

Racton Booster Station, Havant

784-B074714

Access Appraisal

For Information

Portsmouth Water

April 2026

Document prepared on behalf of Tetra Tech Environment Planning Transport Limited. Registered in England number: 03050297



TETRA TECH

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Table of contents

1.0	Introduction	4
	Scope of report.....	4
2.0	Site Access Appraisal	5
	Existing Site Conditions.....	5
	Accident Data Review	6
	Stockheath Lane	7
	Trosnant Road	9
	Brookfield Close	10
3.0	Internal Layout	11
	Operational Phase.....	11
	Construction Phase	12
4.0	Summary	12

Appendices

Appendix A: Visibility Splays

Appendix B: Proposed Turning Heads – Operational and Construction Phases

1.0 Introduction

- 1.1 Tetra Tech has been commissioned by Portsmouth Water to undertake a transport study associated with land at Brookfield Close, Havant. The study reviews the transport impacts of a potential booster station, with a particular focus on the potential access arrangements to the site and the footprint of 20m by 40m available in which to accommodate the booster station.
- 1.2 The site is located on a parcel of land bound by New Road to the south, Stockheath Lane to the west, Trosnant Road to the north and Brookfield Close to the east. The location of the site is shown in **Figure 1.1**.

Figure 1.1- Site Location Plan



Scope of report

- 1.3 This report considers the transport issues, constraints and opportunities at the site, including:
- Feasibility of access from western, northern and eastern site frontage;
 - Visibility splays at proposed access junction(s);
 - Visibility splays at Trosnant Road/Stockheath Lane and Stockheath Lane/New Road junctions;
 - Forward visibility along Stockheath Lane; and
 - Swept path analysis of internal layout.

2.0 Site Access Appraisal

Existing Site Conditions

- 2.1 Figure 2.1 below identifies the existing site and the critical features that will influence the position of the booster station and service road.

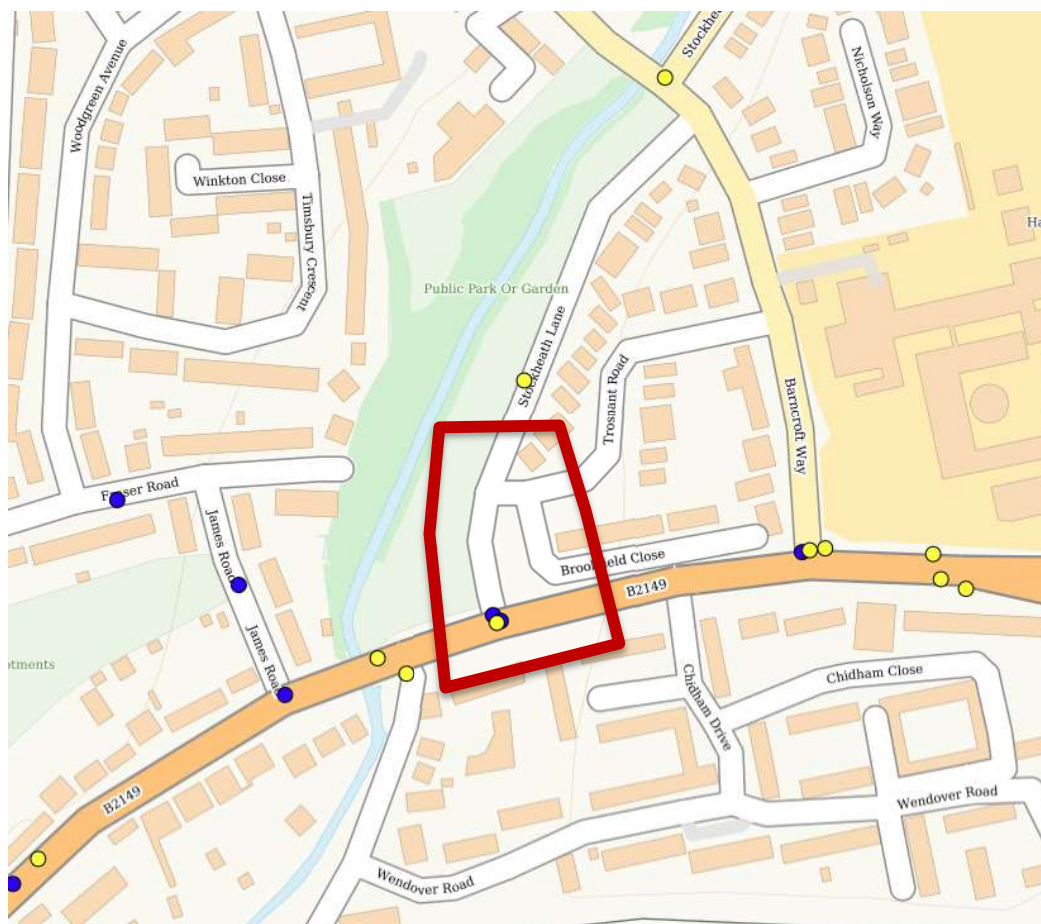
Figure 2.1- Existing site conditions plan



Accident Data Review

- 2.2 A review of the data shows that three accidents occurred around Stockheath Lane, Trosnant Road or Brookfield Close in the most recent 5-year period for which data is available (from May 2021 to April 2025), as shown on **Figure 2.2**.

Figure 2.2- Accident data plot



- 2.3 The three accidents both occurred on the junction between Stockheath Lane and the B2149, with two being reported as being serious in severity and one as slight. The first serious incident took place on the 15th of September 2021 and the second on the 11th of November 2023. The slight incident occurred on 21st May 2024.
- 2.4 Both these incidents appear to have been caused by driver error at the junctions between the B2149 and Stockheath Lane rather than by any inherent flaw with the design of the junction.

Stockheath Lane

- 2.5 Stockheath Road runs along the western site boundary and is a residential street that links New Road in the south to Barncroft Way in the north. It is approximately 5.5m wide and is lit and therefore subject to a 30mph speed limit.
- 2.6 Stockheath Lane is subject to a 7.5 tonne weight restriction, except for access. A lay-by is located opposite the site, which has restrictions in place preventing parking by heavy goods vehicles overnight and at weekends.

Figure 2.2- Stockheath Lane from Trosnant Road junction



Figure 2.3- Site frontage on Stockheath Lane showing lay-by opposite



- 2.7 Visibility splays of 2.4m x 43m (corresponding to a design speed of 30mph) are achievable in both directions at its junction with New Road, as shown at **Appendix A**.
- 2.8 It should be noted that the visibility splay to the south depends on no construction taking place within the splay as shown on the drawing. Any obstruction to visibility would not be permitted by the local highway authority as it would have a detrimental effect on all traffic using the junction.
- 2.9 It is also noted to the north that the achievable visibility is only possible to a point 1.5m from the kerb – i.e. there is a blind spot on the nearside kerb. However, this is an existing junction with no accident history, and there would be minimal additional traffic at the junction during the operational phase of the development, so this is not considered to be a safety issue.

Suitability of Access from Stockheath Lane

- 2.10 Because of the tree situated on the western side of the site, as well as the proximity to the Trosnant Road/Stockheath Lane junction, it is not considered that an access on the western site frontage is suitable.
- 2.11 Visibility splays would be affected by the tree, and construction of the access bellmouth would require construction within the root protection zone. Therefore, this option has been discounted.

Trosnant Road

- 2.12 Trosnant Road is a residential street serving around 30 properties running from Stockheath Lane in the west to Barncroft Way in the east. It is approximately 4.5m wide and has a short frontage with the proposed booster station site along the northern site boundary, measuring approximately 15m.

Figure 2.4- Towards Trosnant Road



- 2.13 Visibility splays of 2.4m x 43m (corresponding to a design speed of 30mph) are achievable in both directions at its junction with Stockheath Lane, as shown on at **Appendix A**.

Suitability of Access from Trosnant Road

- 2.14 Based on the limited site frontage length with Trosnant Road and need for separation of adjacent junctions, this road length is not considered suitable for a site access and has not been investigated further.

Footway Adjacent to Trosnant Road

- 2.15 It is noted that there is a footway running along the northern edge of the site. This will need to be retained as a thoroughfare for pedestrians. There is potential to divert the

footway, if desired, however, the position of the footway will be influenced by the proximity of a tree on Trosnant Road. If it was relocated, the footway would need to be kept as public highway as part of any development scheme.

Brookfield Close

- 2.16 Brookfield Close is a residential cul-de-sac accessed from Trosnant Road which serves around 12 properties, as well as providing access to the rear of several properties on Barncroft Way and their garages.
- 2.17 The carriageway is approximately 5m wide with street lighting throughout, and single yellow line waiting restrictions are in place on the eastern side that prohibit waiting between 9am and 3.30pm, Monday to Friday except public and bank holidays. However, these restrictions are not in place directly opposite the site. Along the site frontage on the western side of Brookfield Close, double yellow lines are in place prohibiting all parking and waiting at any time.
- 2.18 There is a footway running along the eastern side of Brookfield Close; no footway is present along the site frontage to the west.
- 2.19 Whilst Brookfield Close is subject to a 30mph speed limit, the geometry of the road, residential nature, on-street parking and a right-angled bend mean that actual speeds (and the corresponding visibility requirements) will be significantly below 30mph.
- 2.20 Visibility splays of 2.4m x 43m (corresponding to a design speed of 30mph) are achievable in both directions at its junction with Trosnant Road, as shown at **Appendix A**.

Suitability of Access from Brookfield Close

- 2.21 It is proposed to take access to the site from Brookfield Close. Visibility splays of 2.4m x 25m, commensurate with a 20mph design speed is achievable to the right, and a visibility splay to the Trosnant Road junction to the left is achievable, as shown in **Appendix A**.
- 2.22 Brookfield Close is the preferred option for access to the site, due to the achievable visibility splays and greater separation from other junctions.
- 2.23 It is noted that it is achievable for a van to access the site with cars parked on the eastern side of Brookfield Close. Where possible, trips to the site should be

undertaken between 09:00-15:30, Monday to Friday, when parking restrictions are in force elsewhere on Brookfield Close, although it is noted that there could still be vehicles parked directly opposite the site. These spaces will need to be suspended for the duration of the construction works.

- 2.24 Some shrubbery along the eastern site frontage will need to be removed to accommodate the access; however, the access has been located as far north as possible to minimise the impact on the shrubs. This has been assessed as part of the arboricultural survey which recommended that this shrubbery can be cut back to allow space for the access.

