

DESIGN AND ACCESS STATEMENT RESERVE POWER PLANT EXTENSION

LAND TO THE SOUTH OF MINERS ROAD,
LLAY INDUSTRIAL ESTATE,
WREXHAM

Prepared for



Prepared by



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Project Quality Assurance Information Sheet



Reserve Power Plant Extension Design and Access Statement

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CONTENTS

1.0	INTRODUCTION	4
1.1	Forward	4
1.2	Location	4
1.3	Context	4
2.0	DESIGN.....	6
2.1	Use	6
2.2	Scale	7
2.3	Amount	7
2.4	Landscaping and Appearance	7
3.0	ACCESS	8
4.0	CONCLUSION	9

DRAWING SCHEDULE

Drawing Number	Drawing Title	Scale	Sheet Size
SRE1082/17/01	Site Location Plan	1:25,000	A4
SRE1082/17/02	Planning Application Boundary	1:500	A3
SRE1082/17/03	Indicative Site Layout	1:500	A3
SRE1082/17/04	Indicative Lube Oil Storage Elevations	1:50	A3
SRE1082/17/05	Indicative Transformer Elevations	1:25	A3
SRE1082/17/06	Indicative Gas Generator Elevations	1:100	A3
SRE1082/17/07	Indicative Battery Container Elevations	1:50	A3
SRE1082/17/08	Indicative Battery Components Elevations	1:100	A3

1.0 INTRODUCTION

1.1 Forward

- 1.1.1 Planning permission (P/2017/0937) was granted on 4th June 2018 for a Reserve Power Plant (RPP) and associated infrastructure located to the south of Miners Road within Llay Industrial Estate, Wrexham. Sirius Planning Limited have prepared a planning application to extend the RPP facility to add an additional generating capacity of 9.95MW.
- 1.1.2 This Design and Access Statement has been produced in accordance with the DCLG Circular 01/2006 *Guidance on Changes to the Development Control System*, and with reference to the Commission for Architecture and the Built Environment (CABE) publication *Design and Access Statements: How to write, read and use them* (2006).
- 1.1.3 The purpose of a Design and Access Statement is to allow the applicant to demonstrate that development proposals are based on a thoughtful design process and a sustainable approach to access. The Design and Access Statement should also demonstrate how the development proposals have evolved during the design process.
- 1.1.4 This statement sets out the design and access principles for the proposed development in accordance with the CABE guidance.

1.2 Location

- 1.2.1 The application site is situated within Llay Industrial Estate and comprises two linked rectangular plots measuring approximately 0.17ha. The site is approximately 1km to the north-west of the village of Llay and 6.5km north of Wrexham. The site is centred on approximate National Grid Reference 332485, 356381. The location of the site is shown on drawing SRE1082/17/01 and Figure 1.1 below.

Figure 1.1: Site Location



1.3 Context

- 1.3.1 The industrial estate the site is located within originally comprised the Llay Main Colliery which ceased operations in 1996 and the site was redeveloped as an industrial estate in the early 1970's. The spoil heap associated with the colliery is located to the south of the site.
- 1.3.2 The site most recently was used as a storage facility for a road haulage business. The proposal site is no longer actively used and it currently in the process of being cleared. The site is enclosed by fencing and scrub vegetation along the perimeter

boundaries. A series of conifer trees also line the boundary to the west.

1.3.3 Access to the site is via an existing access point of Miners Road.

2.0 DESIGN

2.1 Use

- 2.1.1 National Grid owns and operates the national electricity network. They are obliged to ensure that the electricity supply system runs within specified limits. Many factors change these operating conditions, but none more so than the balance between the electricity being demanded by customers connected to the national network and the electricity generators available to produce the electricity they require.
- 2.1.2 The proposed development is for the extension of a consented Reserve Power Plant (RPP) to add an additional generating capacity of 9.95MW and store an additional 10MWh. The facility will provide balancing services to National Grid to ensure the future security of the country's electricity supply.
- 2.1.3 As per the consented facility, the additional electricity generated will be produced by gas powered generator sets with electricity storage capacity provided within supplementary batteries. The facility will provide power to the local network distribution in a short space of time when demand is greater than available supply.
- 2.1.4 The generators, battery storage units and transformers are temporary structures, which have an operational lifespan of around 10 – 15 years after which they would need replacing or overhauling as appropriate. However, the operational life of the RPP will not be time limited.
- 2.1.5 The generator engines will comprise a general arrangement of two generators for each transformer plus an appropriate number for the battery storage units. The generators will be located within individual modular acoustic enclosures, which are constructed of galvanised steel protected by polyester powder coat paint.
- 2.1.6 The generators will operate when called upon by the National Grid and to recharge the batteries as necessary therefore their operation will be intermittent. The exact number of operational hours per year is not known, but it is not expected to exceed 3,500 hours per year, which is 40% of the total hours in a year.

