



# Yaxley Synchronous Condenser Site

## Transport Statement

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Client: Conrad Energy Ltd  
Project/Proposal No: 5360-1728  
Version: 1.1  
Date: 2022-07-28





# Document Information

|                          |   |
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| Client Contact:          | Jonathan Cooper   |
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| Author:                  | G M Bollan  |
| Reviewed:                | S McGowan   |
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# 1. Introduction

This document considers the potential effects on the local highway network of the construction and operation of a synchronous condenser compound development (the Proposed Development) at The Leys and Ivy Farm, Leys Lane, off Mellis Road in the village of Yaxley within the Mid Suffolk District Council catchment.

The Proposed Development will include erection of a synchronous condenser, with ancillary infrastructure and associate works including access and landscaping.

The Proposed Development site is an approximately 5.1 hectare site including land just west of Leys Lane, north of the village of Yaxley and an access route to the east of the main site. All site traffic would utilise the new access route from the A140 which has been constructed as part of the early works for the consented Progress Power substation site (application reference DC/21/05689<sup>1</sup>) site immediately to the northwest of the Proposed Development.

Figure 1 shows the location of the Proposed Development site and the access route connection to the A140.

## 2. Legislation, policy and guidance

The key documents consulted in the drafting of the Transport Statement included the following :

- National Planning Policy Framework (NPPF) Chapter 9: Promoting Sustainable Transport<sup>2</sup>;
- HM Government Guidance on Travel Plans, Statements and Assessments<sup>3</sup>; and
- Standards for Highways Design Manual for Roads and Bridges (DMRB)<sup>4</sup>.

## 3. Methodology

The proposed methodology is based on good practice for assessment and follows the logical sequence set out below:

- Review of the immediate road network and traffic levels;
- Determination of baseline traffic levels;
- Estimation of the level of traffic generated during the construction and operational phases;
- Assessment of the potential effects of construction and operational traffic; and
- Recommendation of management and mitigation, where appropriate.

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<sup>1</sup><https://planning.baberghmidsuffolk.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=PR8TVBSHI1000>

<sup>2</sup> HM Government, National Planning Policy Framework 2012, updated most recently in 2021. <https://www.gov.uk/guidance/national-planning-policy-framework/9-promoting-sustainable-transport>. Accessed 14 July 2022

<sup>3</sup> HM Government Department for Levelling up, Housing and Communities, Guidance on Travel Plans, Statements and Assessments 2014. <https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements>. Accessed 14 July 2022

<sup>4</sup> Standards for Highways. <https://www.standardsforhighways.co.uk/dmrb/> Accessed 14 July 2022



## 4. Existing conditions

### 4.1 Vehicle numbers

The Proposed Development site will be accessed exclusively from the A140 via a dedicate route currently serving the Progress Power substation construction site adjoining the Proposed Development site. The A140 lies around 500 metres to the east of the Proposed Development site. The access route crosses Leys Lane where it is intended that the minimal numbers of vehicles using Leys Lane to reach The Leys and Ivy Farm will have priority.

The Proposed Development boundary is shown in Figure 1.

The A140 is classified as a trunk road and subject to a local speed limit of 50mph at the location of the access route.

Baseline flows from the most recent pre-COVID pandemic year (2019) are presented in Table 4.1. Data are expressed as Annual Average Daily Trips (AADTs) and hence relate to numbers of vehicle movements rather than numbers of actual vehicles on the network. LDV and HDV are light and heavy duty vehicles respectively.

Figures are Department for Transport (DfT) count data for the A140 at National Grid coordinates (611880, 260000) which is on a more southerly location on the A140, around 15 kilometres away at Little Stonham. The data collected are expected to be broadly similar to traffic flows expected at the Proposed Development.

*Table 4.1 Recorded AADT traffic flows, A140, in 2019*

| Road              | DfT Reference | Count | LDV AADT     | HDV AADT     | Total AADT    |
|-------------------|---------------|-------|--------------|--------------|---------------|
| A140 Northbound   | 26697         |       | 4,519        | 617          | 5,136         |
| A140 Southbound   |               |       | 4,548        | 691          | 5,239         |
| <b>A140 Total</b> |               |       | <b>9,067</b> | <b>1,308</b> | <b>10,375</b> |

### 4.2 Accidents

Road traffic accident data for the five-year period from 2017 to 2021 has been examined via Crashmap (crashmap.co.uk, which visualises public domain accident data from the Department for Transport)

The Crashmap data shows a total of seven accidents, four slight and three serious on the A140 between the Yaxley village roundabout to the south of the site access route and the B1077 roundabout to the north, this link of the A140 is approximately two kilometres in length and the site access route lies around the mid-point. One serious accident occurred in the vicinity of the site access route; however, this was recorded in 2018 before the access point was improved from its former usage as a compound for the adjacent Eye airfield.

