



Design, Access & Planning Statement

Siting of a reserve electricity generation
facility with ancillary equipment at
Land at Whaley Road, Barnsley

For Abbey Powergen Plc

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1.0 INTRODUCTION

- 1.1 This Design, Access and Planning Statement accompanies and supports the planning application submitted by Pegasus Planning Group on behalf of Abbey Powergen Plc for the siting of up to 7 reserve electricity generators within 4 noise attenuated container sets. The scheme will include ancillary development consisting of transformers, a fuel tank, perimeter fencing and minor access works.
- 1.2 Three of the containers will contain 2 generators, while one container will contain one generator with half of the unit being used as a switch room. This can be identified from the site layout plan (1880.002) as the unit with only one top-mounted exhaust.
- 1.3 The purpose of the development is to provide emergency reserve electricity to the National Grid, at times when the level of national electricity demand exceeds the level of available supply from base load power stations. For this reason the facility will operate only intermittently according to remote requesting by the National Grid, and is anticipated to operate for only a few hours per day on average.
- 1.4 This proposal will contribute to meeting a national need for development of this type, identified through national planning policy and recent Government literature. This is set out in more detail in Section 4 of this statement.
- 1.5 The purpose of this Design, Access and Planning Statement is to provide an assessment of the proposals against relevant national, regional and local planning policy and guidance. The statement will demonstrate that the proposed development has fully taken account of the constraints of the site and is in accordance with the contents of the relevant development plan.
- 1.6 The Design and Access element of the statement follows the guidance set out in the Department for Communities and Local Government's (DCLG) Circular 01/2006 to explain *"the design principles and concepts that have been applied to the proposed development and how issues relating to access and the development have been dealt with"* (para. 80, Circular 01/2006).
- 1.7 It was agreed in the course of pre-application discussions with the local authority that detailed noise impact assessment would not be required to support the application, subject to a full specification of the proposed generators being submitted for consideration by the Council's regulatory services officers. The information is attached as a supporting document to this application.

Environmental Impact Assessment

- 1.8 Due to the small scale of the proposal, it is not considered that the development will require Environmental Impact Assessment. However, to provide certainty of this, the proposal has been assessed against the criteria set out in the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.
- 1.9 As shown on accompanying site location plan 1880.002, the application area amounts to 1.3 hectares. Were the area to exceed 0.5 hectares, the development would be defined as Schedule 2 development under Section 3 (a), *Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1)*.
- 1.10 However, the regulations state that only those developments likely to have 'significant effects' on the environment will be classed as Schedule 2 development. The accompanying Circular 02/99 (Environmental Impact Assessment) states at paragraph A11 that "*EIA is unlikely to be required for smaller new conventional power stations.*"
- 1.11 In the case of this proposal, where the hours of operation will be intermittent, it is considered that any effects will be localised and that it is therefore not necessary to consider the need for Environment Impact Assessment.

2.0 THE APPLICATION SITE

- 2.1 As shown on the accompanying site plan 1880.001, the site relates to an area of approximately 0.13 hectares of previously developed land at the northern end of the South Yorkshire Industrial Estate, also known as Redbrook Industrial Estate, served by the internal access road Whaley Road.
- 2.2 The site is located directly adjacent east to a YEDL substation, and forms part of the same unit of land as this development. The land currently consists of hardstanding with concrete supports, on which it the proposed containers will be mounted. Historical satellite imagery indicates that the supports previously hosted similar units which appear to have been used as a reserve electricity facility operated by YEDL.



Historical satellite view of site (31st December 2003)

- 2.3 In its wider context, the proposal site faces an industrial area to the west and south, and a large area of agricultural land to the north and east, in which a Yorkshire Water processing plant is located. The nearest potential residential receptors are at Dearn Hall Fold approximately 360 metres to the northwest, and Kelby Croft at approximately 350 metres to the west.

