



Proposed Peaking Power Generation Plant ,

Blendworth, Hampshire

Transport Statement

**On behalf of
Rydberg Development
Company Limited**

September 2016

INTERMODAL TRANSPORTATION

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IT1663



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1 INTRODUCTION

- 1.1 Intermodal Transportation Ltd (ITL), an independent consultancy specialising in highway engineering and transportation planning was appointed by Rydberg Development Company Limited to produce a Transport Statement (TS) report in conjunction with the planning application for the provision of a Peaking Power Generation Plant on land to the east of the A3(M) and Waterloooville, Hampshire, near to the Forest of Bere. The land is currently undeveloped greenfield.
- 1.2 In producing this report ITL have emailed the proposed scope of the study to Officers at Hampshire County Council (HCC).
- 1.3 In accordance with the aforementioned scoping email the following issues have been investigated and are included as part of this study: -
- A description of the local road network in the vicinity of the site;
 - A description of the development proposal;
 - The adequacy of the proposed vehicular access arrangements including the achievable visibility splays;
 - The likely level of traffic attracted to the proposal; and
 - The routing of Heavy Goods Vehicles (HGV) to / from the site during the construction phase of the project.



2 SITE LOCATION AND LOCAL ROAD NETWORK

Site Location

- 2.1 The site is located approximately 1.47km, as the crow flies, south west of the B2149 outside of woodland maintained by the Forestry Commission, within East Hampshire District, along the southern coast of England. To the south lies Bell's Copse and to the east Havant Thicket. The site itself is within Blendworth Common.
- 2.2 The site is situated within open land to the west of Havant Thicket. Further westwards of the site flows an unnamed watercourse and the location of the A3(M), as it heads northwards from Langstone Harbour towards Horndean. Southwards, beyond Bell's Copse, is Leigh Park an area of Havant, a town in south eastern Hampshire. To the south east of the site is located Staunton Country Park. The site location in the local and wider context is shown on the plan IT1663/TS/01 to the rear of this report.

Local Road Network

- 2.3 As previously mentioned the development site lies to the south east of Blendworth Common and to the west of Havant Thicket. Whilst there are tracks in the vicinity of the site, these are owned by the Forestry Commission and therefore the development would include a new access track to be constructed from the nearby B2149 located to the east of the site. The new track would be utilised by construction traffic during the construction phase of the Peaking Power Generation Plant, and for the permanent access for general maintenance activities. The HGV access track would enter the site from the north and head in a largely north eastwards direction, adjacent to Havant Thicket, until reaching the field boundary, at a point close to the northerly point of Horsefoot Hill, whereby it would veer towards the north-west, towards a derelict racing circuit. From this point the track heads directly north east again to reach the B2149, from which a new access junction would be created.

Plate 2.1: B2149 Site access facing south east



Plate 2.2: B2149 Site access facing north west





- 2.4 Plates 2.1 and 2.2 show the B2149 in the vicinity of the proposed new access to serve the site. The visibility splays, discussed in detail in section 3 of this TS report, have been plotted and can be seen on the plan IT1663/TS/02 located at the rear of this report.
- 2.5 The B2149 runs on an approximately north west (Junction 2 of the A3(M)) to south east alignment (Rowlands Castle and Red Hill), adjacent to the proposed site access. The road is straight and reasonably level in alignment in the vicinity of the proposed site access and is subject to the national speed limit of 60 mph until reaching Rowlands Castle, whereby it is restricted to 30mph.
- 2.6 The B2149 links the A3(M) to the east of Horndean (north of the site) with the A259 south coast route in Emsworth to the south. In the vicinity of the proposed site access junction the B2149 is rural in character with hedgerows lining the road at the back of roadside verges. In the vicinity of the proposed site access the road has a carriageway width of approximately 6.8m, which is suitable for the passage of large HGV traffic.
- 2.7 It is expected that vehicles would access the site from the northwest, utilising Junction 2 of the A3(M), owing to its optimal accessibility, which is approximately 1km from the proposed site access junction and track. The A3(M) provides access from the south coast and the A27 trunk road, north to the M25 London orbital motorway at Guilford. It is therefore an appropriate route for construction traffic to approach the site.



3 PROPOSED DEVELOPMENT

- 3.1 The proposed development consists of the construction of Peaking Power Generation Plant on land to the east of the A3(M) and west of the B2149, east of Waterlooville and north of Havant in Hampshire. The Blendworth Common site would be provided with 10 gas engine power plants capable of providing 20MW of electrical power. The site is located to the south-west of a medium pressure gas main, which would provide the fuel to power the engines.
- 3.2 The site is situated some 2.5km from the access point to the B2149 Manor Lodge Road and therefore a hardcore track would be constructed to link the power station site with the public road using existing tracks where available. The access to the public road would use a new gated access junction onto the B2149. Access into the site compound would be via a new access gate on the eastern edge of the site. The access gate from the public highway would be set back approximately 16m from the western channel of the B2149, and the access would be approximately 7.5m wide between the gate posts. The access apron would be constructed from concrete up to the gate and the surface of the track beyond that point would be made from unbound hardcore or crushed stone.
- 3.3 When complete, the site would be bounded by an acoustic fence, designed to mitigate noise pollution for the surrounding settlements. The access track from the B2149 would be a permanent un-bound track to be used in the future to allow access to the site for maintenance purposes.

