement, only collisions occurring on the public highway are included, the public highway usually includes the adjacent footway.
- 2.3.5 The analysis outlines that there have not been any recorded collisions along the length of Station Road, including at its junction with the A30 to the west of the site. The local highway network to the site therefore exhibits an excellent safety record and the proposals for the site should not be expected to detrimentally impact this fact.

2.4 Accessibility Credentials

2.4.1 The remainder of this section provides an overview of the potential for future residents to adopt alternative modes of travel to the private car for travel to / from the site.

Walking

2.4.2 It is commonly accepted that walking is the most important mode of travel at a local level, offering the greatest potential to replace short car trips. Walking yields numerous personal benefits such as health and fitness improvements, complementing the positive impact from an environmental standpoint.

2.4.3 The 'Planning for Walking' guidance (2015) produced by the Chartered Institution of Highways and Transportation (CIHT) has been considered as part of this report which provides information on the characteristics of pedestrian journeys, the benefits of walking and the legal framework that applies to pedestrians.

2.4.4 Further guidance set out within CIHT '*Providing for Journeys on Foot*' (2000) is also considered, in particular the section relating to desirable / acceptable / maximum walking distances. The table below outlines relative distances for different journey purposes from the guidance.

Standard	Town Centre	Commuting / School	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1km	800m
Preferred Maximum	800m	2km	1.2km

Figure 2 Desirable / Acceptable / Maximum Walking Distances (CIHT, 2000)

2.4.5 Given the proximity of the site to Bagshot centre, there are a range of amenities and services accessible by foot/cycle from the site.

2.4.6 Bagshot features many employment, retail and leisure amenities, all of which are accessible from the site via the network of pedestrian-oriented infrastructure along Station Road and beyond.

2.4.7 There would therefore be a high propensity for future residents to adopt walking as a means of travel to / from the site.

Cycling

2.4.8 Cycling is an important part of the national and local transport policy agenda. An increased perception of cycling as a real alternative mode of transport to the car and growth in cycling as a leisure activity has increased its demand.

2.4.9 Traditional Department for Transport (DfT) guidance outlines that many utility cycle trips are less than 3 miles (approximately 5km), but for commuter journeys a distance of over 5 miles (approximately 8km) is not uncommon. The CIHT's publication 'Cycle Friendly Infrastructure' (1996), suggests that reasonably fit individuals can comfortably cycle a distance of 8km to workplace destinations.

2.4.10 A 5km cycle catchment covers Bagshot and neighbouring centres such as Old Dean, Lightwater and Windlesham. Although the National Cycle Network does not pass through this catchment around the site, cycling should be considered an attractive mode of travel for commuting and leisure purposes for future residents at the site.

Public Transport

2.4.11 There are a number of opportunities within proximity to the site for residents to utilise travel via public transport.

2.4.12 Bagshot Square bus stops are the closest to the site, located at an approximate 400m walking distance. Both stops are characterised by a shelter with seating and accompanying timetable information. Frequent services serve the stop, with details provided in the table below.

Route		First / Last Service
34 / 35	Between Camberley & Guildford	Towards Guildford 07:02 – 23:30 (Mon-Fri) 07:15 – 23:30 (Sat) 08:36 – 19:32 (Sun)
500	Between Staines & Frimley Park Hospital	Towards Staines 07:45 – 17:42 (Mon-Fri) 10:17 – 12:37 (Sat)
730 Flightline	Frimley & Heathrow	Towards Heathrow 24hrs (except for 00:00 and 01:00)

Figure 3 Bagshot Square Bus Service Provision

2.4.13 The outlined service provision would be sufficient so as to offer a potential alternative for journeys in place of the private car. The Bagshot Green bus stops are located to the east of Bagshot centre, and although falling outside of the defined 400m catchment, would still be considered accessible on foot from the site.

2.4.14 Bagshot Railway Station is located approximately 80m to the north of the site along Station Road. The station is operated by Southwestern and provides frequent connections Ascot and Aldershot. The station additionally features 10 secure cycle stands which may increase propensity to utilise rail travel as part of a multi-modal journey.

3 TRIP GENERATION

3.1 Vehicular Trip Generation

3.1.1 In order to provide an indication of the likely trips that the site in its historic form could have generated, trip rates from the Trip Rate Information Computer System (TRICS) have been used. These rates are consistent with those approved as part of the previous planning consent, and hence should similarly be considered acceptable for the revised submission. Full output from TRICS is available at **Appendix B** for reference.

Time Period	Trip Rates (Per Dwelling)			Trip Generation (1 Dwelling)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
AM Peak (08:00-09:00)	0.167	0.472	0.639	0	1	1
PM Peak (17:00-18:00)	0.139	0.139	0.278	0	0	0
Daily (07:00-19:00)	2.001	2.195	4.196	2	2	4

Figure 4 Historic Vehicle Trip Generation (1 Dwelling)

3.1.2 A forecast of four two-way trips (i.e. arrivals and departures) across a typical weekday (07:00-19:00) is shown.

3.1.3 The trip rates as summarised above have been utilised to assess the potential vehicular trip generation associated with the addition of two dwellings at the site, again consistent with the development quantum approved under the previous consent.

Time Period	Trip Generation (3 Dwellings)		
	Arrivals	Departures	Two-way
AM Peak (08:00-09:00)	1	1	2
PM Peak (17:00-18:00)	0	0	1
Daily (07:00-19:00)	6	7	13

Figure 5 Proposed Vehicle Trip Generation (3 Dwellings)

3.1.4 The forecast outlines that three dwellings on the site could generate two two-way trips during the AM peak hour period, one during the PM peak hour period and 13 over the course of a typical weekday (12 hour period).

3.1.5 The forecasted trip generation for the development would therefore remain unchanged from the original consent and hence any highways impact should similarly be considered nominal.

3.2 Multi-Modal Trip Generation

3.2.1 In order to provide a high-level forecast of the multi-modal trip generation expected at the site post-occupation, data from the 2011 Census has been interrogated.

