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**Technical Note in Support of a Planning Application for the Erection of 10 Dwellings with Associated Car Parking  
Land at Greenlands, Collaroy Road Cold Ash Thatcham Berkshire RG18 9PE**

**Introduction**

This technical note has been commissioned by Shorewood Homes Limited in support of a planning application to be submitted to West Berkshire Council for the demolition of an existing dwelling and for the erection of 10 dwellings on land at Greenlands, Collaroy Road, Thatcham. The location of the site is shown below.



The site is located to the western side of Collaroy Road, an unclassified residential access road which links Cold Ash Hill to the south west with The Ridge to the north-east.

The road is subject to a 30mph speed limit and benefits from a pedestrian footway on the eastern side linking to the north. No such path is available to the south and the road does not benefit from street lighting.

A review of the Police's personal injury accident database has revealed that there have been no reported accidents involving injury on Collaroy Road or its associated junctions within the last 5 years which suggests that the highway network is operating in a safe and efficient manner.

## Proposed Development

It is now proposed to demolish the existing detached dwelling and to erect 10 number dwellings in the form of 5 No. three-bed units and 5 number four-bed detached units. This is shown on the Site Plan numbered 8116 D01 Rev A, included as [Appendix 1](#) to this note.

## Traffic Impact

The site previously accommodated a single detached dwelling which historically would have generated vehicular traffic movements.

In order to assess the likely traffic impact that the proposed residential development is likely to create, the TRICS database has been interrogated. Small, privately owned house developments of between 8 and 27 units were selected located within suburban areas (PPS6 Local Centre and Out of Centre). The date range is from 01/01/13 until 22/09/17. The development consists of 10 terraced houses, although one will be a replacement dwelling, therefore the TRICS data can be demonstrated below.

TRICS Trip Rate Houses Privately Owned			
	Arrivals	Departures	Two-way Total
AM Peak Hour	0.220	0.402	0.622
PM Peak Hour	0.366	0.134	0.500
Daily Traffic	2.871	2.937	5.754
TRICS Vehicle Trip Generation based on 9 Additional Houses			
AM Peak Hour	1.98 (2)	3.62 (4)	6
PM Peak Hour	3.29 (3)	1.21 (1)	3
Daily Traffic	25.839 (26)	26.433 (26)	52

From the above it can be seen that the proposed residential use of the site would generate an additional 6 traffic movements in the AM peak (0800 – 0900) and just 3 traffic movements in the PM peak (1700 – 1800). Overall, the site would generate around 52 daily traffic movements over a 12-hour period. The TRICS data is attached as [Appendix 2](#) to this note.

A traffic Survey was undertaken on Collaroy Road between the dates of 1<sup>st</sup> – 7<sup>th</sup> July 2022 to establish the existing traffic volumes on Collaroy Road. The survey showed that in the AM peak there was a combined flow of 35 vehicles whilst in the PM peak there was a combined flow of 66 vehicles. Clearly the volume of traffic results in Collaroy Road being well within its affective capacity. And the additional 6 and 3 traffic movements in the AM and PM peak periods will not materially affect this. The Traffic Data is included as [Appendix 3](#) to this Note.

## Access and Visibility

Advice on the provision of visibility splays is given with the documents Manual for Streets 1 and 2. Whilst the road is subject to a 30mph speed limit, on-site observations showed that traffic speeds were actually lower than the posted speed limit.

In order to ascertain the actual speeds of traffic using this section of Collaroy Road, an 85<sup>th</sup> percentile speed survey was undertaken using an Automatic Traffic Counter. The ATC was installed for a week between the dates of 1<sup>st</sup> – 7<sup>th</sup> July 2022. This Data is included as [Appendix 3](#) to this Note.

The result of the survey gave 85<sup>th</sup> percentile speeds of 28.5mph and 28.6mph in each direction.

Based on the site stopping distance basic formula set out within section 10.1.5 of MfS2, visibility Y distance of 40.0m to both the northerly and southerly directions would need to be employed.

Drawing numbered NJC-001 is included as [Appendix 4](#) to this note which shows the proposed access with the correct Y distances based on the recorded speeds, utilising an X distance of 2.4m.

### **Car and Cycle Parking**

The adopted parking standards are contained within the Housing Site Allocation DPD (Adopted May 2017). These standards identify that for settlements in Zone 3, a three-bed dwelling requires 2.5 spaces whilst a four-bedroomed house should be provided with at least 3 car parking spaces.

Car parking in this case is to be provided at a rate of 3 spaces for each of the larger dwellings, whilst the three-bedroom units will have 2 allocated parking spaces.

The car parking is being provided in the form of open parking bays for the three-bedroom units whilst the larger dwellings will have open bay, together with a garage.

The layout of the site does however allow for informal visitor parking, if required.

Secure and undercover cycle parking is to be provided within sheds located in rear gardens for each property.

### **Servicing Arrangements**

Refuse collection for the existing dwelling currently takes place from the kerbside, however it is recognised that in this instance, a refuse freighter will need to enter the site in order to collect the bins from each property.

Drawings numbered NJC-002 and 003 are included as [Appendix 5](#) to this note which show the swept path tracking of an 11.2m long refuse freighter enter and leaving the site from both the northerly and southerly directions.

## **Conclusion**

This Technical Note has been produced to support a planning application for a residential redevelopment of 10 dwellings on land at Greenlands, Collaroy Road, Cold Ash.

The development if approved is likely to result in a small increase in traffic on the highway network.

Visibility at the site access is in accordance with the requirements of Manual for Streets and is based on recorded traffic speeds on Collaroy Road.

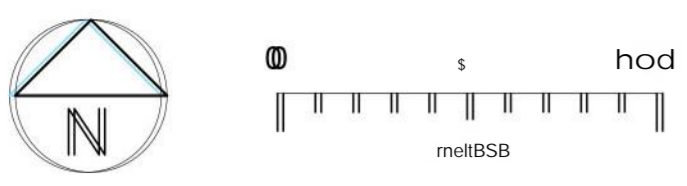
Adequate car and cycle parking is provided on an allocated basis.

The site will accommodate the swept path tracking requirements of a large 11.2m long refuse freighter.

The highway implications of such a proposal are therefore unlikely to result in any demonstrable harm or impact to highway safety.

## **Appendix 1**

### Proposed Site Plan



**Key:**

- Proposed Boundaries/Development
- - - - - Proposed Buildings
- - - - - Demolition

Retaining wall  
RW

**Accommodation Schedule**

- A - 2no 4 bed units of circa 175 sqm over 2 storey. Dwellings are also serviced by a garage to the side.
- B - 5no 3 bed units of circa 105 sqm over 2 storey.
- C1 - 1 no 4 bed unit of circa 170 sqm over 2 storey. Dwelling is also serviced by a garage to the side.
- C2 - 2no 4 bed units of 177 sqm over 2 storey, with integral garage.

