

Our Ref: 2658-01/PR

23rd April 2020

Sent via email to: [dns.wales@pins.gsi.gov.uk](mailto:dns.wales@pins.gsi.gov.uk)

Planning Inspectorate  
Crown Buildings  
Cathays Park  
Cardiff  
CF10 3NQ

planning  
transportation  
planning  
environment  
design

Dear Sir/Madam,

## ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REQUEST

### PROPOSED DEVELOPMENT OF A 49.5MW ENERGY GENERATION FACILITY ON LAND AT NATIONAL GRID'S LEGACY SUBSTATION, WREXHAM, LL14 4HY

I am writing on behalf of our client, HG638LEG Limited, a subsidiary of Harbour Energy Limited ('the Applicant') to request a formal Screening Direction under Regulation 6 of The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (hereafter referred to as 'the EIA Regulations') for the above development proposal, hereafter referred to as 'the Proposed Development'.

The Proposed Development is considered a Development of National Significance (DNS) in Wales (i.e. a facility generating above 10MW and less than 350MW of electricity). In accordance with part (e)<sup>1</sup> of Regulation 31 of the EIA Regulations, this screening request is being made in relation to a DNS for the purposes of section 62D of the Town and Country Planning Act 1990. This screening request has therefore been made to the Planning Inspectorate (PINS), in accordance with the Developments of National Significance Procedural Guidance<sup>2</sup> (Appendix 3: Environmental Impact Assessment).

In accordance with the Guidance and Regulation 31 of the EIA Regulations, and to assist in your adoption of a Screening Direction, we have set out a description of the Proposed Development and its location, then provided our view of whether the Proposed Development falls within Schedule 1 or Schedule 2 of the EIA Regulations. We have then gone on to discuss the likely impacts.

A location plan of the site has been provided and is illustrated on Dwg 2658-01-002. The extent of the likely development is also shown on Dwg 2658-01-004 and Dwg 2658-01-005.

#### Description of the Development

The Proposed Development is for a gas peaking plant with a capacity of 49.5MW. An indicative layout of the proposed development is shown on Dwg 2658-01-004. The key components of the Proposed Development are as follows:

- 11 No. 4.5MW gas engines within acoustic concrete enclosures with c.12m high exhaust stacks and integrated air intakes, free standing radiators;

<sup>1</sup> <https://www.legislation.gov.uk/wsi/2017/567/part/8/made>

<sup>2</sup> <https://gov.wales/sites/default/files/publications/2019-07/developments-of-national-significance-guidance-environmental-impact-assessment.pdf>

- Transmission Network Operator (TNO) metering kiosk;
- Switchgear Room;
- Site Office and Welfare Building;
- 33kV Electrical Transformer;
- 2 No. 13,000 litre Lubrication Oil Tanks (clean and waste tanks);
- Gas Metering Kiosk;
- CCTV;
- Fencing; and
- Pressure Reducing Station.

The Proposed Development is illustrated on the following drawings and described more fully below:

- |               |                                  |
|---------------|----------------------------------|
| • 2658-01-004 | General Arrangement              |
| • 2658-01-005 | General Arrangement              |
| • 2658-01-006 | Gas Engine & Radiator Elevations |
| • 2658-01-007 | Existing Site Plan               |
| • 2658-01-008 | Site Office                      |
| • 2658-01-009 | TNO Metering Kiosk               |
| • 2658-01-010 | Gas Kiosk Elevations             |
| • 2658-01-011 | 33kV Transformer Detail          |
| • 2658-01-012 | 11kV Transformer Details         |
| • 2658-01-013 | Fencing and CCTV Cameras         |
| • 2658-01-014 | PRS Kiosk                        |

### ***Gas Engines***

Each of the 11 No. gas engines would be able to operate independently and, in total, give a combined maximum electrical power output of 49.5MW.

Unlike many existing peaking facilities which are powered by diesel and heavy fuel oils, the proposed engines would be fuelled by clean burning less polluting mains natural gas and would use conventional spark ignition technology to burn the fuel which in turn rotates the generator creating the electricity, which is then exported to support the local electricity network. The connection to the gas supply would be required to facilitate the development and the nearest point of connection is located to the north east of the site.