A “serious” accident results in hospitalisation or death 30 or more days later, a “slight” accident leads to no hospitalisation or delayed fatality.

## 5. Effects of the Proposed Development

### 5.1 During Construction

Permission will be sought from Progress Power to make use of the access route recently developed to Leys Lane from the A140.



Monthly breakdowns for traffic numbers as light and heavy duty vehicles are presented in Appendix A. The construction phase of the Proposed Development is expected to last for 16 months; peak numbers of vehicles are expected to include 40 light and 8 heavy duty vehicles attending site i.e. 80 light duty vehicle trips and 16 heavy; this represents an increase in AADT of just under 100. This represents a 0.8% increase in LDV numbers and a 1.2% increase in HDVs. The increase in numbers of vehicles on the A140 and wider network is expected to be of negligible significance to prevailing flow and congestion conditions, and on the prevalence of accidents on the A140 except potentially at the site entrance.

The Progress Power Transport Assessment produced by Stantec in 2019 for the Progress Power substation access<sup>5</sup> predicted a daily peak of 9 heavy and 21 light duty vehicles attending site i.e. 42 light duty vehicle trips and 18 heavy. The substation construction programme is similar to that of the Proposed Development (18 months) so it is possible that there will be some overlap of the two project's construction phases. As the Stantec report notes, there is no programme requirement for the heavy vehicles to arrive at a common time and will generally arrive at intervals throughout the working day rather than simultaneously contributing to potential peak-hour congestion; this is also expected to be the case for the Proposed Development. The overall numbers of vehicles will remain very small in comparison to typical A140 flows whether or not the construction programmes coincide.

No site traffic will be directed via Leys Lane or Yaxley village.

## 5.2 During Operation

The site will generally be unattended and operated remotely. Operational traffic serving the Proposed Development will be negligible, limited to occasional light duty vehicles of maintenance crews operating on at most a quarterly basis. Emergency maintenance may be required at any time in the event of a serious breakdown, but few if any HDVs would be expected to visit the operational site.

The access route is currently planned to be decommissioned once work on the Proposed Development and substation sites is complete; the occasional maintenance visits to the Proposed Development will thereafter use Leys Lane via Yaxley village.

## 6. Management and mitigation options

The access route for the neighbouring Progress Power site has been designed for left-in, left-out access to and from the Proposed Development. Vehicles originating from the north will not therefore attempt to turn right onto the access route but will divert via the A140 / Castleton Way / Eye Road roundabout just under one kilometre to the south of the access route. Similarly, southbound vehicles leaving the access route will initially turn left onto the northbound A140 and change direction at the A140 / B1077 roundabout one kilometre north of the access route junction..

No further management or mitigation measures are considered necessary.

## 7. Conclusions

The potential effects on the local highway network were considered for the construction and operation of a synchronous condenser compound development (the Proposed Development) at land adjacent to Leys Lane, near Yaxley within the Mid-Suffolk Council catchment.

The Proposed Development site will be accessed exclusively from the A140, the northbound carriageway of which is located around 500 metres to the east of the site. All site traffic will use the dedicated access

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<sup>5</sup> Peter Brett Associates / Stantec: Progress Power Gas Fired Power Station, Eye. Technical Note TN01, 08/04/2019



route between the A140 and Leys Lane; no construction traffic will be routed along Leys Lane and Yaxley village.

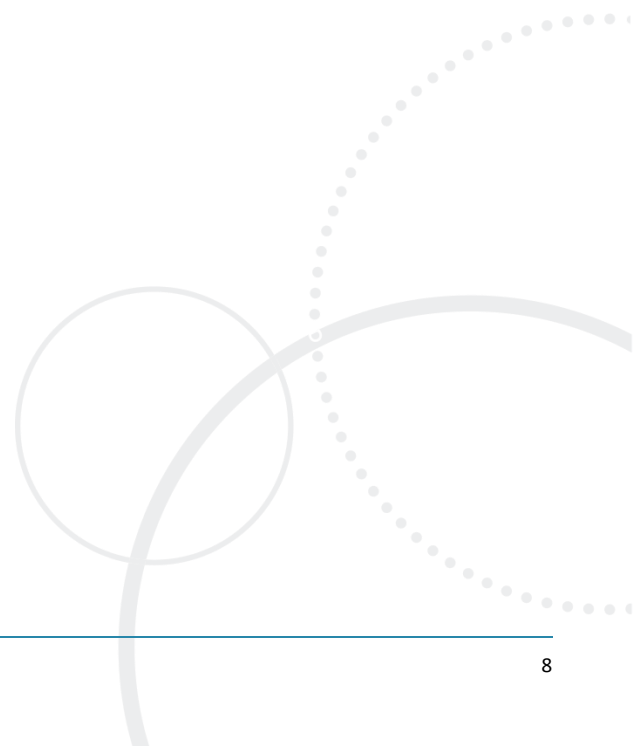
The access route is currently planned to be decommissioned once work on the Proposed Development and substation sites is complete; the occasional maintenance visits to the Proposed Development will thereafter use Leys Lane via Yaxley village.

