

GF Energy Ltd

# Timet Capacity Mechanism Development

Planning Statement



May 2015

Amec Foster Wheeler Environment  
& Infrastructure UK Limited



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# 1. Introduction

## 1.1 The Proposed Development

The proposed development is for a gas fuelled capacity mechanism embedded power plant at the Westfield Industrial Park at Timet near Swansea. The mechanism comprises a series of gas powered generators which operate on a short term basis to meet peak capacity in the electricity distribution network i.e. they are a supplementary form of power which provide back-up supplies during potential black-out periods or when demand outstrips supply.

The proposed development will install up to 37 gas fired spark ignition engines each with up to 1MW export electrical output. These engines offer a number of advantages over other combustion techniques for this type of application including short duration to full power output, high levels of availability, reliability, high generation efficiency and the possibility to match the electrical requirements with the number of operational engines.

This is hereafter referred to as the proposed development. Details of the capacity mechanism process and the physical development are set out below.

## 1.2 The Applicant

GF Energy Ltd (hereafter referred to as GFE) has a contract to supply electrical power via the recent capacity mechanism auction. These plants will operate on a short-term basis meeting peak capacity within the electrical distribution network. They are expected to operate for up to 1,200 hours per year, but when called by the National Grid, they have to reach maximum power output within 2 minutes and supply electricity for the duration of the call period.

## 1.3 Statutory Requirements

The application has been prepared in accordance with the provisions of the Town and Country Planning Act 1990 (as amended) and Town and Compulsory Purchase Act 2004.

As the proposal falls within Schedule 2 development under the *Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999* as amended (hereafter referred to as 'the EIA Regulations'), a Screening Opinion has been requested from Swansea Council under the procedures set out in Part II of the EIA Regulations.

The proposed development is considered to be of a nature and scale that would not result in any significant adverse environmental effects on the surrounding area. In this context, it is considered that the proposed development does not require the preparation of an Environmental Impact Assessment under the provisions of the EIA Regulations.

## 1.4 The Submission

The following plans and documents have been submitted alongside this planning statement:

### Drawings

- ▶ Site Location Plan (Drawing Reference 230/02);
- ▶ Existing Site Layout Plan (Drawing Reference 230/003);
- ▶ Proposed Site Layout Plan (drawing Reference 230/004D);
- ▶ Transformer Elevations and Plan (Drawing Reference STD/010);

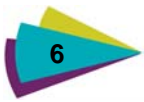


- ▶ Containerised Generator Elevations and Plan (Drawing Reference STD/011A);
- ▶ 33Kv Substation Elevations and Plan (Drawing Reference STD/012);
- ▶ Gas Governor Kiosk Elevations and Plan (Drawing Reference STD/013B);
- ▶ Switch Room Elevations (Drawing Reference STD/019);
- ▶ Welfare Office Elevations and Plan (Drawing Reference STD/021);
- ▶ Acoustic Fence (Drawing Reference STD/03); and
- ▶ Zenith Security Fencing information.

The above drawings and supporting figures are appended in Appendix A.

### **Documents**

- ▶ Planning Application Forms (Appendix B);
- ▶ Air Quality Assessment (Appendix C);
- ▶
- ▶



## 2. Description of the Development

### 2.1 The site

The site is located to the north west of Swansea and comprises approximately (~) 0.57 hectares (ha) in area. The approximate national grid reference for the centre of the site is SS606963. A site location plan is attached (Drawing 230/02).

The land is currently poor quality agricultural land. It is set in a valley which slopes gently up to the north and south. The field within which the compound would be situated is bounded by mature trees and hedges. It is located to the south of an existing Western Power Distribution (WPD) sub-station and immediately to the west of an existing diesel powered Short Term Operating Reserve (STOR) generation plant. Open fields lie to the west and south, whilst a more wooded area lies to the north separating the site from the Afon Lian some 70 m away.

The site is accessed via the existing access road to the WPD substation from Titanium Road, which provides access on to the wider highways network at the A483 in Fforest-fach.

