



The Abergelli Power Gas Fired Generating Station Order

6.2 Environmental Statement Appendices - Volume B Scoping Report and Scoping Opinion

Planning Act 2008
The Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009

PINS Reference Number:	EN010069
Document Reference:	6.2
Regulation Number:	5(2)(a) & Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
Author:	AECOM

Revision	Date	Description
0	May 2018	Submission Version



Appendix 4.1

Abergelli Scoping Report

ABERGELLI POWER PROJECT

Environmental Impact Assessment Scoping Report

June 2014

Table of Contents

Glossary	iv
1 Introduction	1
1.1 Overview	1
1.2 Need for and Benefits of the Project	2
1.3 The Applicant	2
1.4 The Consenting Regime and EIA Process	3
1.5 Purpose of the Scoping Report.....	4
1.6 Content of the Scoping Report.....	4
2 Regulatory and Policy Background.....	6
2.1 Introduction	6
2.2 European Union (EU)	6
2.3 Overview of Decision Making under the Planning Act 2008 and Policy Context	7
2.4 National Policy Statements.....	7
2.5 Welsh Planning	7
2.6 Local Planning Policy	8
2.7 Other Relevant Policy and Guidance	9
3 Project Description	10
3.1 Project Site.....	10
3.2 Description of the Project	11
3.3 Power Generation Plant.....	11
3.4 Gas Connection.....	15
3.5 Electrical Connection.....	17
3.6 Project Site Selection/Design Evolution	18
4 Scope and Structure of the EIA	20
4.1 Introduction	20
4.2 Overall ES Structure.....	20
4.3 Cumulative Assessment	22
5 Detailed Description of ES Impact Sections.....	24
5.1 Introduction	24
5.2 Significance Criteria	24
5.3 Air Quality	26
5.4 Noise and Vibration	32
5.5 Ecology	36

Abergelli Environmental Impact Assessment Scoping Report

5.6	Water Quality and Resources	42
5.7	Geology, Ground Conditions and Agriculture	44
5.8	Landscape and Visual Impact	47
5.9	Traffic, Transport and Access	52
5.10	Cultural Heritage and Archaeology	54
5.11	Socio-Economics	58
6	Summary and Conclusions	61
	Appendix 1: Ecological Appraisal	62

Figures

Figure 1: Project Site Plan

Figure 2: Features of Interest

Figure 3: Indicative Environmentally Sensitive Receptors

Figure 4: Schematic of SCGT Operation

Glossary

Abergelli Power Limited (APL)	A special purpose vehicle which has been established by Watt Power Limited (WPL) to develop the Project.
Above Ground Installation (AGI)	The Above Ground Installation incorporates the minimum offtake connection (MOC) facility, which would be owned by National Grid, and a Pipeline Inspection Gauge (PIG) Trap Facility (PTF), owned by APL. The AGI forms part of the Gas Connection and is located within the Gas Connection Opportunity Area.
Above Ordnance Datum (AOD)	Ordnance Datum is the vertical datum used by Ordnance Survey as the basis for deriving height of ground level on maps. Topography may be described using the level in comparison to 'above' ordnance datum.
Access Road	The proposed purpose built access road from the public highway to the Generating Equipment Site. It is located within the Power Generation Plant Site.
agriculture	Section 336(1) of the Town and Country Planning Act 1990 defines agriculture as including: • Horticulture, fruit growing, seed growing, dairy farming; • The breeding and keeping of livestock (including any creature kept for the production of food, wool, skins or fur, or for the purpose of its use in the farming of land); • The use of land as grazing land, meadow land, osier land, market gardens and nursery grounds; and • The use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes.
Agricultural Land Classification (ALC)	The ALC provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system.
air pollutants	Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects on humans, animals, vegetation and/or materials.
Air Quality Management Area (AQMA)	A defined area by virtue of Section 82(3) of the Environment Act 1995, where it appears that the air quality objectives prescribed under the UK Air

Abergelli Environmental Impact Assessment Scoping Report

	Quality Strategy will not be achieved. In these areas, a Local Authority must designate Air Quality Management Areas, within which an Action Plan can be proposed to secure improvements in air quality so that prescribed air quality objectives can be achieved.
Air Quality Sensitive Receptors	People, property or designated sites for nature conservation that may be at risk from exposure to air pollutants that could potentially arise as a result of the Project.
amenity	The preferable features of a location which contribute to its overall character and the enjoyment of residents or visitors.
Ancient Woodland	Ancient woodland is defined as an area that has been wooded continuously since at least 1600 AD. Ancient Woodland is divided into ancient semi-natural woodland and plantations on ancient woodland sites. Both types of stand are classed as ancient woods.
Applicant	Abergelli Power Limited (APL)
Area of Outstanding Natural Beauty (AONB)	An area designated by Natural England under the National Parks and Access to the Countryside Act 1949 by virtue of being a precious landscape whose distinctive character and natural beauty are so outstanding that it is in the nation's interest to safeguard them.
Archaeological Desk Based Assessment	An assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate.
archaeological interest	Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
Balance of Plant	All infrastructure required to support Gas Turbine Generators within the Generating Equipment Site and includes: stacks; Air Cooled Condensers (ACC)/ cooling plant; demineralised water tank; raw/ fire water tank; administration/ workshop/ control building and gas receiving facility.
baseline	Environmental conditions at specific periods of