Plate 3.1: Proposed Site access location



- 3.4 There would be two distinct phases of development at the site in respect to traffic movements. The first phase would involve the earthworks and provision of the power station compound together with the unbound track required to access the site by vehicle. The second phase would involve the delivery of the power generation plant and



- gas engines. The first phase would involve multiple movements of four axle rigid tipper trucks taking spoil away from the site and delivering the hardcore. The second phase would involve a much smaller number of large articulated HGVs accessing the site.
- 3.5 During the construction phase of the project relatively frequent HGV access to the site would be required. However, once operational, HGV access to the site would be very infrequent with only 1 rigid oil tanker per annum anticipated. Traffic levels at the site are discussed in section 4 of this report.
- 3.6 AutoTrack swept paths were produced to show an adapted maximum legal articulated Lorry accessing the site from the B2149. During deliveries of the gas engines, a max legal articulated HGV carrying an abnormal load, each gas engine would be up to 15.25m long and 3.3m wide, would need to be accommodated. Further details of these movements are outlined in section 4 along with the drawings contained at Appendix B. It is proposed that the HGVs would access / egress the site from the north-east side of the site via the B2149 and from Junction 2 of the A3(M), since this route provides direct access from the trunk road network.
- 3.7 Visibility splays of 2.4 x 215m would be achievable at the proposed site access junction with the B2149, which meets the full Design manual for Roads and Bridges (DMRB) standard for a 60mph road. In the vicinity of the site the B2149 is straight and relatively level in alignment and only trimming of some vegetation may be required to maintain the required visibility splays.
- 3.8 As stated above there would be 10 gas engines located at the site. The site is located comfortably in excess of 600m from the nearest residential properties located in Waterloooville on the west side of the A3(M), meaning that there is little risk of disturbance to local residents.
- 3.9 Within the site boundary, there would be a 4.5m acoustic fence, designed to mitigate noise pollution for the surrounding settlements, while the engines would be located on the north side of the site, furthest from the nearest residential properties. It is proposed that the entire site area and access road would be surfaced in hardcore.
- 3.10 The proposed site layout is shown on the plan at Appendix A.
- 3.11 Swept paths are also included at Appendix B demonstrating that the rigid oil tanker delivery vehicle could acceptably access / egress the site.
- 3.12 Drawing IT1663/TS/02 shows the layout of the proposed site access junction including the temporary widening during the construction phase.



4 TRAFFIC ATTRACTION

Construction Phase

- 4.1 Traffic levels attracted to the site during the construction phase of the project would be significantly higher than the very modest operational phase traffic flows.
- 4.2 The construction phase would last for a maximum of 6 months and as a worst case there are likely to be 5 – 10 construction workers present at the site.
- 4.3 Table 4.1 summarises the various stages of the construction phase of the project and provides an indication of the likely HGV movements associated with each stage.



Table 4.1: Construction phase summary

Stage	Duration	Total Number of HGV Movements	Average Number of Daily HGV Movements
Delivery of earth moving plant	Beginning and end of site leveling / importation of hardcore	2 HGVs carrying earthmoving plant in at start of period and 2 HGVs out at end of period	Less than 1 per day
Initial leveling of site and removal excavated material (if required)	6 weeks (33 working days)	Assumed 80% of hardcore deliveries – approximately 712 HGV tipper loads	42 two-way HGVs per day
Importation of Hardcore	6 weeks (33 working days)	8,900m ³ of hardcore - 890 HGVs in / 890 HGVs out	54 two way HGVs per day
Delivery of gas engines	2 to 3 days	9 HGV arrivals and 9 HGV departures plus 1 crane arrival	10 two way HGV movements
Delivery of other ancillary plant	1 to 2 days	10 HGV arrivals and 10 HGV departures	20 two way HGV movements
Delivery of fence and gate	1 to 2 days	8 HGV arrivals and 8 HGV departures	16 Two way HGV Movements

- 4.4 In addition to the above, as a worst case there would be 10 private vehicle arrivals and 10 private vehicle departures per day associated with construction staff trips to / from the site, although it is considered that in reality that number would be lower as some construction staff would be likely to travel together. Finally, towards the end of the construction period it is possible that there would be 2 to 3 light van movements per day associated with the delivery of smaller items.



- 4.5 It can be seen from Table 4.1 above that as a worst case during the construction phase of the project the development proposal would be likely to attract 96 two way HGV movements per day (assuming the spoil removal and hardcore deliveries occur simultaneously). Over a 9 hour working day that would only equate to a worst case hourly average of 11 HGV arrivals and 11 HGV departures. Furthermore, the peak level of HGV activity would only occur for only the first 6 weeks of the project.
- 4.6 In terms of light vehicle movements it is demonstrated above that typically the proposal would attract a worst case of 10 light vehicle arrivals and 10 light vehicle departures per day during the construction phase of the project.
- 4.7 Table 4.2 sets out a standard severity rating criteria utilised for the environmental assessment of traffic effects of development proposals. On the basis of the severity rating criteria set out in Table 4.2 it can be seen that the proposal would have a minimal effect on the operation of the local road network during the construction phase of the project and would be classified as 'Minor' in terms of impact.



Table 4.2: Traffic Impact Severity Rating Criteria

Impact Magnitude				
Subject Area	Impact Significance			
	Major	Moderate	Minor	Negligible
Vehicular traffic from proposed development	Considerable impact (by extent, duration or magnitude) or more than local significance or in breach of recognised acceptability, legislation, policy or standards (greater than 60 % change).	Limited impact (by extent, duration or magnitude) which may be considered significant (30 % to 60 % change).	Slight, very short or highly localised impact of no significant consequences (10 % to 30 % change).	The bearing of the impact is too small to be measured meaningfully (0 to 10%).
Construction related traffic	Construction traffic flows greater than development traffic flows.	Construction traffic flows greater than 100 HGVs per day on major road network, or greater than 25 HGVs per day on minor roads.	Construction traffic flows less than 100 HGVs per day on major road network, or greater than 25 HGVs on minor roads.	Construction traffic flows less than 25 HGVs per day on all roads.

