

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Boom Developments Ltd

Misslebrook Battery Site
Botley Road, Chilworth

December 2022

Report control

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Project: Missilebrook Battery Site, Botley Road, Chilworth

Client: Boom Developments Ltd

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1 Introduction

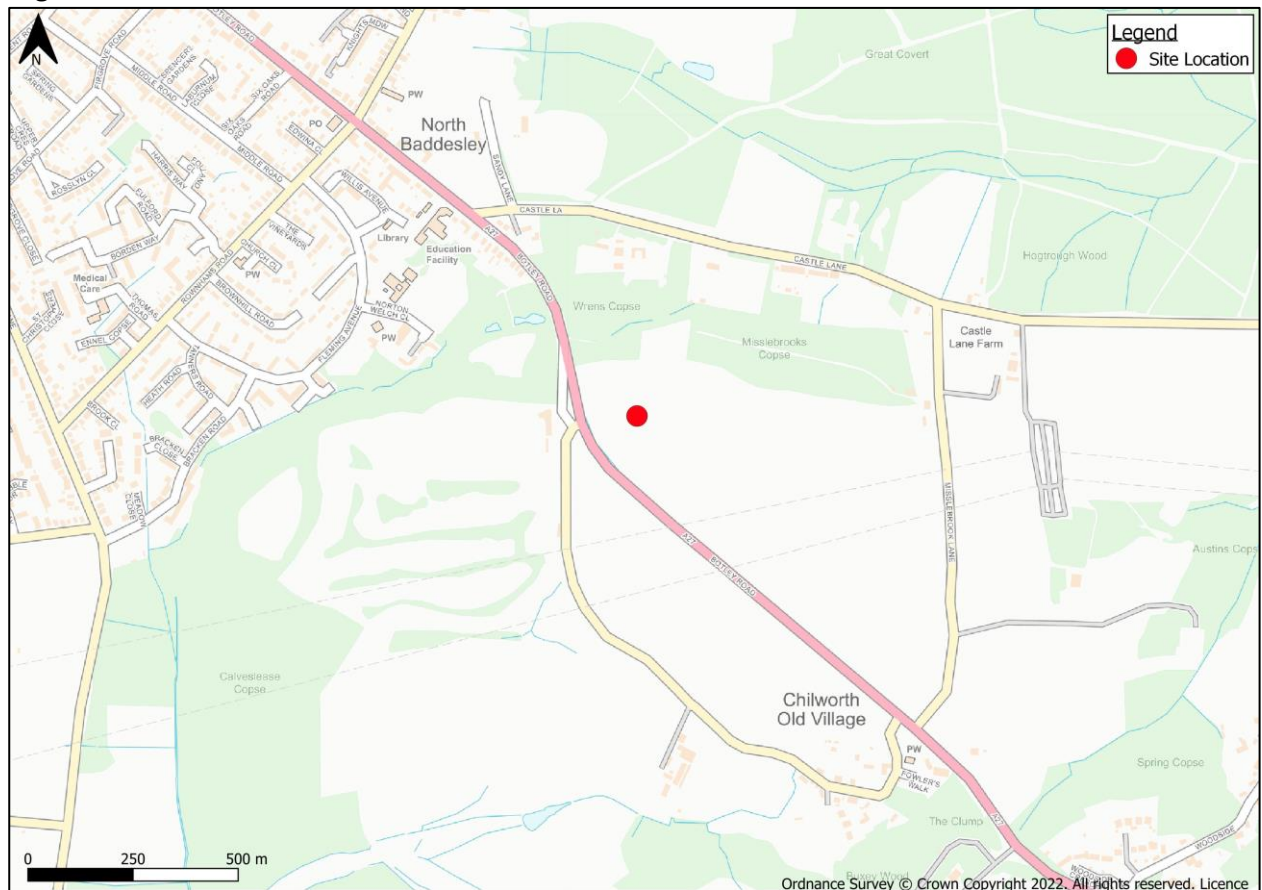
- 1.1 Vectos have been appointed by Boom Developments Ltd to provide a Construction Traffic Management Plan (CTMP) in relation to a proposed battery storage facility on Botley Road, Chilworth. The proposals consist of 60 battery storage units within the administrative boundary of Test Valley Borough Council, with Hampshire County Council acting as the Local Highway Authority. The site layout is attached at **Appendix A**.
- 1.2 The main aim of this CTMP is to manage all types of construction vehicle activity to and from the site during the construction period. The CTMP will improve the safety and reliability of construction related vehicle movement in relation to the site, minimise any potential impacts on local traffic conditions and mitigate any potential for adverse environmental impacts.
- 1.3 This CTMP has been prepared with the following objectives:
- To ensure that construction traffic does not have a detrimental effect on the surrounding public highway and local community;
 - To reduce the impact of construction traffic on the conventional network peak traffic hours; and
 - To identify measures to ensure safe and efficient movement of construction traffic.
- 1.4 This document also sets out the baseline conditions of the site, to demonstrate the appropriateness of the development location in the context of the construction phase. The nature of the development proposals as a battery storage facility means that traffic generation during operation would be limited to occasional maintenance and operational movements to and from the site, which would not be on daily basis. The peak traffic demand to/from the site would be during the construction phase, which this CTMP focuses upon.

2 Baseline Conditions

Site Location

- 2.1 The development is located off Botley Road (A27), Chilworth, approximately 500m south of North Baddesley. The site location is shown in **Figure 2.1**.

Figure 2.1: Site Location Plan



- 2.2 There is an established site access onto Botley Road, which previously served Solent Turf Supplies. This is the form of a simple priority junction with associated field gates.

Local Highway Network

- 2.3 The site access is located along Botley Road A27, a two-lane carriageway subject to a 50mph speed limit. The road is bordered by grass verges and hedges on either side of the carriageway. Botley Road runs in an east-west alignment from the M3 Junction 14 in the east (4km), to Romsey in the west (7km).

Collision Review

- 2.4 A Personal Injury Collision (PIC) review has been undertaken using the Crashmap online search tool, considering the highway network surrounding the site. This covers a five-year period 2017-2019, and is shown in **Extract 2.1**.

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Extract 2.1: Recorded Collisions (2017-2019)



Taken from Crashmap.co.uk

- 2.5 There are no recorded collisions at the site access within the study period. The two recorded collisions along Botley Road did not involve vulnerable road users (pedestrians and cyclists), or vehicles over 3.5 tonnes.
- 2.6 It is recognised that there are a cluster of collisions recorded at the Botley Road / Castle Lane junction. As demonstrated in **Section 4**, the development proposals will generate a marginal uplift in daily traffic, and furthermore the majority of vehicles routing to the site from the strategic road network will be from the east, avoiding the Botley Road / Castle Lane junction. Therefore, it is considered that the development proposals would not exacerbate any existing road safety issues.