3.0 Internal Layout

Operational Phase

- 3.1 A swept path assessment of the internal layout has been undertaken for a 4.6 tonne panel van, which is expected to be the typical vehicle accessing the site during the operational phase. On occasions, larger vehicles may be required, and accordingly, swept paths of a 7.5t panel and a large rigid vehicle have also been undertaken, although this is larger than the vehicles typically requiring access the site.
- 3.2 Minimal trips are expected to be generated by the site during the operational phase, with infrequent trips by service vans being the only trips. These would have no material impact on the highway network and would fall within typical daily variations in flow on the surrounding highway network.
- 3.3 The plan is included in **Appendix B** and shows the swept paths of servicing vehicles entering and exiting the site. It is noted that it is not possible for a large van to reverse into the site and exit in a forward gear, due to the presence of parked cars on the opposite side of the carriageway.
- 3.4 The access has been designed to avoid the root protection zone (RPZ) of the large tree on the western side of the site. The suggested position of the turning head takes account of the existing adjacent footpaths.
- 3.5 The booster station will be constructed outside of the visibility splay at the Trosnant Road/Stockheath Lane junction.

Construction Phase

- 3.6 A separate layout showing the turning head for the construction phase has been shown at **Appendix B**, with the largest construction vehicle assumed to be a 26t grab lorry. The grab lorry is able to enter the site in forward or reverse gear.
- 3.7 As mentioned previously, the turning head will need to avoid the large tree on the western side of the site. Given the larger vehicles accessing the site in the construction phase, the turning head requirements are more onerous than for the operational layout; therefore, a temporary larger access road could be provided and reduced in size once construction is finished. This would be done through the use of heavy-grade matting, suitable to accommodate the large vehicles, which would then be removed upon completion of the works.
- 3.8 Parking on Brookfield Close opposite the site would need to be restricted for the duration of the construction works.

4.0 Summary

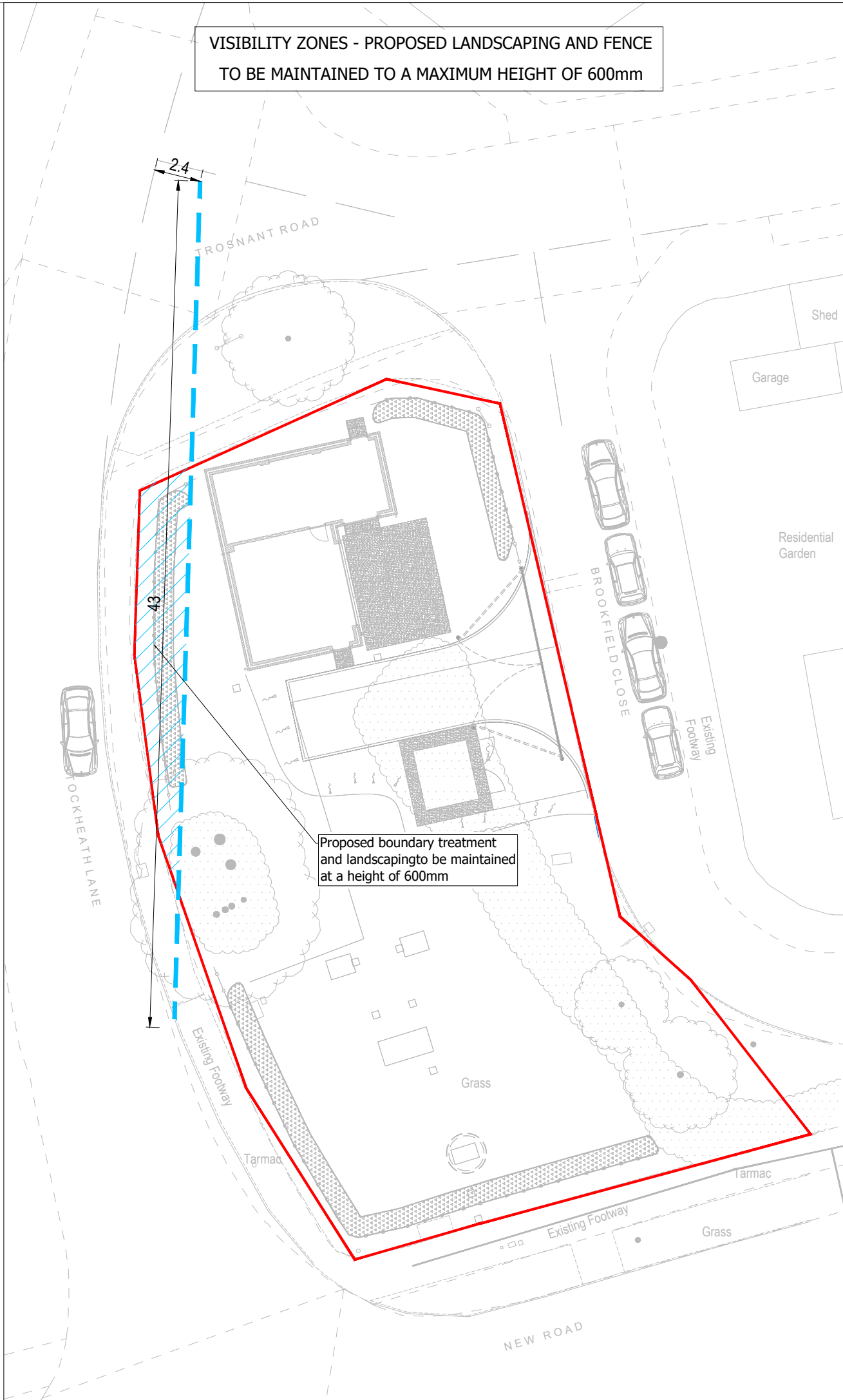
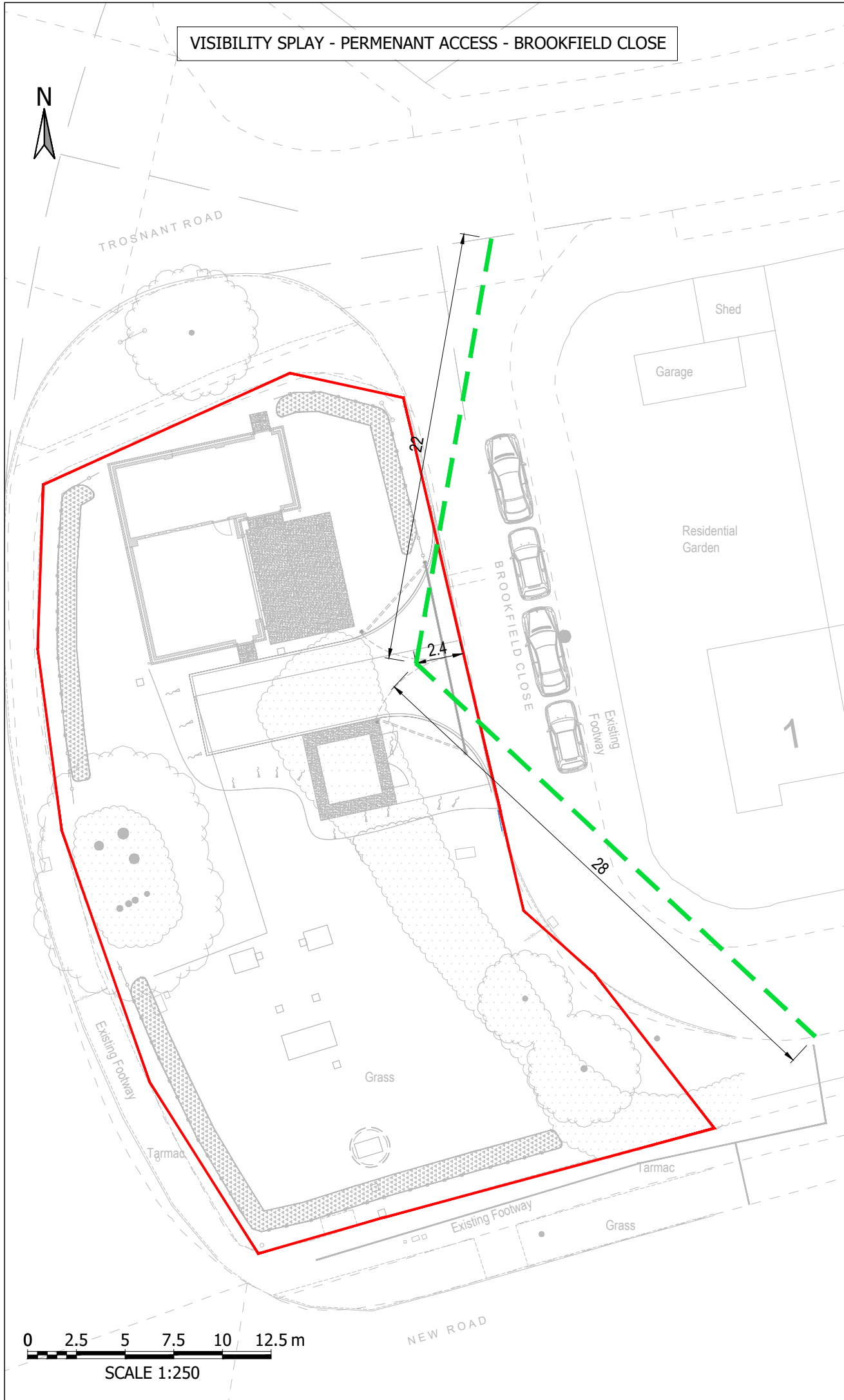
- 4.1 An appraisal of potential position and access arrangements to a proposed booster station on public highway at Brookfield Close, Havant, has been undertaken. The study has considered the existing constraints, potential access arrangements, the internal layout (including space needed for the construction and operational phases), and the impact on existing off-site junctions.
- 4.2 A summary of the key points is set out below:
- The site frontages on Stockheath Lane and Trosnant Road do not provide a suitable location for the permanent site access;
 - Access should be in the form of a simple priority junction on Brookfield Close;
 - The booster station should not encroach on the visibility splay to the left from Trosnant Road;
 - Requirements for turning heads are different for the operational and construction phases – a temporary, larger access space may be needed for the construction phase;

- Visibility at the off-site junctions is to standard, with the exception of the visibility to the right from Trosnant Road where the required visibility is achievable to a 1.5m offset from the kerb. However this is an existing junction with no accident history and minimal traffic being generated; and
- The footway along the northern part of the site will be retained on its existing route

4.3 It has therefore been concluded that there will be minimal transport impacts as a result of the development, with negligible additional vehicle trips to be generated onto the local highway network and safe access to and from the site being provided. It is therefore considered that there are no reasons to refuse the application on transport or highways grounds.