3.2.2 Statistics regarding method of journey to work (dataset *WU03EW - Location of usual residence and place of work by method of travel to work*) has been extracted for the Surrey Heath 002 Middle-Layer Super Output Area (MSOA), in which the site is located.

3.2.3 The generation at the site is presented in the table below, alongside a forecast into the number of daily trips by all modes utilising the proposed vehicular trip generation as outlined in the previous section.

Method of travel to work	Mode Share	Daily Two-Way Trips
Train	6.71%	1
Bus, minibus or coach	2.24%	0
<i>Driving a car or van</i>	<i>75.82%</i>	<i>13</i>
Passenger in a car or van	4.13%	1
Bicycle	2.06%	0
On foot	7.37%	1
Other method of travel to work	1.67%	0
Total	100%	17

Figure 6 Forecasted Multi-Modal Trip Generation

3.2.4 As highlighted, there would be scope for journeys to take place via modes of travel other than the private car, again consistent with the previously approved quantum.

4 INTERNAL LAYOUT, ACCESS AND PARKING

4.1 Layout

4.1.1 As outlined within the Proposed Site Plan attached hereto at **Appendix A**, the development proposals comprise the demolition of the existing on-site dwelling and the erection of three new dwellings. Plot 1 is located at the front of the site replacing the existing dwelling and Plots 2 and 3 are provided on the rear of the site, connected by the proposed internal site access road. This is consistent with the general layout of the approved 21/1176/FFU scheme.

4.2 Access

4.2.1 The existing access to the site would be retained. The access would serve the parking area to Plot 1 directly and then would align along the western side of the site to access the Plots 2 and 3. The access arrangement would be consistent with that approved under the original 21/1176/FFU consent.

4.2.2 Drawing **2021/5918/003**, attached hereto, outlines the achievement of a 2.4m x 43m visibility splay from the site access road on Station Road, in accordance with Manual for Streets standards for a 30mph speed limit.

4.2.3 The vehicle swept path movements along the access road using a standard car are outlined in drawing **2021/5918/001** attached hereto. It is illustrated that an egressing vehicle can wait inside the site for an incoming vehicle to enter and pass before exiting without waiting required on the public highway.

4.2.4 In further accordance with the previously approved layout, a shared surface would be provided along the internal access road which meets with the existing footway along Station Road to facilitate pedestrian access to the site.

4.3 Car Parking

4.3.1 As summarised in the attached Site Plan at **Appendix A**, the proposals include the provision of two car parking spaces for Plots 1 and 2, and a single space at Plot 3. The overall number of space (five total) would be in accordance with the previously consented 21/1176/FFU scheme.

4.3.2 Drawing **2021/5918/001** illustrates that the on-site car parking spaces can be accessed and egressed accordingly by a standard car.

4.3.3 SCC's Parking Standards confirm the requirements for Electric Vehicle Charging Points (EVCP) for residential development, outlining that all houses should be provided with a fast charge socket. In accordance with this guidance, it is proposed that each dwelling be equipped with a space available for a fast charge socket.

4.4 Cycle Parking

- 4.4.1 SCC's parking standards include a requirement for two cycle parking spaces for dwellings providing three bedrooms and above. In accordance with this guidance, a secure shed would be provided within the confines of the private residential gardens to securely store bicycles at each Plot.