3 Development Proposals and Access

- 3.1 The site layout is attached at **Appendix A**, and illustrates that the proposals will include 60 batteries, alongside 10 transformer units and inverters. The proposals also include three substations, a local supply transformer and two spare containers.

Site Access

- 3.2 The site access proposals are shown at **Drawing 226849_PD01**. This arrangement utilises the existing field gate access, with minor widening proposed.
- 3.3 The road is subject to a 50mph speed limit, and therefore 2.4m x 160m visibility splays are shown on **Drawing 226849_PD01**, in accordance with DMRB CD 109 guidance. This visibility is achievable within highway maintainable at public expense.
- 3.4 **Drawing 226849_PD01_AT01** demonstrates that the maximum legal length articulated vehicle can enter and exit the site. Whilst the vehicle does overrun into the adjacent running lane, this is a typical movement for larger HGVs, and clear forward visibility in either direction, as shown in **Figure 3.1**, means this manoeuvre can be undertaken safely.
- 3.5 The access road will be formed of gravel, and will run parallel to Botley Road in a northwest direction to the main site.

Figure 3.1: Site Access Visibility

To West



To East



Operative and Visitor Parking

- 3.6 All operative and visitor parking will be located within the curtilage of the site, and therefore no parking on the public highway will take place.

Traffic Regulation Orders

- 3.7 There are no Traffic Regulation Orders (TROs) within the vicinity of the site along Botley Road.

4 Construction Programme and Traffic Generation

Hours of Construction and Programme

4.1 The site construction hours are as follows:

- Non-noise Invasive Works (No heavy machinery or deliveries)
 - 07:30-18:30 Monday to Friday; and
 - 07:30-16:30 on Saturdays.
- Non-noise Invasive Works (Including heavy machinery and deliveries)
 - 08:30-17:30 Monday to Friday; and
 - 09:00-13:00 on Saturdays.

4.2 No work shall take place at any time on Sundays or Bank/Public Holidays.

4.3 The construction phase is forecast to last six months.

Construction Trip Generation

4.4 While the trip impact during operation is negligible, limited to occasional operation and maintenance vehicles, the construction of the battery plant will generate a higher level of movement to/from the site.

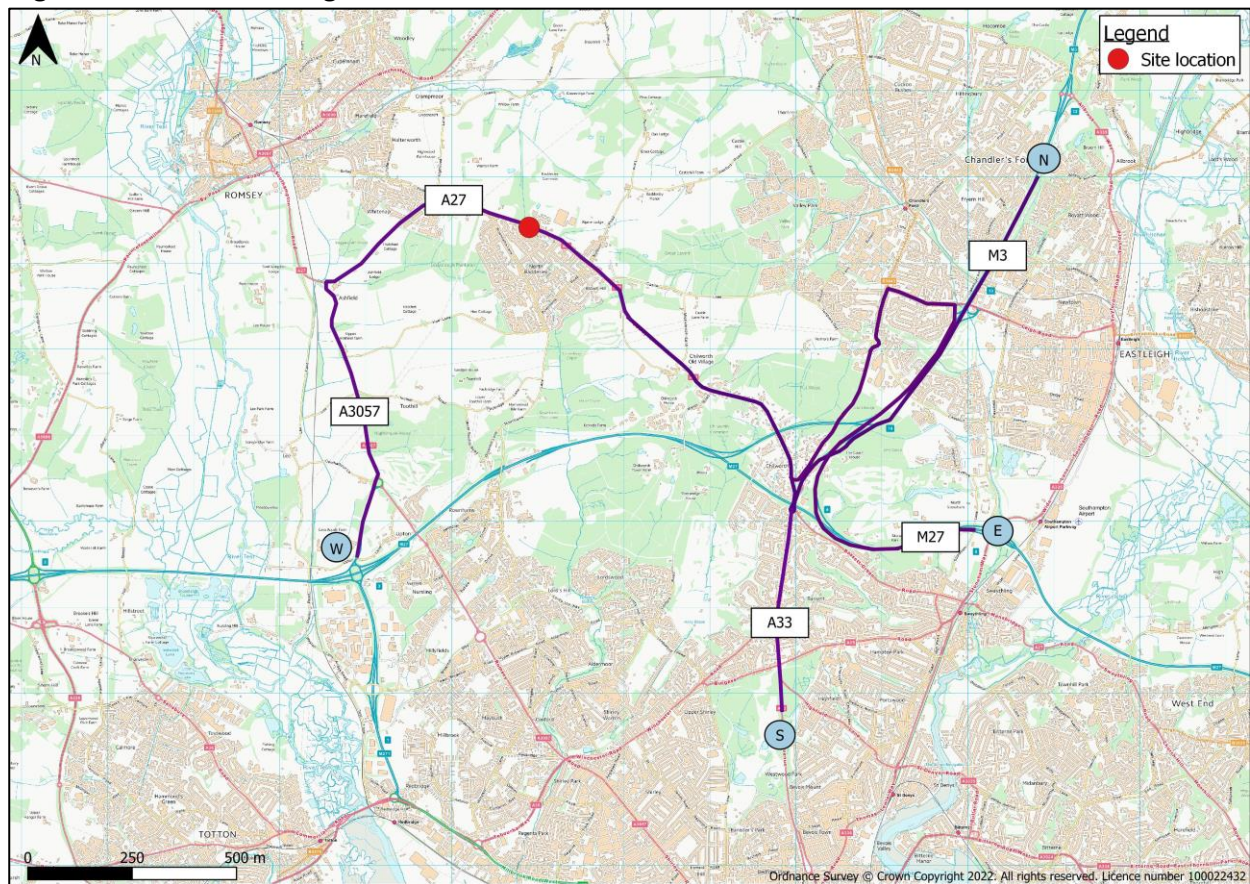
4.5 The site operators have confirmed the likely number of deliveries associated with construction, which is shown in **Table 4.1**.

Table 4.1: Estimated Construction Deliveries

Description	Estimated Deliveries	Vehicle Type
Containers of Batteries	60	16.5m articulated HGV
DNO Substation	3	16.5m articulated HGV
Inverter Deliveries	10	16.5m articulated HGV
Switchgear	3	16.5m articulated HGV
Transformers	10	16.5m articulated HGV
Ready mix concrete/pre-cast concrete	21	16.5m articulated HGV/Concrete Mixer
Consumables for Site	10	16.5m articulated HGV
Temporary Welfare Facilities	4	7.5t Rigid HGV
Generators	4	16.5m articulated HGV
Cranes for Installation of Battery Containers	2	16.5m articulated HGV
Site Road / Compound Construction Material	21	20t Tipper HGV
Miscellaneous Plant	10	16.5m articulated HGV
Spare Units	2	16.5m articulated HGV
Cabling	9	16.5m articulated HGV
Total	170	