Appendix A: Visibility Splays

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Notes:

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Key:

- Proposed access visibility splays
- Visibility splay that encroaches into proposed site
- Visibility zone - must be kept clear of obstructions between a height of .6m and 2.0m as stated in Manual for Streets 7.6.3, this includes boundary treatments such as fencing

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Rev	Description	Date	SJR	GS	NW
P01	PRELIMINARY FIRST ISSUE	13.02.2026	SJR	GS	NW

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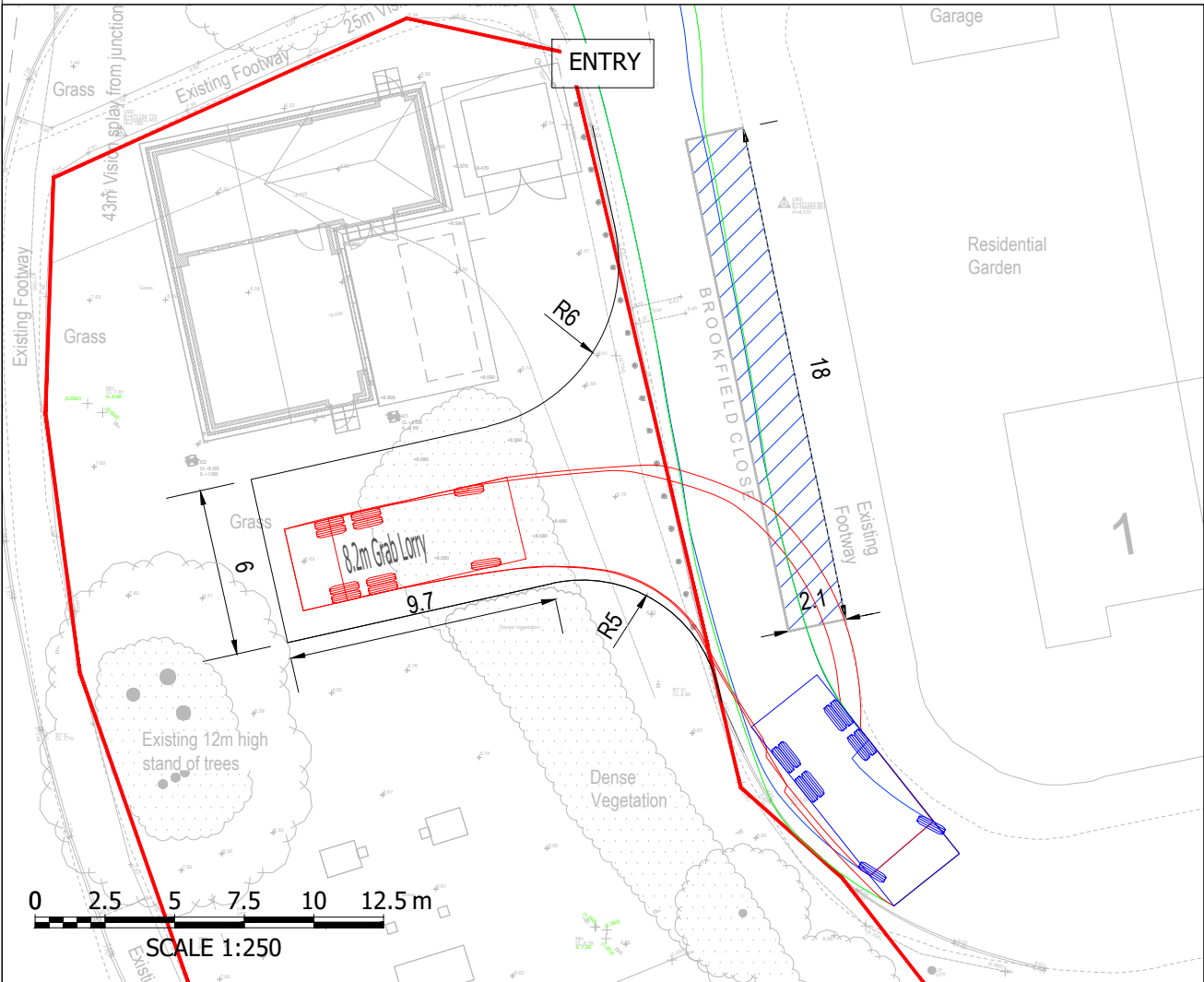
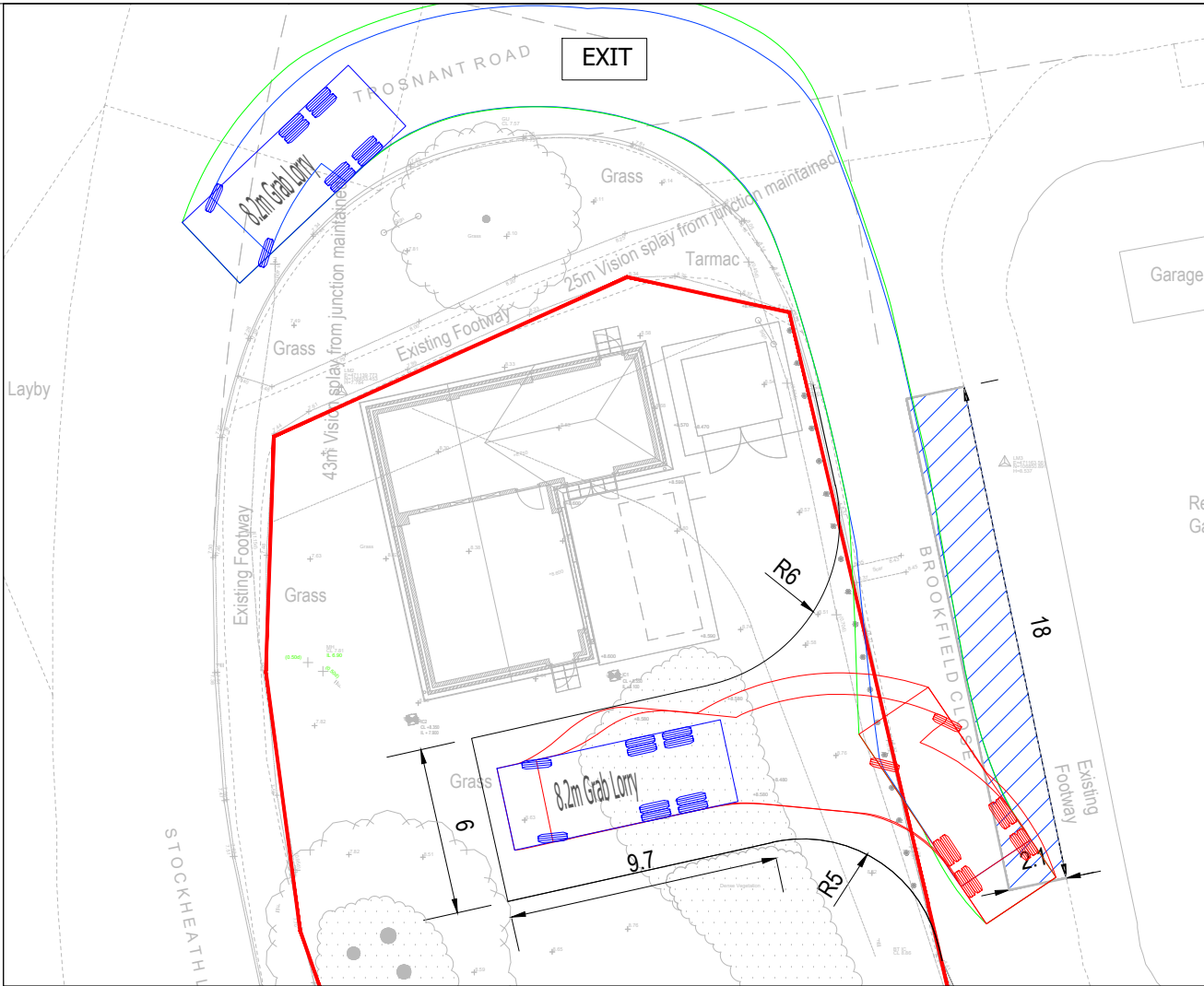
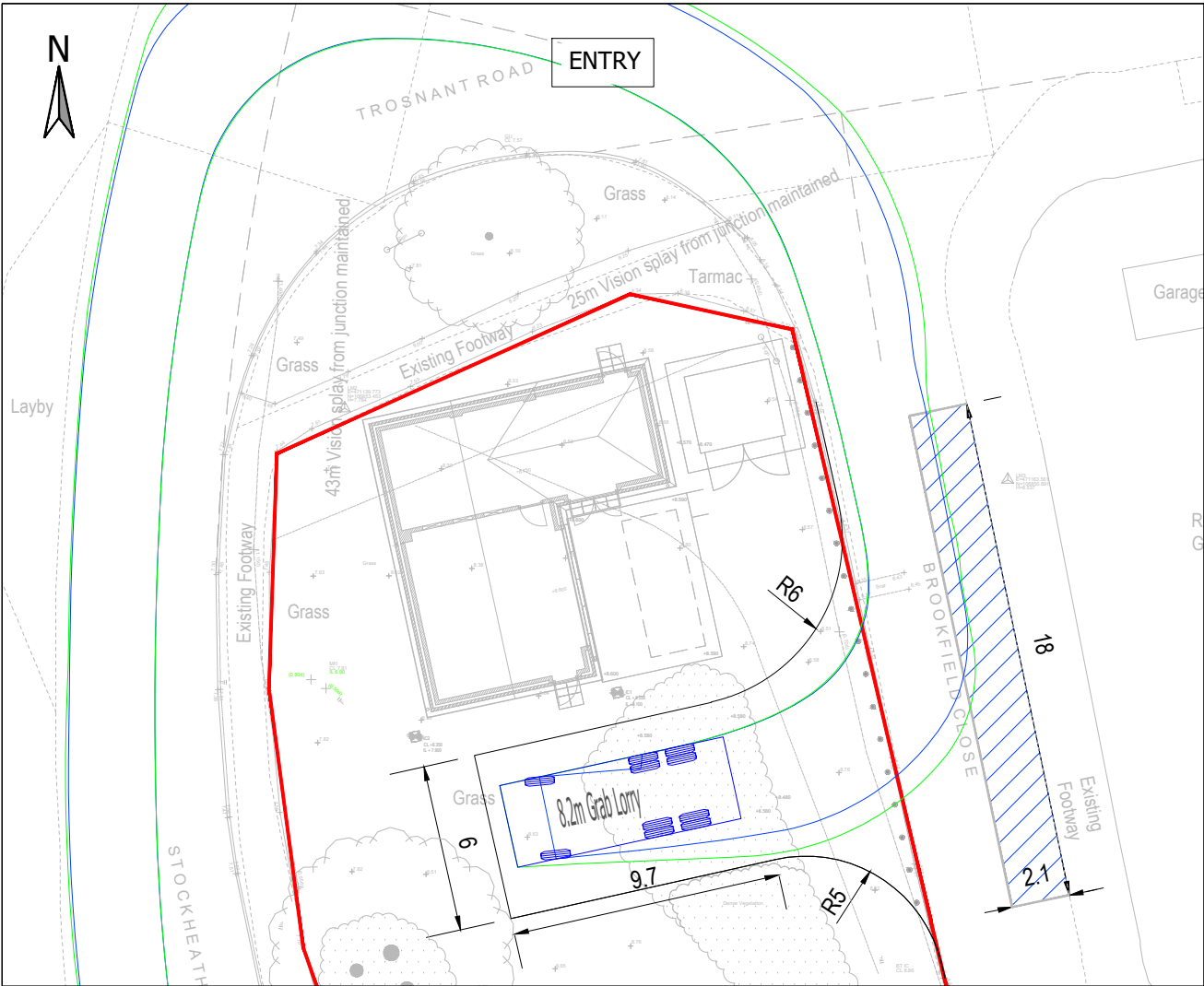
Project Name
RACON BOOSTER STATION