The gas engines would be low emission and comply with current emission legislation and Environmental Permitting requirements.

The gas engines would be contained within a pre-fabricated concrete enclosure unit incorporating air inlets/outlets and connections to the exhaust stack. The concrete enclosure unit is an integral part of the plant and machinery and will provide acoustic enclosure for the engines. The concrete unit would be accessible for general maintenance of the gas engine, but engines would need to be removed for any major maintenance activities and this has been allowed for in the design of the proposed development.

### ***Exhaust Stacks***

The combustion gases from the gas engines would be discharged by a c.12m high exhaust stack from each engine.

The key emissions from the combustion of natural gas are oxides of nitrogen (NO<sub>x</sub> and NO<sub>2</sub>) and carbon monoxide (CO). Other pollutants associated with combustion processes such as sulphur dioxide (SO<sub>2</sub>) and particulates are negligible due to the type of fuel used.

An Environmental Permit would be required to operate the facility and this will ensure that emissions are monitored and will remain below acceptable levels. The Environmental Permitting process is a separate consenting regime to planning and the applicant will not be able to operate the facility until a Permit has been issued.

### ***Switchgear Room***

The switchgear equipment would be contained within the switchgear housing located within the centre of the array of gas engine enclosures. This would comprise a concrete building with doors at either end for access by site operatives / maintenance engineers.

### ***Transformers***

The proposed 33kV transformer is required to convert the electricity generated by the gas engines to a higher voltage for connection to the distribution network and neighbouring substation. The 33kV transformer would be located at the western side of the development. A smaller 11kV transformer would also be required to onsite systems.

### ***Office and Welfare Building***

The office and welfare building is provided for visiting maintenance engineers to provide office and welfare facilities. The office would comprise a portacabin style modular building.

### ***Lubrication Oil Tanks***

Two oil lubrication tanks would be provided adjacent to the gas engine enclosures. The purpose of the lubrication oil storage tanks would be to provide storage for new and used lubrication oil for the gas engines. These would consist of double skinned fully bunded metal or GRP containers on a fully bunded hard surface with 110% containment capacity as recommended by EA best practice. Both the clean and used oil tanks would have a 13,000 litre capacity.

### ***Access, Surfacing and Parking***

Access to the site would utilise the existing access into the National Grid substation off Bronwylfa Road. Access to the Proposed Development would use existing site roads within the substation and a short section of new road to connect to the Site.

The site would be largely surfaced with free draining stone and areas of hardstanding. The areas of hardstanding would be drained to soakaways and/or the surface water pond to the east (via an interceptor). The areas of hardstanding would be used for maintenance of engines and parking for use by site monitoring staff and maintenance engineers.

### ***Grid Connection***

The proposed development would be connected to the adjacent National Grid substation and the local distribution network via underground cables.

The grid connection works outside the Site boundary would be undertaken by an ICP (Independent Connection Provider), in accordance with the National Grid design requirements, under Permitted Development Rights. As such, these works do not form part of this planning application and are not included within the planning application boundary.

### **Gas Connection**

The proposed development would be connected to the nearby gas main by an underground pipe that would link the Proposed Development to the Pressure Reducing Station (PRS) located in the northwest corner of the Substation. The PRS would be connection to the gas transmission system by a short section of pipe and this s work would be undertaken by the utility provider using permitted development rights and would not be included within the application.

### **Lighting**

Lighting at the site would be kept to a minimum to reduce light pollution and running costs. Lighting would only be used when maintenance staff are present on site to allow them to safely move around the site. Lighting would be directional LED lighting with shrouds to prevent upwards light spillage. Lighting would be fitted to CCTV columns, gas engine enclosures, site office and perimeter fencing as required.

### **Operation of the Proposed Development**

The Proposed Development would not be permanently manned. However, a team of maintenance engineers would visit the site on routine weekly maintenance visits. The site would also be constantly monitored by staff remote from the site throughout the day.

During site operations very limited traffic would be generated by the proposed development. This would be limited to regular visits by a maintenance engineers using a van.

Although the gas engines would be available to supply the National Grid 24hrs/day and 7 days/week. The engines would generally only run for short periods at a time most typically between the morning and afternoon peak hours between 7am – 11am and 3:30pm to 7:30pm respectively. It is anticipated that the gas engines could be operational for approximately 2,500 hours per annum.