Two 33kV overhead lines currently cross the field in which the proposed development is situated. The western line will be retained and passes to the west of the site boundary whilst the eastern line which will be undergrounded by WPD and will pass under the site as part of a separate development project.

This undergrounding will be completed prior to commencement of the capacity mechanism construction and the easement is shown on Drawing 230/004D. No stand-off is required for this level of voltage and there would be no restriction on building over it.

The site and adjoining land is identified within the emerging Local Development Plan for the future extension of Westfield Industrial Park on the western side of Swansea.

### 2.2 The proposed scheme

The proposed development will comprise up to 37 gas fired spark ignition engines each with approximately 1MW export electrical output.

The development will be powered by natural gas which will be piped under the site access from a high pressure main located on Titanium Road. A gas governor and metering kiosk will be located at the site entrance and from here it would be piped underground to each of the generators.

The generators will be arranged in rows on the site and each would be encased in a white steel container, measuring approximately 12 m by 3 m. Each would be approximately 2.8 m high with 2.2 m roof mounted plant and a 5.5 m high stack situated on top of the generator cabin. The preferred generating unit is the Guascor SFGLD 560 engine rated at 762 kW electrical output, and capable of operating as a back-up unit in the event of a loss of power or to generate commercially exported power continuously. On average the plant will operate for around 5 hours per day at peak times, and around 1,200 hours per year (based on historical data and projections from DECC).

The proposed engines offer a number of advantages over other combustion techniques for this type of application including short duration to full power output, high levels of availability, reliability, high efficiency and the possibility to match the number of operational generators to demand.

19 transformers, each comprising a dark grey box with cooling fins on each corner measuring in total 1.8 m x 1.8 m x 2.2 m high (see Drawing STD/010) would be constructed – each serving two generators.

In addition the following structures are proposed on the site:

- ▶ Switch room – a metal cabin measuring 12 m x 3.2 m and 4 m high (to ridge) with two sets of double doors and a single door set into the front elevation to provide access. The cabin would be green in colour (see Drawing STD/019);



- ▶ Gas governor kiosk – measuring 6.15 m x 1.8 m and 2.25 m high (see Drawing STD/013B);
- ▶ 33Kv substation (see Drawing STD/012);
- ▶ Welfare office (see Drawing STD021); and
- ▶ Oil tanks.

The electricity generated will pass out through two small substations on the southern edge of the site and connect via cables under the access track to Titanium Road to a WPD substation 0.3 km to the south.

Highway access would be from the WPD sub-station service road via an existing field access immediately to the south of the existing generation compound from an existing field access as shown on Drawing 230/004D. This will be tarmacked and designed with a turning head within the site to allow vehicles to enter and leave the site in forward gear. A new gate to the south of the proposed access track will ensure continued access to the agricultural field.

The development will be enclosed within a 2.4 m high metal security fence with the appropriate signage to adhere to HSE regulations. Within this fence will be a 3.5 m high acoustic fenced compound.

This would be made from 50 cm high planks of acoustic cassettes comprising insulating material with black glass fibre protective tissue, fronted with a grey front panel made from 100% recycled cellular u-PVC with a perforated internal panel at the back, again made of 100% recycled cellular u-PVC and incorporates a 35 mm void space.

These panels sit on top of a concrete gravel board and are slotted into H-shaped fence posts which also include an acoustic seal. The acoustic barrier is expected to reduce noise from the site by 4dB below local background levels.

6 m high security columns with CCTV cameras will be provided each corner of the site. Additional security will be provided by a security company to ensure site and community safety is maintained. In addition, active detection methods will also be employed on the site which have been successfully used on the adjacent STOR site.

No permanent staff will be employed at the site but engineers will visit the site up to three times a week to check generators and undertake general maintenance. It is anticipated that once operational no more than two transit vans would be required on the site at any one time.

## 2.3 Scheme Construction

Site construction, laying of underground services and preparation of the foundations and slabs for the generators would take roughly three months with a further three to four months required for the delivery and installation of the generators. These would arrive on a lorry and be craned off into the appropriate location prior to connection to utilities.