4.5 Delivery & Servicing

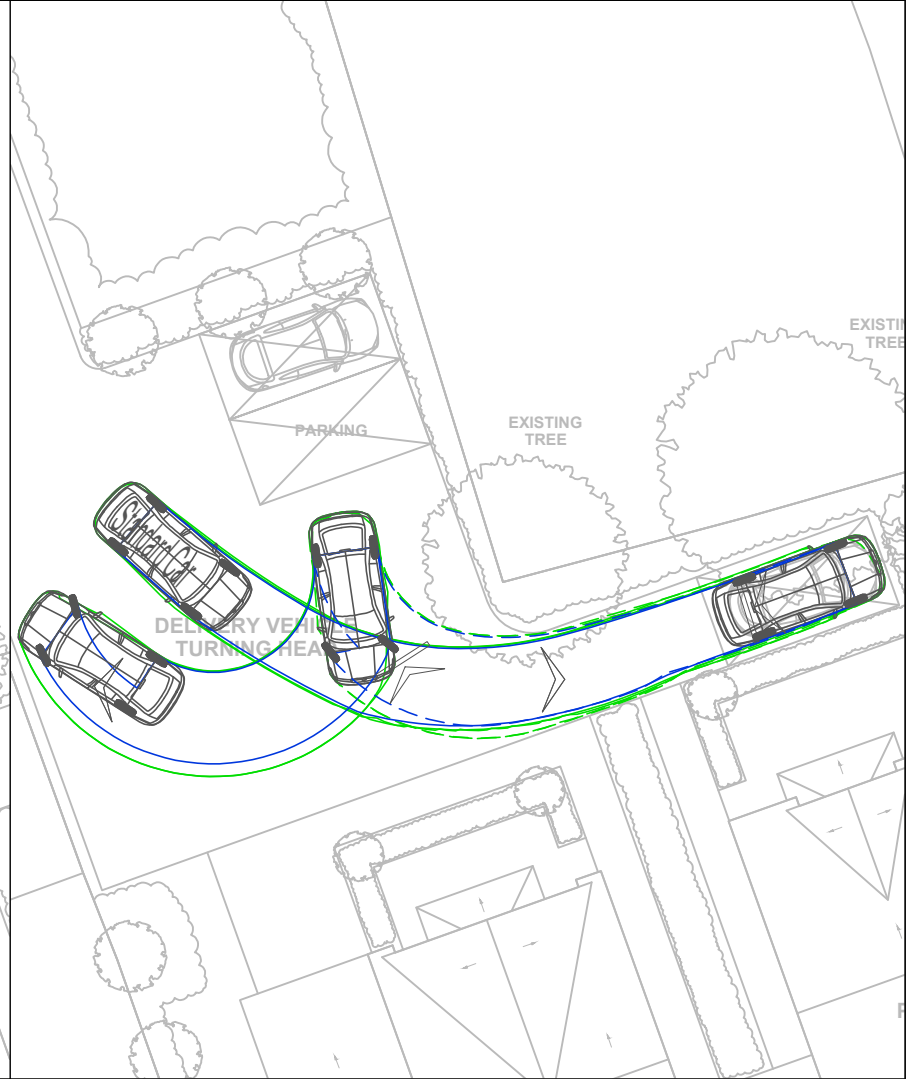
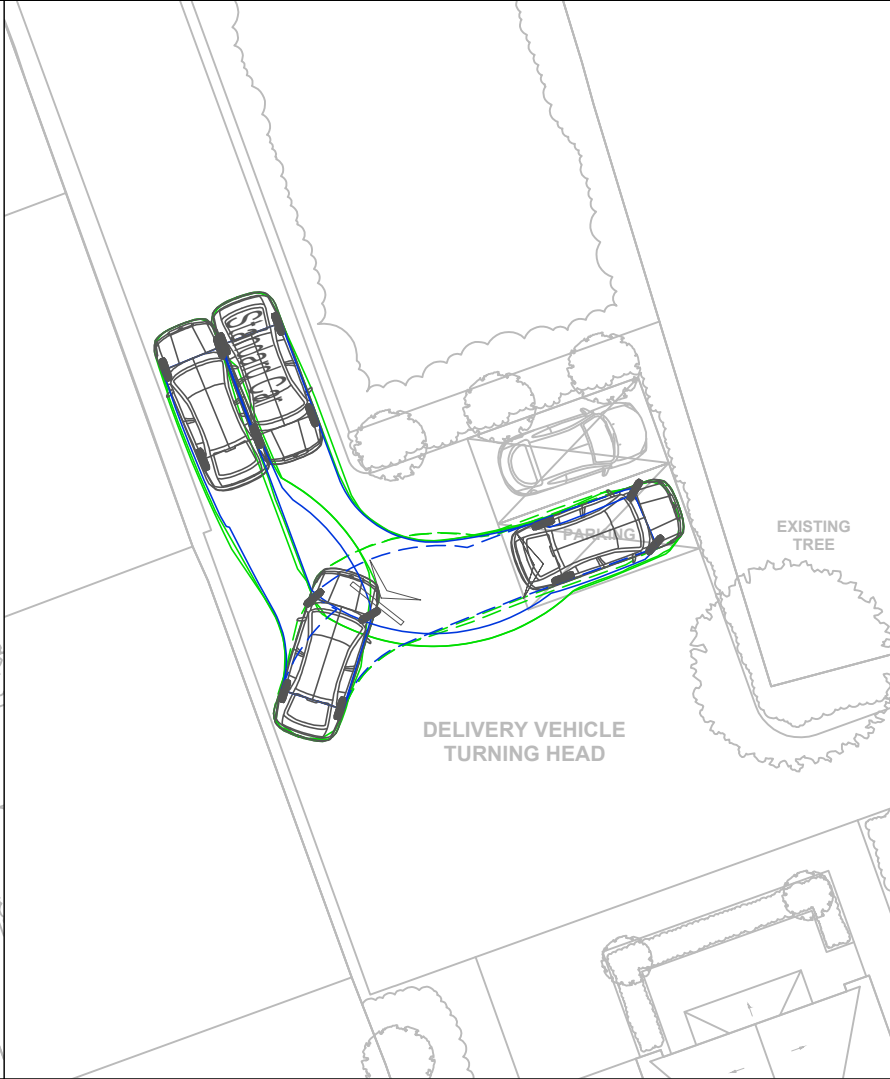
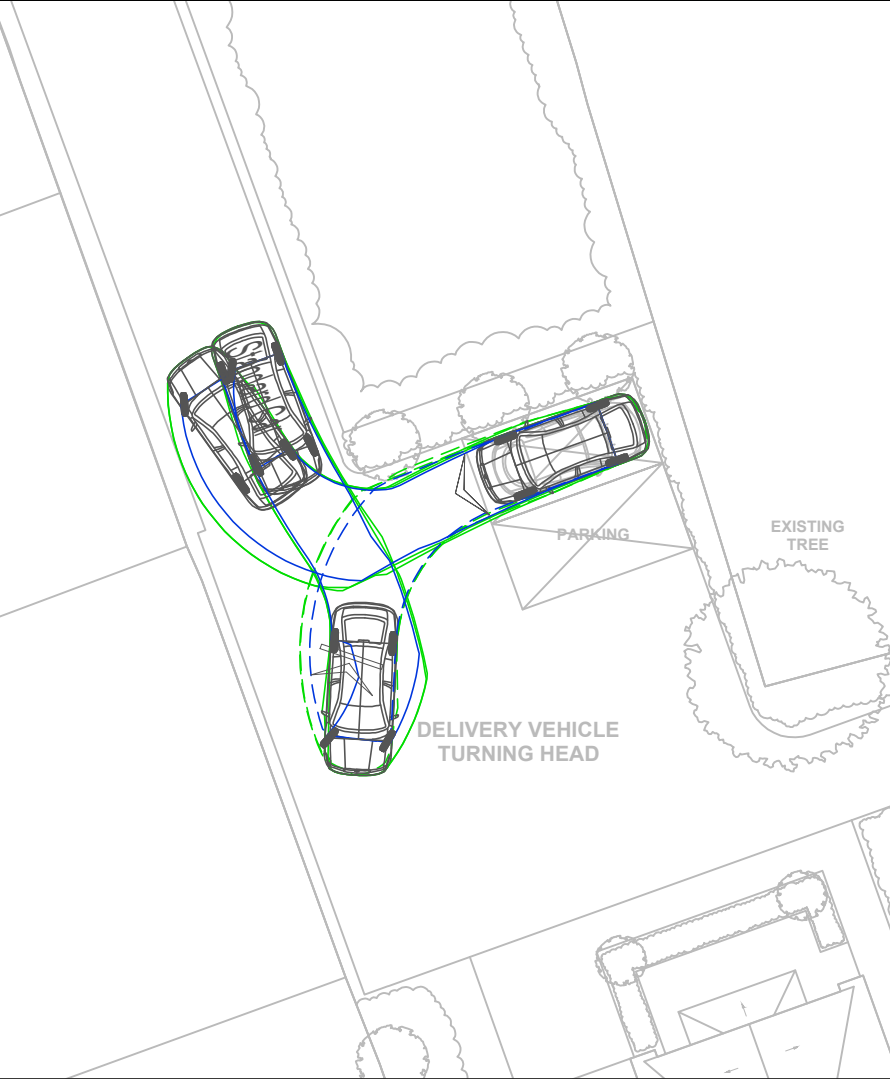
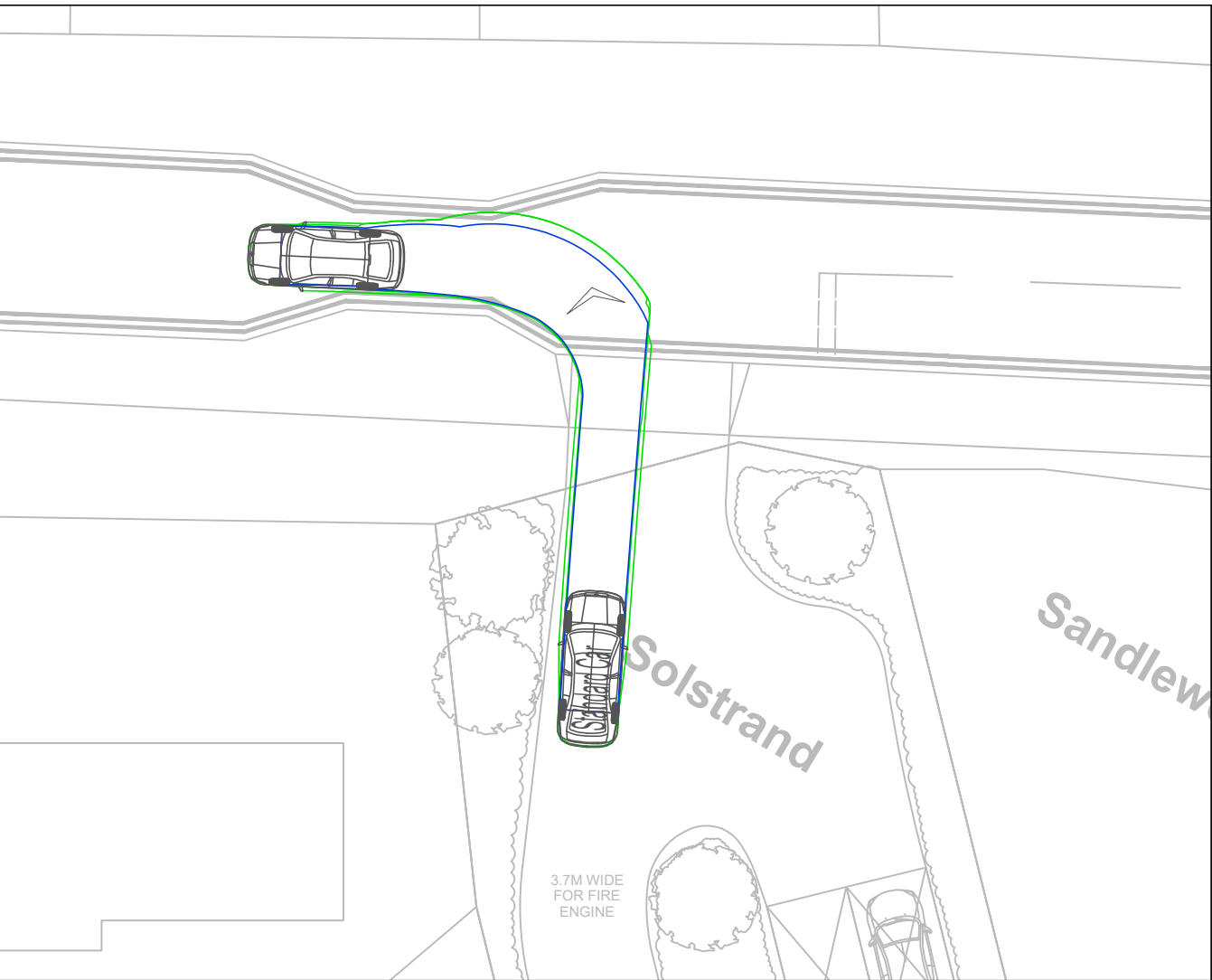
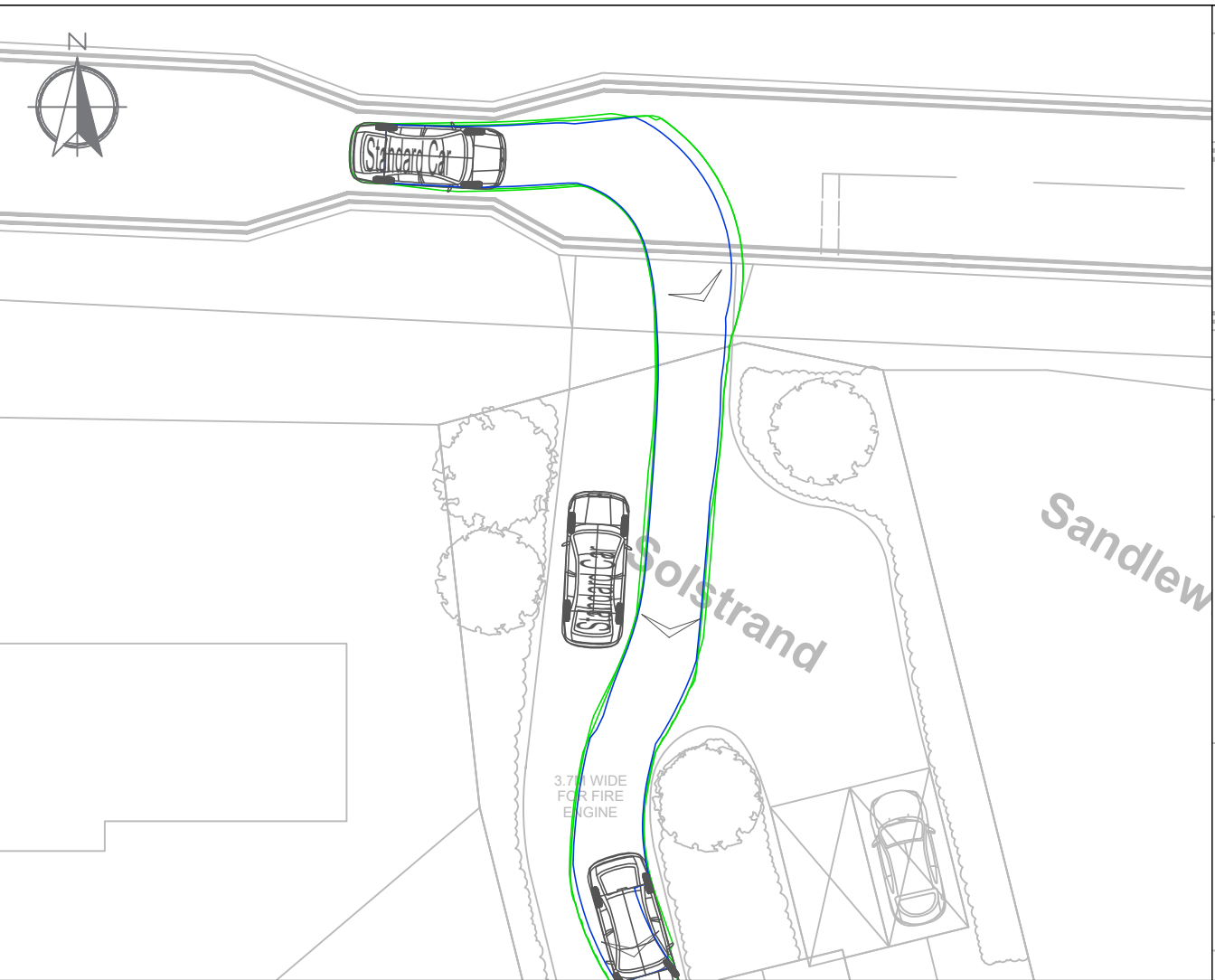
- 4.5.1 Bin storage is to be provided within the curtilage of each dwelling in the form of a covered timber store. On collection days, it is proposed that individual bins will be taken by residents to the dedicated refuse collection area located on the western side of the boundary, as shown in the attached Site Plan at **Appendix A**.
- 4.5.2 The proposed refuse access strategy accords with that approved under the previous 21/1176/FFU layout, devised in accordance with MfS guidance citing that two-wheeled containers should not be transported over 15m by collectors and residents should not be required to carry waste more than 30m. Refuse collection will be made on-street and would tie into existing arrangements along Station Road.
- 4.5.3 Other residential deliveries typically comprise small goods such as general postal / courier services, supermarket deliveries and restaurant / takeaway deliveries, for example. Therefore, a short duration of time is required to complete loading activity and the resultant delivery and service vehicle activity at the site would not represent an intensive level.
- 4.5.4 The type of deliveries would typically require the use of cars and light goods vehicles (LGVs), rather than larger delivery lorries. These deliveries would generally require vehicles to stop for up to a maximum duration of five minutes, and on infrequent occasions that larger / bulkier goods are delivered, up to 15 minutes may be needed to complete loading activity.
- 4.5.5 As per the Swept Path Analysis outlined in the attached drawing 3083-001 at **Appendix C**, a standard delivery vehicle would be able to enter and exit the site in a forward gear and use the turning space internally accordingly.
- 4.5.6 The proposed internal site layout can satisfactorily accommodate a fire tender, as outlined in the attached drawing **2021/5918/004**. As per the previously consented scheme layout, the vehicle would be able to drive to within 45m of the front entrance to each of the dwellings, with a reverse distance within the site domain of circa 20m.
- 4.5.7 The proposed amendments to the layout above the originally consented 21/1176/FFU layout should therefore be considered nominal and hence similarly acceptable in highways and transport terms.