- 4.6 In addition to the above, the following plant will be required on site during the construction period:
- 1 x JCB;
 - 1 x dumper truck;
 - 1 x telehandler;
 - 1 x crane;
 - 1 x roller; and
 - 2 x excavators
- 4.7 As shown in **Table 4.1**, the site will generate a total of 170 HGV trips during construction, or 340 two-way HGV trips. Construction on the site is expected to occur over a 6-month period, which equates to approximately 7 two-way HGV vehicle trips per week, or around one two-way HGV trips per day (based upon 5.5 working days per week). This increase in HGV movements would be imperceptible on the wider highway network.
- 4.8 There will be staff vehicle movements to and from the site throughout construction. The day-to-day volume of staff trips will fluctuate throughout the construction period, as the number of staff required on site will vary dependent on the activities being undertaken. The majority of staff are expected to arrive via private car or van. Following construction, staff movements to and from the site will be limited, with only occasional operation and maintenance visits being undertaken.
- 4.9 The appointed contractor at each stage will take all reasonable steps to ensure that construction traffic, where possible, travels to and from the site via the strategic road network (SRN) (i.e. M3, M27) so as to limit any effect on local roads. The appointed contractor will ensure that all suppliers are aware of this.
- 4.10 The construction traffic routes from the surrounding SRN links are illustrated in **Figure 4.1**. All construction traffic will arrive to the site primarily via the A27 Botley Road, A3057, A33, and M3. From the SRN, the preferred access route to the site is from the east via the A27, A33, M3 and M27. Southampton Docks can be accessed via the M27 and M271, approximately 9km south of the site.

Figure 4.1: HGV Routing Plan



Traffic Management Principles

4.11 The following traffic management principles will be followed:

- The Site Manager will take responsibility for deliveries to the site, ensuring that any disruption and/or nuisance to neighbouring properties or road users is minimised;
- The Site Manager will liaise with haulage companies relating to the routes to site, and note any width or height restrictions;
- The Site Manager will ensure that mitigation measures are adhered to, as to avoid mud and debris on the surrounding highway network. They will also implement road cleansing where appropriate;
- North Baddesley Parish Council and Chilworth Parish Council will be provided with the contact details of the Site Manager in the event any issues relating to vehicle movements to/from the site are raised by the public, as to quickly remedy the situation; and
- Where possible, on-site vehicles will be encouraged to turn off their engines where stationary, as to reduce noise and reduce exhaust pipe emissions.

Signage Strategy

- 4.12 There will be signs erected on Botley Road at the site access, which will highlight the site to drivers westbound and eastbound along Botley Road. The signage will be in accordance with, or similar to, Drawing P7301 of Part 3 of the Traffic Signs Manual Chapter 8, as shown in **Figure 4.2**.

Figure 4.2: Drawing P7301 ‘Works Access’



Vehicle Movements

- 4.13 The movement of all construction related vehicles will be monitored by the appointed contractor to ensure that it is carried out in accordance with the details contained within this CTMP.
- 4.14 It is envisaged that regular meetings will be held to discuss the construction of the site. Construction traffic management will be an agenda item at all regular meetings and anticipated delivery vehicle movements will be discussed. Any activities not undertaken in accordance with the details contained within this CTMP will be discussed and corrective action taken as appropriate.

Mitigation Measures

- 4.15 The effects of construction traffic will be carefully managed. The following measures will be implemented by the Contractor to ensure that any disruption is minimised.

Construction Hours

- 4.16 In the event there is localised congestion that may cause operational difficulties, there is the ability to restrict deliveries to:
- 09:00-15:00 Monday to Friday; and
 - 08:00-13:00 on Saturdays.

Wheel Washing and Road Cleaning

- 4.17 Vehicles exiting the site may inadvertently carry deposits of debris or mud, trapped on their tyres, out on to the surrounding highway network.
- 4.18 To ensure that this does not occur, a wheel-cleaning regime will be implemented throughout the duration of the contract.

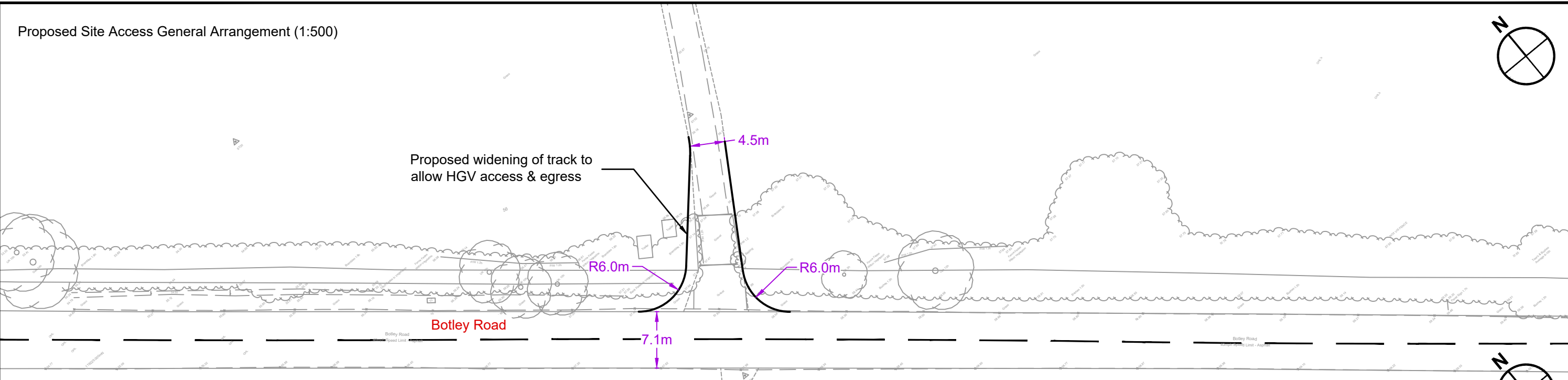
- 4.19 The wheel-cleaning operation will be carried out by an operative wearing appropriate Personal Protective Equipment, who will inspect vehicles leaving site, and clean wheels with a jet wash if required.
- 4.20 The contractor will sweep Botley Road as is reasonably necessary to remove any spoil or debris deposited on the highway resulting from the construction period.

Dust and Noise Suppression

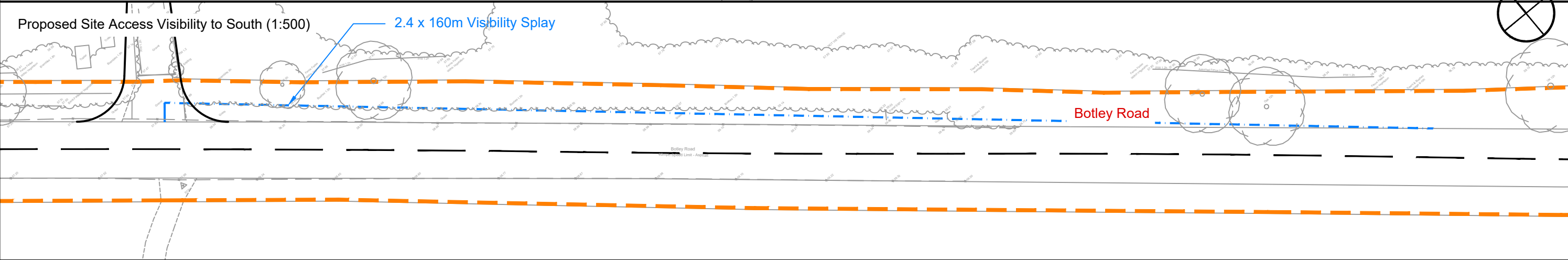
- 4.21 The contractor will take reasonable steps to minimise noise and suppress dust, dirt and debris generated by the scheme working to the relevant British Standards and best working practices. Some of these measures may include:
- The location of wind-break netting around loose debris such as materials, stockpiles near vehicle loading/unloading areas; and
 - Sheeting of vehicles carrying loose aggregate or other materials to and from the site to mitigate against materials being blown from the vehicles whilst travelling.