## 3. The need for the development

### 3.1 Capacity mechanism

Capacity mechanism is a service administered and paid for by the National Grid that enables short term predicted shortfalls in electricity supply to be met – for example, as a result of sudden cold weather.

The grid experiences a large fluctuation of demand throughout the day and throughout different times of the year. During periods of high demand, the Grid will either reduce the demand, or increase supply, to maintain a 20% supply margin. Where unanticipated demand exceeds supply, National Grid can call on a number of short term supplies including pump storage and STOR generation plants but where a supply imbalance is identified in advance – such as weather conditions resulting in increased demand for heating or reduced supply or wind or solar energy or a power station comes off line for technical reasons, the distribution network can be supplemented by capacity mechanism generation.

When called upon, capacity generators can produce electricity very quickly reaching maximum output within 1 minute. The providers of capacity mechanism generation quickly begin to generate power and rebalance the system, providing a regular buffer within the electricity supply to ensure that demand can be met and reducing the likelihood of power cuts.

Capacity mechanism contracts with the Grid require operators to guarantee that their plant be available at specific times and days of the week, known as 'availability windows'. This means that the engines will not be running continuously. The availability windows vary by season and year-on-year and are not known more than a year or so in advance. For the current modelling, it was assumed that the facility would be used between the times of 07:00 and 21:00.

More flexibility is required in the electricity distribution system for the following reasons:

- ▶ The increased reliance on renewable energy and intermittent power sources, notably wind, which means that a larger portion of the overall capacity of the network is not certain. When the renewable energy is not available, this needs to be covered by an alternative form of supply.
- ▶ The proposed increase in size of the next generation of nuclear power plants from 1.2GW to 1.8GW each has a similar demand increase. In the event of one of these new generating stations coming off line, a larger amount of power is lost that must be covered by an alternative form of supply.
- ▶ There is also a large interim demand to be covered as many of the existing coal and nuclear power plants are due to come off line in the next decade before the full benefits of the renewables have time to be developed. Government figures included in the Energy White Paper - Meeting the Energy Challenge state that a total of 22.5 GW of generating capacity will be gone by 2020. By 2025 there will be further coal plant closures and just one of our existing nuclear power stations will still be working. This represents almost 50% of existing capacity.

### 3.2 The suitability of this site

This site offers a number of advantages for this kind of this development.

When electricity is generated in this way, it is done so at Low Voltage, typically 415V and then increased in voltage to allow for efficient transmission through the network. This 'stepping up' is done through transformers situated in substations.

In consultation with WPD engineers and their asset management teams, GFE has analysed the WPD networks and visited all of the 500+ primary substations on the network to identify sites which can accept embedded generation. Fewer than 40 potential sites have been identified which operate at a voltage which is capable of accepting generation connections at 40MW and have no other technical issues.





The site at Timet is one of the few identified locations and has sufficient fault level headroom and connectivity to accept generation.

It is also in an area identified for future industrial development where its containers and stacks are more likely to conform to future uses. The site is also over 500 m from residential receptors which might be affected by noise or air quality issues.

## 4. Operational and Environmental Safeguards

### 4.1 Air Quality

An air quality assessment of the site based upon a detailed dispersion model has been undertaken by Amec Foster Wheeler and forms part of this application. The full assessment is appended at Appendix C. The pollutants covered by the assessment are oxides of nitrogen (NO<sub>x</sub> as NO<sub>2</sub>); and carbon monoxide (CO).

The assessment assumes the engines operate for full, hourly periods to predict both the long-term and short-term impacts of engine emissions and concentrations were calculated for each hourly period during the typical availability windows. This approach ensures that those meteorological conditions conducive to producing elevated ground level concentrations of pollutants are appropriately considered. However, given that the engines will only run for about 5 hours a day and about 1,200 hours per year, additional post-processing of raw modelled output has also been undertaken.

The impact assessment demonstrates that, under the anticipated operational profile of the plant, exceedances of any AQS, EAL, critical level or critical load are unlikely, or where exceedances are predicted due to the existing baseline concentration or deposition rate, the additional contribution from the plant is not considered to be significant. In addition, the impacts at human receptor locations can be defined as 'negligible' following the guidance issued by Environmental Protection UK.