5 SUMMARY AND CONCLUSIONS

- 5.1.1 RGP is instructed to provide transport planning and highways input in support of proposed residential development at Solstrand, Station Road, Bagshot, GU19 5AS ("the site").
- 5.1.2 The proposals would be largely consistent with the previously approved scheme at the site (21/1176/FFU) in means of access, general layout and parking provisions. The latest layout however makes amendments to the car parking and turning hear arrangements within the internal confines of the site.
- 5.1.3 The majority of highways and transport-related considerations of the scheme are therefore as per the previous submission, with the trip attraction, acceptability of the access arrangements with Station Road, and the delivery / servicing arrangements, all consistent.
- 5.1.4 The information contained within, and appended to, this report demonstrate that the proposed amendments to the general layout of the site would have a nominal impact upon the functionality of the site, with all expected vehicles able to enter and egress in a forward gear.
- 5.1.5 SCC Highways is therefore respectfully requested to confirm that the proposed amendments to the scheme layout above that approved under application 21/1176/FFU, are acceptable.

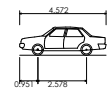


DRAWINGS



NOTES

This drawing has been prepared for the purpose of planning discussions and does not constitute a detailed design drawing, or construction drawing. A Design Hazard Inventory has been prepared by RGP setting out the hazards which have been designed out. This is available upon request.



Standard Car
 Overall Length 4.572m
 Overall Width 1.769m
 Overall Body Height 1.488m
 Min Body Ground Clearance 0.249m
 Max Track Width 1.713m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 5.100m

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RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, please note the following residual hazards:

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

Rev.	Drawn	Comments	Date
P5	GE	Site layout and swept paths updated	08/12/21
P4	GE	Site layout and swept paths updated	30/11/21
P3	GE	Site layout updated	12/10/21
P2	GE	Site layout and swept paths updated	11/10/21
P1	GE	FIRST ISSUE	19/05/21



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Client: Forays Homes

Project: Solstrand,
 Station Road, Bagshot

Drawing Title: Swept Path Analysis

Drawing No: 2021/5918/001 Rev: P5

Scale: 1:200 Drawn By: GE Checked By: SH A3



Swerford

Westwar

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Th

Treetol

BROOK
House

VISIBILITY SPLAYS OF 2.4m x 43m ON
STATION ROAD TO THE NEARSIDE KERB.