Operational Phase

- 4.8 The proposed Peaking Power Generation Plant is essentially an automated facility and as such traffic levels to / from the site once the facility is operational would be very low. In that regard, unless the facility breaks down, only a once weekly routine maintenance visit is likely. That visit would be undertaken in a light vehicle.
- 4.9 As indicated earlier in this report, the only other visit likely once the site is operational would be an annual oil delivery visit by a small HGV tanker.
- 4.10 It is therefore concluded that the proposal would have a minor impact on the operation of local road network during the construction phase and a negligible effect once it is operational.



5 OTHER TRANSPORT ISSUES

Car Parking

- 5.1 Post construction and during operation of the Peaking Power Generation Plant, only site maintenance vehicles would be required to access the site. To accommodate these vehicles, adequate on-site parking spaces would be provided to meet the demand. Parking spaces would be designed in accordance with the required standards such that vehicles can park, turn around and exit the site safely onto the highway network in forward gear.



6 CONCLUSIONS

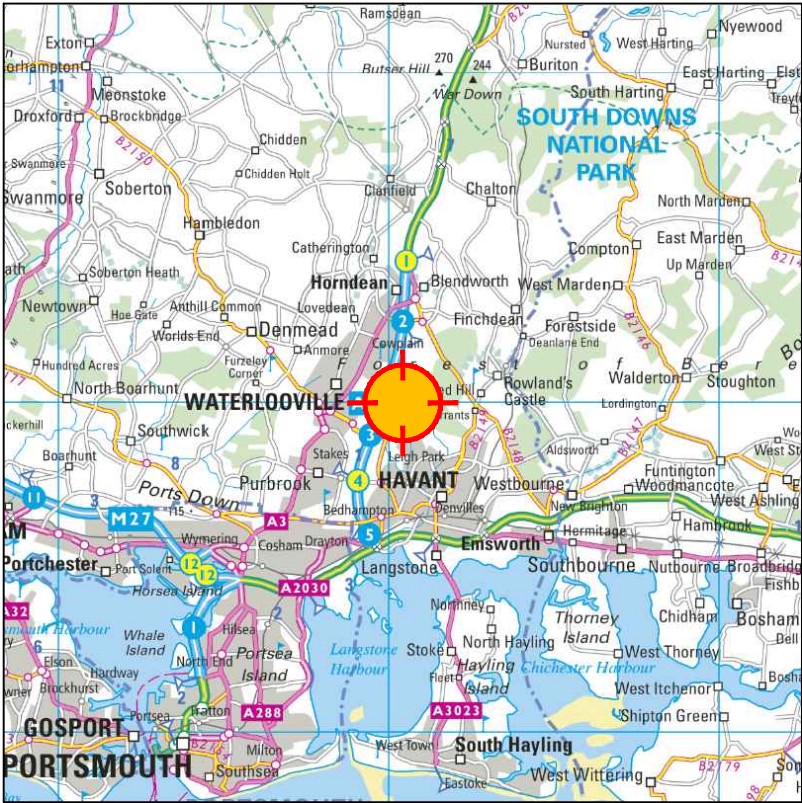
- 6.1 Intermodal Transportation Ltd (ITL), an independent consultancy specialising in highway engineering and transportation planning was appointed by Rydberg Development Company Limited to produce a Transport Statement (TS) report in conjunction with the planning application for the provision of a Peaking Power Generation Plant on land to the north of Havant, east of the A3(M) and west of the B2149 Manor Lodge Road at Blendworth Common in Hampshire. The site is located on a greenfield, undeveloped site.
- 6.2 In producing this report ITL have emailed the proposed scope of the study to Officers at Hampshire County Council (HCC).
- 6.3 The proposal would be accessed via a new site access junction from the B2149, designed to accommodate the largest construction related HGV traffic (articulated low-loader carrying the gas engines). It is also demonstrated in section 3 of this report that acceptable levels of visibility are achievable at the proposed access junction.
- 6.4 It is proposed that the construction related HGV traffic would be routed to / from the north-west, i.e. from the A3(M) trunk road, via the grade separated junction with the B2149 (Dell Piece and Manor Lodge Road). The proposed site access is located only 1km from the A3(M) junction and therefore construction traffic would not have to travel long distances on local traffic routes to reach the site.
- 6.5 Traffic levels attracted to the site during the construction phase of the project would be significantly higher than the very modest operational phase traffic flows. However, it is demonstrated in section 4 of this report that even during the busiest part of the construction phase of the project, removal of excavated spoil and deliveries of hardcore to form the access track and site compound, the proposal would only be likely to have a 'minor' effect on the operation of the local road network.
- 6.6 It is therefore concluded that the provision of a Peaking Power Generation Plant at the site should be considered as acceptable from a highways and transportation perspective.