Figure 2.1: Indicative Site Layout



- 2.1.7 The site layout, as seen in Figure 2.1 below and provided in drawing SRE1082/17/03, is indicative only. Before commencement of works on site a detailed site arrangement will be provided for approval.

2.2 Scale

- 2.2.1 The proposed development is located within a plot within Llay Industrial Estate measuring approximately 0.17ha. The largest structures on site will be the gas generators measuring 15.6m x 7m and battery containers 16.2m x 2.7m. Drawing SRE1082/17/06 and SRE1082/17/07 provides elevations of the gas generator sets and the battery containers.
- 2.2.2 The scale of the proposed facility reflects a number of factors including the capacity of the facility and localised site constraints such as available space and location of sensitive receptors. Following various environmental and technical assessments (see Appendices A – D of the Planning Statement), it was considered that the site and the proposed infrastructure would be of a suitable scale.

2.3 Amount

- 2.3.1 The proposed extension will comprise up to 6 generator sets providing 9.95MW of gas generated power and 3 battery storage units capable of storing in the region of 10MWh. The gas engines and batteries will not send power to the grid at the same time, hence a maximum generating capacity of 9.95MW. 3 transformers will control the electricity generated by the engines which is then sent to the on-site substation. This will complement the consented 5 generator sets, 2 battery storage units and associated infrastructure on site.
- 2.3.2 As per the consented facility, the proposed generator sets will be fuelled by gas that will feed to site by a supply pipe from the nearby medium pressure gas main located adjacent to the site on Miners Road. The batteries will be charged with power from the gas engines when there is no demand from the local grid network.
- 2.3.3 The cabling / service connections required to transfer the energy from the generators to the transformers will be below ground with trench depths being 600mm.
- 2.3.4 The application site will be secured by a consented 2.4m paladin perimeter fencing under planning permission P/2017/0937. Infra-red (non-visible at night) inward facing pole mounted CCTV cameras (2.5m in height) will also be provided at appropriate intervals along the boundary fence.
- 2.3.5 During the construction phase a temporary equipment set down compound will be provided within the development boundary. The compound will accommodate deliveries of materials and equipment during construction and welfare facilities as well as also providing parking for construction operatives.
- 2.3.6 The construction is expected to take approximately 4 months.

2.4 Landscaping and Appearance

- 2.4.1 The proposed development has been designed to be compatible to the nature of its surroundings. The proposed development is located on a former storage facility for a road haulage business and is no longer actively used. This proposal would not extend the footprint of the site beyond the current overall plot boundary.
- 2.4.2 Given the position of the proposal and the limited footprint of the facility compared to the wider industrial estate it is considered that the scale and appearance of the proposed development is in-keeping with the surrounding area.

3.0 ACCESS

- 3.1.1 As per the consented facility, the existing access point off Miners Road will be utilised. A new consented site access gate, under planning permission P/2017/0937, will be provided off the existing access point. This access will serve the site during the construction and will provide on-going access during the operational phase for maintenance purposes, and access to the wider plot.
- 3.1.2 All delivery traffic would use the existing access off Miners Road which will be accessed from the east from the B5373. The A483 lies to the south-east of the site. Upon arrival onto Miners Road, vehicles will turn left into the existing access point.
- 3.1.3 An internal service road, which will measure 4.5m wide and be finished with compacted crush stone will then provide vehicular access within the site.
- 3.1.4 A temporary equipment set down compound will also be provided within the development boundary during the construction period. This compound will also provide parking for construction operatives.
- 3.1.5 Once operational, the facility will be unmanned, but traffic generation for fuel deliveries and the occasional maintenance and inspections will utilise the existing access off Miners Road.

Figure 3.1: Access to the site off Miners Road



Source: Google Maps

4.0 CONCLUSION

- 4.1.1 This statement describes a proposal by Sirius Renewable Energy to extend a consented Reserve Power Plant (RPP) and associated infrastructure on land to the south of Miners Road within Llay Industrial Estate, Wrexham.
- 4.1.2 The DAS demonstrates that the extent of the works will be contained upon a small footprint within the existing Llay Industrial Estate. With the existing industrial nature surrounding the site, it is considered that the scale and appearance of the proposed development is not out of character with the local setting. The layout of the site has been designed in response to the operations of the RPP facility.