### **Site Location and Context**

The site is located on undeveloped land, north of and adjacent to an existing National Grid substation. The village of Talwrn is located circa 700m to the south of the site and the town of Rhostyllen is located circa 1.5km to the east, while Wrexham is circa 2km to the north-east.

The site is formed of rough grassland with some self-seeded trees and shrub, within the overall National Grid Substation complex. The site covers an area of approximately 0.45 ha. Dwg 2658-01-002 illustrates the site location. The substation complex is surrounded by a substantial wooded embankment that screens the site from the surrounding landscape.

To the south of the site sits the existing substation complex and agricultural land borders the site to the north, west and east. Small pockets of residential development are also apparent in the area, as are agricultural buildings. Solar developments are also present in the area to the north of the site on agricultural land. A public right of way runs alongside the western boundary of the site.

The site is not subject to any heritage or Conservation Area designations and there are no listed buildings on or in the immediate vicinity of the site. A Scheduled Ancient Monument (SAM) is located circa 400m east of the site. The proposed development would not be visible from this asset due to existing screening and therefore there would be no impact upon the setting of this heritage asset.

The site is not located within any statutory designated sites for nature conservation. The nearest ecological designations are summarised below:

- Strÿt las a'r hafod SSSI, 2.1km south east

- Johnstown Newt Sites SAC, 2.1km south east
- Ruabon/Llanntysilio Mountains and Minera SSSI, 2.5km west
- Berwyn a Mynyddoedd De Clwyd/ Berwyn and South Clwyd Mountains SAC, 2.5km west
- Gatewen Marsh SSSI, 3.6km north east
- Sontley Marsh SSSI, 4.4km east
- Coedwig Ffossil Brymbo Fossil Forest SSSI, 4.8km north

The site is not in a flood risk area and is below 1 hectare in area. As such, the planning application will not need to be accompanied by a Flood Risk Assessment.

The site is not located within a Development High Risk Area as defined by the Coal Authority's Interactive Map and as such a coal mining risk assessment is not required.

There are no residential dwellings within or immediately adjacent to the site. The nearest residential areas relative to the Site are located to the southwest of the Proposed Development off Bronwylfa Road at a distance of circa 325m Additional isolated residential receptors are located southeast off Bronwylfa Road at a distance of 390m and to the northwest and northeast directions at distances of circa 430m to 540m respectively.

The emerging Wrexham County Borough Council (WCBC) Local Development Plan 2013-2028 identifies that the site is located within a 'local designated site of nature conservation and geological importance' (Policy NE2).

### Planning History

A review of the WCBC planning website shows that there is a limited planning history for the site. Those applications considered relevant to the proposed development are summarised below:

Planning Ref.	Description	Outcome / Date
P/2008/0046	Installation of 40 Kva Generator and Ancillary Equipment at Legacy Substation.	Granted, February 2008
P/2014/0263	Installation of Solar Panels and Associated Equipment to Enable Energy Generation and Connection to National Grid. (	Granted, July 2014
P/2016/0089	Application for Non-Material Amendment to Planning Permission P/2014/0263 For Retention of Temporary (Internal) Access Track and Alteration to Solar Array Layout as per Condition No 20	Granted, March 2016

It can be seen from the above planning history review that there have been several energy related planning applications in the vicinity of the substation complex.

### EIA Screening

As previously discussed, we have set out below our view of whether the Proposed Development falls within Schedule 1 of Schedule 2 of the EIA Regulations.

The EIA Regulations define EIA development as that falling under either Schedule 1 Development, or Schedule 2 Development. These developments have potential to have likely significant effects on the environment by virtue of factors such as their nature, size or location.

### **Schedule 1 Development**

Projects defined within Schedule 1 are EIA development and it is mandatory for planning applications for such developments to be supported by an Environmental Statement.

The Proposed Development does not fall under any of the Schedule 1 categories. Therefore, the Proposed Development is not considered to be Schedule 1 development and mandatory EIA is not required.