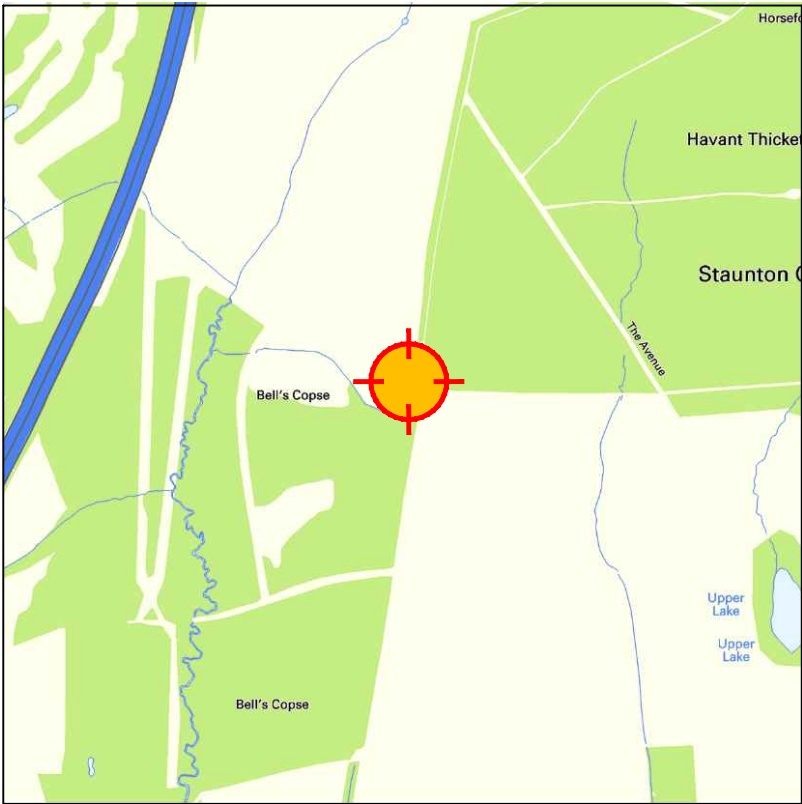
DRAWINGS



WIDER CONTEXT



LOCAL CONTEXT



 SITE LOCATION	IT Project: PROPOSED PEAKING POWER GENERATION PLANT, BLENDWORTH, HAMPSHIRE		Drawing Title: SITE LOCATION IN THE LOCAL AND WIDER CONTEXT	
Rev	Description	Date	Rev	-
Client: RYDBERG DEVELOPMENT COMPANY LIMITED		Drawn By: BK	Approved By: JB	Drawing No: IT1663/TS/01
A4		Notes: Dimensions should not be scaled from this drawing. The contents of this drawing are confidential. should you receive this drawing in error please return it to Intermodal Transportation at the address printed.		Date: AUG 2016
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				Scale: NTS


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2.4m x 155m
Visibility splay Left

Permanent concrete
access apron

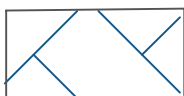
Hardcore access road

2.4m x 155m
Visibility splay Left

Key:



New permanent kerbline



Temporary access additional access
Hardcore)

IT Project:
**PROPOSED PEAKING
POWER GENERATION
PLANT, BLENDWORTH,
HAMPSHIRE**

Rev:

-

Drawing Title:
**SITE ACCESS JUNCTION
LAYOUT**

Sheet 1 of 1

Rev Description Date
Client:
**RYDBERG DEVELOPMENT
COMPANY LIMITED**

Drawn By:
BK

Approved By:
SW

Drawing No:
IT1663/TS/02

CAD File:
IT1663_TS_02.dwg

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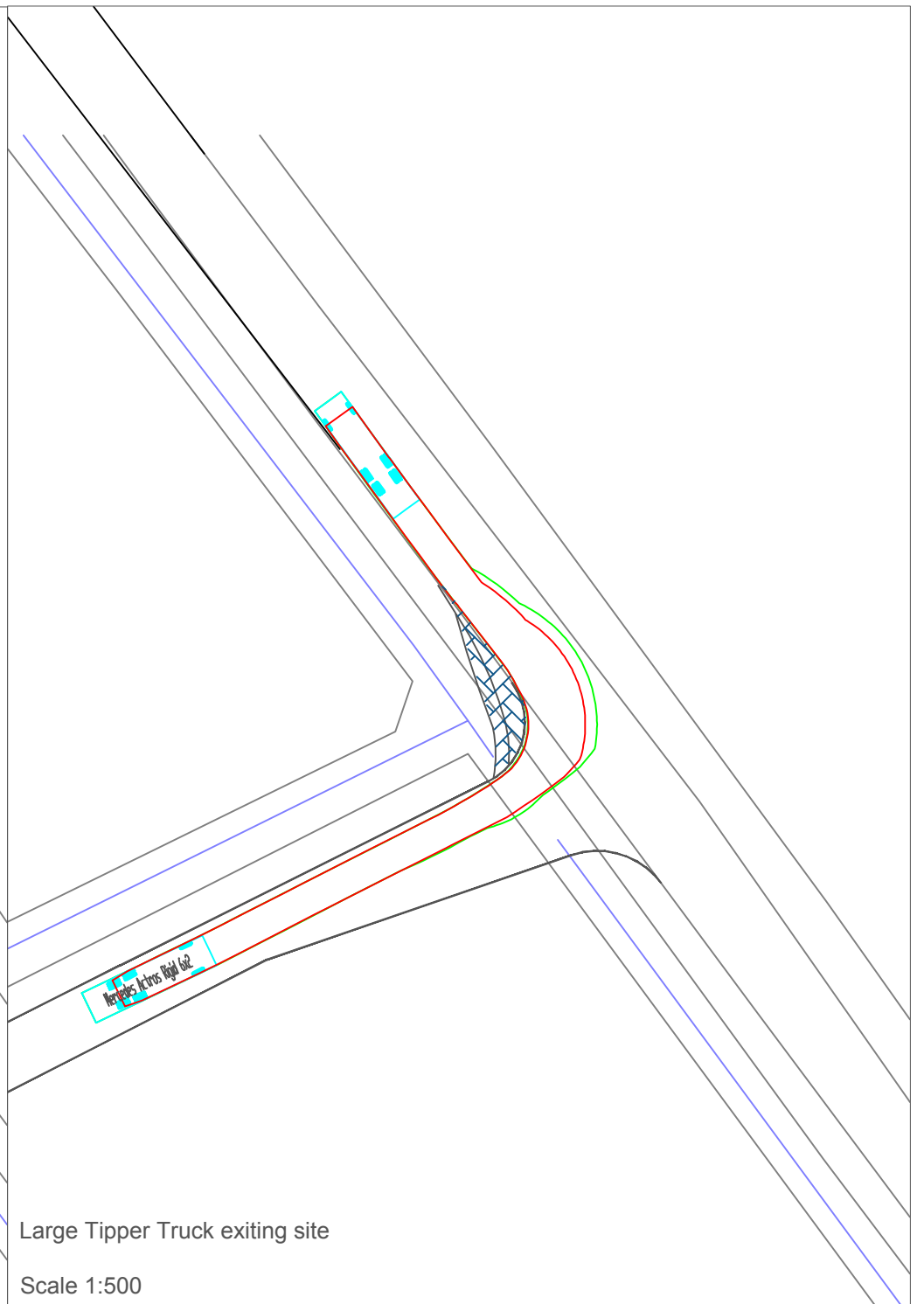
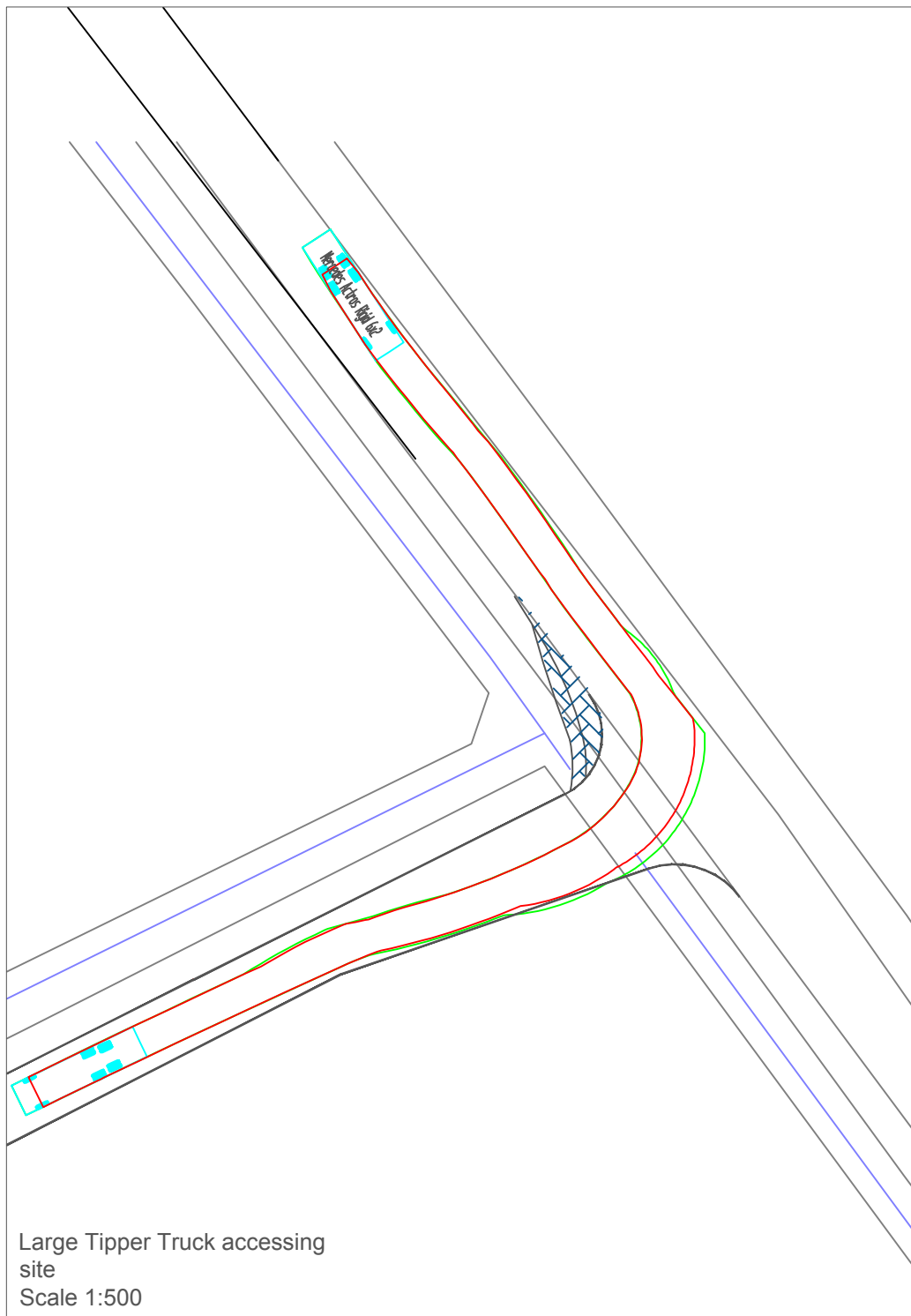
APPENDIX A

