



Regent Park Energy Limited

Planning Statement and Design & Access Statement in Support of an Application

**for the Retention of the Natural Gas Meter Cabinet, the Installation of
a Containerised Back-Up Power Generator, Cooling Radiator,
Associated Pipework and Transformer Outside of the Existing
Generation Building and a 5m High Acoustic Screen**

**at the
Hickleton Energy Park
Off Barrowfield Road
Thurnscoe
Rotherham
S63 0BH**

Prepared by:
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Issue record

Issue	Prepared by	Date	Approved by	Date
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Appendix B	Noise Impact Assessment by Acoustic Associates, Report No.: SS/J3234/16529, Dated September 2017

Drawings Referred to in the Application

Drawing No.

12-2401-01	Location Plan
12-2401-02	Existing Site Plan
12-2401-03 Revision B	Proposed Site Plan
12-2401-04 Revision A	Proposed Site Elevations

1 The Planning History and the Proposed Development

1.1 The proposed site is currently operating as a coal mine methane extraction and electricity generation facility.

1.2 The site is currently operating under the following planning permissions

Ref. No. B/99/0998/DE dated 19th October 1999;
Ref. No. B/00/0010/DE dated 22nd February 2000;
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Ref. No. B/04/0903/DE dated 13th July 2004.

A further planning permission, reference 2005/1635, was granted for the erection of bio-fuel plant for electrical generation, but that application was never activated, so it has now lapsed.

On 10th August 2012, planning permission (reference 2012/0576) was granted for the variation of condition 3 of application B/00/0761/DE to allow the supplementary use of mains gas.

1.3 The existing generators, within the generation building, will continue to operate on coal mine methane, supplemented by natural gas.

1.4 The proposed generator, to be housed in a container, outside of the generation building, is to be used to provide back-up power to the Grid using natural gas as its fuel.

1.5 The back-up power generator will be called upon by the Grid to operate for only up to 1000 hours per year.

The operational hours of the generator will be dictated by the demands of the Grid, but are expected to be between 07:30 and 20:30 hours. However, from time to time, this generator may be called upon to run outside these hours, if National Grid instructs the site to run in emergency situations to fulfil the sites' duties under a standing reserve contract. These types of emergencies are rare and are envisaged to only take place a relatively small number of days in any rolling year.

Even though the generator units are unlikely to run outside the above mentioned hours; the noise assessment, submitted with this application, uses a conservative range of hours of operation from 07:00 to 22:00 hours as its normal operating hours and has also considered the impact of the emergency overnight running of the generator.

2 Ownership

- 2.1 The majority of the application area, shown edged red on Drawing No. 12-2401-01 Location Plan, is owned by Regent Park Energy Limited. A further area, shown edged in blue, is also under Regent Park's control.
- 2.2 A small part of the application area, shown edged in green on the location plan, is owned by The Coal Authority and is leased by Regent Park Energy.

3 The Proposed Generator Container, Access and Other Matters

3.1 Amount

- 3.1.1 The application area is some 0.065 Ha and is shown edged red on Drawing 12-2401-01 Location Plan. The remainder of the land within the applicant's control is shown edged blue on the same drawing.
- 3.1.2 The maximum projected output of electricity which would be exported from the site, at any one time, is to be about 7.4 MW (Mega Watts).

3.2 Groundworks

- 3.2.1 The proposed development will include the construction of 3 No. reinforced concrete bases on which to situate the proposed equipment.

The base for the generator container will be some 15.80m x 4.90m.

The base for the cooling radiators will be some 5.10m x 2.70m.

The base for the transformer will be some 2.10m long x 1.03m.

3.3 Generator Container and Cooling Radiators

- 3.3.1 The proposed generator container will be approximately 15.5m long x 4.6m wide x 5.0m high, (excluding the exhaust and ancillary equipment). The container is to be painted dark olive green, to match the existing containers on site.
- 3.3.2 The low level cooling radiators will be approximately 4.8m long x 2.4m wide x 2.4m high. The cooling radiators will be painted grey.
- 3.3.3 The transformer will be painted grey and, for safety reasons, the additional mine gas pipework will be painted yellow to match the existing pipework.

3.4 Noise

3.4.1 The Applicant has appointed Acoustic Associates, Peterborough to carry out a background noise survey and model the predicted noise emissions from the proposed back-up power generation facility. The Assessment (Report No.: SS/J3234/16529, dated September 2017) may be found in Appendix B, of this statement.

3.4.2 The Noise Report has assessed the impact of the proposed installation of a back-up generator on local residents at two assessment points. The assessment included the cumulative effect of mitigation measures which have been proposed, after receiving advice from Acoustic Associates.