Sheet Title
**OPERATIONAL PHASE
VISIBILITY SPLAYS**

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale	Suitability
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- TTE	- 00	- XX	- SK	- O	- 0006		P01	

Appendix B: Proposed Turning Heads – Operational and Construction Phases

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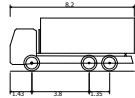
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Vehicle used:



8.2m Grab Lorry
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to lock time
Kerb to kerb Turning Radius

8.200m
3.000m
3.500m
0.433m
3.000m
6.00s
9.000m

Key:



Parking bays to be suspended during construction stage

PRELIMINARY ISSUE

Rev	Description	Date	Drawn / Chk / App
P04	SWEPT PATHS AMENDED	16.04.2026	SJR GS NW
P03	SWEPT PATHS AMENDED	18.03.2026	SJR GS NW
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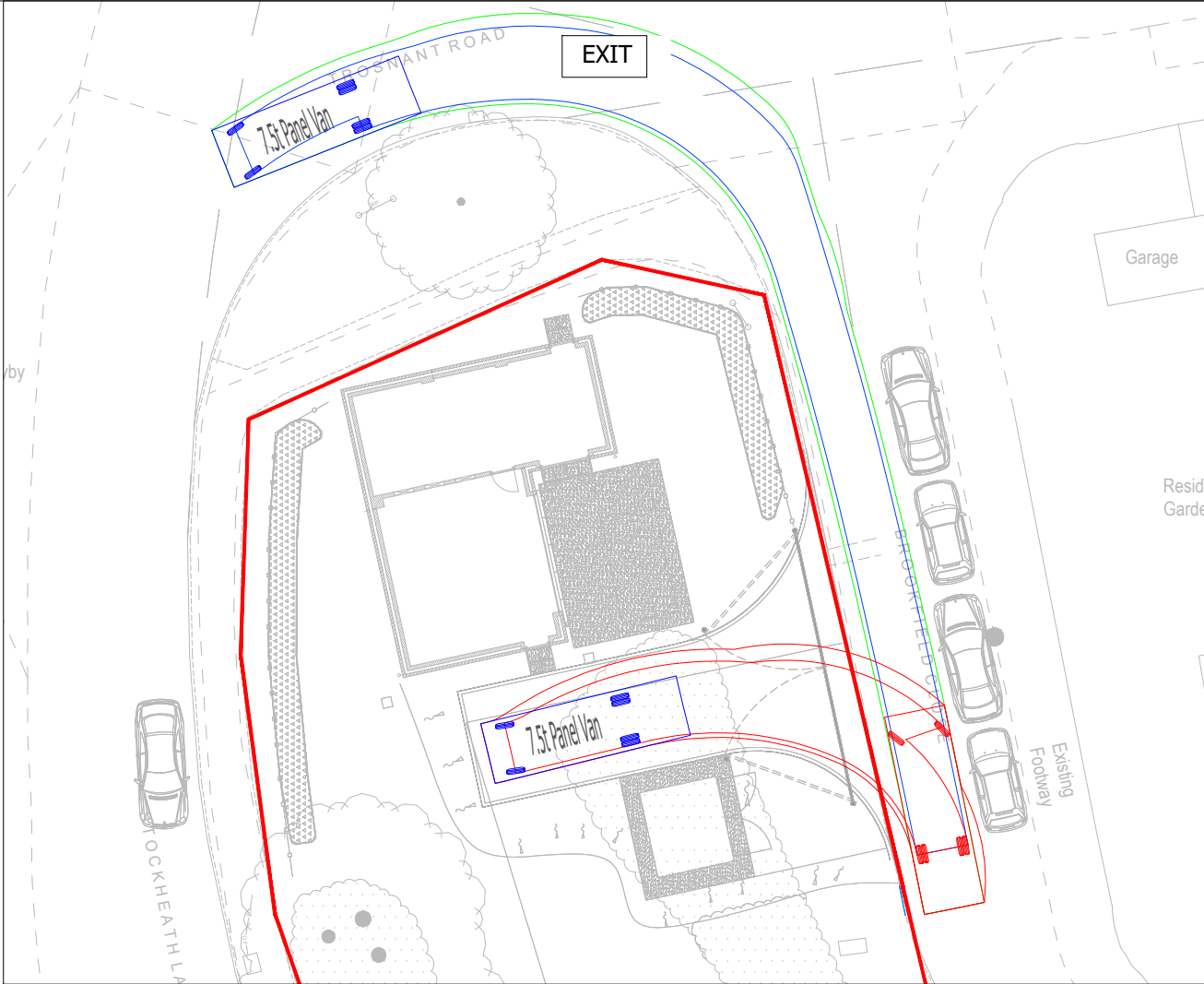
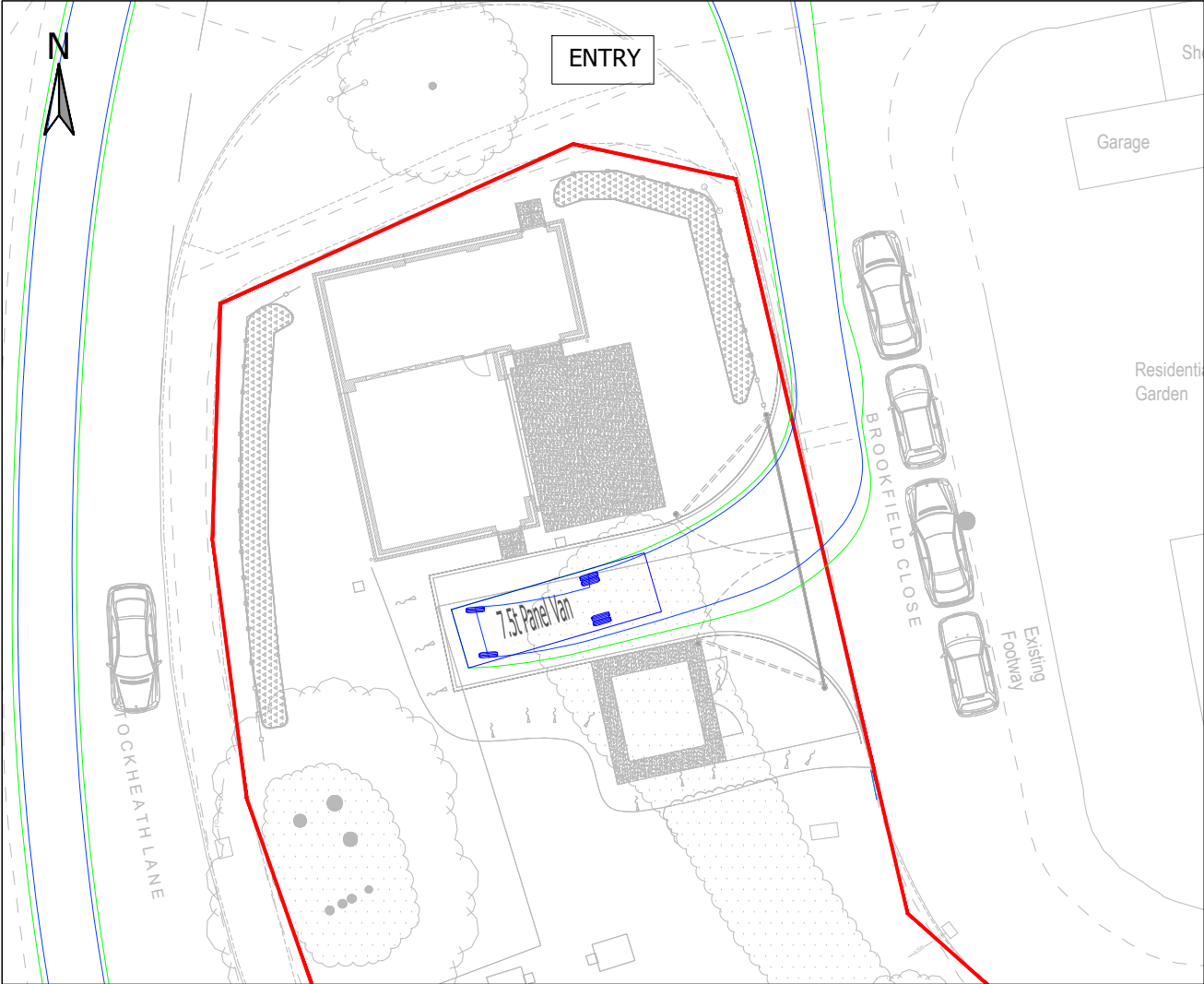
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SWEPT PATH ASSESSMENT**