### **Schedule 2 Development**

Schedule 2 developments are screened as EIA projects and as such are required to be accompanied by an Environmental Statement (ES) if they are deemed likely to give rise to significant effects by virtue of the characteristics of the development, location or characteristics of the potential impacts they may cause.

In the context of the Proposed Development, the relevant category of Schedule 2 is paragraph 3 Energy Industry (a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1). The Schedule 2 indicative threshold for industrial installations for the production of electricity, steam and hot water is that the area of the development exceeds 0.5ha. However, the Proposed Development is 0.45ha and accordingly, it is not considered to fall within category 3a of Schedule 2 of the EIA regulations.

Therefore, on this basis, it is not considered that the development would ordinarily be considered EIA development. Notwithstanding the above it is understood that Welsh Ministers have the power to direct that something is EIA development even if it doesn't fall within the Schedule 2 Criteria for a particular type of development. As such consideration has been given to the information required to complete the EIA Regulations Screening Matrix<sup>3</sup>. This is presented under the following headings:

1. Natural Resources
2. Waste
3. Pollution and Nuisances
4. Population and Human Health
5. Water Resources
6. Biodiversity (Species and Habitats)
7. Landscape and Visual
8. Cultural Heritage/Archaeology
9. Transport and Access
10. Land Use
11. Land Stability and Climate
12. Cumulative Effects
13. Transboundary Effects

### **Natural Resources**

The Proposed Development will not lead to any significant change to the topography of the area and earthworks would be limited to soil stripping, cable & pipe trenches and the formation of foundations for the gas peaking plant complex. These types of activities are common to most types of industrial development and are unlikely to result in any significant environmental effects. Phase 1 Site Investigation would be undertaken for the site to identify contamination risk and to develop remediation proposals, if required.

---

3

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/643241/TCPA\\_EIA\\_Screening\\_Matrix\\_2017\\_Regs.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/643241/TCPA_EIA_Screening_Matrix_2017_Regs.pdf)

The site is mostly composed of grassland and scrub vegetation with interspersed trees of varying maturity. The more mature and established vegetation is located on the surrounding embankments. This would be outside the site boundary and would be unaffected by the Proposed Development. Scrub and grassland vegetation within the site would be lost as a result of the Proposed Development. However, their value is considered limited.

### **Waste**

The Proposed Development would not generate significant waste during construction or operation. Oil is required for the lubrication of the generators and waste oil tanks would be present on the site. Disposal of the limited amount of waste oil would be carried out in accordance with the appropriate regulations at licenced facilities so would not present a risk to the environment. Maintenance of the site may also require the occasional removal and replacement of some equipment. However, this would be infrequent and typical for industrial installations. Recycling would occur where ever possible. As such, waste occurring as a result of the Proposed Development would not be likely to result in significant environmental effects.

### **Pollution and Nuisances**

Primary aerial emissions from the eleven gas engines will be NO<sub>x</sub> / NO<sub>2</sub> and CO. The facility will be operated in accordance with an Environmental Permit issued by Natural Resources Wales. This permit will include controls on permitted emission limits from the gas engine stacks.

An Air Quality Assessment (AQA) has been undertaken for the Proposed Development and is provided with this screening request. The AQA found that the greatest impacts are predicted at those residential receptors closest to the site to the northeast, southwest and southeast. Background pollutant concentrations at these locations are predicted to be well below the Air Quality Assessment Levels (AQALs). The AQA does not predict that the total long-term NO<sub>2</sub> concentrations, produced by the Proposed Development, would approach, or exceed, the relevant AQALs.

Long-term impacts at the nearest residential receptors are predicted to be *slight* at most (experienced at a single receptor) with all other impacts being predicted to be *negligible*.

There would be limited light pollution associated with the construction / operation periods and this would be localised and mitigated by standard construction management techniques.

A Noise Assessment has been undertaken for the construction and operational periods of the Proposed Development and is provided with this screening request. The Noise Assessment predicts the noise contribution from the Proposed Development using ISO9613-2 methodology and CadnaA noise modelling software. The assessment confirms that rating noise levels from the site would range between 30dB and 39dB LAeq during maximum site operations.

The predicted noise levels would be below the measured background levels at the nearest receptors and as such noise impacts would not be significant.