On this basis, air quality factors should not be considered a constraint to development of proposal.

### 4.2 Ecology

An ecological assessment of the site has been undertaken by Amec Foster Wheeler and forms part of this application. The full assessment is appended at Appendix D.

The appraisal finds that the site comprises a species-poor agricultural field in silage production with very limited potential to support protected or notable species and is of very low biodiversity value.

Adjacent habitats are more species-diverse and comprise marshy grassland, scrub, woodland and hedgerows with potential to support reptiles and bats, and which form part of Penyfodau Fawr to Llewitha SINC. Further SINCS occur within 1 km of the proposed development and all have been designated for habitat mosaics of rush pasture, scrub, woodland and meadows.

Whilst there could be potential effects on the Penyfodau Fawr to Llewitha SINC these potentially negative effects would be avoided / minimised through the adoption of various environmental measures to minimise the working footprint and disturbance arising from construction. These measures are set out in Table 5.1 of the ecological assessment and would also ensure legal compliance.

On this basis, ecological factors should not be considered a constraint to development of proposal.

### 4.3 Noise

A BS 4142 acoustic assessment of the site has been undertaken by Clover Associates and forms part of this application. The full assessment is appended at Appendix E.

This assessment has been carried out at the nearest receivers to a proposed gas fuelled power plant and a background noise survey was conducted during Thursday 30<sup>th</sup> April 2015 and Friday 1<sup>st</sup> May 2015 at a location representative of the nearest sensitive receivers.

The assessment has shown that the proposed installation would predict a noise rating level of 4dB below the local background. According to BS4142 is indicatives that the proposal will have a low impact.

On this basis, noise should not be considered a constraint to development of proposal.

## 5. Policy Appraisal

### 5.1 Introduction

This section considers the planning policies and legislative framework against which this proposal will be considered. It identifies relevant policies set out in the Development Plan and also those national and local policies and statements which are considered to be material to the consideration of the Application.

### 5.2 National Policy

#### Planning Policy Wales (July 2014)

Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It notes the requirement for every local planning authority in Wales to prepare a local development plan (LDP) for its area which should provide a firm basis for rational and consistent decisions on planning applications and appeals.

It requires applications for planning permission, to be determined in accordance with the approved or adopted development plan for the area, unless material considerations indicate otherwise (paragraph 3.1) and sets out a presumption of sustainable development which includes:

- ▶ Sustainable resource
- ▶ Sustaining the environment
- ▶ A sustainable economy
- ▶ A sustainable society
- ▶ The well-being of Wales

PPW places great emphasis on climate change and moving towards a sustainable, low-carbon economy. The proposal for gas-powered capacity mechanisms does not conflict with this as it provides short term additional capacity to support the network whilst that transition takes place and to support intermittent power sources such as wind. It will also meet the short to medium term demands as many of the existing coal and nuclear power plants are due to be retired in the next decade before the full benefits of the renewables have time to be developed.

PPW notes that development in the countryside should be located within and adjoining those settlements where it can be best be accommodated in terms of infrastructure, access and habitat and landscape conservation (paragraph 4.7.8) and efficient use of resources and land (paragraph 4.11.5). The application site immediately adjoins an existing STOR facility and is within an area identified for employment/industrial development in the Waunarlyydd-Fforestach Strategic Development Area - Concept Plan produced by developer Persimmon Homes in partnership with the Council in August 2014.

Applications that reflect the key principles of climate responsive developments and exceed the standards set out in Building Regulations are encouraged in PPW (paragraph 4.12.6). They should also ensure that development does not increase the risk of flooding elsewhere by loss of flood storage or flood flow route or increase the problem of surface water run-off (paragraph 13.4.2).

The application is accompanied by a drainage strategy which demonstrates that the site will neither be affected by flooding or cause flooding elsewhere.