- Proposed Trees
- Existing Trees
- Proposed Hedge
- Existing Hedge

A 22.07.12 Access gate added  
REVISIONS

**RADLEY HOUSE**  
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JOB | Greenland, Cold Ash

DWG | Proposed Site Plan

SJ1:200@A1

DJUNE/22 No. | 8116\_D01\_A

## Appendix 2

### TRICS Data

## 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
04	EAST ANGLIA NF NORFOLK	2 days
06	WEST MIDLANDS SH SHROPSHIRE	1 days
08	NORTH WEST CH CHESHIRE	1 days
10	WALES VG VALE OF GLAMORGAN	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: 8 to 24 (units: )  
 Range Selected by User: 8 to 40 (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 04/06/19

*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
Wednesday	2 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	1 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	5
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	5
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,*



Secondary Filtering selection:

Use Class:

C3 6 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
10,001 to 15,000	3 days
15,001 to 20,000	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
75,001 to 100,000	2 days
125,001 to 250,000	2 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	1 days
1.1 to 1.5	4 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 6 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 6 days

*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	CH-03-A-09 GREYSTOKE ROAD MACCLESFIELD HURDSFIELD Edge of Town Residential Zone Total No of Dwellings: 24 <i>Survey date: MONDAY 24/11/14</i>	TERRACED HOUSES	CHESHIRE	<i>Survey Type: MANUAL</i>
2	KC-03-A-05 ROCHESTER ROAD NEAR CHATHAM BURHAM Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 8 <i>Survey date: FRIDAY 22/09/17</i>	DETACHED & SEMI-DETACHED	KENT	<i>Survey Type: MANUAL</i>
3	NF-03-A-03 HALING WAY THETFORD  Edge of Town Residential Zone Total No of Dwellings: 10 <i>Survey date: WEDNESDAY 16/09/15</i>	DETACHED HOUSES	NORFOLK	<i>Survey Type: MANUAL</i>
4	NF-03-A-10 HUNSTANTON ROAD HUNSTANTON  Edge of Town Residential Zone Total No of Dwellings: 17 <i>Survey date: WEDNESDAY 12/09/18</i>	MIXED HOUSES & FLATS	NORFOLK	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
5	SH-03-A-06 ELLESMERE ROAD SHREWSBURY  Edge of Town Residential Zone Total No of Dwellings: 16 <i>Survey date: THURSDAY 22/05/14</i>	BUNGALOWS	SHROPSHIRE	<i>Survey Type: MANUAL</i>
6	VG-03-A-01 ARTHUR STREET BARRY  Edge of Town Residential Zone Total No of Dwellings: 12 <i>Survey date: MONDAY 08/05/17</i>	SEMI-DETACHED & TERRACED	VALE OF GLAMORGAN	<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	6	15	0.092	6	15	0.264	6	15	0.356
08:00 - 09:00	6	15	0.126	6	15	0.264	6	15	0.390
09:00 - 10:00	6	15	0.069	6	15	0.172	6	15	0.241
10:00 - 11:00	6	15	0.184	6	15	0.172	6	15	0.356
11:00 - 12:00	6	15	0.172	6	15	0.161	6	15	0.333
12:00 - 13:00	6	15	0.138	6	15	0.230	6	15	0.368
13:00 - 14:00	6	15	0.172	6	15	0.172	6	15	0.344
14:00 - 15:00	6	15	0.184	6	15	0.115	6	15	0.299
15:00 - 16:00	6	15	0.218	6	15	0.138	6	15	0.356
16:00 - 17:00	6	15	0.195	6	15	0.195	6	15	0.390
17:00 - 18:00	6	15	0.299	6	15	0.149	6	15	0.448
18:00 - 19:00	6	15	0.264	6	15	0.195	6	15	0.459
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			2.113			2.227			4.340

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: 8 - 24 (units: )  
 Survey date range: 01/01/11 - 04/06/19  
 Number of weekdays (Monday-Friday): 6  
 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 3**

### Traffic Data

# Cold Ash ATC 01, Collaroy Road

Produced by Streetwise Services Ltd.

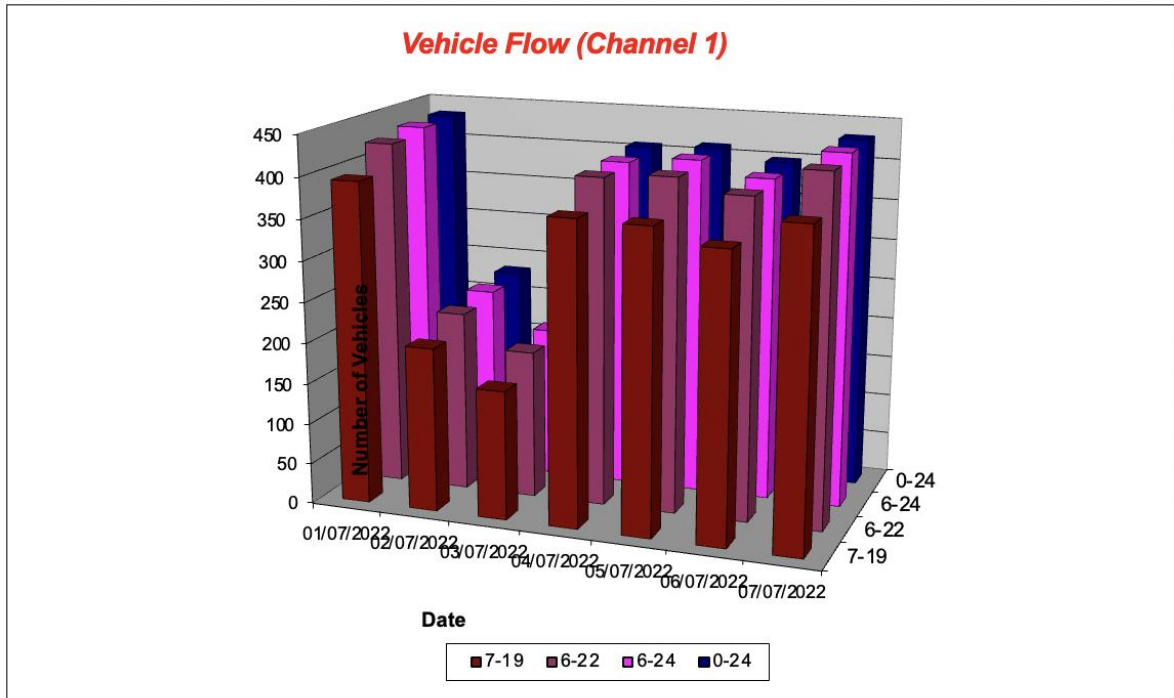


Channel 1 - Southbound

Vehicle Flow

Week 1

Hr Ending	01/07/2022 Friday	02/07/2022 Saturday	03/07/2022 Sunday	04/07/2022 Monday	05/07/2022 Tuesday	06/07/2022 Wednesday	07/07/2022 Thursday	5 Day Ave	7 Day Ave
1	1	1	1	1	0	1	0	1	1
2	1	2	0	1	0	0	0	0	1
3	0	1	2	1	0	1	0	0	1
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	1	1	0	2	1	1	1
7	4	1	1	2	4	6	7	5	4
8	23	8	2	24	23	20	18	22	17
9	72	11	10	74	76	76	94	78	59
10	43	19	8	18	20	21	21	25	21
11	38	31	16	24	22	18	24	25	25
12	21	20	11	21	21	17	24	21	19
13	15	13	13	22	28	16	27	22	19
14	17	18	21	19	21	13	27	19	19
15	36	22	16	31	35	38	35	35	30
16	61	10	17	46	36	53	40	47	38
17	38	19	18	26	27	27	18	27	25
18	16	20	17	36	31	33	37	31	27
19	14	10	9	28	27	16	17	20	17
20	22	8	9	16	23	19	19	20	17
21	4	8	7	6	7	12	8	7	7
22	0	3	6	7	5	5	8	5	5
23	6	5	2	3	5	4	3	4	4
24	1	2	2	0	0	0	3	1	1
7-19	394	201	158	369	367	348	382	372	317
6-22	424	221	181	400	406	390	424	409	349
6-24	431	228	185	403	411	394	430	414	355
0-24	433	232	189	407	411	398	431	416	357