### **Population and Human Health**

Emissions that could affect human health would be the aforementioned emissions from the gas generators. As set out above, the AQA modelled the potential impacts due to increases in long-term concentrations of NO<sub>2</sub> at the nearest residential receptors to be slight at most.

Predicted impacts of short-term concentrations of NO<sub>2</sub> at the nearest residential receptors are predicted to be moderate at most. At receptors where these moderate impacts are predicted,

EA guidance, which considers the resulting total short-term concentrations, assumes the background short-term concentrations are twice the long-term background concentration. The resulting total short-term concentrations are predicted to remain well below the relevant AQAL at all receptors and impacts are considered insignificant.

Additional consideration was made in the AQA of those receptors located close to sources of NO<sub>2</sub>, such as near the A483 and which may therefore experience higher background NO<sub>2</sub> concentrations. However, the resulting predicted annual mean NO<sub>2</sub> concentrations with the development at all these receptors were found to remain well below the AQAL and impacts were considered negligible.

The AQA considered the overall effect of the Proposed Development on local air quality, with regards to human health as not significant. As such there is no significant risk to the surrounding population as a result of the Proposed Development.

### ***Water Resources***

A small pond is present on land adjacent to the site of the Proposed Development. The closest part of the Proposed Development to this pond would be the gas pipe connection to the PRS. This represents a minor element of the construction required and would have no direct impacts on the pond.

The site is not within a flood risk area, and drainage from the site would be assessed as part of a Drainage Impact Assessment to ensure that measures are in place to limit run-off from the Proposed Development to green field rates using SUDS.

As such effects on water resources can be effectively managed to avoid any potential for significant environmental effects.

### ***Biodiversity***

The site is remote from SSSIs, Ramsars, SACs and NNRs. As previously discussed, an Ecological Assessment has been undertaken on the site and this is provided with this screening request. The Ecological Assessment considers the impact of the Proposed Development on the impact zones of these designated sites. It concludes that, as a result of the separation distance and lack of identified pathways, no direct or indirect impacts are anticipated.

The areas surrounding the existing substation (including the Site) are designated as a Local Wildlife Site. The Ecological Assessment considers the impacts of the Proposed Development on local habitats and species. The Proposed Development would remove some scrub and grassland species on the site, along with some sparse self-seeded trees. The scrub and grassland were found to offer local wildlife interest and could potentially support a diverse range of species. To compensate for the loss of this habitat other areas surrounding the substation would be enhanced/managed to ensure that there would be a net gain in overall biodiversity.

The assessment also concludes that the trees likely to be lost offer limited potential for roosting bats and some potential for nesting birds. Removal of these trees would take place outside of the bird breeding season (March-August inclusive) as recommended through the preliminary Ecological Assessment report. Again enhancement measures such as additional bird and bat boxes would be provided in adjacent areas to provide a net gain in overall biodiversity.

Overall, it is considered that the proposed development would have localised effects on existing habitats, but that this would not have significant effects on biodiversity.

### ***Landscape and Visual***

There are no areas or features on or around the location which are protected for their landscape and scenic value, which could be affected by the project. The Proposed Development would be located on a site that is heavily screened landform and the belt of woodland bordering the site to the north, west and east, and the existing substation complex being present to the south.

The Proposed Development is unlikely to be visible from outside the boundary of the existing substation and as such would not give rise to any widespread significant landscape and visual effects.

### ***Cultural Heritage/Archaeology***

There are no scheduled monuments, listed buildings or conservation areas registered parks and gardens or historic battlefields within or immediately adjacent to the site. As such, effects on the setting of any assets in the local area would not be significant.

### ***Transport and Access***

Access to the site from the trunk road network would be provided from the A483 via the B5605, B5098 and B5097 (Bronwylfa Road). These roads are considered suitable for use during construction and delivery of gas engines without improvement. This route would have been for large electrical equipment previously delivered to the site for use constructing and maintaining the existing substation. Due to the relatively small site footprint and basic engineering works required construction works would not generate significant levels of traffic and any increase would be for a short period of time.

During the operation of the development the site would not be permanently manned and vehicle movements associated with operational maintenance would be minimal. As such, there would be no long term significant effects on these routes. A public right of way (PROW) runs alongside the western boundary of the site. There would be no direct impacts on this footpath as a result of the Proposed Development and views of the Proposed Development would be effectively screened/filtered by the vegetation surrounding the existing substation complex. The visual impact on this footpath would not be significant.