DfT count data for 2019 indicated almost 10,400 total Annual Average Daily Trips on the A140 of which around 1,300 were heavy duty vehicles.

The construction phase of the Proposed Development will last for around 16 months and add a peak amount of 96 daily trips, of which 16 are heavy duty vehicles. This is considered a change in vehicle flows of negligible significance and not expected to materially affect accident probabilities or severities.



# Figure 1

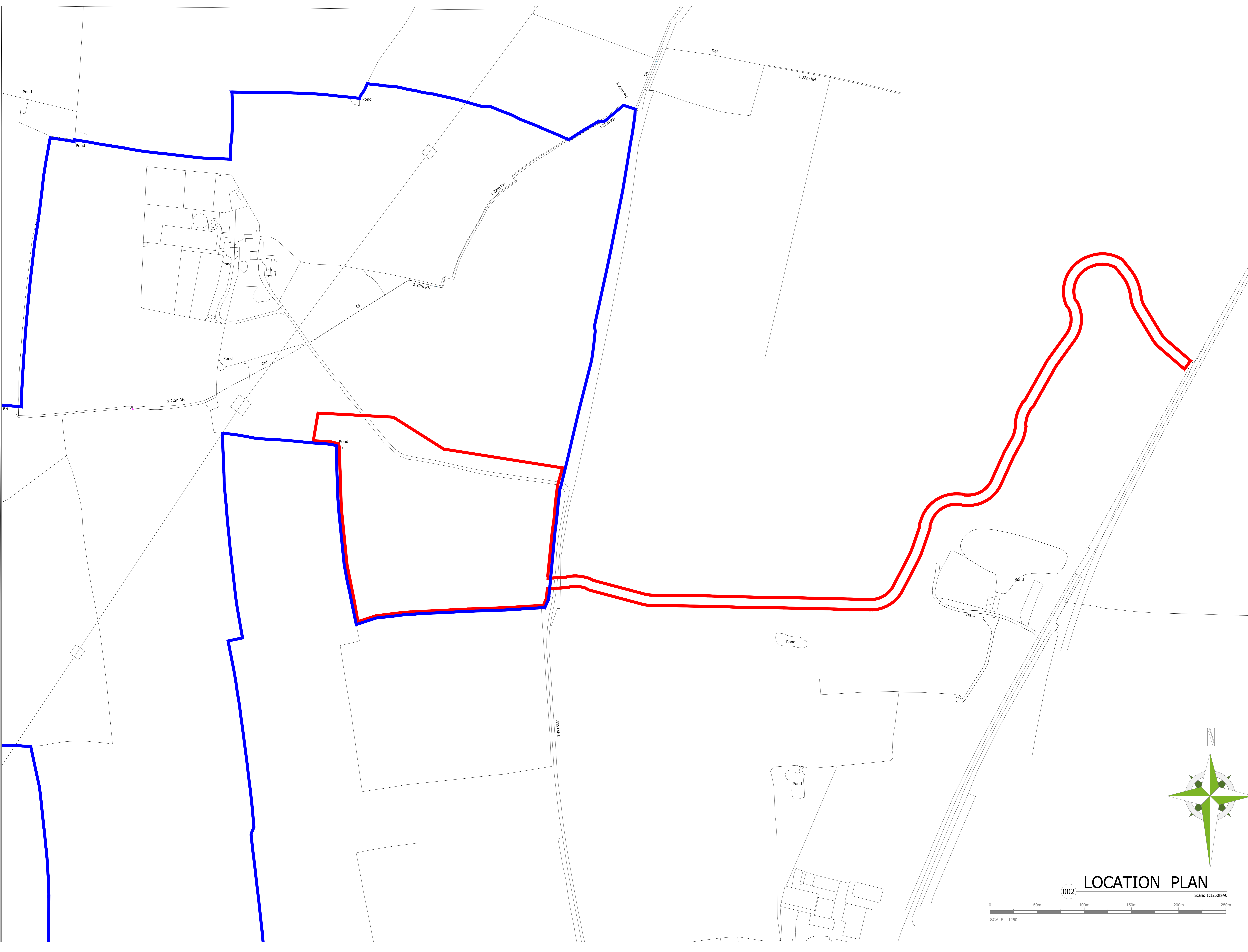




LOCATION PLAN

LEGEND

SITE INFRASTRUCTURE  
LANDOWNERS PROPERTY  
PROPOSED SITE



| rev       | revision notes        | date     |
|-----------|-----------------------|----------|