Access

- 2.4 The application site is currently access via a private road leading from Whaley Road. This private road currently serves the existing YEDL substation which lies adjacent to the site. Whaley Road leads to the A637, which provides wider transport connections including the M1 which passes approximately 1.5km to the west of the site.

Environmental Designations

- 2.5 Land included in the Barnsley Green Belt is located to the north of the site. However, due to the location of the intervening railway embankment it is not anticipated that the proposed development will have any visual impact on the Green Belt.

Flood Risk

- 2.6 The Environment Agency interactive flood mapping service demonstrates that there is no risk of flooding on the application site.

3.0 RELEVANT PLANNING HISTORY

- 3.1 Prior to this submission, two applications ([2009/0814](#) and [2009/1539](#)) were made on the site for the development of a biomass electricity facility within a building. Both were subsequently withdrawn. These applications were the subject of a large number of objections on the basis that the proposed fuel types are connected with the loss of land for food production worldwide.
- 3.2 For clarity, the current application proposes the use of fossil diesel only, and the applicant is happy for a condition to be attached in this regard should the LPA consider it necessary to do so.

4.0 PROPOSED DEVELOPMENT

- 4.1 This planning application proposes the siting of reserve electricity generators within attenuated containers to be connected to the YEDL substation at Whaley Road, Barnsley. The development is considered to be a *sui generis* land use, while being industrial in its visual and functional nature.
- 4.2 The development will consist of three acoustic containers with top mounted emissions abatement equipment (drawing 1880.003) each containing 2 no. Perkins 4012-46TAG3A diesel generators (specification and technical data attached). A further fourth container will contain one Perkins generator while its other half will host the switch gear apparatus for the site (drawing 1880.006).
- 4.3 Each container will be accompanied by a transformer (drawing 1880.004), and will be refuelled by means of gravity feeding from the single fuel tank (drawing 1880.005). The site will be enclosed by perimeter palisade fencing, details of which are shown on accompanying drawing 1880.003 for ease of comparison with the container sets.
- 4.4 The acoustic containers will be designed specifically for this development, and will achieve an operational noise level of 85dB(A) at 1 metre with the proposed generators.
- 4.5 The purpose of the generators is to temporarily export electricity to the National Grid. This will enable the plant to form part of the National Grid's Short-Term Operating Reserve ('STOR') programme, which provides balance to the Grid during unexpected periods of high demand or constraints on the system whereby the National Grid can call upon the provider on demand. Full details of the need for and role of STOR development are set out in section 6 of this statement.
- 4.6 In order to provide a link between the generating plant and the existing local electricity distribution network it will be necessary to connect the site to the adjacent substation within the industrial estate. The proximity of the substation is a major factor of the siting of the development, as it is the only local substation with the capacity to connect new electricity for export. This proximity also allows connection of the reserve facility to the Grid with minimal environmental disruption due to underground or overhead cabling.
- 4.7 This connection will be the subject of a separate application under Section 16 of the Electricity Act 1989. Therefore, the details of the grid connection do not form part of this planning application.

- 4.8 It is expected that the generators will only be required for approximately 75 hours per annum, and no more than 300 hours per annum, typically running at times between 07:00 and 14:00 and 16:00 and 22:30 and not during the night.
- 4.9 While it is highly likely that these operating hours and time periods will not be exceeded, the facility would be subject to a contractual agreement for generators to run on demand from the National Grid at any time. Should this occur it would most likely be in the event of a major national supply incident, such as the simultaneous loss of two or more baseload power stations. The proposal represents an emergency supply facility, and therefore would not be viable if it were subject to strict conditions on its operating hours.
- 4.10 The transfer of all fuel will take place by secure means in fully bunded areas. Transfer between the on-site fuel storage and the generators will be carried out by gravity feed pipes to minimise the risk of spillage. Comprehensive measures will be taken to ensure that no materials, including liquid fuels, are able to escape the site. It is considered that due to these measures the risk of contamination to ground water or any nearby watercourse will be minimised.