Drawings

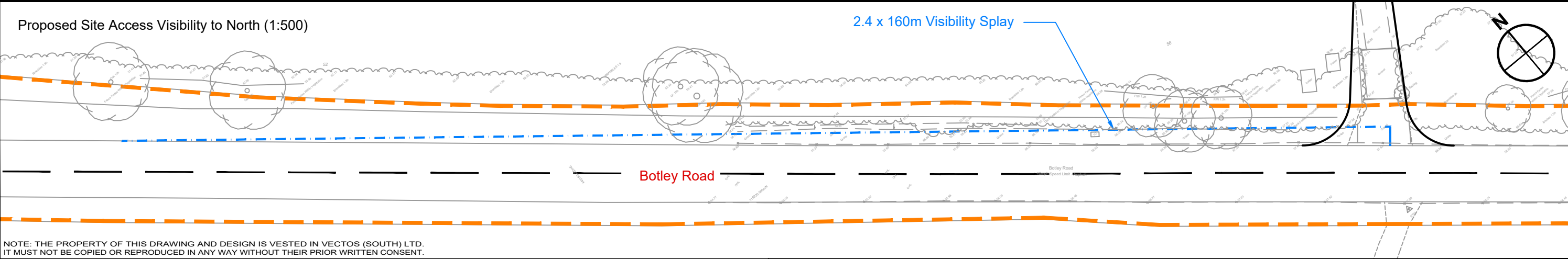
Proposed Site Access General Arrangement (1:500)



Proposed Site Access Visibility to South (1:500)



Proposed Site Access Visibility to North (1:500)



NOTE: THE PROPERTY OF THIS DRAWING AND DESIGN IS VESTED IN VECTOS (SOUTH) LTD.
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REV.	DETAILS	DRAWN	CHECKED	DATE
1				

- Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.
 2. White lining is indicative only.

Key:

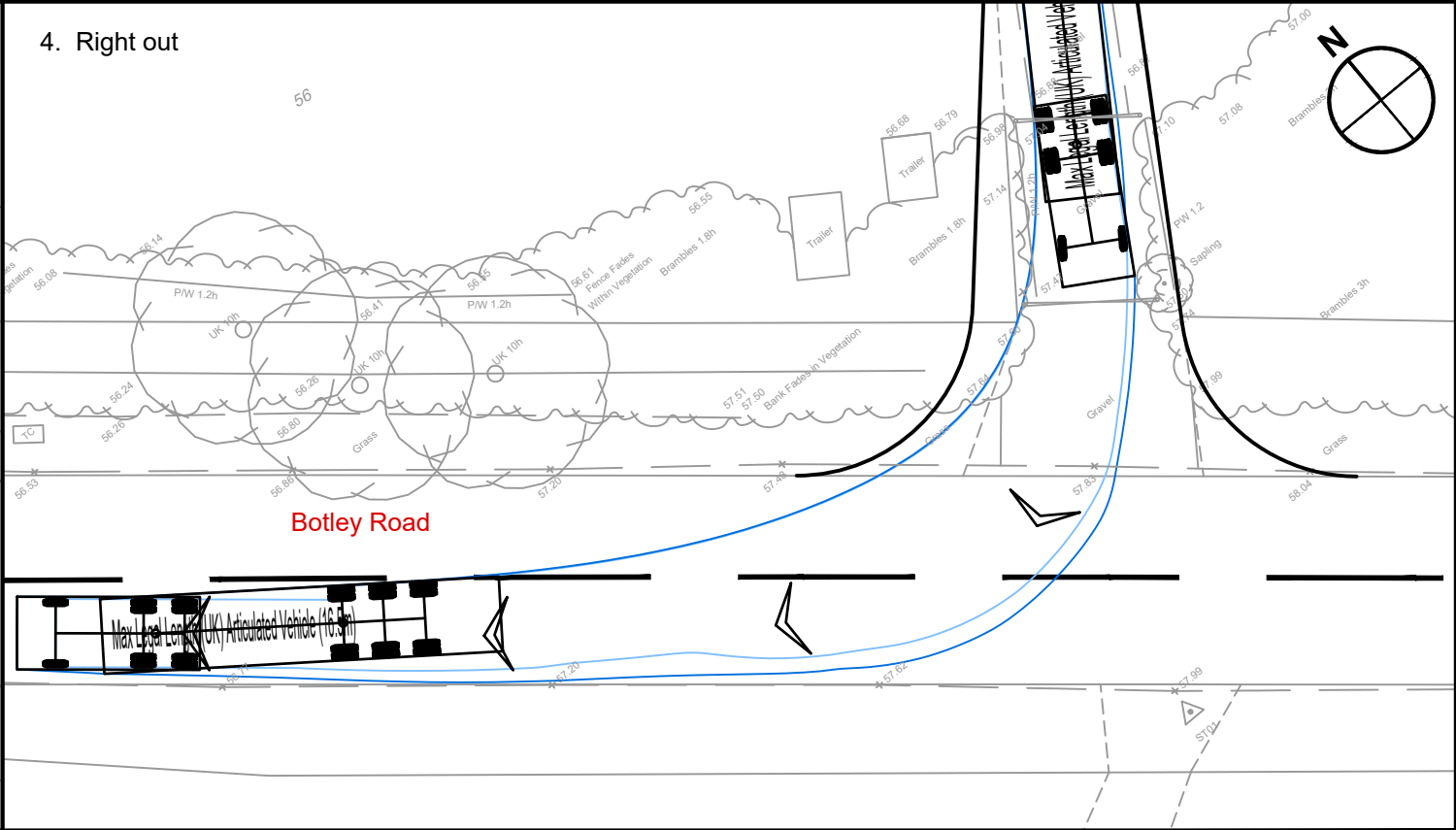
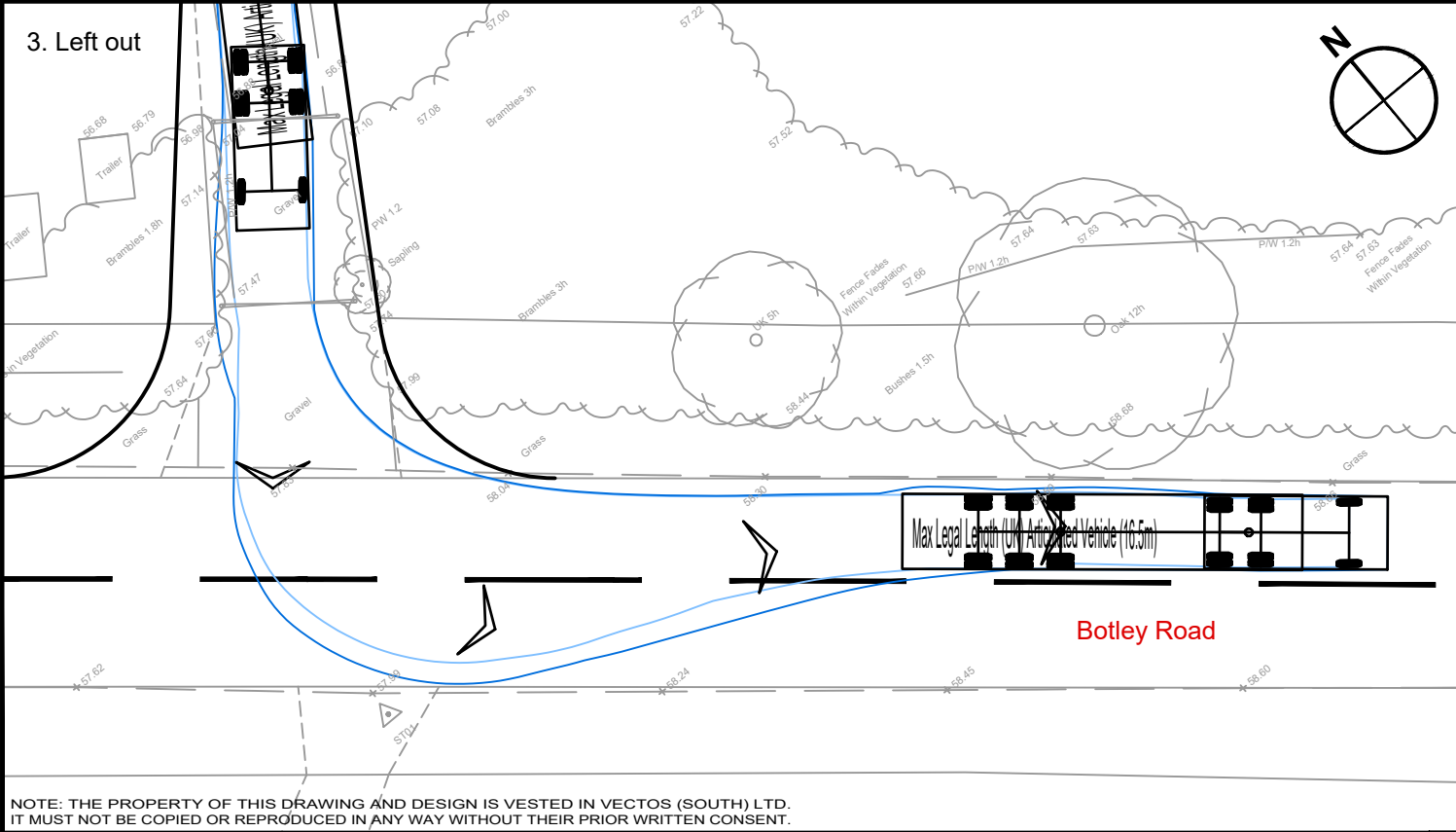
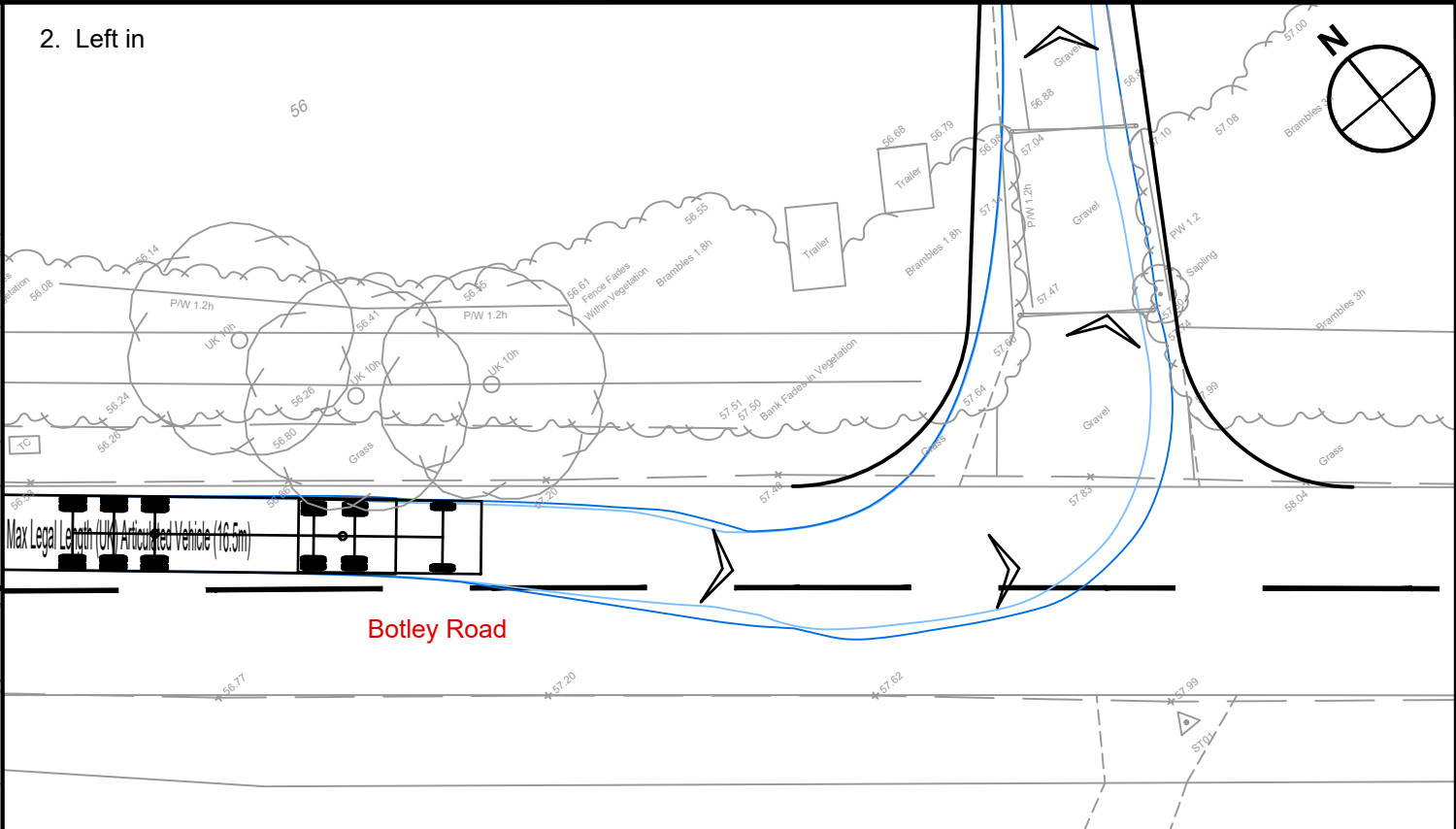