| A         | Red line area amended | 22.06.22 |
| REVISIONS |                       |          |

Design

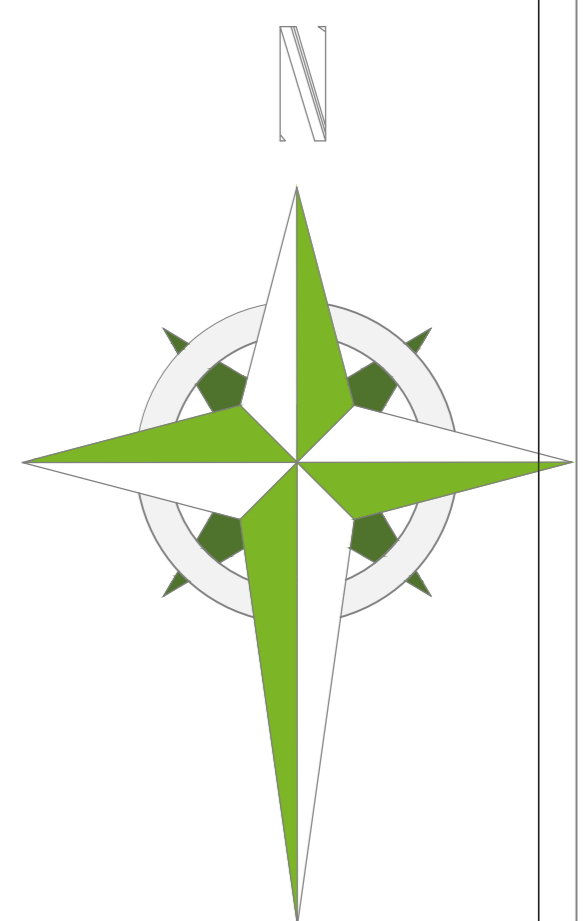
ALL DIMENSIONS TO BE CHECKED ON SITE  
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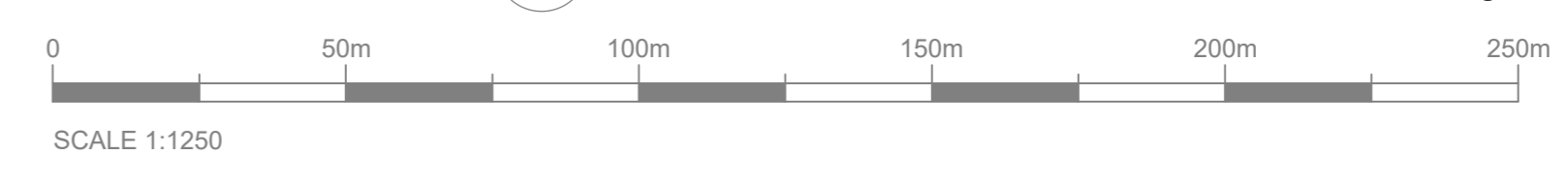
CONRAD ENERGY LIMITED  
UNIT 15 & 16, WINDMILL COURT, BLACKLAND WAY, ARBROOK DRY 157  
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Project Title:  
PROPOSED SYNCHRONOUS CONDENSER  
LAND OFF- LEYS LANE  
YAKLEY  
611791, 275017

Drawing Title:  
SYNCHRONOUS CONDENSER  
LOCATION PLAN - INDICATIVE LAYOUT

Scale @ A0: 1:1250 Date: 22.06.2022  
Drawn: HC Checked: JC  
Drawing No: YAX-SYNCO-LP-002 Rev: A