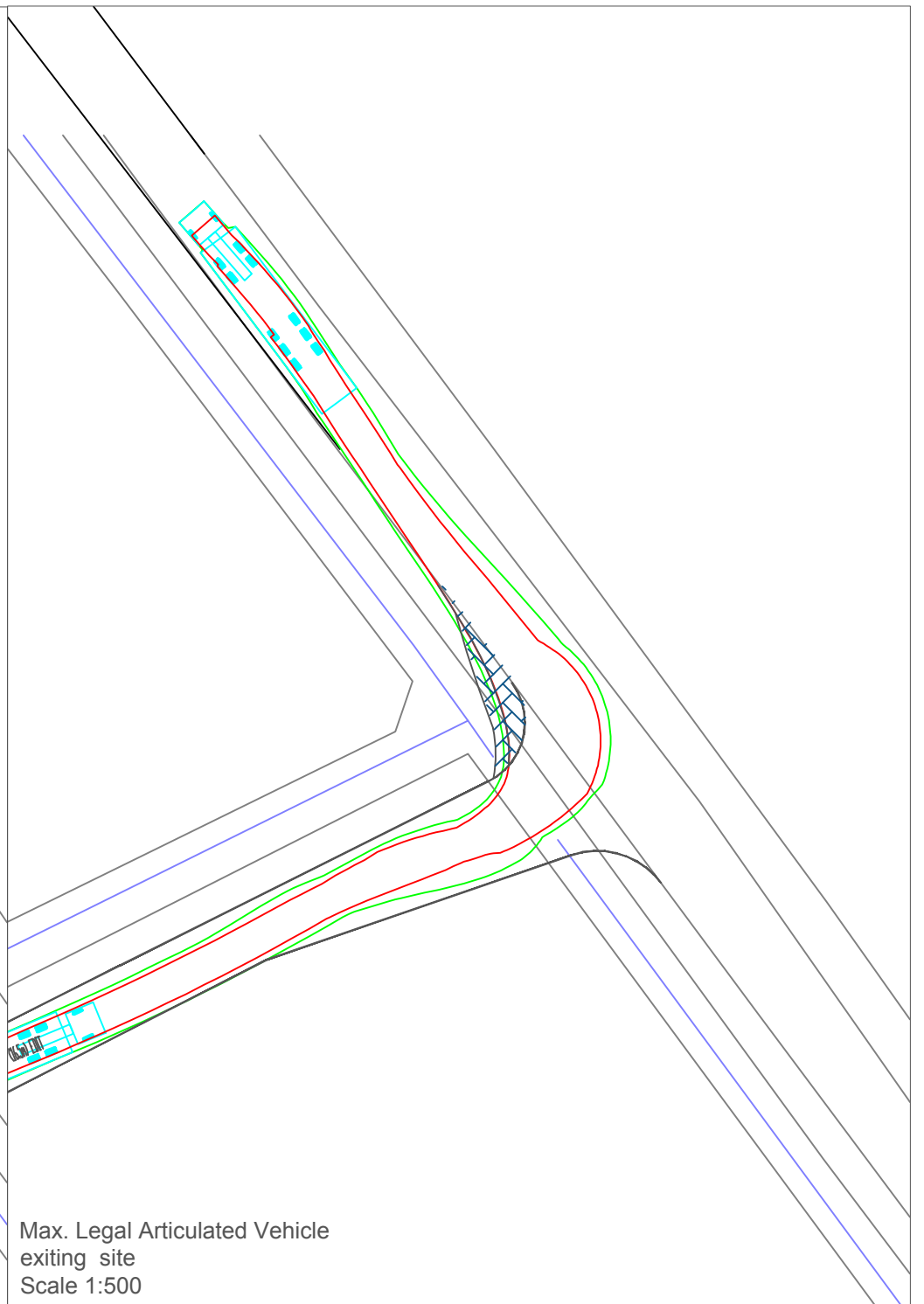
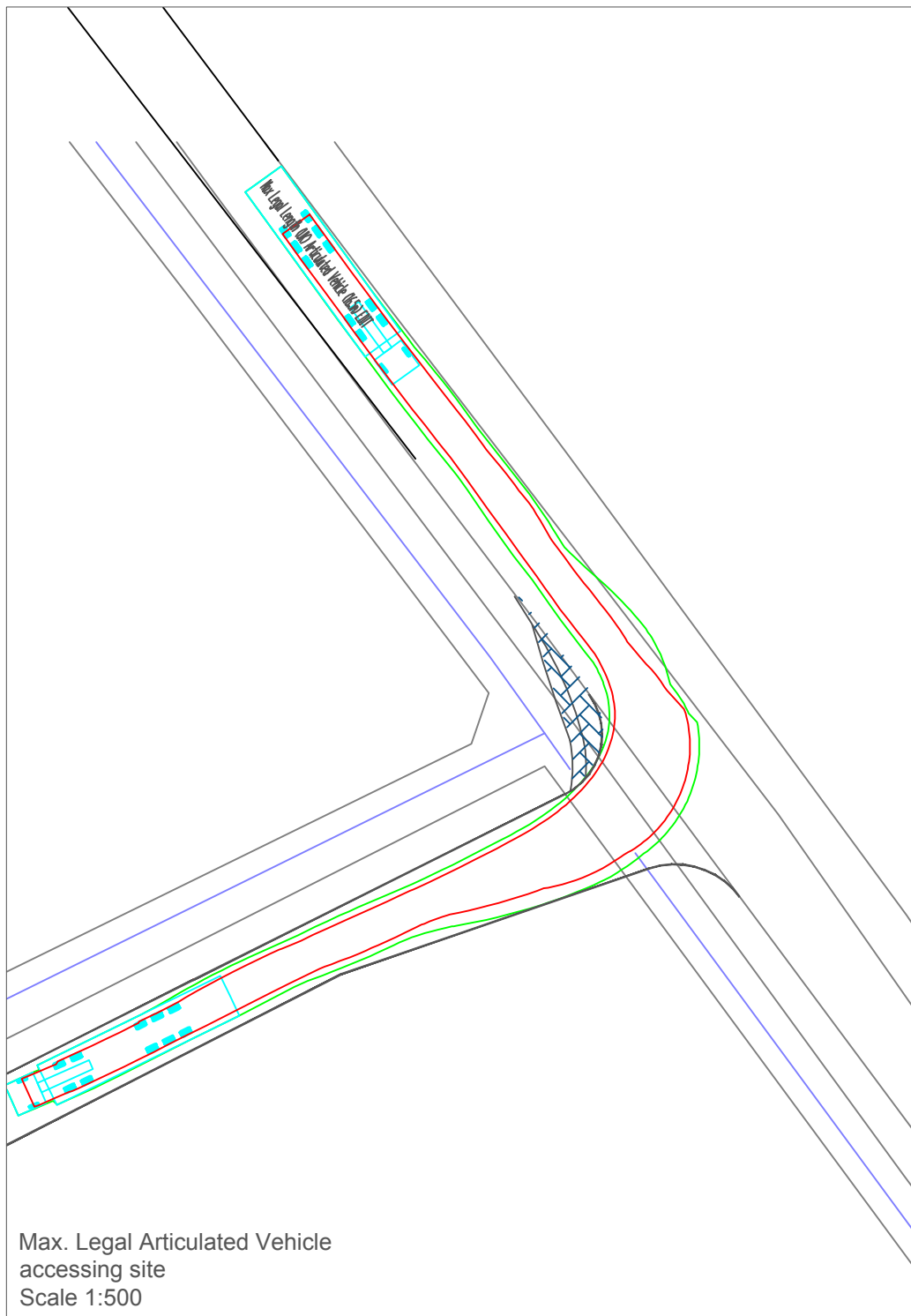
SITE LAYOUT PLAN