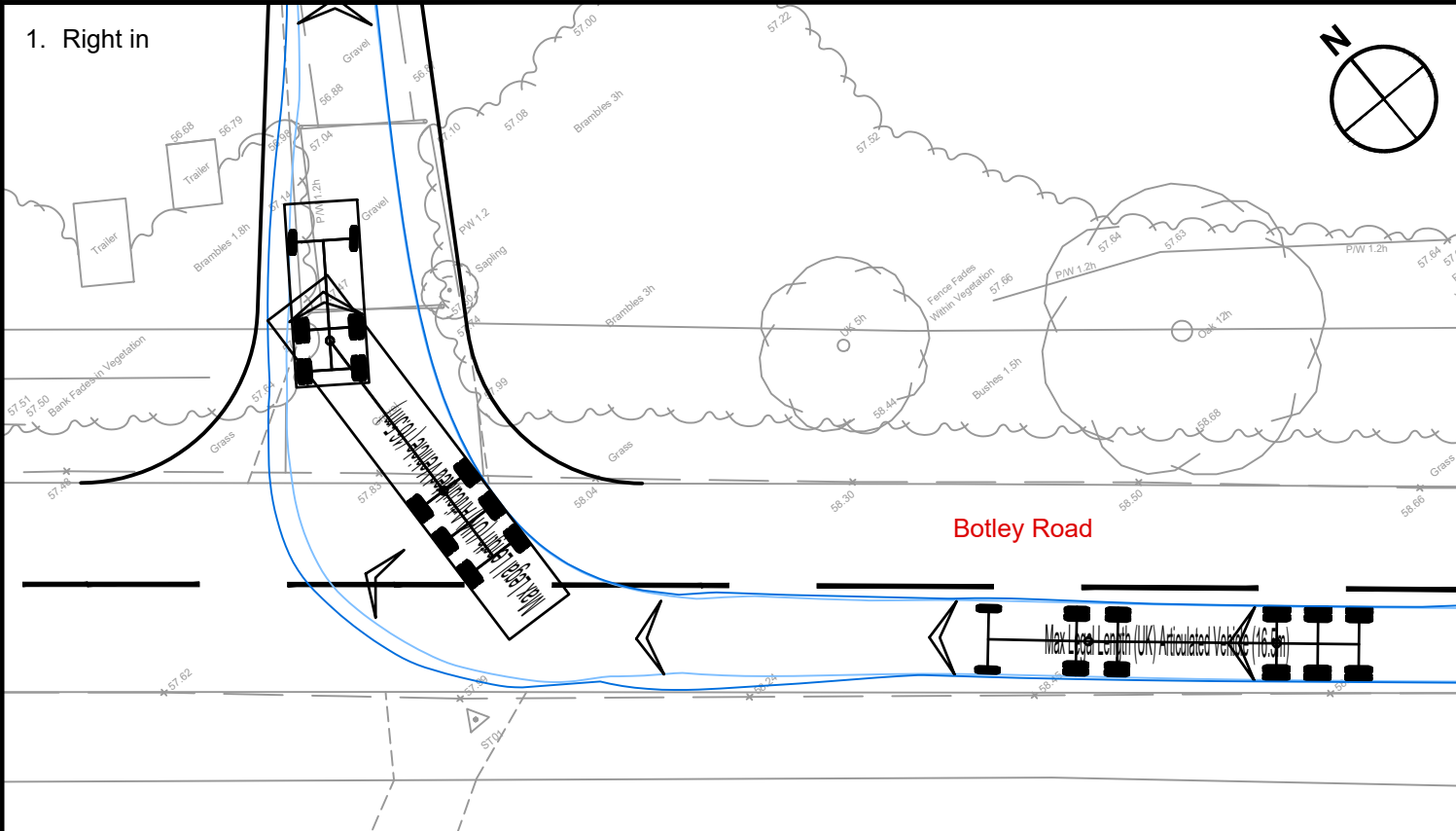
----- Highway Boundary (Obtained from Hampshire County Council)