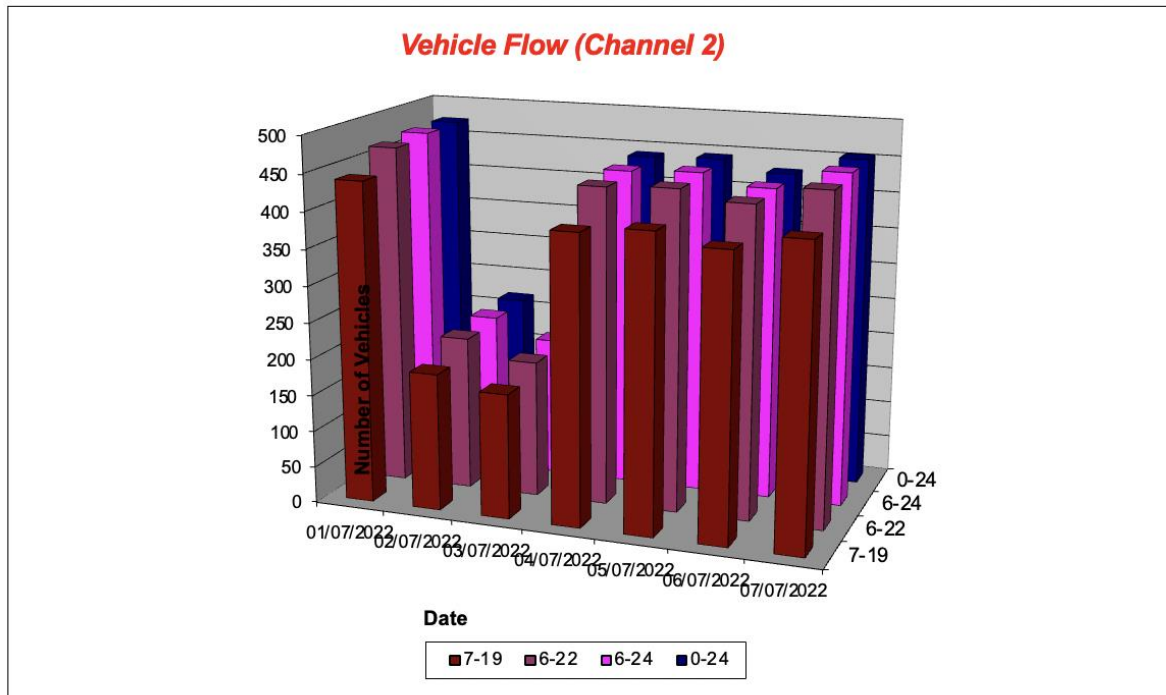


Channel 2 - Northbound

Vehicle Flow

Week 1

Hr Ending	01/07/2022 Friday	02/07/2022 Saturday	03/07/2022 Sunday	04/07/2022 Monday	05/07/2022 Tuesday	06/07/2022 Wednesday	07/07/2022 Thursday	5 Day Ave	7 Day Ave
1	0	1	0	0	0	1	0	0	0
2	0	1	0	0	1	0	0	0	0
3	1	0	0	2	0	0	0	1	0
4	0	0	1	0	0	0	0	0	0
5	0	0	1	0	0	0	0	0	0
6	0	0	0	1	1	1	1	1	1
7	5	0	0	3	5	4	2	4	3
8	18	4	6	9	12	15	11	13	11
9	72	10	1	92	95	90	100	90	66
10	31	21	15	28	26	24	23	26	24
11	23	19	24	23	19	22	21	22	22
12	59	19	18	21	15	13	17	25	23
13	28	21	14	18	18	24	25	23	21
14	24	12	15	18	15	13	21	18	17
15	37	18	24	27	25	30	16	27	25
16	67	14	12	81	72	73	89	76	58
17	45	29	16	37	42	38	35	39	35
18	24	9	12	22	36	26	26	27	22
19	11	12	14	17	27	18	22	19	17
20	14	10	6	25	10	15	22	17	15
21	4	7	6	8	16	11	11	10	9
22	5	6	4	4	4	8	7	6	5
23	3	3	1	4	3	1	3	3	3
24	2	2	3	0	1	1	2	1	2
<b>7-19</b>	<b>439</b>	<b>188</b>	<b>171</b>	<b>393</b>	<b>402</b>	<b>386</b>	<b>406</b>	<b>405</b>	<b>341</b>
<b>6-22</b>	<b>467</b>	<b>211</b>	<b>187</b>	<b>433</b>	<b>437</b>	<b>424</b>	<b>448</b>	<b>442</b>	<b>372</b>
<b>6-24</b>	<b>472</b>	<b>216</b>	<b>191</b>	<b>437</b>	<b>441</b>	<b>426</b>	<b>453</b>	<b>446</b>	<b>377</b>
<b>0-24</b>	<b>473</b>	<b>218</b>	<b>193</b>	<b>440</b>	<b>443</b>	<b>428</b>	<b>454</b>	<b>448</b>	<b>378</b>



# Cold Ash ATC 01, Collaroy Road

Produced by Streetwise Services Ltd.



Channel 1 - Southbound

Average Speed

Week 1

Hr Ending	01/07/2022 Friday	02/07/2022 Saturday	03/07/2022 Sunday	04/07/2022 Monday	05/07/2022 Tuesday	06/07/2022 Wednesday	07/07/2022 Thursday
1	18.0	23.0	28.0	33.0	-	18.0	-
2	18.0	25.5	-	23.0	-	-	-
3	-	23.0	25.5	23.0	-	28.0	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	28.0	23.0	-	25.5	28.0
7	24.2	28.0	38.0	25.5	24.2	26.3	25.1
8	23.4	25.5	25.5	25.3	25.4	23.0	24.7
9	24.5	23.9	25.0	24.4	23.0	24.1	22.7
10	26.3	23.0	25.5	22.2	23.2	22.8	22.3
11	21.2	24.6	21.1	23.4	23.2	25.5	21.5
12	22.3	23.5	22.1	23.2	20.9	21.1	23.4
13	20.3	23.4	20.1	21.2	20.5	23.3	26.0
14	25.4	20.6	24.0	24.1	21.4	22.2	21.6
15	23.1	23.0	22.7	23.2	22.9	24.3	24.6
16	24.5	24.0	20.6	23.9	22.4	24.3	24.8
17	23.9	22.7	22.4	25.1	23.2	24.3	24.9
18	23.0	23.1	23.9	24.2	21.4	25.0	24.8
19	23.7	23.7	20.8	23.4	25.0	25.2	24.2
20	23.7	21.8	20.2	20.8	21.7	22.7	26.4
21	24.2	26.1	20.1	22.2	23.7	24.2	24.2
22	-	19.7	23.0	25.9	26.0	23.0	24.9
23	28.8	22.0	15.5	29.7	24.0	23.0	21.3
24	28.0	20.5	25.5	-	-	-	28.0