STATION ROAD

Solstrand

Sandlewood

The
Elms

n Anne
use

3.7M WIDE
FOR FIRE
ENGINE

REFUSE
COLLECTION
POINT

PLOT 1

NOTES

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Rev.	Drawn	Comments	Date
P4	GE	Site layout updated	16/01/24
P3	GE	Site layout and visibility splays updated	08/12/21
P2	GE	Site layout updated	14/10/21
P1	GE	FIRST ISSUE	11/10/21

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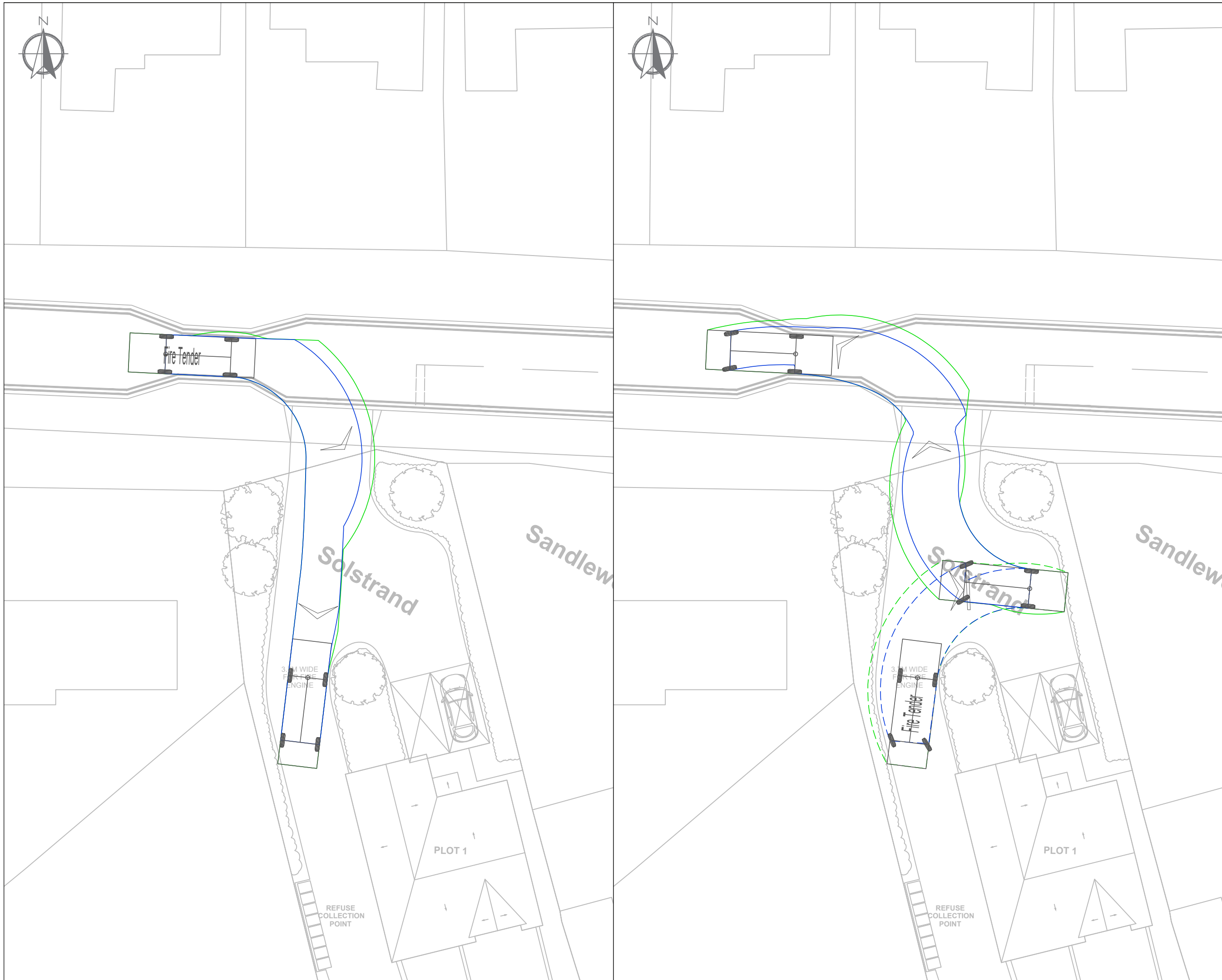
Client: Forays Homes

Project: Solstrand,
Station Road, Bagshot

Drawing Title: Visibility Splay

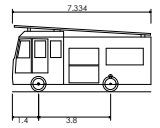
Drawing No. 2021/5918/003 Rev. P4

Scale: 1:250 Drawn By: GE Checked By: SH A3



NOTES

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Fire Tender
 Overall Length 7.334m
 Overall Width 2.286m
 Overall Body Height 3.493m
 Min Body Ground Clearance 0.380m
 Track Width 2.286m
 Lock to lock time 5.00s
 Kerb to Kerb Turning Radius 8.000m

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Rev.	Drawn	Comments	Date
P4	GE	Site layout updated	16/01/24
P3	GE	Site layout updated	08/12/21
P2	GE	Site layout and swept paths updated	30/11/21
P1	GE	FIRST ISSUE	14/10/21



Client	Forays Homes		
Project	Solstrand, Station Road, Bagshot		
Drawing Title	Fire Tender Swept Path Analysis		
Drawing No.	2021/5918/004	Rev.	P4
Scale	1:200	Drawn By	GE
		Checked By	SH
			A3