PPW notes that adequate and efficient infrastructure, including provision of electricity is crucial for the economic, social and environmental sustainability of all parts of Wales (paragraph 12.1.1). It also considers that local planning authorities should seek to maximise the use of existing infrastructure and should consider how the provision of different types of infrastructure can be co-ordinated (paragraph 12.1.6). This application maximises use of the existing high pressure gas main and the only available grid connection.

The Welsh Government is committed to using the planning system to:

- ▶ Optimise renewable energy generation;
- ▶ Optimise low carbon energy generation;
- ▶ Facilitate combined heat and power systems (and combined cooling, heat and power) where feasible; and
- ▶ Recognise that the benefits of renewable energy are part of the overall commitment to tackle climate change by reducing greenhouse gas emissions as well as increasing energy security (paragraph 12.8.8).

Whilst the capacity mechanism proposal is not a renewable energy installation, it facilitates an increase in renewable and low carbon energy generation and is an important element of the wider context for reducing greenhouse gas emissions. Essentially, it provides the backup power generation to cope with peaks and troughs in the supply/demand cycle that are typical of renewable power sources and form part of ensuring resilience in supply as traditional coal and oil fired power stations are phased out.

## 5.3 Energy Statements

### A Low Carbon Revolution - The Welsh Assembly Government Energy Policy Statement

This document opens with the statement “Climate change is the greatest environmental, economic and social challenge facing the planet.” The policy statement which follows sets out the Welsh Assembly’s ambitions for low carbon energy in Wales. Its ambition is to:

- ▶ Maximise energy savings and energy efficiency in order to make producing the majority of the energy we need from low carbon sources more feasible and less costly;
- ▶ Meet energy needs securely from low carbon sources; and
- ▶ Ensure that the transition to low carbon maximises the economic renewal opportunities for practical jobs and skills, strengthens and engages the Welsh research and development sectors, promotes personal and community engagement and helps to tackle deprivation and improve quality of life.

### National Policy Statement for Energy (EN-1)

The NPS sets out the Government’s policy for delivery of major energy infrastructure over a certain threshold defined in part 3 of The Planning Act 2008. These include electricity generating stations generating more than 50 megawatts (MW) onshore from any fuel source. This scheme has a generation capacity of 40MW and is therefore below the threshold to require a Development Consent Order. However, the NPS sets out some useful general guidance on applications for schemes which provide additional generation capacity.

NPS-1 notes that demand for electricity is forecast to increase significantly over the coming decades to supply new homes, businesses and transport as well as increases in the use of electricity in existing premises. This will result in the need for additional generation capacity and distribution networks. In paragraph 3.7.3, the NPS notes:

*“...that new electricity network infrastructure projects, which will add to the reliability of the national energy supply, provide crucial national benefits, which are shared by all users of the system.”*

The creation of a capacity mechanism scheme at Timet entirely meets this requirement by providing short term supply to meet any shortage in local supply caused by either a peak in demand or a drop in supply.

## 5.4 The Development Plan

A new plan, the Swansea Local Development Plan (LDP), is being prepared and a preferred Strategy Final Draft was published in July 2014. It is a strategic level planning document that sets out the broad approach

the Council will take to ensure the City and County of Swansea (the County) is developed in a sustainable manner over the period to 2025. The preferred strategy outlined in this document would also promote the Westfield Industrial Park as a key development opportunity. The plan notes that *“the area fulfils an important role as a strategic employment location with a number of valued businesses, and these should continue to be supported during the LDP period”*. Development of the capacity mechanism site would therefore be consistent with the general emerging strategy proposed for the area.

The current development plan for the area is the City and County of Swansea Unitary Development Plan (2008). This is used to determine planning applications. The relevant policies are set out in Table 5.1 below and an assessment of the scheme against each policy is included.