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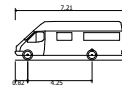
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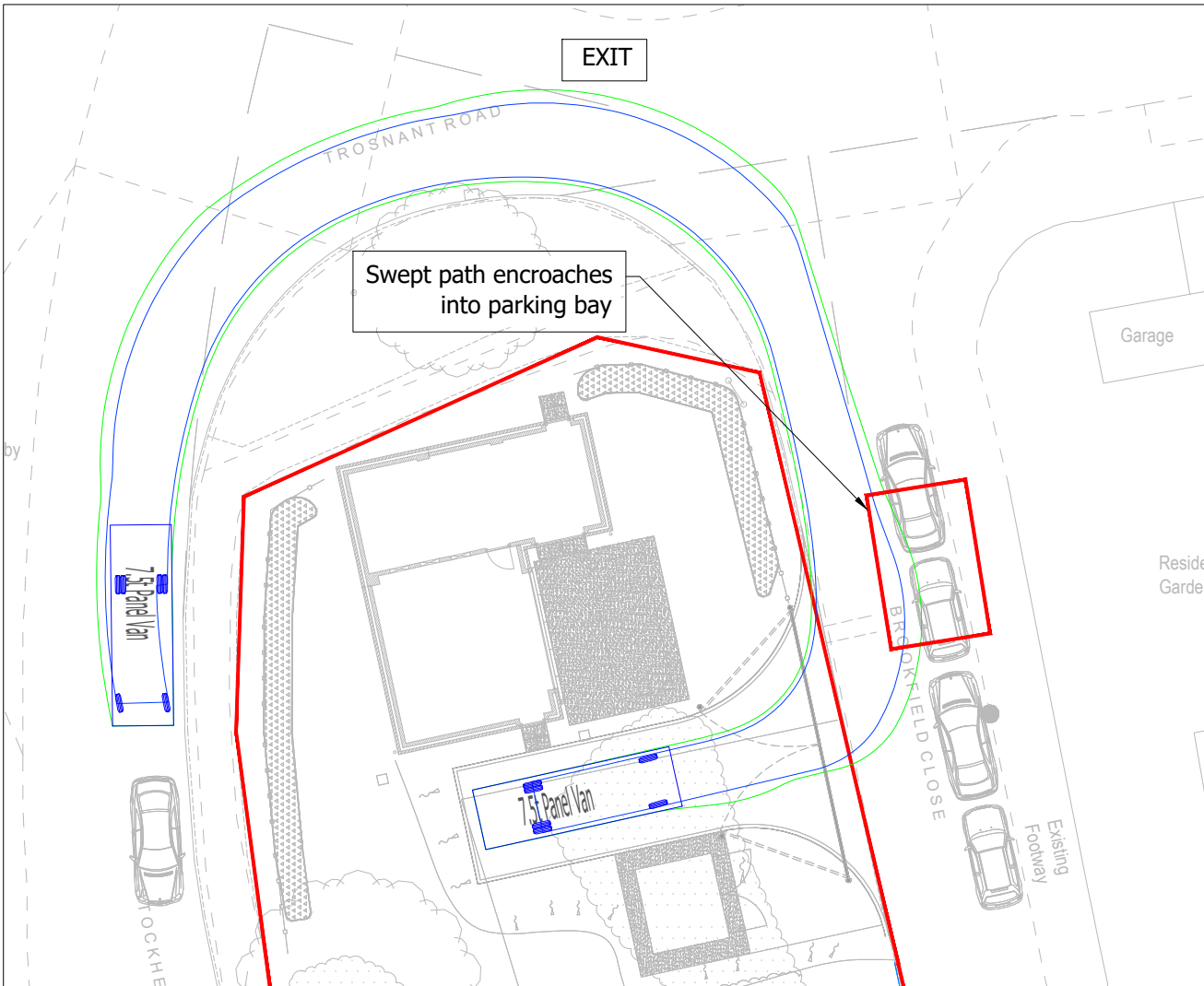
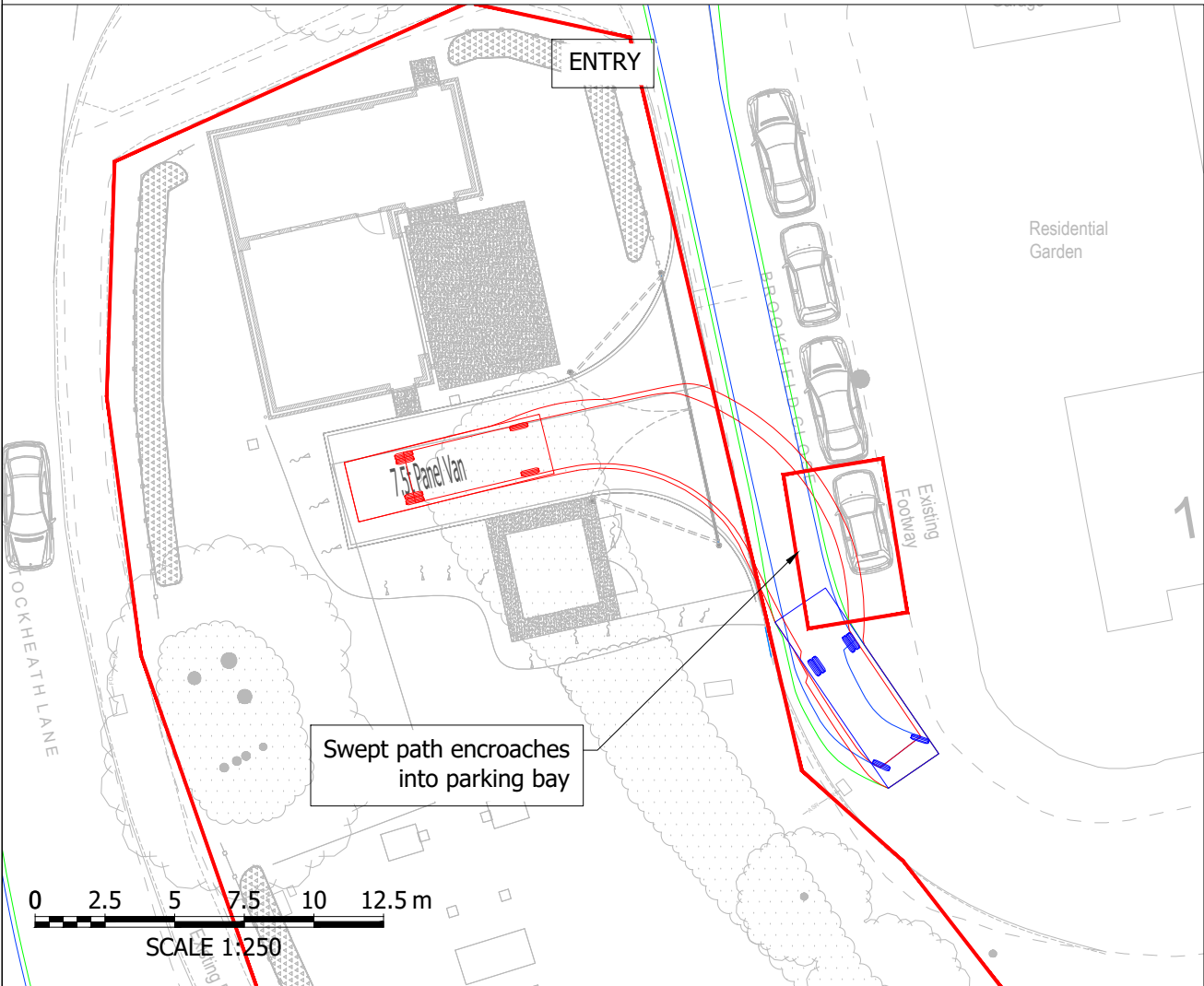
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Vehicle used:



7.5t Panel Van
Overall Length 7.210m
Overall Width 2.192m
Overall Body Height 2.544m
Min Body Ground Clearance 0.316m
Track Width 1.865m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.400m

7.210m
2.192m
2.544m
0.316m
1.865m
4.00s
7.400m



PRELIMINARY ISSUE

Rev	Description	Date	Drawn	Checked	Appr
P03	SWEPT PATHS AMENDED	16.04.2026	SJR	GS	NW
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Project Name
RACON BOOSTER STATION