STATUS:

INFORMATION ONLY

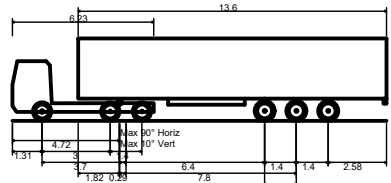
PROJECT: Botley Road, Chilworth			
DRAWING TITLE: Proposed Site Access General Arrangement & Visibility Assessment			
DRAWN: LJ	CHECKED: HF	DATE: 30.08.22	SCALES: 1:250/500 @ A3

CLIENT: Boom Developments Ltd	
vectos. PART OF SLR	
3rd Floor, Brew House, Jacob Street, Bristol, BS2 0EQ t: 0117 203 5240 e: enquiries@vectos.co.uk	
DRAWING NUMBER: 226849_PD01	REVISION: .



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REV.	DETAILS	DRAWN	CHECKED	DATE



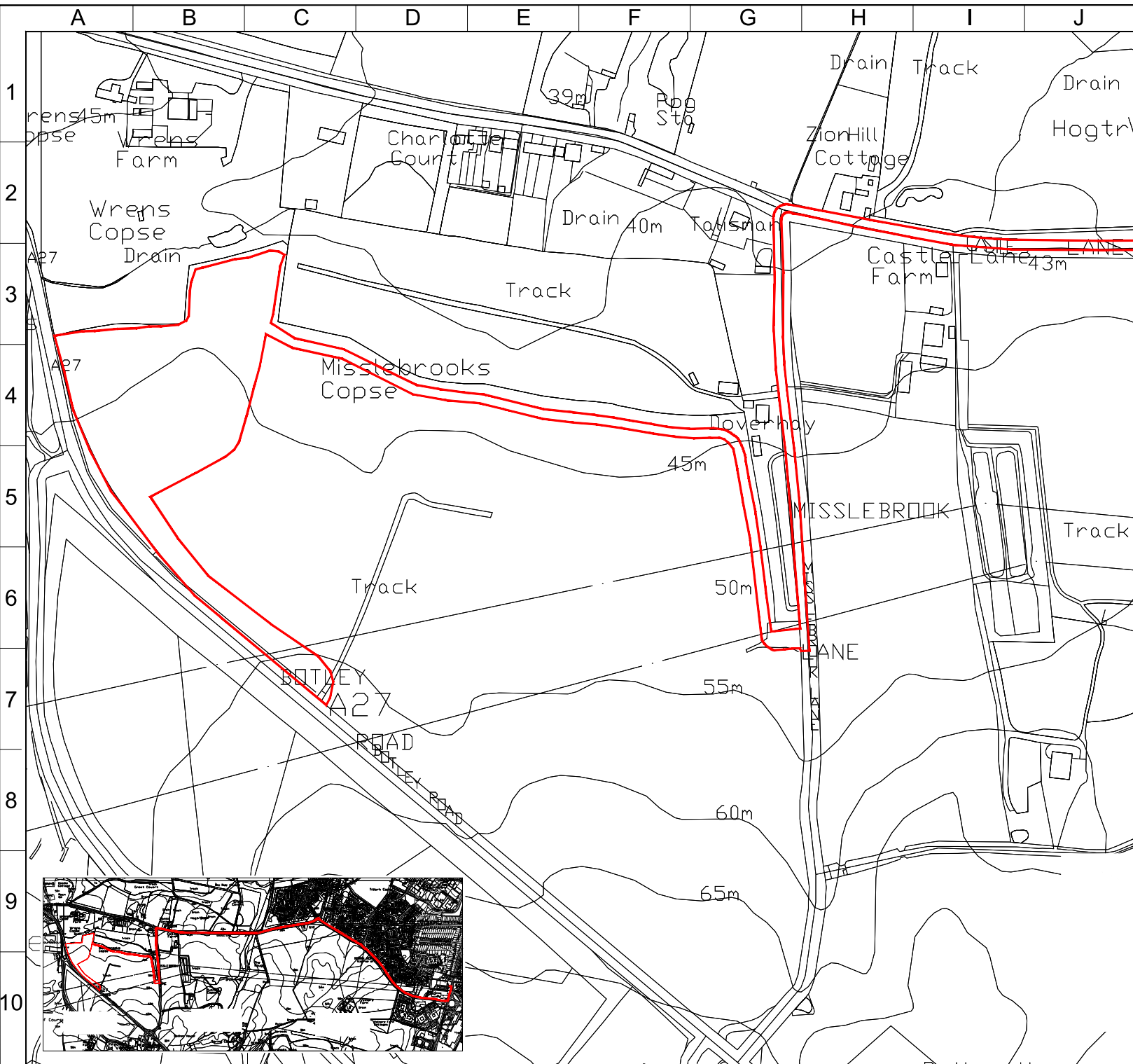
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.632m
Min Body Ground Clearance 0.396m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.870m

STATUS:
INFORMATION ONLY

PROJECT: Botley Road, Chilworth			
DRAWING TITLE: Swept Path Analysis 16.5m HGV Site Access			
DRAWN: LJ	CHECKED: HF	DATE: 30.08.22	SCALES: 1:250 @ A3

CLIENT: Boom Developments Ltd	
vectoros. PART OF SLR	
3rd Floor, Brew House, Jacob Street, Bristol, BS2 0EQ t: 0117 203 5240 e: enquiries@vectoros.co.uk	
DRAWING NUMBER: 226849_PD01_AT01	REVISION: .

Appendix A



MISSLEBROOKS SOLAR FARM PROJECT INFOBOX

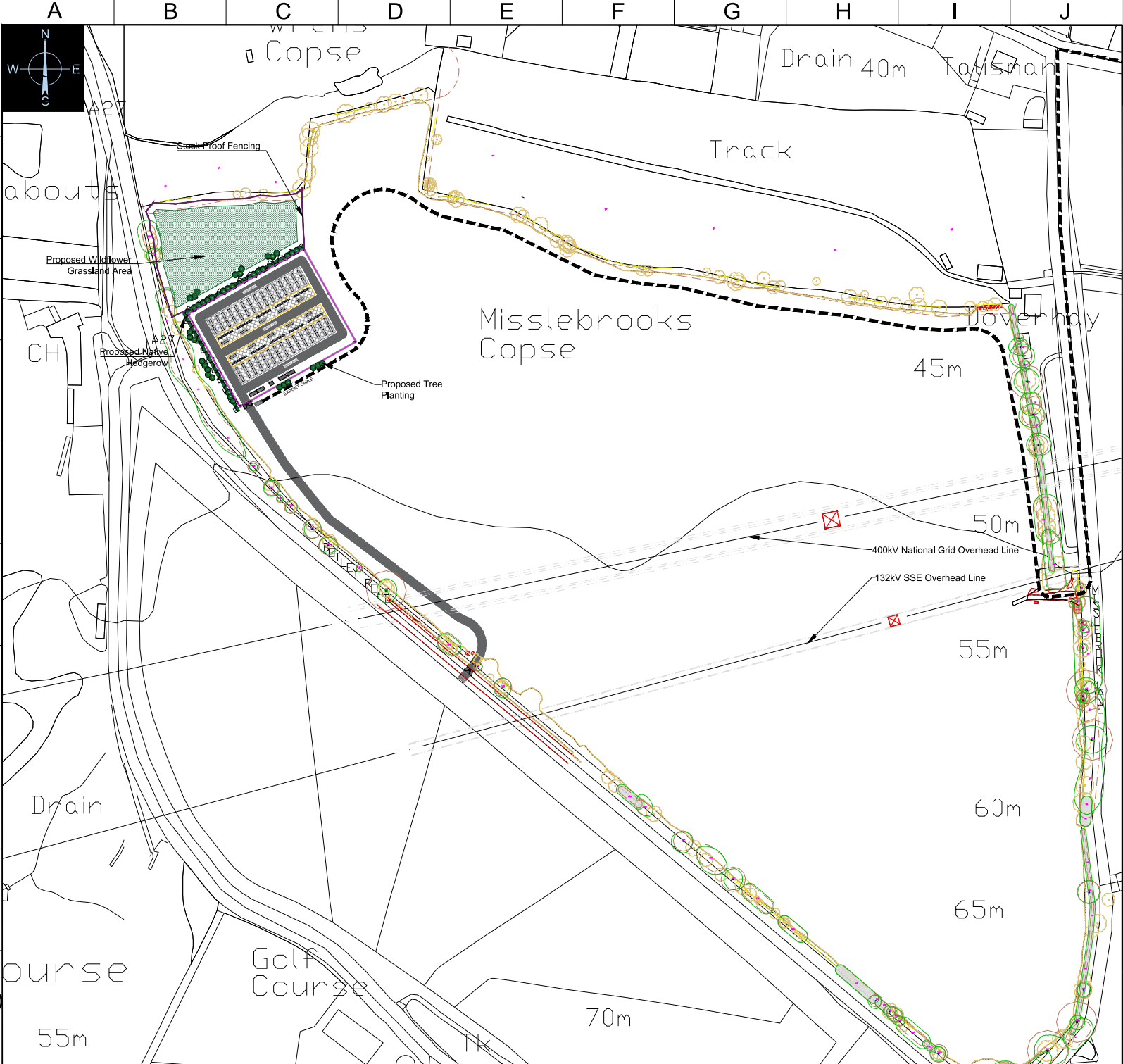
Application Boundary	
Site Area	16.91 Acres