**Table 5.1 Assessment of Scheme against City and County of Swansea Unitary Development Plan Policy**

UDP Policy	Assessment against Policy
<p><b>EV1 General Development Principles</b>            New development shall accord with the following objectives of good design:</p> <ol style="list-style-type: none"> <li>i. Be appropriate to its local context in terms of scale, height, massing, elevational treatment, materials and detailing, layout, form, mix and density,</li> <li>ii. Integrate effectively with adjacent spaces and the public realm to create good quality townscape,</li> <li>iii. Not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, disturbance and traffic movements,</li> <li>iv. Incorporate a good standard of landscape design,</li> <li>v. Sensitively relate to existing development patterns and seek to protect natural heritage and the historic and cultural environment, not only on-site, but in terms of potential impact on neighbouring areas of importance, and, where appropriate:</li> <li>vi. Foster 'inclusive design' by ensuring the development allows access for the widest range of people possible,</li> <li>vii. Support an integrated transport system,</li> <li>viii. Contribute to the creation of new, and the improvement of existing, spaces and an enhancement of the general street scene,</li> <li>ix. Promote resource efficient and adaptable buildings and layouts using sustainable design and construction techniques, including the reuse and recycling of construction and demolition waste on site, and energy and water efficiency measures,</li> <li>x. Provide a safe environment by addressing issues of security, crime prevention, and the fear of crime in the design of buildings and the space and routes around them Have regard to the desirability of preserving the setting of any listed building</li> <li>xi. Have regard to the desirability of preserving the setting of any listed building</li> </ol> <p>Design statements will be required in support of planning applications that have design implications, including applications for new or extended buildings and infrastructure, changes to landscape appearance, and/or those involving sensitive sites and locations.</p>	<p>The proposed scheme is within an area identified for industrial development in the emerging LDP. The location and minimal traffic movements will not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, disturbance and traffic movements. The site will be designed to be visually consistent with the neighbouring site. Security measures outlined above will address issues of security and crime prevention. Design statements are not required for engineering operations.</p>
<p><b>EV2 Siting &amp; Location</b>            The siting of new development should give preference to the use of previously developed land over greenfield sites, and must have regard to the physical character and topography of the site and its surroundings by:</p> <ol style="list-style-type: none"> <li>i. Avoiding locations that would have a significant adverse impact on prominent buildings, landscapes, open spaces and the general locality, including loss of visual amenity,</li> <li>ii. Effectively integrating with the landscape, seascape or coastline by utilising topography to integrate into the contours of the site and avoiding conspicuous locations on prominent skylines and ridges,</li> <li>iii. Retaining important views into and out of the site,</li> <li>iv. Taking into account and where possible retaining site features including existing buildings, topography, landscape, archaeological and water features, trees and hedgerows, and, where appropriate:</li> <li>v. Undertaking, at the earliest opportunity, an assessment of species and habitats on site and, where planning permission is granted, implementing any necessary mitigation measures,</li> <li>vi. Avoiding detrimental effects on the historic environment,</li> <li>vii. Locating near transport nodes to encourage an integrated transport system,</li> </ol>	<p>The development is constrained by the need for good and proximate access to a viable sub-station. The site is adjacent to a STOR plant and within an area allocated for future industrial developments. The surrounding landscape features mean that from most views the development would be screened by existing, mature vegetation. An assessment of species and habitats on site accompanies this application. There are no known heritage assets which could be affected by this development. Access to the remaining agricultural land would be retained in perpetuity. The location of the proposed development reduces the potential adverse effects on nearby sensitive receptors.</p>

## UDP Policy

## Assessment against Policy

- viii. Not prejudicing the viability and function of any agricultural land adjoining the site,
- ix. Determining whether the proposal would be at risk from flooding, increase flood risk off-site, or create additional water run-off,
- x. Having due regard to the implications of the development for infrastructure and services,
- xi. Integrating with existing community facilities,
- xii. Utilising landscape and topography to maximise energy efficiency,
- xiii. Having full regard to existing adjacent developments and the possible impact of environmental pollution from those developments, as well as the creation of any environmental pollution to the detriment of neighbouring occupiers (including light, air and noise),
- xiv. Identifying the location of any hazardous installations in the area and development that would be at risk from, or prejudice the operational use of, hazardous installations,
- xv. Identifying and fully addressing issues of contamination and land instability

EV6 Ancient Monuments and Protection of Archaeological Sites

The Council will seek to protect, preserve and enhance Scheduled Ancient Monuments and their settings, and also unscheduled archaeological sites and monuments and their settings listed in the County Sites and Monuments Record held by the Glamorgan Gwent Archaeological Trust's Curatorial Division. Where proposals affect sites and areas of archaeological potential, applicants will be required to provide the following information with planning applications:

- i. An assessment or evaluation of the archaeological or historic importance of the site or structure,
- ii. The likely impact of development on the archaeological site, and
- iii. The measures proposed to preserve, enhance and record features of archaeological interest.