10-12	21.6	24.2	21.5	23.3	22.1	23.3	22.5
14-16	24.0	23.3	21.6	23.6	22.6	24.3	24.7
0-24	23.8	23.3	22.5	23.8	22.8	23.9	23.9

7 Day Ave	23.4
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85th Percentile

Hr Ending	01/07/2022 Friday	02/07/2022 Saturday	03/07/2022 Sunday	04/07/2022 Monday	05/07/2022 Tuesday	06/07/2022 Wednesday	07/07/2022 Thursday
1	18.7	23.1	28.1	33.9	-	18.5	-
2	18.5	28.6	-	23.3	-	-	-
3	-	23.5	28.8	23.8	-	28.8	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	28.3	23.4	-	28.6	28.5
7	28.6	28.3	38.0	28.3	28.3	28.8	28.1
8	28.3	28.6	28.3	28.9	28.1	28.0	28.8
9	28.3	28.6	33.4	28.6	28.2	28.2	28.4
10	33.8	28.3	28.3	28.6	29.0	28.1	28.5
11	28.0	28.3	28.9	28.4	28.1	28.1	28.5
12	28.8	28.8	29.0	28.1	23.4	23.3	28.2
13	23.8	28.8	28.4	23.6	28.4	28.1	28.3
14	33.7	28.6	28.3	33.7	28.5	28.0	28.1
15	28.0	29.0	28.2	28.9	28.2	28.5	28.6
16	28.4	28.9	23.2	28.8	28.5	28.7	28.2
17	28.9	28.2	28.6	28.0	28.3	28.5	28.9
18	28.8	28.7	28.4	28.5	28.6	33.8	28.1
19	28.4	29.0	23.4	28.9	28.5	28.1	28.4
20	29.0	28.2	23.7	23.4	28.2	28.2	28.3
21	28.9	28.5	28.3	23.7	33.9	28.7	28.9
22	-	28.1	28.6	38.5	28.7	28.5	28.8
23	38.1	29.0	18.2	33.5	28.5	23.4	23.3
24	28.9	23.7	28.2	-	-	-	28.7

10-12	28.4	28.0	28.6	28.5	28.4	28.1	28.3
14-16	28.5	28.6	28.1	28.4	28.1	28.7	28.1
0-24	28.8	28.1	28.5	28.4	28.8	28.9	28.0

7 Day Ave	28.5
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7 Day Ave 28.5

Channel 2 - Northbound

Average Speed

Week 1

Hr Ending	01/07/2022 Friday	02/07/2022 Saturday	03/07/2022 Sunday	04/07/2022 Monday	05/07/2022 Tuesday	06/07/2022 Wednesday	07/07/2022 Thursday
1	-	23.0	-	-	-	23.0	-
2	-	28.0	-	-	28.0	-	-
3	33.0	-	-	28.0	-	-	-
4	-	-	13.0	-	-	-	-
5	-	-	13.0	-	-	-	-
6	-	-	-	18.0	18.0	23.0	18.0
7	25.0	-	-	24.7	25.0	24.2	25.5
8	24.1	24.2	23.8	26.3	23.8	23.0	24.4
9	23.4	21.0	23.0	23.7	22.9	23.4	23.4
10	23.5	24.2	23.1	23.2	25.5	23.2	25.6
11	24.5	23.3	23.7	23.7	22.2	23.9	22.0
12	22.5	23.5	20.9	24.0	23.1	23.0	20.8
13	22.5	24.4	21.0	20.6	22.6	24.5	25.2
14	24.2	24.8	25.7	22.7	23.3	21.5	21.3
15	24.5	24.1	21.8	23.4	26.0	25.5	22.7
16	24.2	21.4	21.1	24.6	22.7	24.6	24.6
17	23.7	24.4	21.1	24.5	23.6	22.9	24.6
18	25.3	22.4	23.8	21.7	22.0	25.1	25.3
19	23.5	25.1	21.2	25.4	24.3	26.9	22.5
20	25.1	22.5	24.7	25.8	25.0	24.3	27.1
21	18.0	24.4	18.8	23.0	20.8	22.1	22.1
22	27.0	22.2	19.2	23.0	26.8	26.1	24.4
23	28.0	21.3	18.0	21.8	24.7	28.0	23.0
24	28.0	18.0	21.3	-	18.0	18.0	30.5
10-12	23.1	23.4	22.5	23.8	22.6	23.6	21.5
14-16	24.3	22.9	21.5	24.3	23.6	24.8	24.3
0-24	23.8	23.6	22.2	23.9	23.3	24.0	23.9