Boom Power Ltd. Address	Project Address
Boom Power Ltd. Unit 5E Park Farm Chichester Road Arundel West Sussex BN18 0AG	Land at Misslebrook North Baddesley Hampshire SO52 9LY

Drawing Information			
V No	Revision Note	By	Date
1.0	Initial Drawing	SF	01/08/2022
2.0	Amended	SF	01/11/2022

Drawing Information	
Scale When Printed	1:1250 @ A0
Stage	ISSUED FOR REVIEW
Drawing Name	Location Plan
Drawing Number	A001.1
Designed By	Sian Fay
Sheet 1 of 1	

BUILD | OWN | OPERATE | MAINTAIN
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MISSILEBROOKS
BATTERY STORAGE OVERALL LAYOUT
PROJECT INFOBOX

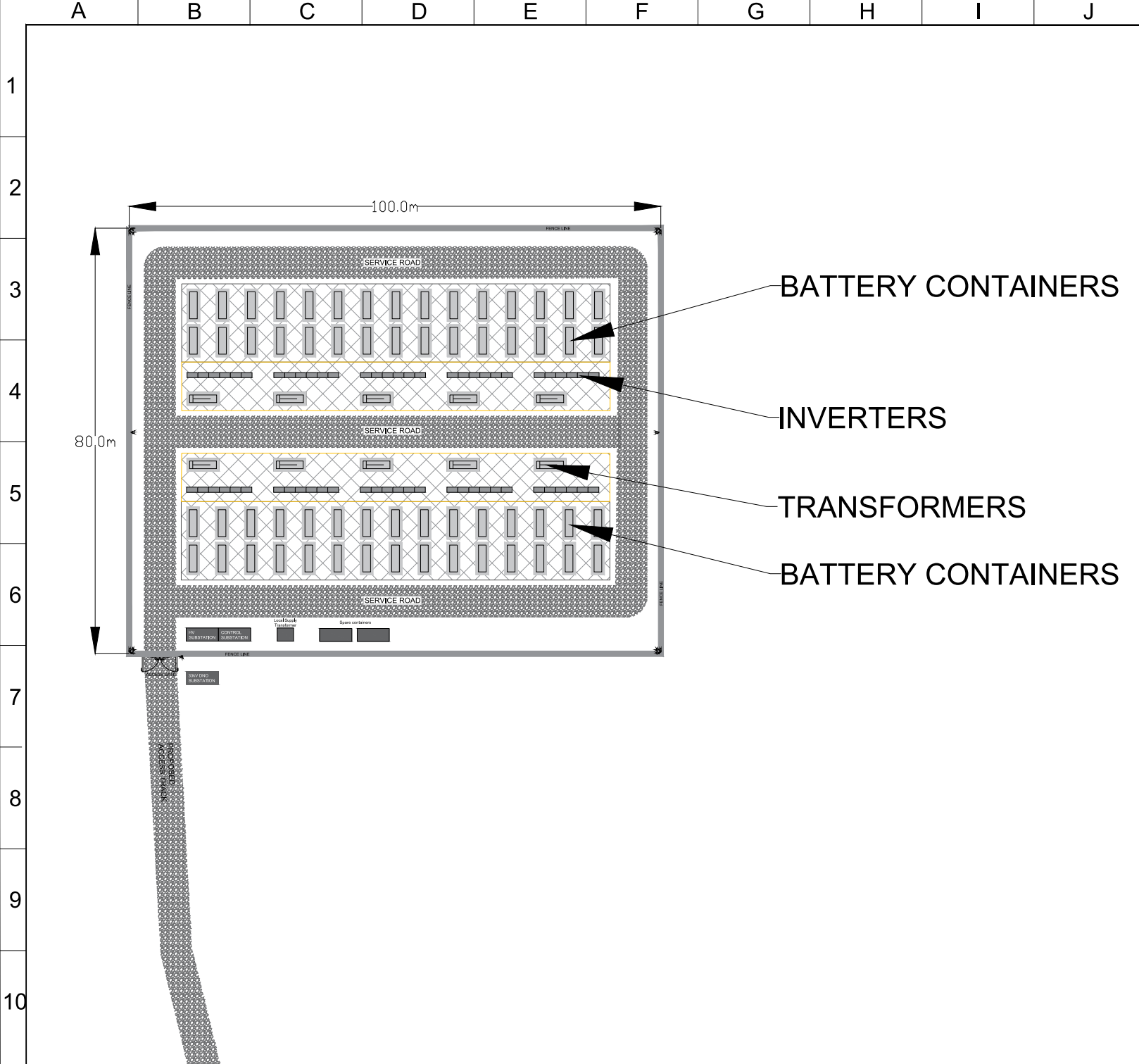
- SITE BOUNDARY
- INVERTERS
- TRANSFORMERS
- LOCAL SUPPLY TRANSFORMER
- BATTERY CONTAINERS
- SUBSTATIONS
- INTERNAL SERVICE ROAD
- PROPOSED ACCESS TRACK
- EXPORT CABLE ROUTE
- 400kV National Grid OHL
- 132kV SSE OHL

Boom Power Ltd. Address	Project Address
Boom Power Ltd, Unit 5E Park Farm Chichester Road Arundel West Sussex BN18 0AG	Land Between: Botley Road A27, Castle Lane & Missilebrooks Lane. SO52 9LY

Drawing Information			
V No	Revision Note	By	Date
2.1	FINAL	SH	13/12/2022

Drawing Information	
Scale	1:2500 @ A0
Stage	FINAL
Drawing Name	Battery Storage Overall Layout
Drawing Number	B201
Designed By	Sam Hogan
Sheet 1 of 1	

BUILD | OWN | OPERATE | MAINTAIN
BOOM-POWER.CO.UK



MISSLEBROOKS
BATTERY STORAGE LAYOUT
PROJECT INFOBOX

SITE BOUNDARY

INVERTERS

TRANSFORMERS

LOCAL SUPPLY TRANSFORMER

BATTERY CONTAINERS

SUBSTATIONS

INTERNAL SERVICE ROAD

PROPOSED ACCESS TRACK

EXPORT CABLE ROUTE

Boom Power Ltd. Address

Project Address

Boom Power Ltd,
Unit 5E Park Farm
Chichester Road
Arundel
West Sussex
BN18 0AG

Land Between:
Botley Road A27,
Castle Lane &
Misslebrooks Lane.
SO52 9LY

Drawing Information

V No	Revision Note	By	Date
2.1	FINAL	SH	13/12/2022

Drawing Information

Scale	1:50 @ A3
Stage	FINAL
Drawing Name	Battery Storage Overall Layout
Drawing Number	B201.1
Designed By	Sam Hogan
Sheet 1 of 1	

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