There are no known sites or features of archaeological importance which would be affected by the scheme.

EV23 Green Wedges

Green wedges are identified at a number of locations including Cockett Valley (including Cockett and Hendrefoilan Ridges and land between Dunvant, Three Crosses and Gowerton),

Within these areas development will only be permitted if it maintains the openness and character of the green wedge and does not contribute to the coalescence of settlements or adversely affect the setting of the urban area.

Appropriate development within the green wedge comprises the following:

- Justified development in association with agriculture or forestry,
- Essential facilities for outdoor sport and recreation or cemetery use,
- Limited extension, alteration or replacement of existing dwellings,
- Small scale farm diversification,
- The re-use of existing permanent/substantial buildings,
- Affordable housing for local needs under Policy EV18,
- Other uses of land and forms of development that maintain the openness of the green wedge and do not conflict with the purpose of including land within it. (

The proposed development sits within the designated employment site, close to the green wedge between Waunarlwydd and Swansea Road to the north. The green wedge policy does not therefore affect the proposed development.

EV25 European Protected Sites

Development, alone or in combination with other plans or projects, which is likely to adversely affect the integrity of a European protected site (SAC, Marine SAC, SPA and Ramsar Sites) and is not directly connected with or necessary to the management of the site, will not be permitted unless:

- i. There are imperative reasons of overriding public interest, including those of a social or economic nature, which are sufficient to override the reasons for designation, and
- ii. There is no alternative solution.

Where such development is permitted, planning conditions and/or obligations will be used to secure all compensatory measures necessary to ensure that the overall coherence of the European Site is protected.

Burry Inlet and Loughor Estuary 3 km to the west of the site is both an SPA and a Ramsar site and forms part of Carmarthen Bay and Estuaries SAC. The proposed development would have no direct effects on the designated site. The air quality assessment demonstrates how any emissions from the generators would not adversely affect this important site. The site would be designed to ensure there could be no risk of run-off of oils or other fuels or materials from the site into the Afon Lian which flows into the estuary at Loughor. This will ensure that the overall coherence of the European Site is protected and the proposal confirms with this policy.

EV27 SSSIs and National Nature Reserves

Development that significantly adversely affects the special interests of sites designated as SSSIs and NNRs will not be permitted unless the need for the development is of such significance that it outweighs the national importance of the designation.

The nearest SSSI, Burry Inlet and Loughor Estuary SSSI is approximately 3 km to the west of the site. It forms part of Carmarthen Bay and Estuaries SAC, Burry Inlet SPA, Burry Inlet Ramsar). As noted above, the proposed development will not have any

**UDP Policy****Assessment against Policy**

Where development is permitted, planning conditions and/or obligations will be used to protect and enhance those interests and where necessary provide effective mitigation and compensatory measures.

adverse effect on the SSSI and is thus considered to comply with this policy.

**EV30 Trees, Woodland and Hedgerow Protection**

Protection and improved management of woodlands, trees and hedgerows which are important for their visual amenity, historic environment, natural heritage, and/or recreation value will be encouraged, with priority being given to:

- i. Protecting the remaining areas of ancient semi natural woodland and planted ancient woodland sites,
- ii. Promoting new planting with species appropriate to the location, where there is no conflict with other land uses or nature conservation interests, and
- iii. Ensuring that where management involves commercial felling and replanting, protection of amenity interests is achieved

No trees would be affected as a result of the construction of this proposed development.

**EV34 Protection of Controlled Waters**

Development proposals that may impact upon the water environment will only be permitted where it can be demonstrated that they would not pose a significant risk to the quality and or quantity of controlled waters.