Access & Fuel Delivery Method

- 4.11 The site will be accessed via the existing private road leading from Whaley Road to the YEDL substation adjacent to the site. The facility will require only one fuel delivery per week, by means of a 15 tonne fixed wheelbase tanker. The vehicle will enter the site via the access gates shown and pull up along site the fuel tank which is located at the site entrance. After refuelling, the vehicle will reverse back-right into the existing T junction, enabling it to leave rejoin Whaley Road in forward gear.

5.0 PLANNING POLICY BACKGROUND

Regional Spatial Strategy for Yorkshire and the Humber (“the RSS”)

- 5.1 The RSS for the region was revoked on 6th July 2010 following the election of the Coalition Government. However, following a High Court Judgement on 10th November 2010, the RSS was re-established as part of the development plan. It is now expected that the revocation will follow the enactment of the Localism Bill and will be subject to Parliamentary consideration of the environmental assessment of the revocation of each individual regional plan. The Secretary of State has instructed that the intention to revoke regional strategies should be taken as a material consideration.

Barnsley MBC Core Strategy (“the Core Strategy”)

- 5.2 Policy CSP19 is of direct relevance to this application, as the proposal site lies within an area designated for employment uses. The policy states that *“existing employment land, or land last used for employment purposes will be retained in order to safeguard existing or potential jobs. The redevelopment of employment land and buildings for non-employment uses will only take place if:*

Redevelopment would not result in a loss of existing jobs or employment potential; and there will still be an adequate supply of employment land in the locality.”

The policy goes on to state that, if the above can be demonstrated, proposals should also show that the land in question cannot satisfactorily support continued employment use.

- 5.3 Policy CSP29 sets out general design principles for the borough. It states that high quality development will be expected, which respects and enhances its locality and any cultural or environmental assets it may impact upon.
- 5.4 CSP34 deals with the protection of the Green Belt, and states that *“the extent of the Green Belt will be safeguarded and remain unchanged.”*
- 5.5 CSP40 deals with the protection of potential sensitive receptors from any negative impacts which might arise from a development, including *“air, surface water and groundwater, noise, smell, dust, vibration, light or other pollution which would unacceptable affect or cause a nuisance to the natural and built environment or to people.”* It states that where any of the above may be the case, developers will be expected to minimise the effects and provide mitigation measures where appropriate.

Barnsley MBC Local Plan (“the Local Plan”) (saved policies)

- 5.6 Policy ED4 deals with residential amenity, and states that proposals will be assessed with regard to the likely impact of air pollution, noise and visual intrusion on potential residential receptors.
- 5.7 Policy ED7 is concerned with employment policy areas, and is of direct relevance to this application – it indicates that the area should prioritise applications for employment generating uses.

National Planning Policy

- 5.8 The Government is currently undergoing reform of the planning system, through which it is intended that all national Planning Policy Statements and other statutory national planning guidance will be consolidated into a single document known as the National Planning Policy Framework (“the NPPF”), encompassed by a ‘presumption in favour of sustainable development’.
- 5.9 At the time of making this application, the NPPF is yet to be published in its final form, and the following relevant national planning policies remain a complete reflection of statutory policy.

Planning Policy Statement 1: Delivering Sustainable Development (“PPS1”)

- 5.10 PPS1 sets out the Government’s high level policy objectives for planning. It sets a framework for specific policies, which are set out in the thematic Planning Policy Statements, but with a broad approach to sustainable development. To this end, the Government envisages that the planning system should facilitate and promote sustainable and inclusive patterns of development by contributing to sustainable economic development and by ensuring high quality development through good and inclusive design, together with the efficient use of resources. This is to be actively sought by ensuring that new development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.
- 5.11 PPS1 promotes the more efficient use of land through higher density, mixed use development and the use of suitably located previously developed land and buildings. Planning should actively seek to bring vacant and underused previously developed land and buildings back into beneficial use to achieve the targets the Government has set for development on previously developed land.