The mitigation measures proposed are as follows:

- A 5 metre high acoustic fence constructed immediately to the north of the generators;
- the cooling radiators are to be located to the south of the generator, forming a noise barrier; and,
- the complete enclosure of the generator unit within a canopy including attenuators added to the exhaust, inlet and outlet

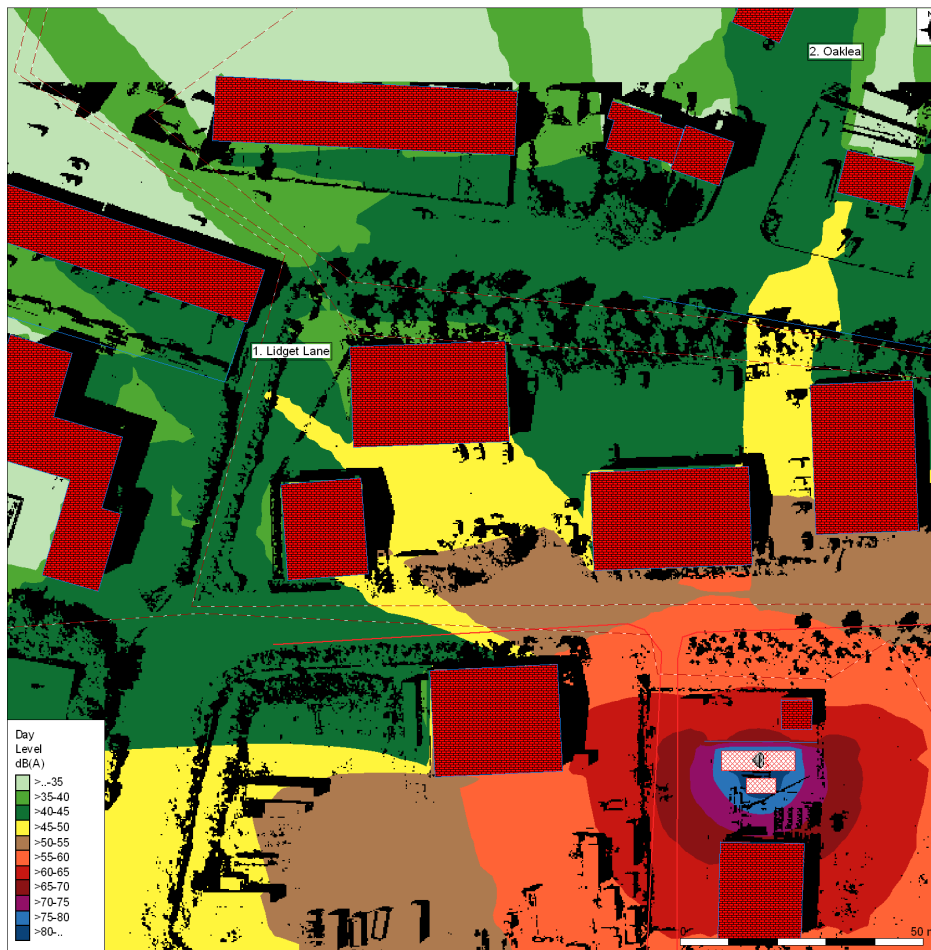
Those measures have been incorporated into the design of the site layout which has been submitted as part of this application.

3.4.3 The results of the unattended noise monitoring show a statistically typical background noise level of $41L_{A90,15minutes}$ during the daytime (07:00-23:00) and $3641L_{A90,15minutes}$ during the night time (23:00-7:00).

3.4.4 The noise levels due to emissions from the proposed generator have been predicted – the predicted levels at two assessment locations are as follows:

Assessment Location	Specific noise level $L_{Aeq,T}$ dB(A)	
	Ground Floor	First Floor
Lidget Lane (1)	39.4	40.7
Oaklea (2)	40.8	40.8

Noise contours, Figure 3 in the Noise Assessment, are reproduced below.



- 3.4.5 The Noise Consultant concludes that when the generator is running at full load, with the proposed mitigation, the noise levels internally at the nearest dwellings are likely to comply with criteria for internal noise given in British Standard BS 8233 (Reference 3) in both the daytime and night-time.

And, when the generator is running at full load, noise levels in the amenity areas of the nearest dwellings are likely to comply with criteria for external noise given in British Standard BS 8233 by a significant margin.

3.5 Dust and Airborne Emissions

- 3.5.1 Apart from a small amount of dust which must be expected during the construction period there will be no significant dust produced during the life of the plant.
- 3.5.2 The proposal is to use a spark ignition internal combustion gas engine, on the site, to drive an alternator, which will generate electricity.

3.5.3 Emissions from such gas engines will be virtually colourless and include limited quantities of gaseous nitrogen and carbon dioxide. Emissions of nitrogen and sulphurous oxides are significantly less than those from comparable fossil fuel generating stations. Flue gas is discharged from the plant via a chimney. Under certain conditions (particularly in cold weather) a steam plume may emanate from the chimney. This is non-polluting, the only consideration being the visual effect.

3.5.4 The spark ignition generator engines that are proposed for this site will generate electricity from natural gas.

The engines are designed to run within the following emission limits:

Nitrous oxides (NO_x) < 500 mg/m³;
Carbon monoxide (CO) < 1400 mg/m³.

Nitrogen dioxide (NO_2) is the most relevant of the NO_x compounds in this case.

3.6 Access, Highways and Transport

3.6.1 There will be no requirement to alter the existing access from Barrowfield Road, which will be perfectly adequate to accommodate the construction works and the maintenance of the proposed externally sited engine.