Initiatives that lead to improvements in the quality of surface water will be approved subject to satisfactory ecological and visual safeguards.

**EV35 Protection of Controlled Waters**

Development that would have an adverse impact on the water environment due to:

- i. Additional surface water run off leading to a significant risk of flooding on site or an increase in flood risk elsewhere, and/or
- ii. A reduction in the quality of surface water run-off, will only be permitted where it can be demonstrated that appropriate alleviating measures can be implemented.

Sustainable drainage systems (SUDS) will be encouraged wherever they would be effective and practicable, so as to ensure that development does not increase run off, and potentially damage important landscape features and protected species and habitats. Where SUDS are not provided then any conventional drainage system utilised must improve the status quo.

The generators will be gas powered. There will be little opportunity to affect controlled waters. The only liquid on site will be lubricating oil. This will be stored in a bunded tank as well as on a bunded slab. The generator cabins are also bunded to prevent escape of the fluid when undertaking periodic oil changes in the generators. This will ensure there is no risk to controlled waters.

**EV40 Air, Noise and Light Pollution**

Development proposals will not be permitted that would cause or result in significant harm to health, local amenity, natural heritage, the historic environment or landscape character because of significant levels of air, noise or light pollution.

The emissions to air from this proposal are assessed in the Air Quality Assessment report submitted with this planning application (Appendix C). The assessment considers sensitive ecological receptors and human receptors. The report confirms the nutrient nitrogen and deposition rates at ecological receptors resulting from emissions from the installation are not expected to have a significant impact on the integrity of the designated ecological features of the sites and the impacts at human receptor locations can be defined as 'negligible'.

Acoustic barriers will limit noise outputs from each generator unit to 75dB(A) at 1 metre. No lighting is proposed at the site which would be visible from outside the compound.

**EC1 General Employment Sites**

Employment land is allocated at the following locations to meet the growth needs of the local economy:

**EC1 (4) Swansea West Industrial Park**

"It is anticipated that the Industrial Park will be fully developed in the short term. Accordingly, land between Alcoa/Timet and the Industrial Park, south of the Afon Lian is allocated for B1, B2, and B8 uses to meet Swansea's economic growth needs".

The proposed development is within EC1(4), Swansea West Industrial Park. The proposed development is entirely appropriate for an industrial area and does not conflict with other potential developments within the allocation.

## 6. Conclusion

The capacity mechanism strategy is one which is designed to ensure continuity of electricity supply within the local distribution network. This network is essential for supplying homes and businesses with electricity.

There are a limited number of locations where such sites can be developed due to the current demands and opportunities of the distribution network. The site at Waunarywdd offers such a location.

Site design, vehicle movements and negligible environmental impacts mean that the development is in accordance with UDP Policy EV1 and EV2.

There are no known sites or features of archaeological importance which would be affected by the scheme and therefore the scheme is in accordance with UDP Policy EV6.

The proposed development would have no direct effects on the Bury Inlet and Loughor Estuary SPA, Ramsar, and SSSI and would be designed to ensure there could be no risk of run-offs of oils or other fuels or materials from the site into the Afon Lian which flows into the estuary at Loughor. As such, the scheme is in accordance with UDP Policies EV25 and EV27.

The accompanying air quality, ecology, and noise assessments have demonstrated that the proposed development will not have any significant effects on sensitive environmental and human receptors. As such, the scheme is in accordance with UDP Policy EV40.

Site design incorporating mitigation measures including bunding to ensure there is no risk to controlled waters mean that the development is in accordance with UDP Policy EV34.

The site is allocated for employment development which is consistent with the proposed use. The proposed scheme is therefore in accordance with UDP Policy EC1.

Overall the scheme delivers a number of benefits, particularly ensuring local electricity supply. The site has been selected to minimise effects on sensitive environmental receptors and where necessary mitigation measures have been included in the scheme design to minimise off-site effects. These include acoustic fencing and bunding of fuel tanks. The scheme is considered to be in accordance with the relevant UDP policies and also with the strategy set out in the emerging Swansea Development Plan.