APPENDIX A

STATION ROAD

Sandlewood

The Elms

Solstrand

1

4

Railway Cottages

PLOT 1

REFUSE COLLECTION POINT

3.7M WIDE FOR FIRE ENGINE

PARKING

EXISTING TREE

EXISTING TREE

DELIVERY VEHICLE TURNING HEAD

elwood

PLOT 3

PLOT 2

EXISTING TREES

Windlecot

REV C AMENDED TO SWEEP PATH ANALYSIS_20.12.2023
REV B AMENDED TO COMMENTS_11.12.2023
REV A AMENDED TO COMMENTS_27.11.2023

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12 The Oaks,
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DNA

ARCHITECTURE LTD

SOLSTRAND
STATION ROAD
BAGSHOT
GU19 5AS

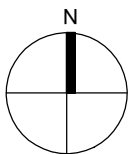
BROOKLANDS HOMES

PROPOSED SITE PLAN

Scale 1/250 @ A3
Date 29.06.2023
Drawn JM

Drw No 1034_02_102
C

These plans are based on measured survey undertaken BY OTHERS
Due care is exercised in surveying but no liability can be accepted
for any inaccuracy, the client and third parties should rely on their
own information, notwithstanding this the drawings are a fair
representation of the premises for present purposes, copyright is held
by the author: no unauthorised use shall be made of the drawings.
given dimensions are in mm.





APPENDIX B

Calculation Reference: AUDIT-728001-201014-1037

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST KC KENT	1 days
06	WEST MIDLANDS WK WARWICKSHIRE	1 days
08	NORTH WEST MS MERSEYSIDE	1 days
16	ULSTER (REPUBLIC OF IRELAND) DN DONEGAL	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: 6 to 15 (units:)
 Range Selected by User: 6 to 15 (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 22/09/17

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:

Thursday	1 days
Friday	3 days

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

Selected survey types:

Manual count	4 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:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	1

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	3
Village	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.

Secondary Filtering selection:

Use Class:

C3 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 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	2 days
5,001 to 10,000	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:

5,000 or Less	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	2 days
1.1 to 1.5	1 days
1.6 to 2.0	1 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 4 days

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 4 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DN-03-A-02 GLENFIN ROAD BALLYBOFEY	DETACHED	DONEGAL
	Edge of Town Residential Zone Total No of Dwellings: 7 <i>Survey date: THURSDAY 05/09/13</i>		<i>Survey Type: MANUAL</i>
2	KC-03-A-05 ROCHESTER ROAD NEAR CHATHAM BURHAM	DETACHED & SEMI-DETACHED	KENT
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 8 <i>Survey date: FRIDAY 22/09/17</i>		<i>Survey Type: MANUAL</i>
3	MS-03-A-03 BEMPTON ROAD LIVERPOOL OTTERSPOOL	DETACHED	MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 15 <i>Survey date: FRIDAY 21/06/13</i>		<i>Survey Type: MANUAL</i>
4	WK-03-A-01 ARLINGTON AVENUE LEAMINGTON SPA	TERRACED/SEMI /DET.	WARWICKSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 6 <i>Survey date: FRIDAY 21/10/11</i>		<i>Survey Type: MANUAL</i>

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	4	9	0.028	4	9	0.167	4	9	0.195
08:00 - 09:00	4	9	0.167	4	9	0.472	4	9	0.639
09:00 - 10:00	4	9	0.111	4	9	0.139	4	9	0.250
10:00 - 11:00	4	9	0.167	4	9	0.111	4	9	0.278
11:00 - 12:00	4	9	0.139	4	9	0.278	4	9	0.417
12:00 - 13:00	4	9	0.139	4	9	0.139	4	9	0.278
13:00 - 14:00	4	9	0.139	4	9	0.167	4	9	0.306
14:00 - 15:00	4	9	0.111	4	9	0.028	4	9	0.139
15:00 - 16:00	4	9	0.306	4	9	0.167	4	9	0.473
16:00 - 17:00	4	9	0.194	4	9	0.194	4	9	0.388
17:00 - 18:00	4	9	0.139	4	9	0.139	4	9	0.278
18:00 - 19:00	4	9	0.361	4	9	0.194	4	9	0.555
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.001			2.195			4.196

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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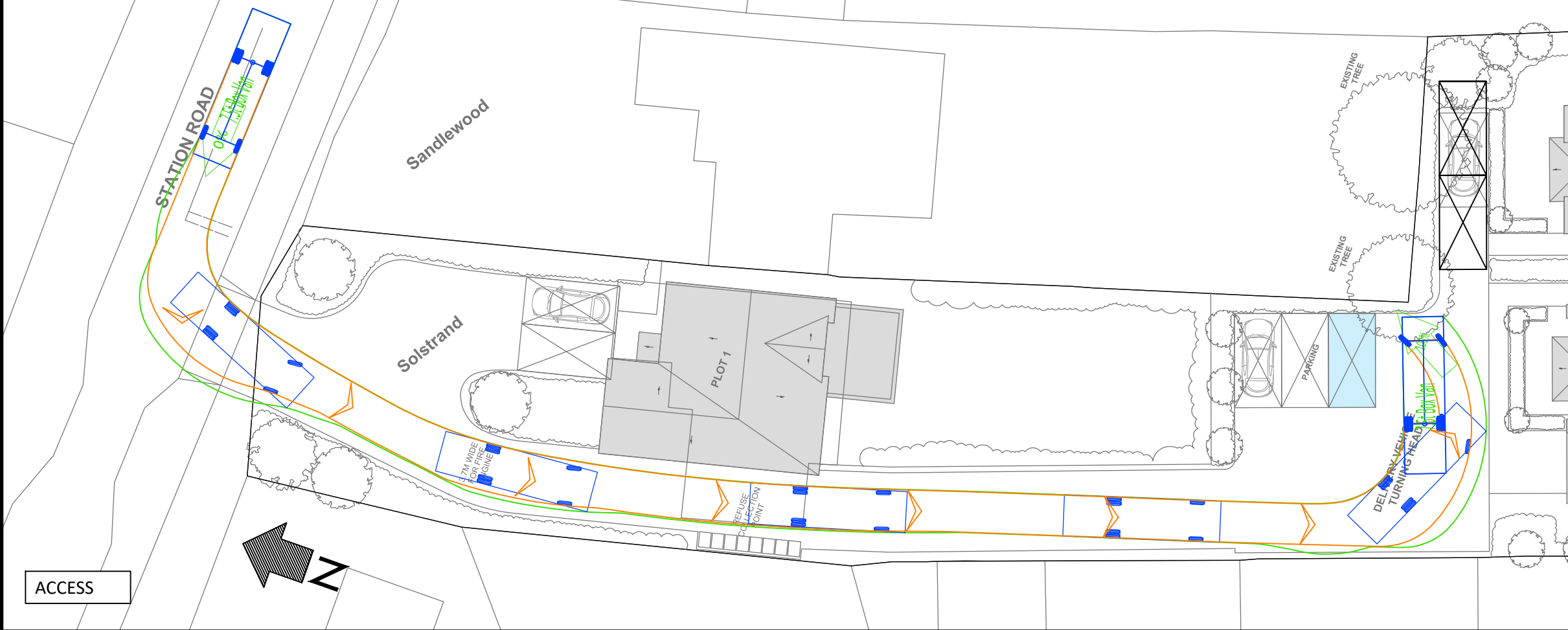
Parameter summary