Overall, the Proposed Development is unlikely to result in significant environmental effects associated with increased traffic generation or PROWs.

### ***Land Use***

The site is considered compatible with the proposed land use is not allocated in the local development plan for any other type of development. Whilst the site is designated as part of a local wildlife site the Proposed Development will include habitat enhancements to provide net biodiversity gain. As such, this loss of a small area of this locally designated site would not result in likely significant environmental effects. The Proposed Development would not conflict with land use designations or existing adjacent uses, and significant effects in terms of land use are unlikely.

### ***Land Stability and Climate***

This location is not susceptible to earthquakes, subsidence, landslides, erosion, or extreme /adverse climatic conditions, e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems. Whilst located in a historic mining area the site is not identified as a Development High Risk Area as defined by the Coal Authority.

### ***Cumulative Effects***

The Proposed Development would not result in any likely significant effects in isolation. The Proposed Development would be very well screened by existing vegetation and earthworks

around the perimeter of the existing substation. As such there would be no landscape or visual impacts beyond the site boundary and no potential for cumulative effects in this respect.

The aerial emissions from any existing activities that may lead to cumulative impacts would be incorporated within the Defra predicted background pollutant concentrations used in the Air Quality Assessment provided with this screening request. The air quality consultant has not identified any existing activities in the area that would require more detailed cumulative impact assessment.

These predicted background concentrations would not include any recently constructed, consented but not yet built out, or proposed developments in the area. However, given the nature of the locality of the site it is unlikely that plans exist such that significant cumulative impacts would arise.

A review of Wrexham CBC Planning Application Search website has not revealed any developments in the immediate vicinity of the site

### ***Transboundary Effects***

Due to its geographic location, scale and nature if the proposed development there would be no potential for transboundary effects.

### **Screening Request**

This letter provides a brief description of the Proposed Development and the likely significant effects on the environment in line with the requirements of Regulation 6(2) and Schedule 3 of the EIA Regulations. Screening against Schedule 3 of the EIA Regulations clearly demonstrates that the Proposed Development is not likely to result in significant environmental effects by virtue of factors such as the nature of emissions, size or location. As such, it is considered that the Proposed Development does not constitute 'EIA development'.

### ***Planning Submission***

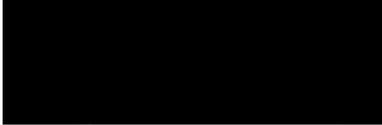
Notwithstanding the above, the DNS submission will be accompanied by a series of assessments setting out the details of the Proposed Development and the results of various technical assessment. These will include the following:

- Planning and Design & Access Statement;
- Planning Drawings;
- Ecological Assessment;
- Drainage Impact Assessment;
- Landscape and Visual Impact Assessment;
- Noise and Vibration Assessment; and
- Air Quality Assessment
- Phase 1 Ground Condition reports

The final list of documents to be submitted in support of the detailed DNS submission will be confirmed with PINS & WCBC as part of pre-application discussions. We trust that the contents of this letter along with the attached plan are sufficient to enable PINS of behalf of the Secretary of State to adopt a screening direction.

We look forward to receiving your response within the statutory three-week period; in the meantime, please do not hesitate to contact us should you have any queries.

Yours faithfully,



Phil Roden  
**Director**

Encl.

- 2658-01-002            Location Plan
- 2658-01-004            General Arrangement
- 2658-01-005            General Arrangement
- 2658-01-006            Gas Engine & Radiator Elevations
- 2658-01-007            Existing Site Plan
- 2658-01-008            Site Office
- 2658-01-009            TNO Metering Kiosk
- 2658-01-010            Gas Kiosk Elevations
- 2658-01-011            33kV Transformer Detail
- 2658-01-012            11kV Transformer Details
- 2658-01-013            Fencing and CCTV Cameras
- 2658-01-014            PRS Kiosk
- Air Quality Assessment (R2746C-R01-v3)
- Noise Impact Assessment (R20.0302/DRK)
- Ecological Assessment (AxisL-043-1215 -V2)