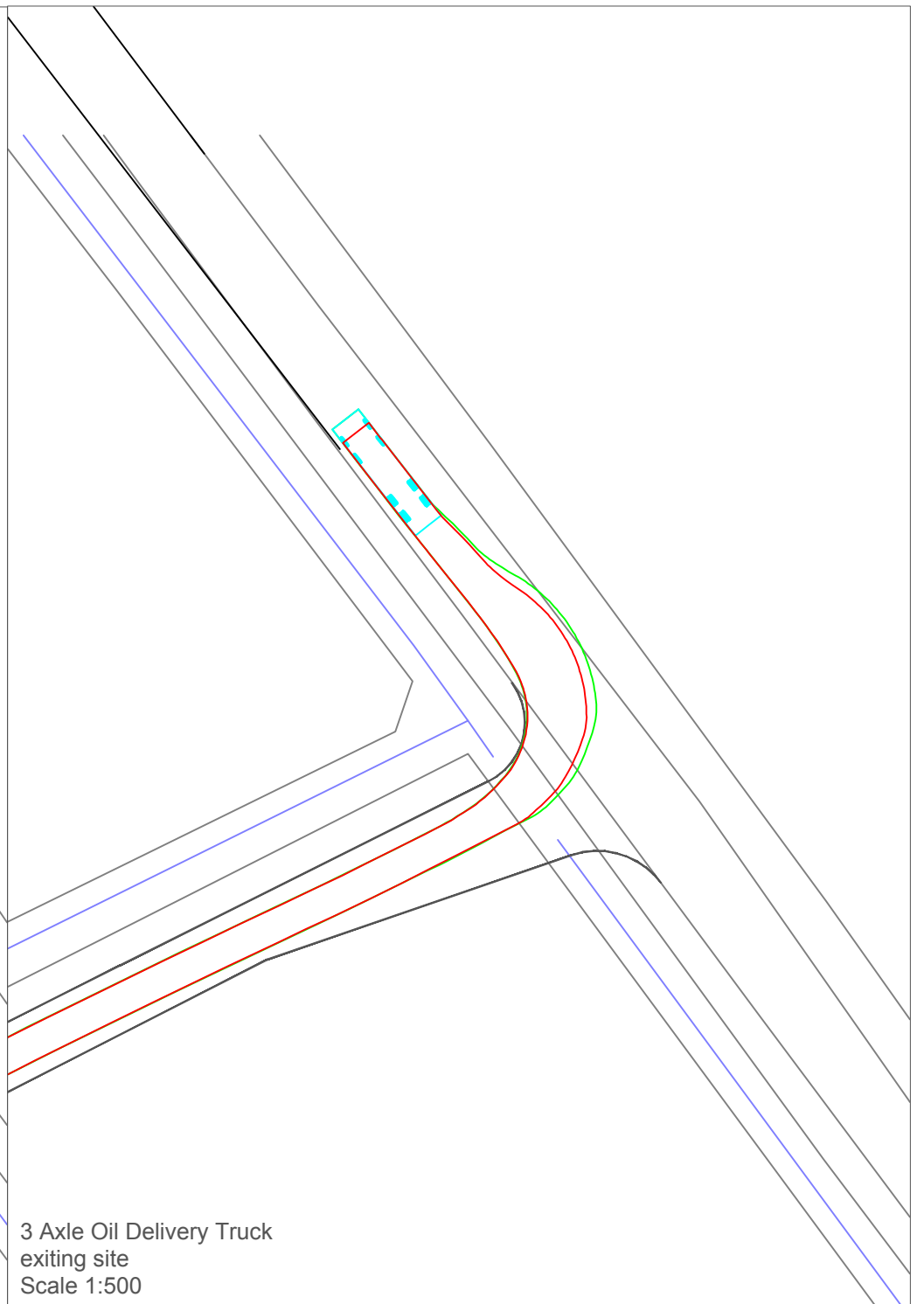
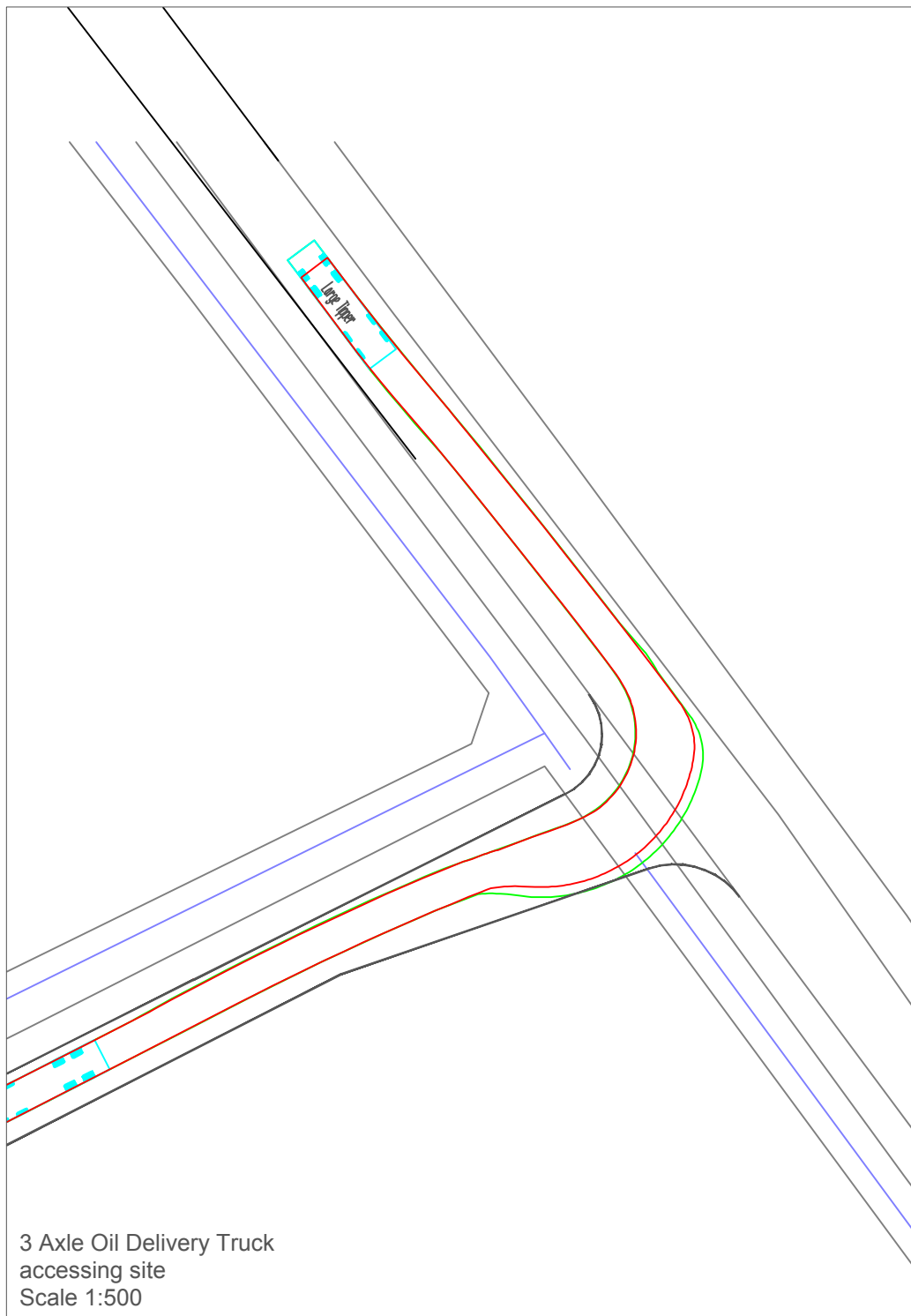