7 Day Ave 23.5

85th Percentile

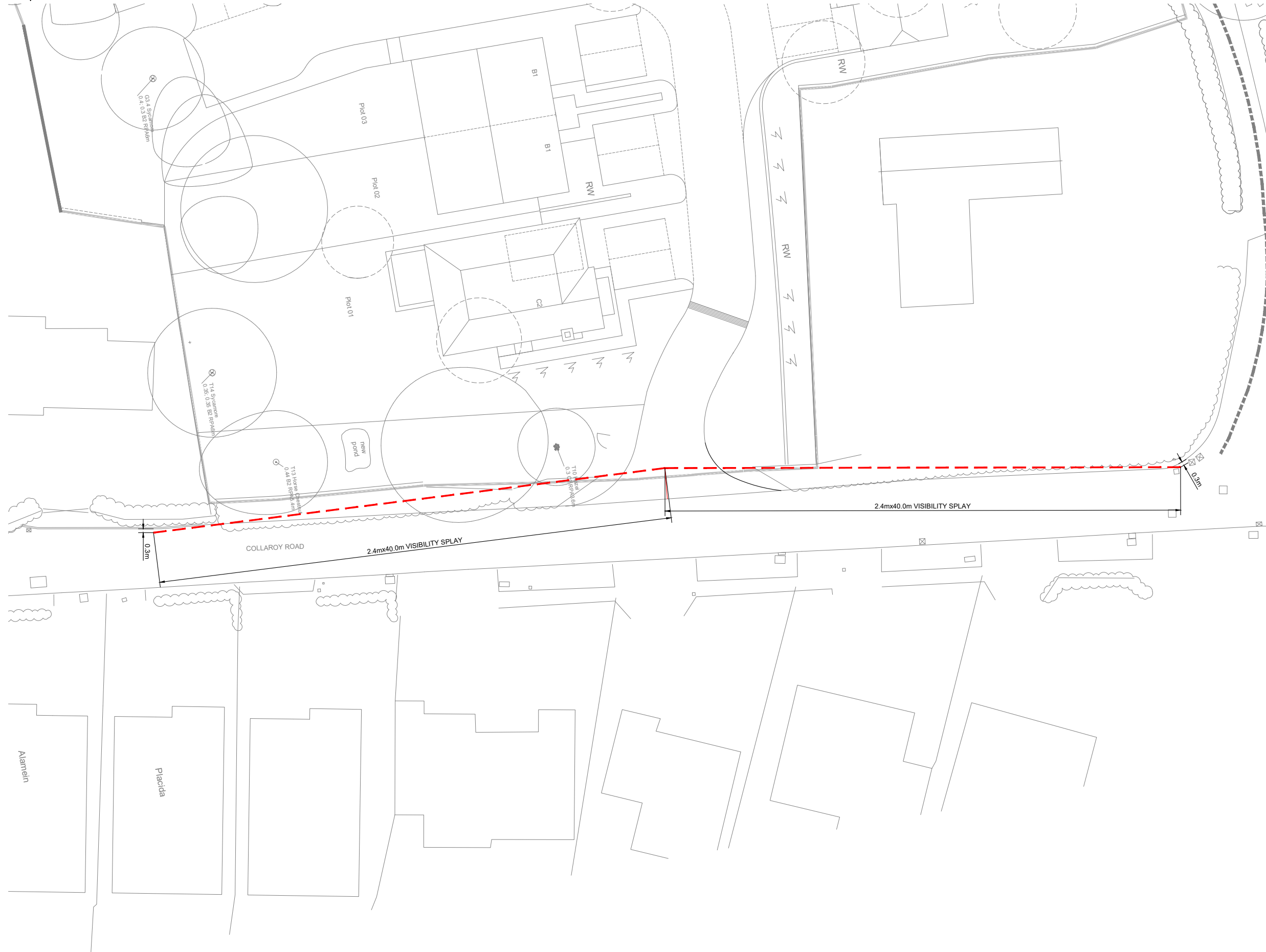
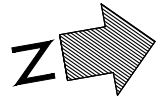
Hr Ending	01/07/2022 Friday	02/07/2022 Saturday	03/07/2022 Sunday	04/07/2022 Monday	05/07/2022 Tuesday	06/07/2022 Wednesday	07/07/2022 Thursday
1	-	23.6	-	-	-	23.6	-
2	-	28.3	-	-	28.5	-	-
3	33.3	-	-	28.2	-	-	-
4	-	-	13.2	-	-	-	-
5	-	-	13.4	-	-	-	-
6	-	-	-	18.7	18.7	23.3	18.1
7	38.8	-	-	28.7	28.8	28.1	28.8
8	33.3	28.1	33.5	33.6	33.4	28.2	28.7
9	28.2	23.5	23.8	28.8	28.9	28.1	28.5
10	28.5	33.2	28.5	28.2	28.7	28.4	28.2
11	28.3	29.0	28.4	28.8	28.1	29.0	28.2
12	28.3	28.1	28.5	28.2	28.6	28.5	23.3
13	28.0	28.0	28.2	29.0	28.7	28.5	28.8
14	28.5	33.3	33.6	28.1	28.0	29.0	28.1
15	28.2	28.5	28.5	33.1	28.4	28.2	28.5
16	28.9	28.9	28.7	28.8	28.4	28.4	28.8
17	28.6	28.5	28.9	28.4	28.3	28.4	28.8
18	33.8	23.4	28.4	28.5	29.0	28.3	33.3
19	28.9	33.8	28.3	28.1	28.8	28.5	29.0
20	38.3	28.8	28.3	28.1	28.7	28.1	28.8
21	23.5	28.7	28.2	28.2	23.4	28.5	28.7
22	28.1	28.7	23.5	28.0	28.7	34.0	28.9
23	33.6	24.0	18.2	28.7	28.3	28.6	28.9
24	33.4	23.3	28.6	-	18.4	18.9	33.4
10-12	29.0	28.5	28.4	28.5	28.4	28.7	28.1
14-16	28.1	28.4	28.9	28.6	28.9	28.4	29.0
0-24	28.9	28.7	28.5	28.2	28.1	28.7	28.8