3.6.2 During the 2 – 4 week construction and installation period the number of vehicle movements is expected to be as follows:

Vans or cars 1 - 3 per day. i.e. 2 to 6 vehicle movements per day;

Lorries delivering construction materials, including hardcore and concrete 0 - 3 lorries per day, i.e. 0 - 6 vehicle movements per day for 2 or 3 days.

3.6.3 Abnormal load movement (for the delivery of the generator container) would also follow agreed traffic routes to and from the main road and would only be undertaken with the prior notification of the highway authority and, if necessary, the police.

3.6.4 As with the rest of the Hickleton site, except for the construction, installation and commissioning phases of the development, the site will generally be unattended. The plant and equipment will be operated and controlled remotely, from Alkane Energy's depot and control room, at Markham Vale, Near Chesterfield, in Derbyshire.

Therefore, vehicle movements during the operational phase will remain unchanged at around 2 – 6 per week, i.e. a visit by one or two maintenance people by car or light van, 1 to 3 three times a week.

When major plant service or repairs are being undertaken, the number of people on site may exceed the above figures for short periods. One or two HGV vehicles and a crane may also be required, on site, at that time.

- 3.6.5 Under normal circumstances, members of the public will not be permitted to access any part of the generation facility. In exceptional circumstances, members of the public or other visitors may be invited to the site. In such circumstances, they will be accompanied by an employee of Alkane Energy or another authorised person.
- 3.6.6 Maintenance personnel and occasional visitors will be able to use the self-contained amenity container and portable toilet which are already provided on the site.

3.7 Drainage and Flood Risk

- 3.7.1 Part of the site that is a hardcore platform, which is porous and self-draining. The remainder of the site that is covered with tarmacadam surfacing and has gullies located around the perimeter to catch surface water run-off. Therefore, there will be no increase in surface water run-off associated with the development
- 3.7.2 A search on the Environment Agency's website shows that the site is within Flood Zone 1. Flood Zone 1 is land having a less than 1 in 1,000 annual probability of river or sea flooding.
- 3.8.3 Therefore it is concluded that there would be no increase in flood risk arising from the proposed development and that the proposal is in accordance with the relevant parts of PPS25.



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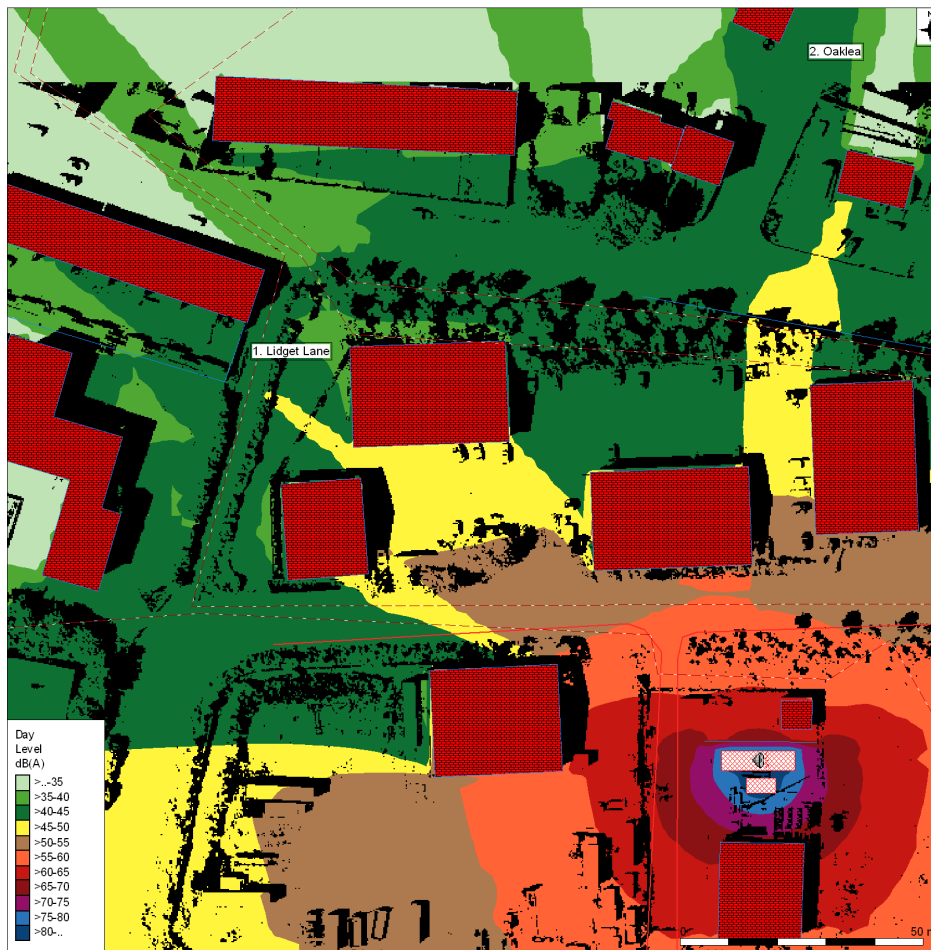
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