Planning Policy Statement: Planning and Climate Change – Supplement to Planning Policy Statement 1

- 5.12 This supplement to PPS1 was published in December 2007 and sets out how planning, in providing for the new homes, jobs and infrastructure needed by communities, should help shape places with lower carbon emissions and resilient to the climate change now accepted as inevitable.
- 5.13 The 'key planning objective' set out at paragraph 9 is to deliver sustainable development. In doing so, this should include securing energy efficiency and the reduction in emissions, reducing the need to travel, and responding to the concerns of business by mitigating and adapting to climate change. Paragraph 10 builds on this and stresses the need for new development to be located and designed to limit carbon dioxide emissions and make good use of opportunities for decentralised and renewable or low carbon energy.

Planning Policy Statement 4 – Planning for Sustainable Economic Growth ("PPS4")

- 5.14 PPS4 was published in December 2009 and sets out the Government's comprehensive policy framework for planning for sustainable economic development in urban and rural areas.
- 5.15 Paragraph 9 states that *"the Government's overarching objective is sustainable economic growth,"* and paragraph 10 sets out the Government's objectives for planning in achieving this, which are to:
- *build prosperous communities by improving the economic performance of cities, towns, regions, sub-regions and local areas, both urban and rural;*
 - *reduce the gap in economic growth rates between regions, promoting regeneration and tackling deprivation;*
 - *deliver more sustainable patterns of development, reduce the need to travel, especially by car and respond to climate change*
 - *raise the quality of life and the environment in rural areas by promoting thriving, inclusive and locally distinctive rural communities whilst continuing to protect the open countryside for the benefit of all.*
- 5.16 Policy EC2 promotes sustainable economic growth, particularly having regard to the character of the area and the need for a high quality environment, making the most efficient and effective use of land, prioritising previously developed land which is suitable for re-use, reflecting the different location requirements of businesses, locating developments which generate substantial transport movements in locations that are accessible, and avoiding congestion and preserving local amenity as far as possible.

- 5.17 Policy EC10 is a policy for determining planning applications for economic development, with paragraph EC10.1 stating that *"local planning authorities should adopt a positive and constructive approach towards planning applications for economic development. Planning applications that secure sustainable economic growth should be treated favourably."*
- 5.18 Paragraph EC10.2 sets out a number of impact considerations against which all planning applications for economic development should be assessed. These are:
- (a) *whether the proposal has been planned over the lifetime of the development to limit carbon dioxide emissions, and minimise vulnerability and provide resilience to, climate change;*
 - (b) *the accessibility of the proposal by a choice of means of transport including walking, cycling, public transport and the car, the effect on local traffic levels and congestion (especially to the trunk road network) after public transport and traffic management measures have been secured;*
 - (c) *whether the proposal secures a high quality and inclusive design which takes the opportunities available for improving the character and quality of the area and the way it functions;*
 - (d) *the impact on economic and physical regeneration in the area including the impact on deprived areas and social inclusion objectives;*
 - (e) *the impact on local employment.*

Planning Policy Statement 23: Planning and Pollution Control ("PPS23")

- 5.19 PPS23 is intended to complement the pollution control framework under the Pollution Prevention and Control Act 1999 and the PPC Regulations 2000.
- 5.20 Of relevance to this application, PPS23 states, at paragraph 26, that:

"The overall aim of planning and pollution control policy is to ensure the sustainable and beneficial use of land (and in particular encouraging reuse of previously developed land in preference to greenfield sites). Within this aim, polluting activities that are necessary for society and the economy should be so sited and planned, and subject to such planning conditions, that their adverse effects are minimised and contained to within acceptable limits."

Planning Policy Guidance Note 24: Planning and Noise ("PPG24")

- 5.21 PPG24 guides local planning authorities in England on the use of their planning powers to minimise the adverse impact of noise. It outlines the considerations to be

taken into account in determining planning applications both for noise-sensitive developments and for those activities which generate noise.