7 Day Ave 28.6



## **Appendix 4**

### Access and Visibility



Client



Project  
LAND AT GREENLAND'S  
COLLARROY ROAD COLD ASH

Drawing Title  
ACCESS AND VISIBILITY

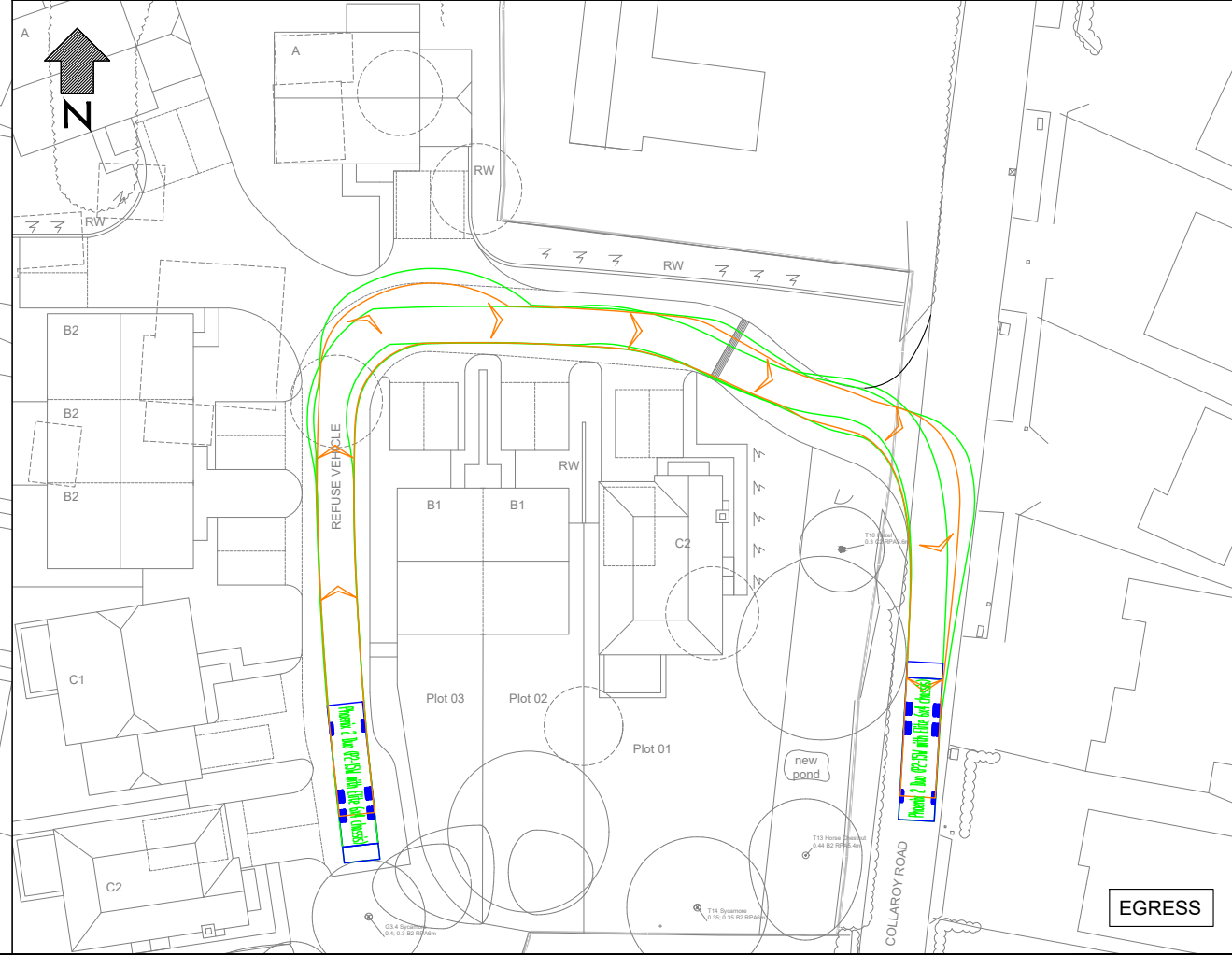
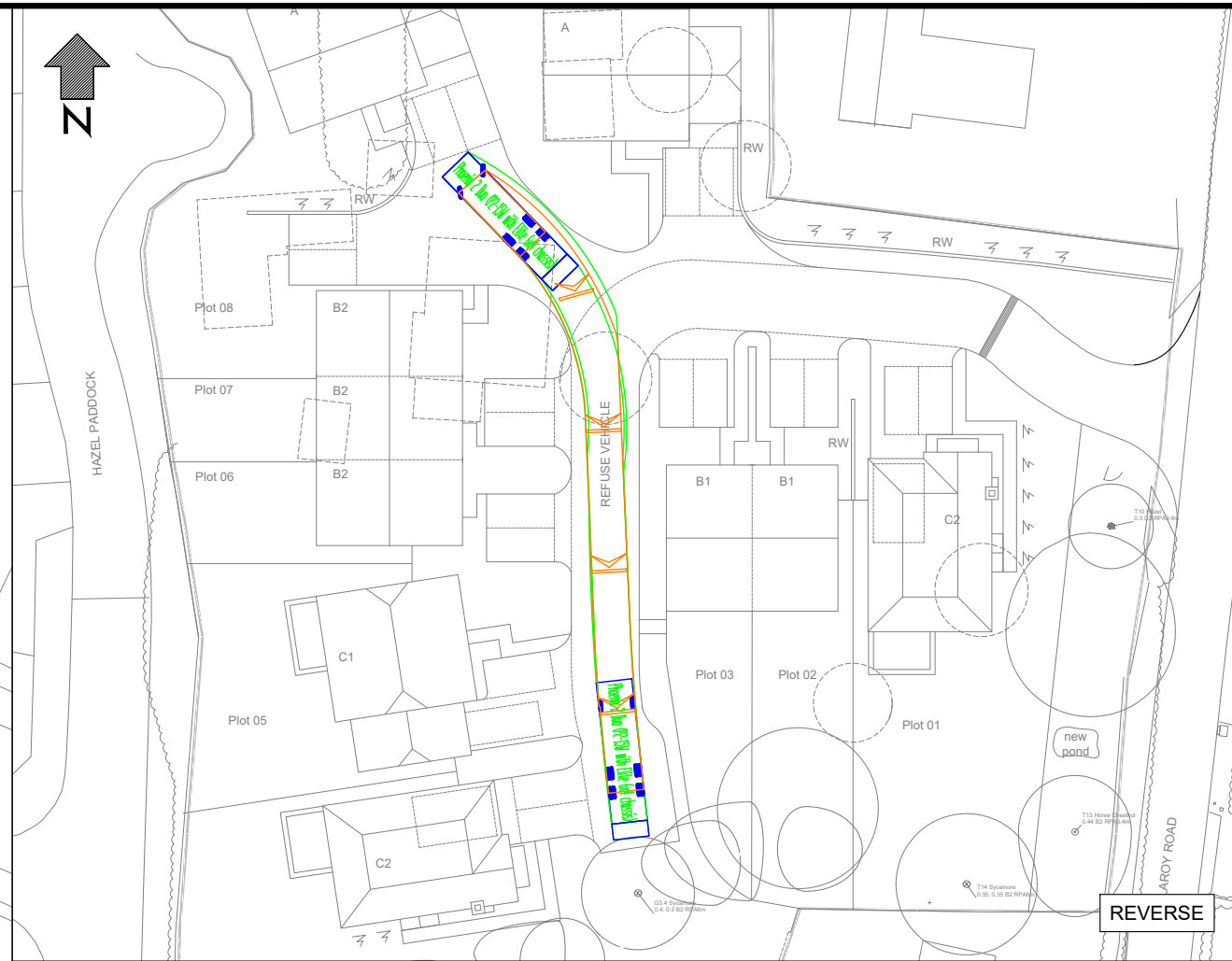
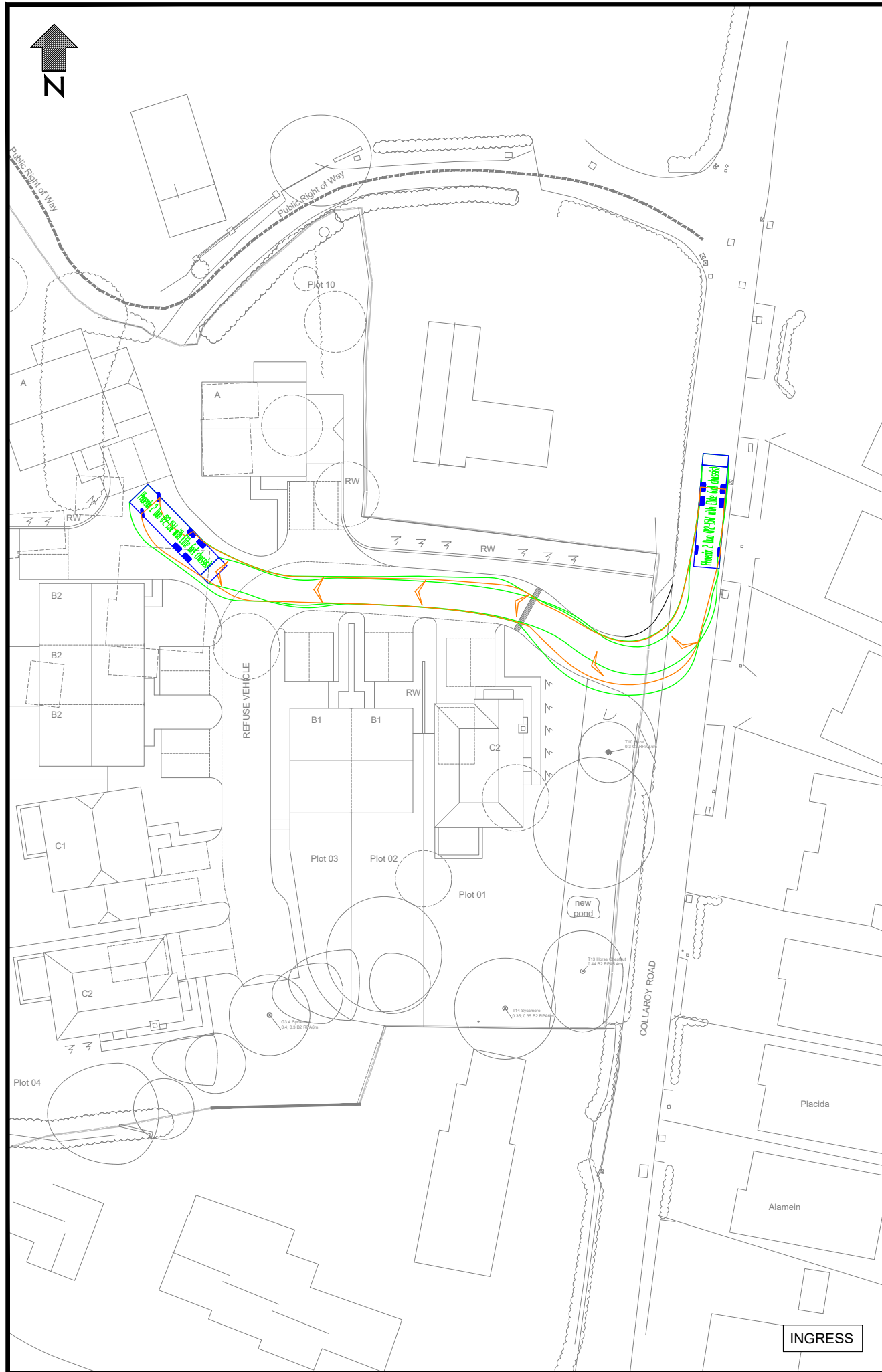
Drawing Status  
FOR INFORMATION