Trip rate parameter range selected: 6 - 15 (units:)
Survey date range: 01/01/11 - 22/09/17
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

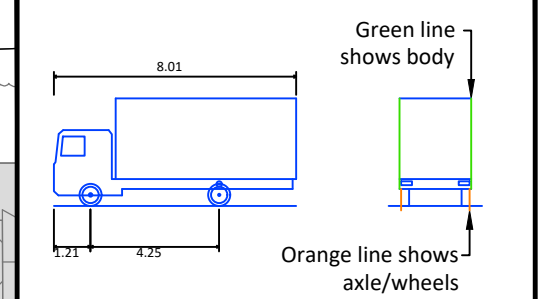
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



APPENDIX C



VEHICLE DETAILS:



7.5T BOX VAN

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	7.400m

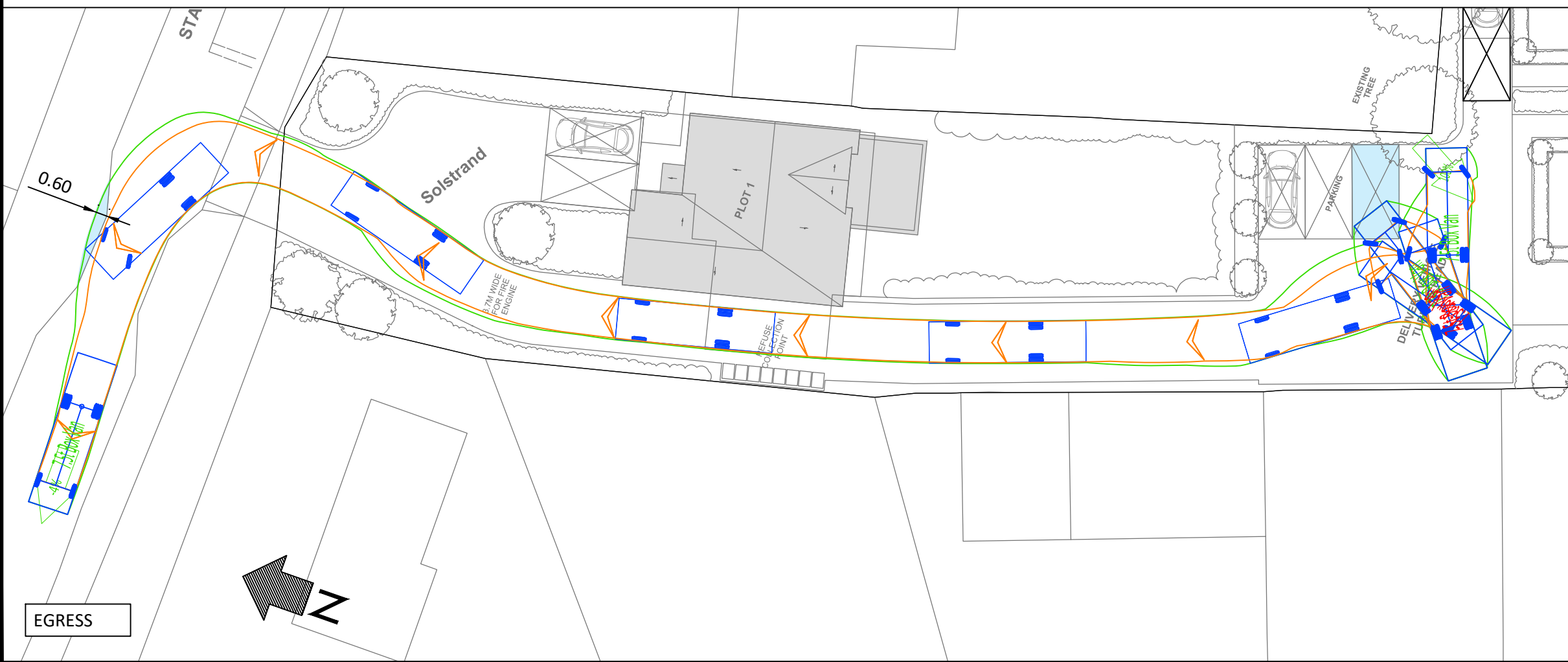
Design speed 5kph for all Forward movements
Design speed 2.5kph for all Reverse movements

AREA NEEDED FOR VEHICLE MANOEUVRE

LAYOUT HAS BEEN PROVIDED BY DNA ARCHITECTURE LIMITED. FILENAME: 1034_02_102B.

Rev	Date	Description	Dwn	Chk	App
-	19/12/23	ORIGINAL ISSUE	AS	DW	DW

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Client
DNA ARCHITECTURE LIMITED

Project
SOLSTRAND, STATION ROAD
BAGSHOT

Drawing Title
SWEEP PATH ANALYSIS USING A
8.01M 7.5T BOX VAN

Drawing Status
FOR INFORMATION

Drawn AS	Designed AS	Date DEC 2023	Scale 1:250	Size A3
Drawing No. 3083-001				Rev -



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