- 5.22 Paragraph 2 identifies that the impact of noise can be a material consideration in the determination of planning applications, and that the planning system has the task of guiding development to the most appropriate locations.
- 5.23 Paragraph 10 states that *“much of the development which is necessary for the creation of jobs and the construction and improvement of essential infrastructure will generate noise. The planning system should not place unjustifiable obstacles in the way of such development. Nevertheless, local planning authorities must ensure that development does not cause an unacceptable degree of disturbance.”*
- 5.24 Paragraph 13 sets out the ways in which noise can be mitigated, which comprise engineering (reduction of noise at point of generation), layout and administrative mitigations (e.g. limiting operating times, activities and setting noise limits).

6.0 THE NEED FOR RESERVE ELECTRICITY DEVELOPMENT

6.1 A basic introduction to the role of backup, or Short-Term Operating Reserve (STOR) plant in the national energy infrastructure is set out in the National Grid document *STOR General Description of the Service* (April 2010) which is included as Appendix I to this statement. However, a summary of recent national guidance relating to STOR development is set out below.

6.2 In July 2011 the Department for Energy and Climate Change (DECC) released the Electricity Market Reform White Paper *Planning our electric future: a White Paper for secure, affordable and low-carbon electricity*. The White Paper sets out the challenge of ensuring that electricity capacity keeps pace with the changing landscape of technologies and demand. Regarding STOR plant, it states the following:

"The System Operator (SO), National Grid, is responsible for maintaining the stability of the electricity system by ensuring that supply and demand are in balance at all times. Although individual market participants will have planned ahead of time for the expected demand in each half hour, there will be times when demand is greater than forecast ... National Grid makes an assessment of how much reserve capacity is required to manage these uncertainties in the period about four hours ahead of real time. This requirement is about 4 GW, and is largely met by the Short-Term Operating Reserve (STOR), whereby National Grid contracts reserve capacity to be made available on demand.

As greater amounts of wind generation are added to the system, National Grid expects that the level of required reserve will increase, due to the need to cope with real time unexpected changes in wind generation in addition to existing challenges; this can be both the wind dropping off or blowing too hard causing generation to drop rapidly." (p.64)

6.3 The White Paper identifies a chief barrier to more secure capacity as being the "potentially limited routes to market for some independent generation" (p.66). This market failure is due in part to the permitted development rights which allow historical statutory undertakers to install reserve plant under prior notification, while new developers are required to undertake the full planning process.

6.4 Increasing the amount of standing reserve plant across the country under the National Grid STOR programme is identified as a key solution to the growing demand balancing problem, along with Demand Side Response (DSR), new storage technology and other innovations. The White Paper sets out two options for developing a more comprehensive and secure market for meeting the capacity

challenge – the Strategic Reserve and Capacity Market models – both of which would depend on a large increase in the availability of STOR generation plant.

- 6.5 Taking into account the challenges facing the electricity market and the forecast closures of base-load coal and power generation plant over the next decade, National Grid have estimated that by 2019/20 the amount of STOR reserve generation will need to be almost double from 2009 (National Grid Future Balancing Requirements: Response 2009).

Critical infrastructure for renewable energy development

- 6.6 In response to the EU Renewable Energy Directive 2009/28/EC - which set a legally binding target of 15% renewables share in the energy portfolio by 2020 – a series of high level Government documents (including the UK Renewable Energy Strategy of 2009 and the UK Low Carbon Transition Plan of 2009) a series of White Papers have been published to ensure that this target is met. PPS22: Renewable Energy and its Companion Guide set out the National Planning Policy which requires that the impact of a development on the deployment of renewable energy is a prominent planning consideration.
- 6.7 While it involves electricity generation from fossil fuels, the installation of new STOR plant allows the overall proportion of electricity produced from renewable sources of energy to be increased nationally, for the reasons described in the 2011 White Paper quoted above. The considerable increase in renewable electricity production demanded by the most recent national planning policies – seeking to meet the challenge of climate change - will require a proportional increase in the availability of reserve generation plant if reliability is to be maintained, and rolling blackouts avoided.
- 6.8 In addition to this, following on from the announcement of proposed changes to the planning system set out in the Coalition's Budget of March 2011, the draft National Planning Policy Framework sets out the Government's intention for there to be "*a presumption in favour of sustainable development*" at the heart of the planning system (p.4). The intention of the Government to encourage economic growth implies the need for a corresponding growth in energy infrastructure, and this combines with the need to expand the renewables share to create an increased need for new reserve generation development to be approved and installed.
- 6.9 It is considered that the Government literature referenced above demonstrates a clear national need for reserve electricity development, rooted in national planning policy for renewable energy and sustainability, to which significant weight should be applied. STOR development is required to provide critical infrastructure for the long term sustainability of electricity generation in the UK.