Date	Scale	Size
JUL 2022	1:150	A1

Drawing No.	Rev
NJC-001	-

## Appendix 5

### Swept Path Tracking Details



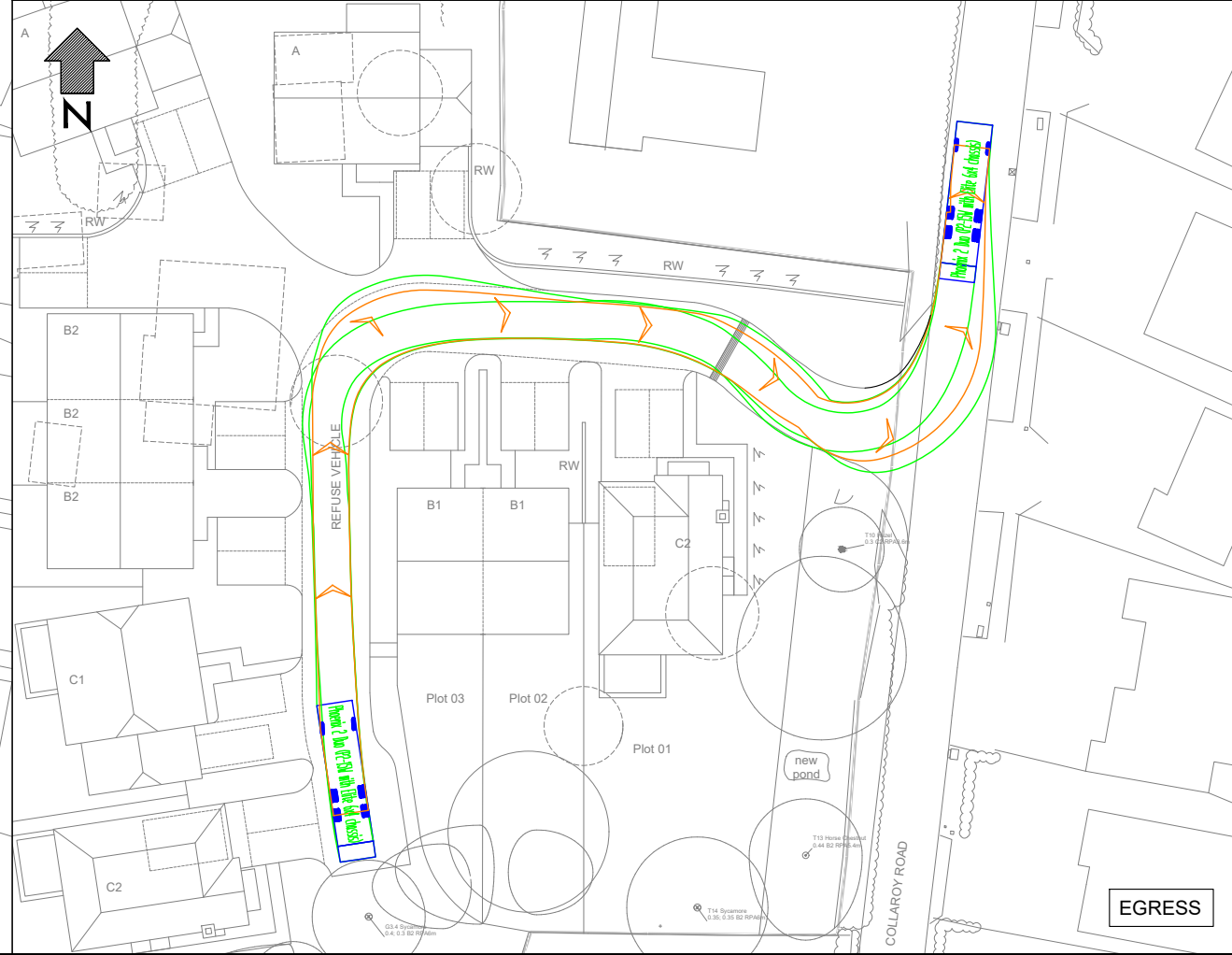
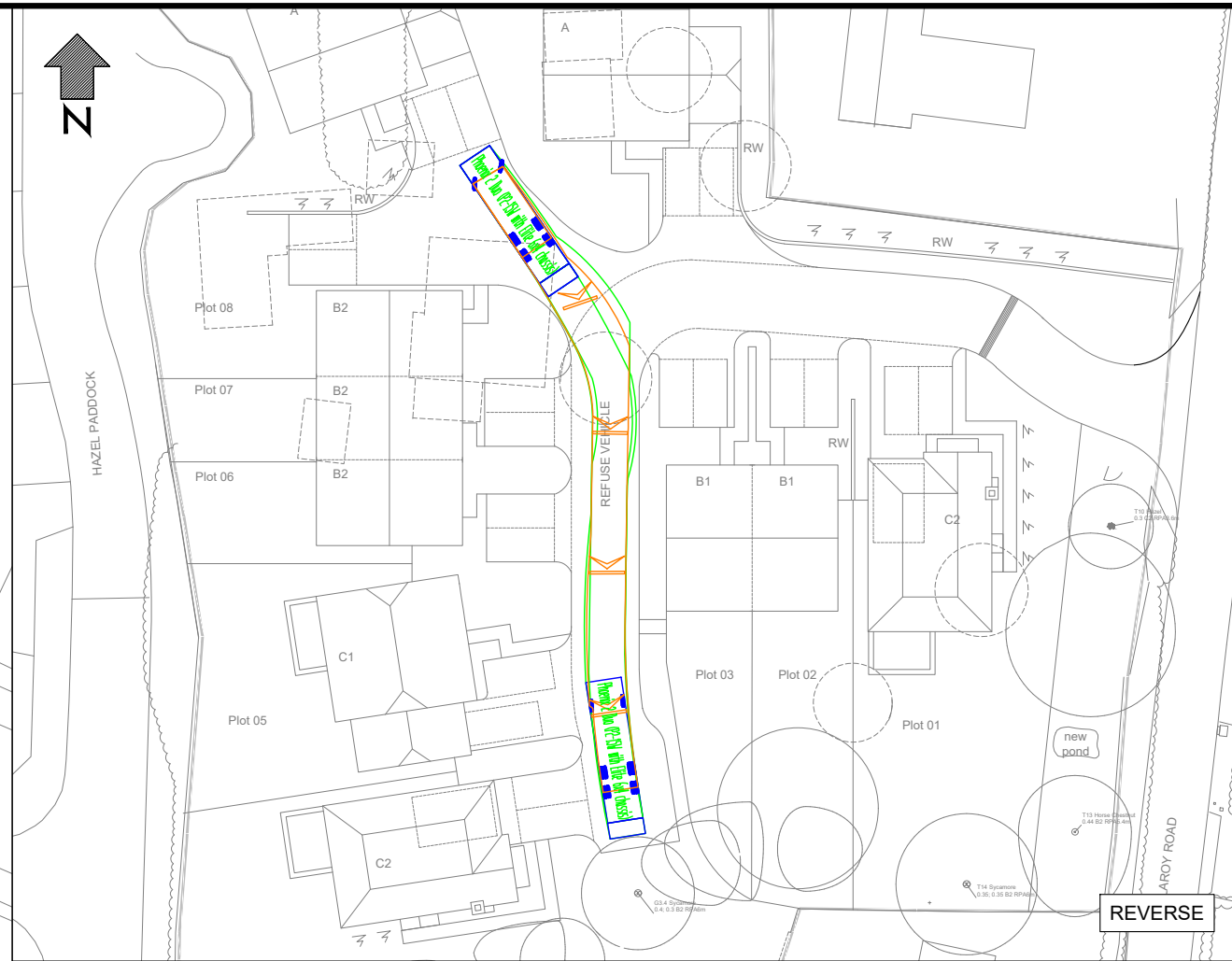
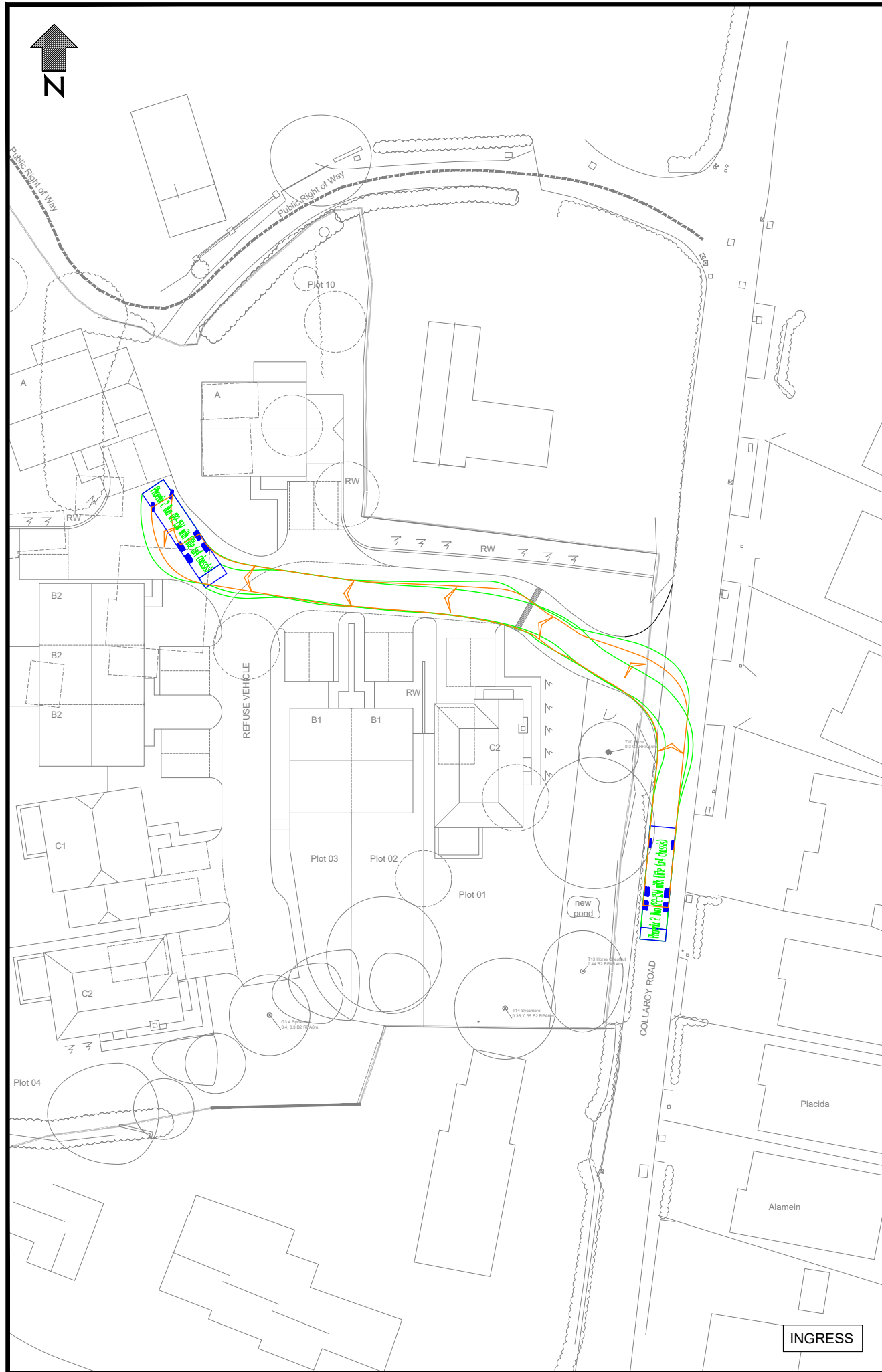
**VEHICLE DETAILS:**

PHOENIX 2 DUO  
(P2-15W WITH ELITE 6X4 CHASSIS)

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.500m

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

Client		
Project		
LAND AT GREENLAND'S COLLARROY ROAD COLD ASH		
Drawing Title		
SWEPT PATH TRACKING		
Drawing Status		
FOR INFORMATION		
Date	Scale	Size
JUL 2022	1:250	A1
Drawing No.	Rev	
NJC-002	-	



**VEHICLE DETAILS:**

**PHOENIX 2 DUO  
(P2-15W WITH ELITE 6X4 CHASSIS)**

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.500m

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

Client		
Project		
LAND AT GREENLAND'S COLLARROY ROAD COLD ASH		
Drawing Title		
SWEPT PATH TRACKING		
Drawing Status		
FOR INFORMATION		
Date	Scale	Size
JUL 2022	1:250	A1
Drawing No.	Rev	
NJC-003	-	