APPENDIX B

AUTOTRACK SWEEP PATHS









APPENDIX C

CONSTRUCTION SCHEDULE

Notes:

This vehicle movement spreadsheet estimates the total number of vehicle movements to construct the sites.

>Site construction is over a 4 to 6 month period.

>Post construction, the site will be typically visited once per week by a technician in a van/4x4.

>Once a year there will be a couple of tanker movements to deliver and remove lubrication oil.

>Once every 5 to 6 years the engines will undergo a major overhauled and it will be expected that there will be maximum of 5 HGV movements per day for 3 weeks .

	ENC1
	Blendworth
Total number of HGV movements	1639
Plus 10%	1803
Site Type	Green field
Existing Surface	Grass
Site Generation(Mw)	20
Access Road Condition	New
Road Area (Ha)	1.322
Site Area (Ha)	0.466
% surface to prepare	1
Depth of Hardcore (cm)	50
Cubic meters of Hardcore	8940
Weight of Hardcore (T)	14304
Number (10m ³) tipper trucks	894
Soil removal trucks (80% of delivery trucks)	715.2
Total Earthworks Trucks	1610
Construction Weeks (Groundworks Only)	8
No of Engines	10
Number of HGVs for Engines (2 lorries per 3 engines)	15
Transformers	5
HGV movements for transformers (assume 2 + HGV)	3
HGVs for Oil Tanks	1
HGVs for Switchroom	1
HGVs for Gas cabinet	1
HGV for DNO Substation	1
Acoustic Fencing	114
Lorries for fencing	6
Pipes and Cables	2
Total	1639