7.0 ASSESSMENT OF PROPOSED DEVELOPMENT

Employment Designation and Principle of Development: Need

- 7.1 It is considered that the principle issue affecting this proposal is its siting within a designated existing employment area. It is accepted that the proposal would result in the loss of land designated for employment, and in this regard the development would not be fully in accordance with the development plan. However, it is considered that material considerations affecting the proposal provide sufficient weight to override this concern in favour of the development, for the following reasons:
- 7.2 The information provided in Section 6 is considered to demonstrate in detail the considerable national need for reserve electricity development of this type. In addition to this, it is considered that there is a specific need for the siting of the development in this particular location due to the proximity of the Whaley Road substation. The substation has been identified as the only connecting point in the area with the capacity to take on new electricity export connection. Further evidence of this has been provided by Midland Power Networks, and accompanies this submission (ref MPN/AGS/BNOT).
- 7.3 In addition to this, it is considered that this particular piece of land within the Whaley Road industrial estate is of sub-optimal quality for employment development. The land has been historically in use for the hosting of electricity equipment in connection with the adjacent YEDL substation. Generally, the location next to this substation makes the site unfit for any employment use. This proposal will therefore not result in the loss of any existing jobs, but is also very unlikely to prevent future employment uses which are very unlikely to be proposed for the land.
- 7.4 The development is expected to necessitate the creation of approximately 2 full time jobs or equivalent, for the purposes of deliveries and maintenance of the site. Additional employment will be generated during the construction phase. This is considered to add further weight to the argument above.
- 7.5 It is therefore considered that material considerations arising from the particular nature of this development proposal and the site are sufficient to outweigh the deviation from the development plan in terms of Core Strategy policy CSP19.

Visual Impact, Appearance and Local Amenity

- 7.6 The development will consist of generators within mobile-style containers with associated transformer equipment, a fuel tank, access tracks and perimeter timber screen fencing. Overall, the development will be utilitarian and industrial in visual

appearance, and will therefore complement the existing character of the industrial estate.

- 7.7 Due to the screening effect of the railways embankment to the north, it is not anticipated that the development will have any negative impacts on the Green Belt. With regard to general residential amenity, it is considered that a combination of the distance from the residential receptors to the northwest and west, and the massing of the built industrial environment that intervenes, renders insignificant any potential direct negative impacts of the development on residential amenity.

Air Quality and Emissions

- 7.8 The air quality impacts of the proposed development have been assessed by Phlorum Ltd in the accompanying Air Quality Screening statement. The statement finds that the proposal will not result in any unacceptable impacts in terms of air quality, largely due to the intermittent nature of its use. The requirements of Core Strategy CSP19 are therefore considered to be met in this regard.

Noise Impact

- 1.12 It was agreed in the course of pre-application discussions with the local authority that detailed noise impact assessment would not be required to support the application, subject to a full specification of the proposed generators being submitted for consideration by the Council's regulatory services officers. The information is attached as a supporting document to this application. Due to the intermittent nature of its use, the proposal is not anticipated to result in any unacceptable noise impacts.

Utilities

- 7.9 In order to provide a link between the generating plant and the existing local electricity distribution network it will be necessary to connect the site to a substation. This connection will be the subject of a separate application under Section 37 of the Electricity Act 1989. Consequently the details of the grid connection do not form part of this planning application.