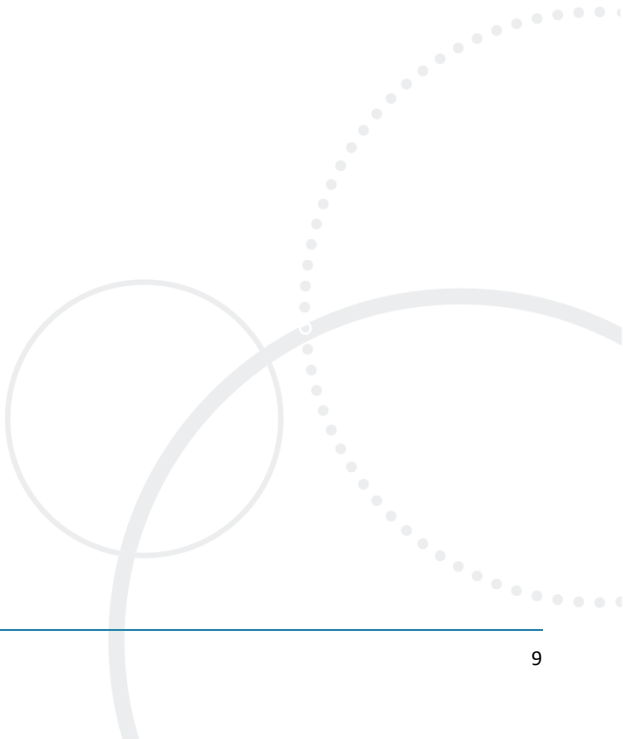


002 LOCATION PLAN Scale: 1:1250@A0





# Appendix A – Construction Vehicle Numbers





| Indicative Construction Development Programme      |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |               |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Activity   | Month        |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              | Total         |
|  | 1            | 2            | 3            | 4            | 5            | 6            | 7            | 8            | 9            | 10           | 11           | 12           | 13           | 14           | 15           | 16           |               |
| <b>HGVs</b>  |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |               |
| Site Mobilisation/Demobilisation                   | 40           |              |              |              |              |              |              |              |              |              |              |              |              |              |              | 40           | 80            |
| Civil Engineering Works                            | 100          | 200          | 200          | 200          | 200          | 200          | 200          | 200          |              |              |              |              |              |              |              |              | 1,500         |
| Electrical Installation and Cabling                |              |              |              |              |              |              |              |              | 80           | 80           | 80           | 80           | 80           | 80           |              |              | 480           |
| Concrete Requirements                              |              |              |              |              |              |              |              |              | 34           | 34           | 34           | 34           | 34           | 34           |              |              | 203           |
| Commissioning                                      |              |              |              |              |              |              |              |              |              |              |              |              |              |              | 10           | 10           | 20            |
| Misc Delivery                                      | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 32            |
| <b>Sub-Total</b>                                   | <b>142</b>   | <b>202</b>   | <b>202</b>   | <b>202</b>   | <b>202</b>   | <b>202</b>   | <b>202</b>   | <b>202</b>   | <b>116</b>   | <b>116</b>   | <b>116</b>   | <b>116</b>   | <b>116</b>   | <b>116</b>   | <b>12</b>    | <b>52</b>    | <b>2,315</b>  |
| <b>Abnormal Loads</b>                              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |               |
| Abnormal Indivisible Loads (Synchronous Condenser) |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              | 2            |               |
| <b>Sub-Total</b>                                   |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              | <b>2</b>     | <b>2</b>      |
| <b>Staff Cars and Vans</b>                         |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |               |
| Staff  | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        | 1,040        |               |
| <b>Sub-Total</b>                                   | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>1,040</b> | <b>16,640</b> |
| <b>Total (All vehicles)</b>                        | <b>1,182</b> | <b>1,242</b> | <b>1,242</b> | <b>1,242</b> | <b>1,242</b> | <b>1,242</b> | <b>1,242</b> | <b>1,242</b> | <b>1,156</b> | <b>1,156</b> | <b>1,156</b> | <b>1,156</b> | <b>1,156</b> | <b>1,156</b> | <b>1,054</b> | <b>1,092</b> | <b>18,957</b> |
| Total HGV  | 142          | 202          | 202          | 202          | 202          | 202          | 202          | 202          | 116          | 116          | 116          | 116          | 116          | 116          | 14           | 52           |               |
| Average Total Traffic per Day*                     | 45           | 48           | 48           | 48           | 48           | 48           | 48           | 48           | 44           | 44           | 44           | 44           | 44           | 44           | 41           | 42           |               |
| Average HGV Traffic per Day*                       | 5            | 8            | 8            | 8            | 8            | 8            | 8            | 8            | 4            | 4            | 4            | 4            | 4            | 4            | 1            | 2            |               |

\* Assuming a 26 day working month



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