Sheet Title
**OPERATIONAL PHASE
SWEPT PATH ASSESSMENT**

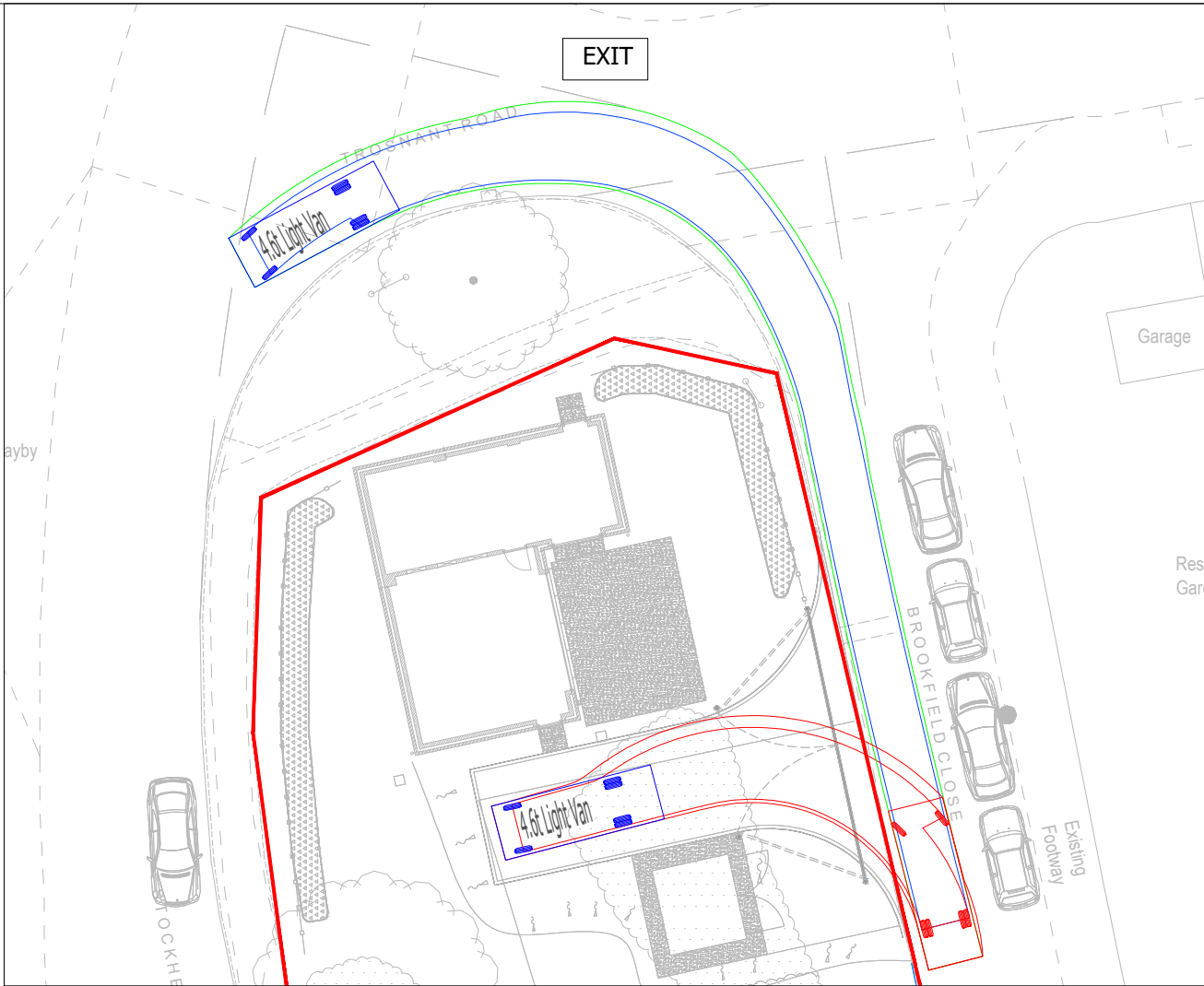
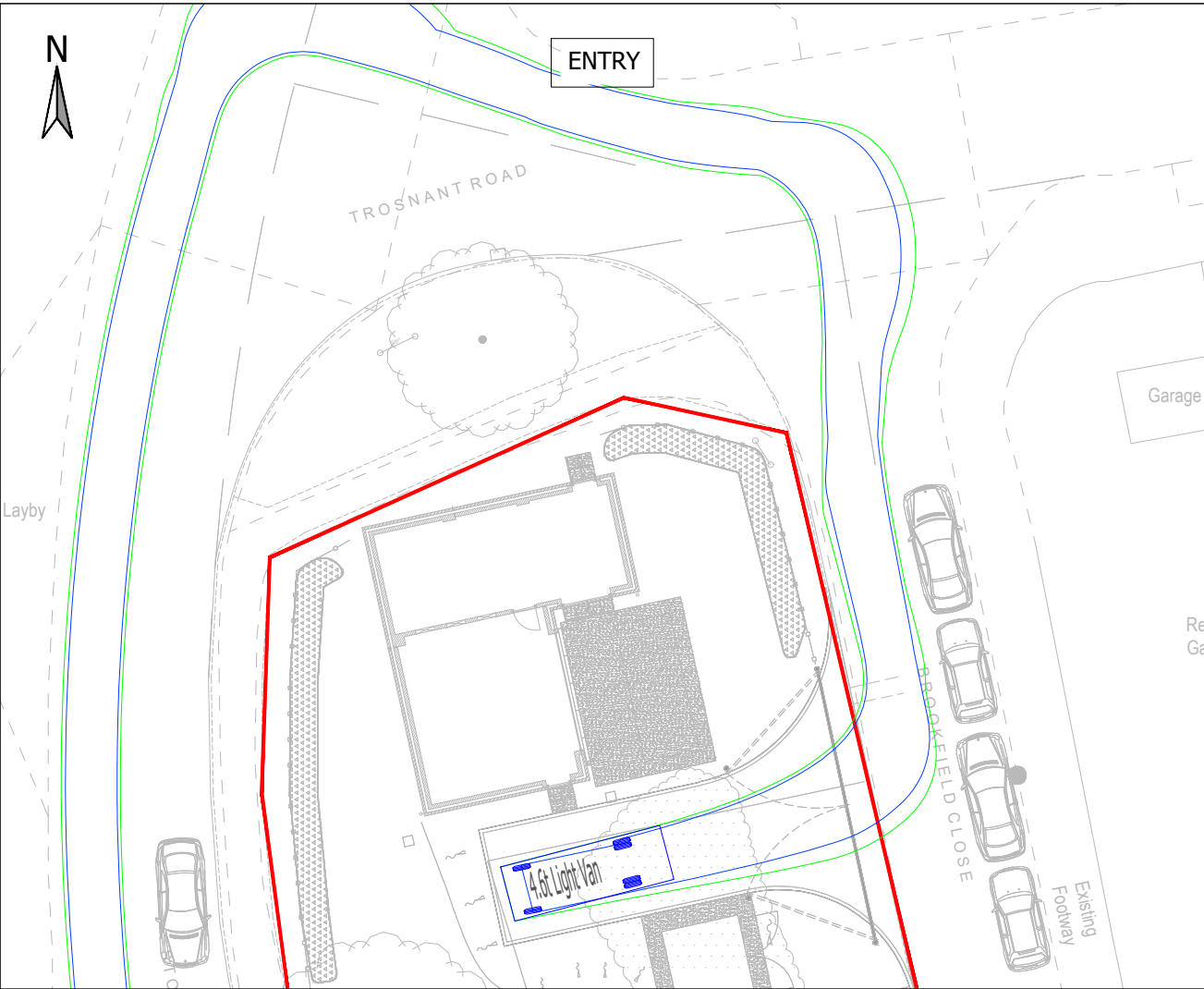
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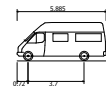
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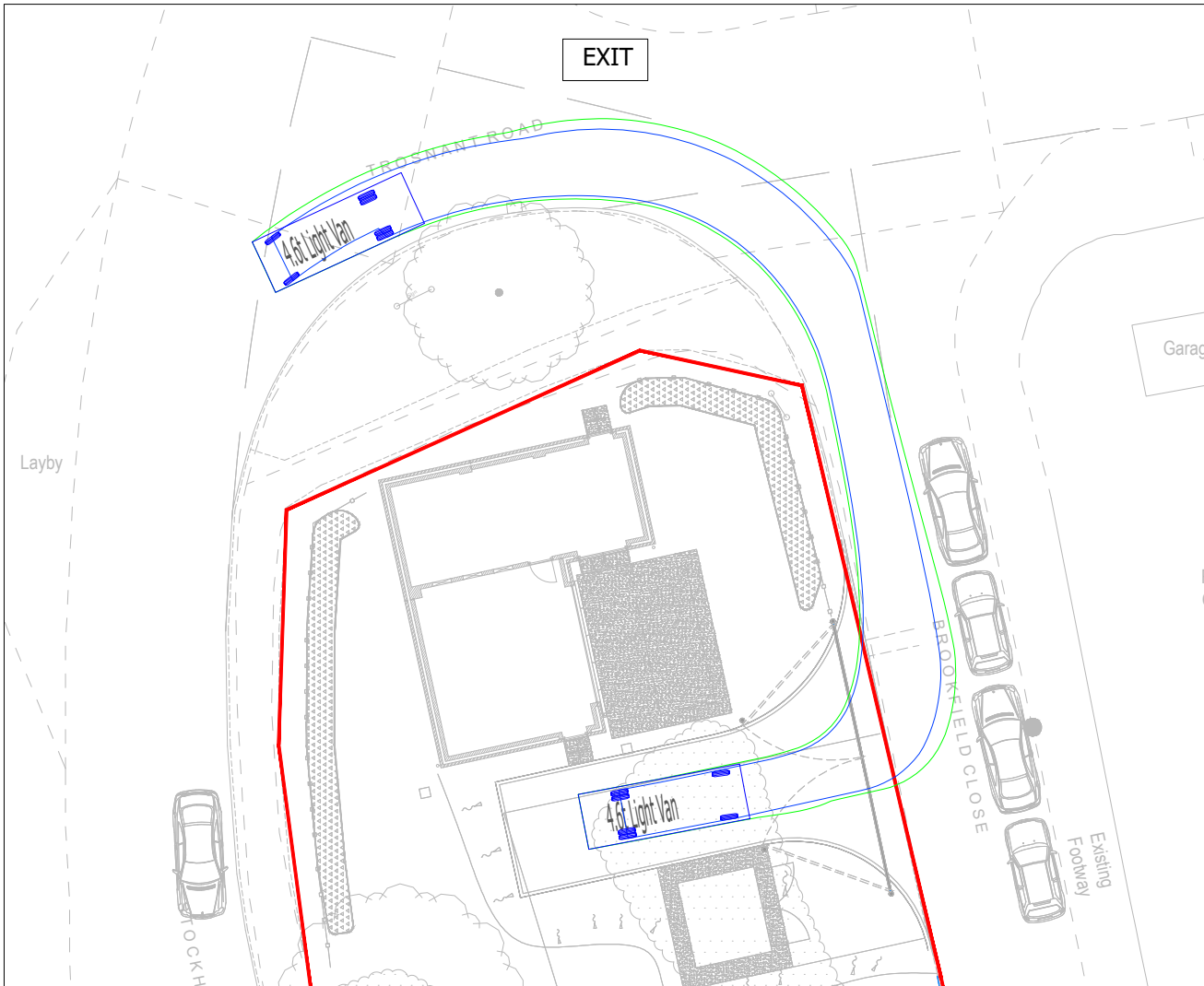
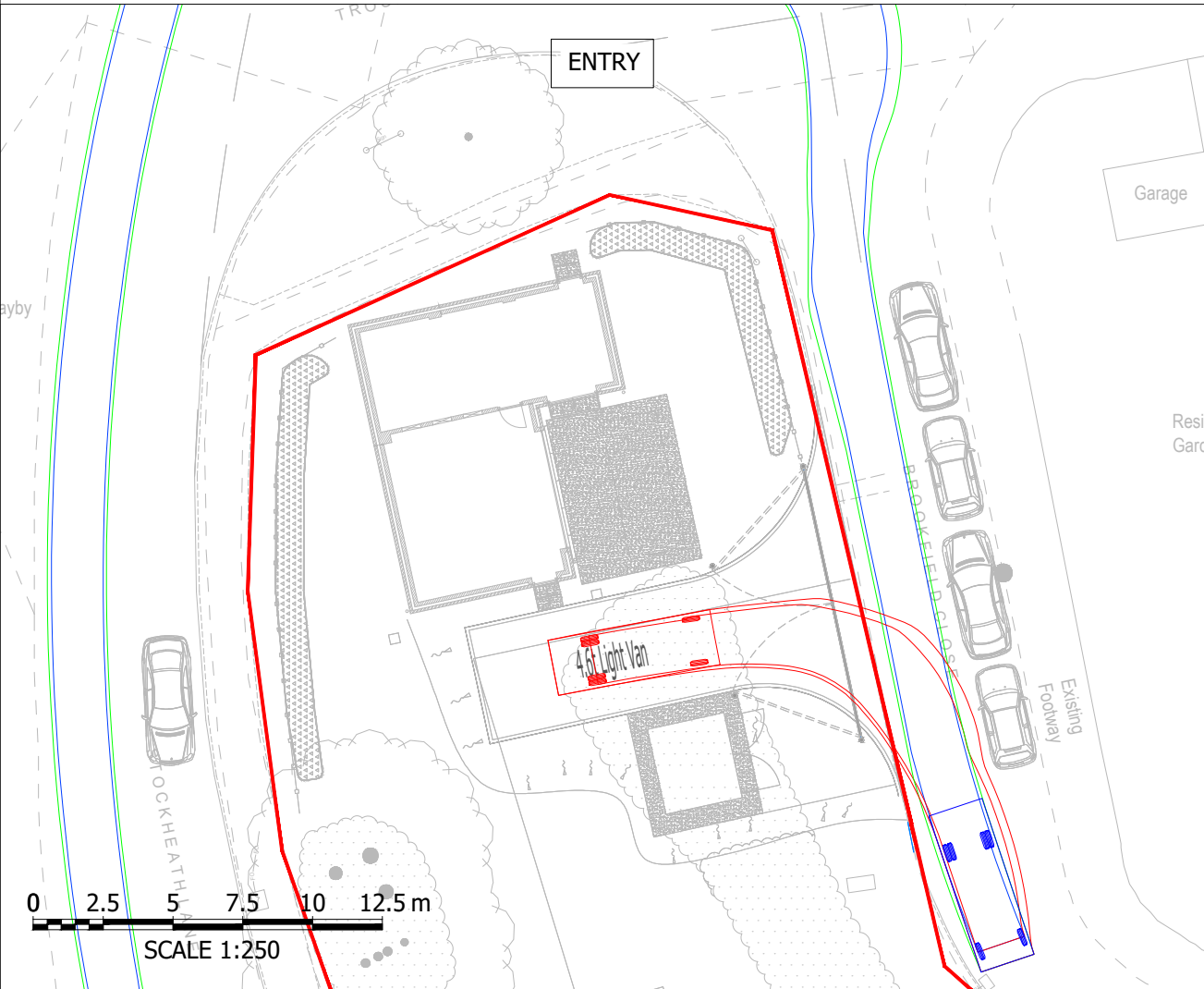
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Vehicle used:



4.6t Light Van
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to lock time
Kerb to Kerb Turning Radius

5.885m
2.000m
2.526m
0.299m
1.750m
4.00s
6.000m



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Project Name
RACON BOOSTER STATION

Sheet Title
**OPERATIONAL PHASE
SWEEP PATH ASSESSMENT**

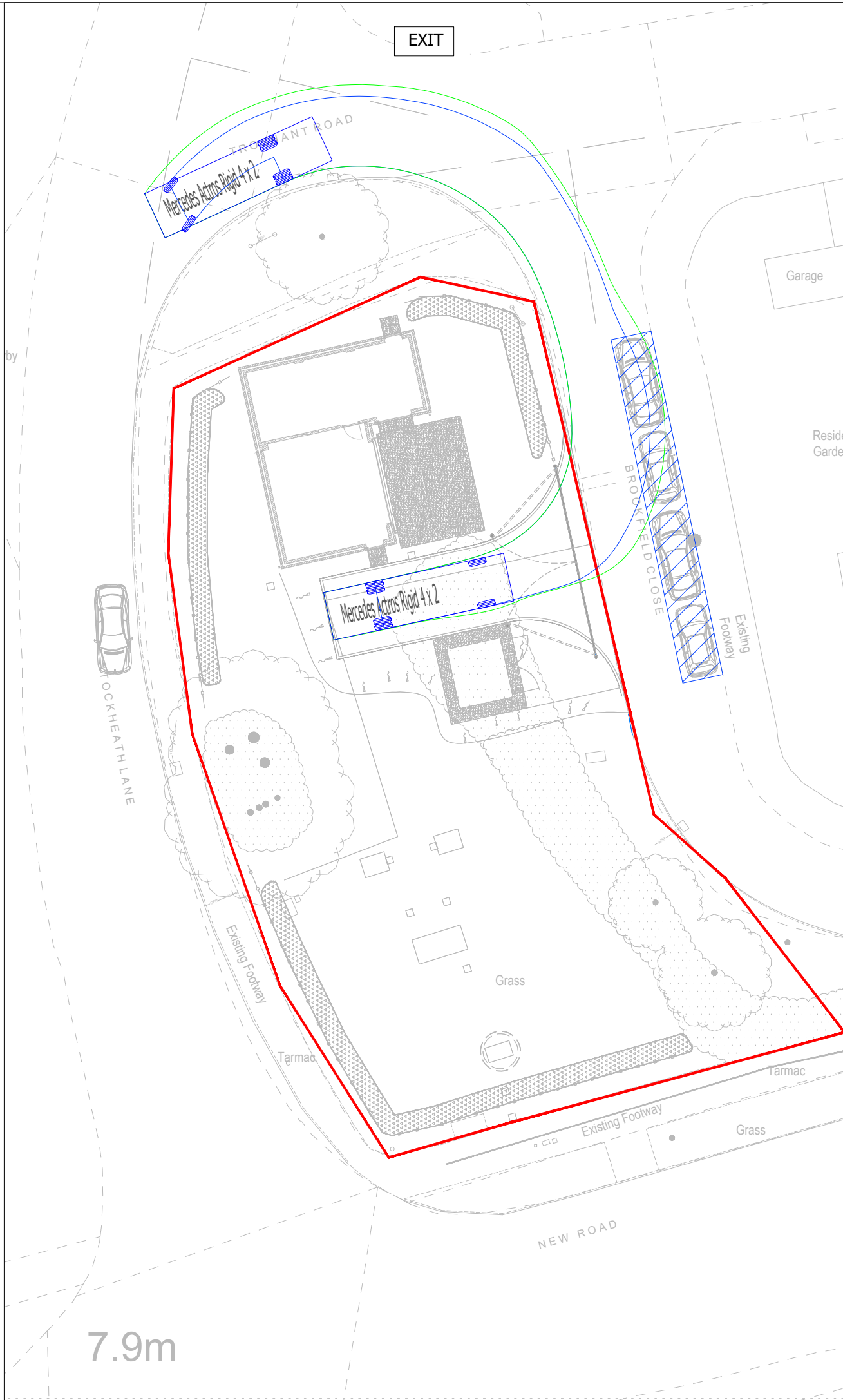
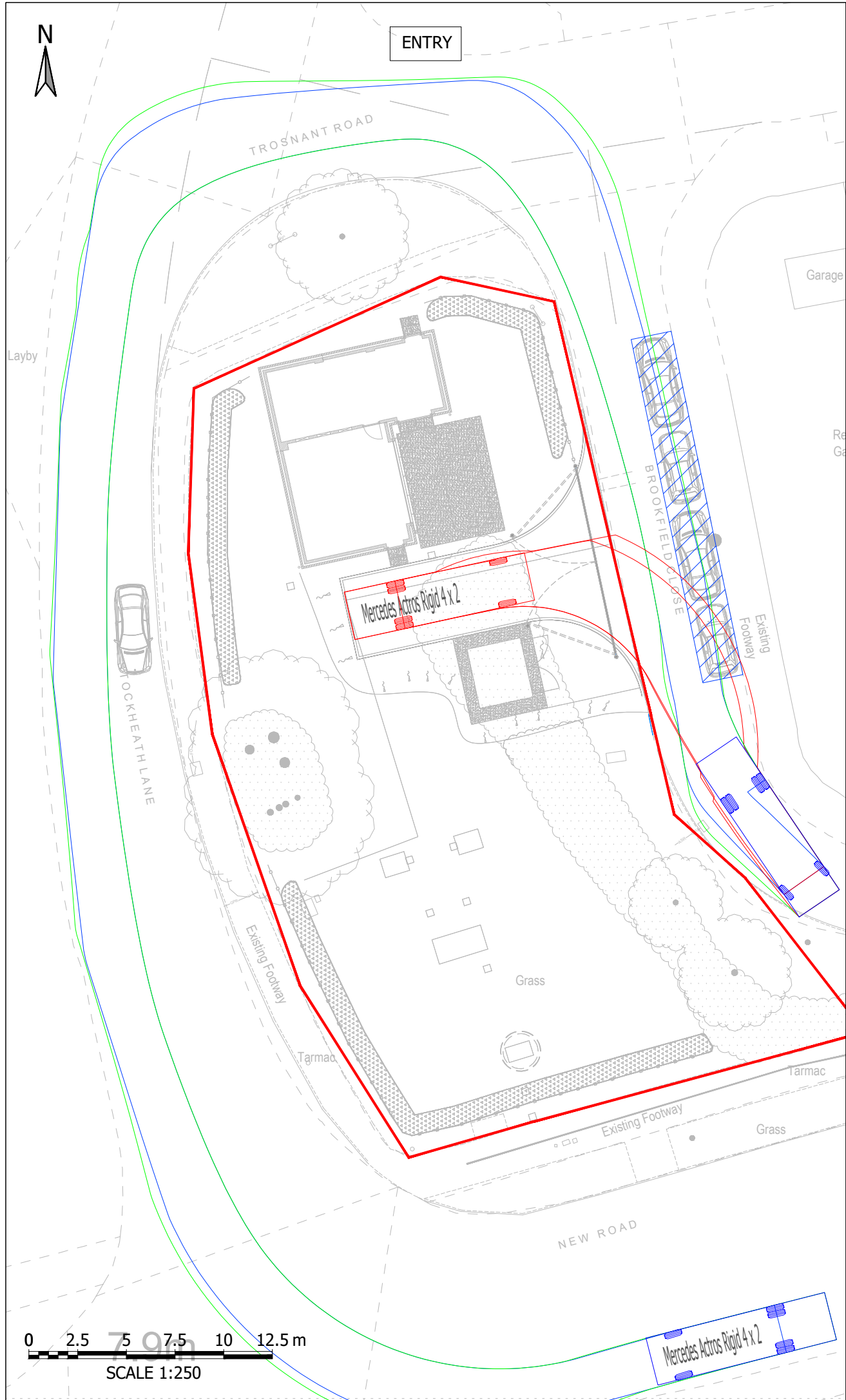
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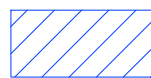
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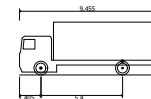
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Key:



Temporary parking order required for the suspension of parking bays when planned maintenance required

Vehicle used:



Mercedes Actros Rigid 4 x 2
Overall Length 9.455m
Overall Width 2.494m
Overall Body Height 3.495m
Min Body Ground Clearance 0.200m
Track Width 2.494m
Lock to lock time 5.00s
Kerb to Kerb Turning Radius 10.250m

PRELIMINARY ISSUE

Rev	Description	Date	Drawn	Check	App
P02	SWEEP PATHS AMENDED	18.03.2026	SJR	GS	NW
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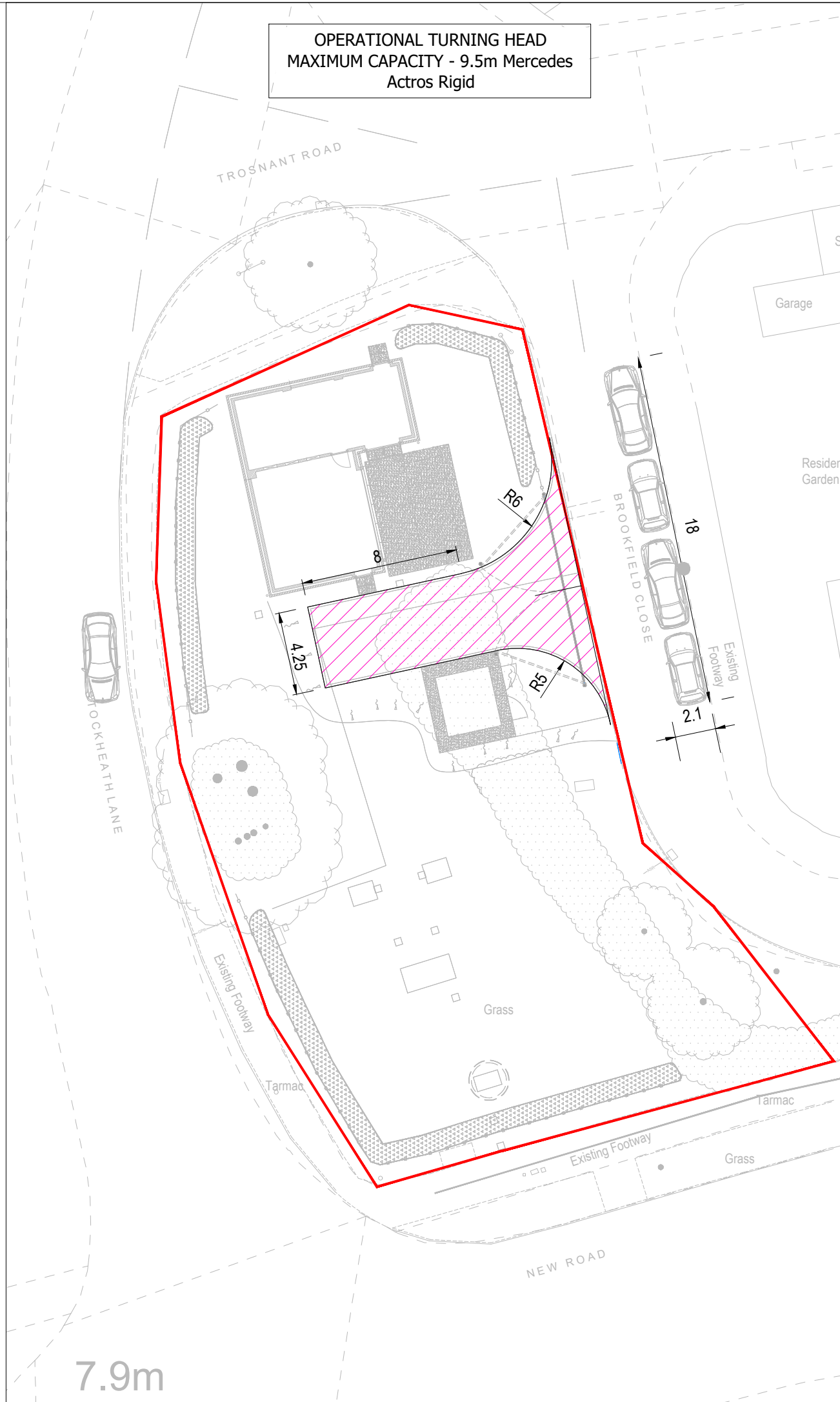
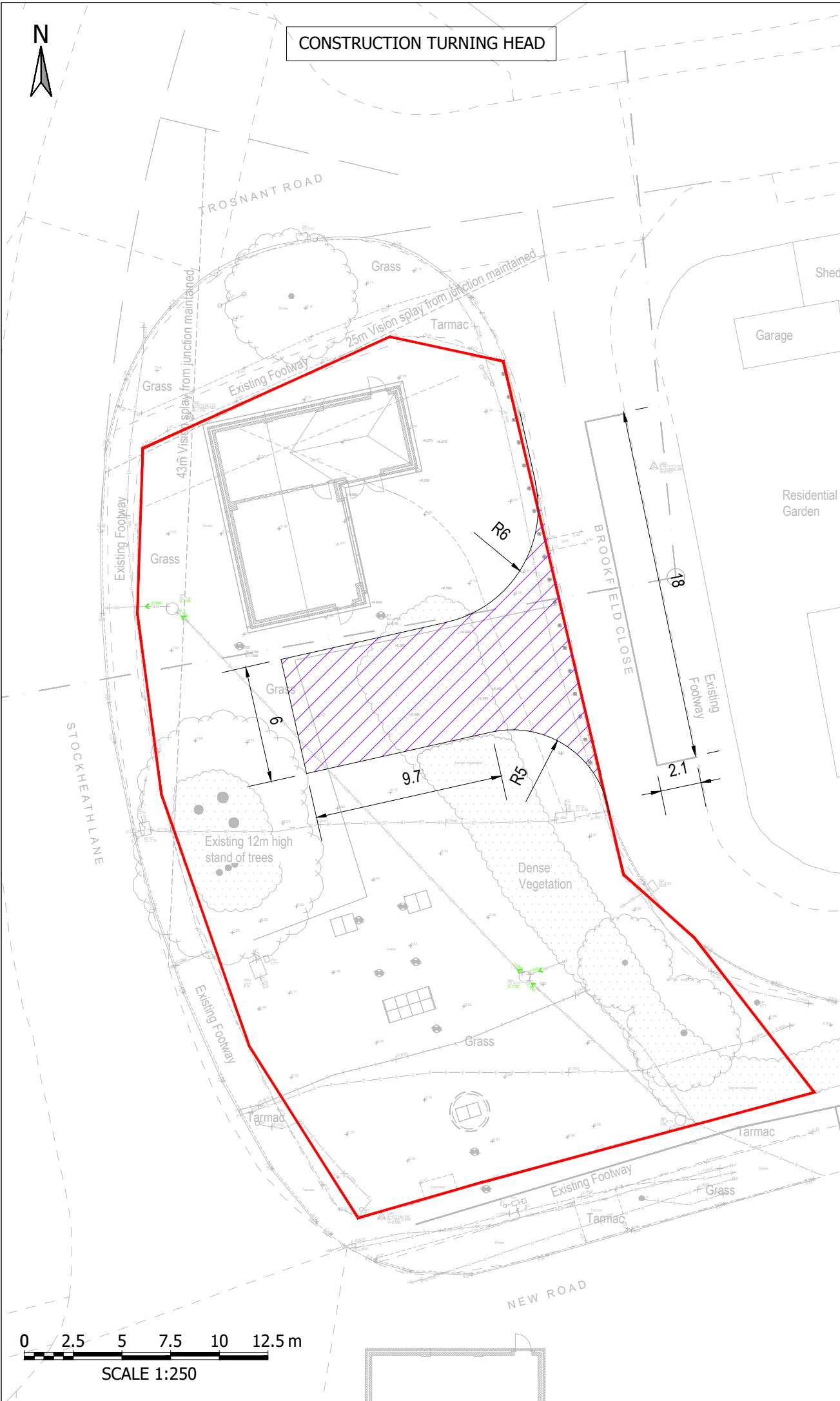
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TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale	Suitability
784-B074714	SJR	Feb 26	GS	Feb 26	NW	Feb 26	As Shown	S3
Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Rate	Number	Revision	
- TTE	- 00	- XX	- SK	- O	- 0005	P02		

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\\lds-dc-vm-101\Data\Projects\784-B074714_Brookfield_Close_Havant\60_Output\61_WIP\6102_Drawings\SS\784-B074714 - SK0002_SK0006-P03 - Operational Phase.dwg



- Notes:
- General**
1. Do not scale from drawing.
 2. All dimensions are in metres, unless stated otherwise.
 3. This drawing is to be read & printed in colour.
 4. This drawing is for illustrative purposes only.

- Disclaimer**
1. The information contained in this drawing is based on a combination of OS and data provided by others and Tetra Tech shall not be liable for any inaccuracies or deficiencies.

- Key:**
-  Construction phase turning head
 -  Operational phase turning head - maximum capacity - 9.5m rigid vehicle

PRELIMINARY ISSUE

Rev	Description	Date	Drawn	Check	App
P03	TURNING HEAD AMENDED	18.03.2026	SJR	GS	NW
P02	LAYOUT UPDATED	13.02.2026	SJR	GS	NW
P01	PRELIMINARY FIRST ISSUE	10.07.2025	SJR	GS	NW

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Client
PORTSMOUTH WATER

Project Name
RACTON BOOSTER STATION

Sheet Title
**CONSTRUCTION & OPERATIONAL PHASE
TURNING HEADS**

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale	Suitability
784-B074714	SJR	July 25	GS	July 25	NW	July 25	As Shown	S3
Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Rate	Number	Revision	
- TTE	- 00	- XX	- SK	- O	- 0004	P03		