Abergelli Environmental Impact Assessment Scoping Report

	time, present on, or near a site, against which future changes may be measured or predicted.
biodiversity	Abbreviated form of 'biological diversity' referring to variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.
Biodiversity Action Plan (BAP)	Plans which set specific, measurable, achievable, realistic and time bound conservation targets for species and habitats. The UK BAP is the UK Government's response to the Convention on Biological Diversity (CBD) signed in 1992. More information is available at www.ukbap.org.uk .
British Standards (BS)	The display of a British Standard number shows that the manufacturer claims to have made the produce in accordance with British Standard. A standard is a published document that contains a technical specification or other precise criteria designed to be used consistently as a rule or definition. Standards are designed for voluntary use and do not impose any regulations. However, laws and regulations may refer to certain standards and make compliance with them compulsory. Sometimes BS will be accompanied by the letters EN and/or ISO. These mean that the standard was developed as a European (EN) or International (ISO) standard and then adopted by the UK as a British Standard.
Carbon Monoxide (CO)	A colourless, odourless and tasteless gas that is produced from the partial oxidation of carbon containing compounds.
Combined Cycle Gas Turbine (CCGT)	Gas plant technology system comprising Gas Turbine(s) fuelled by natural gas, a Heat Recovery Steam Generator(s) utilising heat from the Gas Turbine exhaust gases, and a steam turbine plant with associated condensing system.
Combined Heat and Power (CHP)	A cogeneration power station capable of supplying power to the National Grid and also heat to local heat users (such as industry or leisure) through a direct connection to waste heat/steam produced as part of the combustion process.
Conceptual Site Model	The objective of constructing a Conceptual Site Model is to record all the potential pollutant linkages between the source of contamination and the receptors, i.e. the reasonably possible ways in which the receptors may experience

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	exposure and consequent adverse effects.
Conservation Area	An area of special environmental or historical importance that is protected from changes by law by statutory designation.
Construction Environmental Management Plan (CEMP)	Strategic document setting out best practice methods to minimise environmental impacts (including dust) during construction.
consultation	Procedures for assessing public, landowner and statutory consultee opinion about a plan or major development proposal including seeking the views of affected neighbours or others with an interest in the Project or affected land
contamination	Where land has been affected by contamination it may present a risk to humans, ecosystems, water quality and property.
cropmarks	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Cultural Heritage	The legacy of physical artefacts and intangible attributes of a group or society inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage includes both physical culture (such as buildings, monuments, landscapes, books, works of art and artefacts) as well as intangible culture (such as folklore, traditions, language and knowledge).
cumulative effects	The summation of effects that result from changes caused by a development in conjunction with other reasonably foreseeable development that is either consented but not yet constructed or is in the process of seeking consent.
Desk Based Assessment (DBA)	Research based primarily on database and internet data gathering methods.
Development Consent Order (DCO)	A Development Consent Order (DCO) is made by the Secretary of State (SoS) pursuant to the Planning Act 2008 (PA 2008) to authorise a Nationally Significant Infrastructure Project (NSIP).
Development Consent Order Application (DCO Application)	The Application for a DCO made to the SoS under section 37 of the PA 2008 in respect of the Project, required pursuant to section 31 of the PA 2008 because the Project constitutes an NSIP under section 14(1)(a) and section 15 PA 2008 by virtue of being an onshore generating station in

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		England or Wales of 50 MWe capacity or more.
Development Documents (DPD)	Plan	Development plan documents (DPD) include the core strategy, allocations, proposals map and action area plans.
dust		Fine particles of solid materials capable of being re-suspended in air and settling only slowly under the influence of gravity where it may cause nuisance.
Electrical Connection		The Electrical Connection will comprise all the necessary elements to enable power to be exported from the Generating Equipment to the NETS. It includes new electrical circuits proposed as either underground cable or overhead lines and cable terminal chambers on the GIS (Gas Insulated Switchgear) circuit at the point where the underground cable or overhead line emerges to facilitate its connection into the NETS. The Electrical Connection is located within the Electrical Connection Opportunity Area.
Electrical Connection Opportunity Area		The area being investigated for the location of the Electrical Connection.
emission		A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.
Environmental Assessment (EIA)	Impact	A systematic means of assessing a development project's likely significant environmental effects undertaken in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009.
Environmental Statement (ES)		Statutory report summarising the findings of an environmental impact assessment.
features (landscape feature or element)		A component part of the landscape (e.g. hedgerow, wood, stream)
findspot		Location of individual or groups of archaeological artefacts.
Flood Consequences Assessment (FCA)		A desk based study which considers the contributing factors and predicts / quantifies the risk of flooding to and from a proposed development and also identifies a water level in the event of flooding.
Flood Zone		An area identified, through modelling, that is at risk of flooding from rivers or the sea, to varying levels of magnitude and frequency. There are four classifications for flood zones as defined in the Technical Advice Note 15: Development and

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	Flood Risk: • Zone A: Considered to be at little or no risk of fluvial or tidal/coastal flooding; • Zone B: Areas known to have been flooded in the past evidenced by sedimentary deposits; • Zone C: Based on Environment Agency extreme flood outline, equal to or greater than 0.1% (river, tidal or coastal); • Zone C1: Areas of the floodplain which are developed and served by significant infrastructure, including flood defences; and • Zone C2: Areas of the floodplain without significant flood defence infrastructure.
Gas Connection	A new underground gas Pipeline connection and Above Ground Installation (AGI) to bring natural gas to the Generating Equipment from the Gas National Transmission System (NTS) or Local Transmission System (LTS). The Gas Connection is located within the Gas Connection Opportunity Area.
Gas Connection Opportunity Area	The area being investigated for specific route corridor options for the Gas Connection.
Gas Turbine Generators	Between one and five Simple Cycle Gas Turbine (SCGT) generators (as proposed in the Power Generation Plant) which utilise the combustion of gas and air to generate hot gases that are routed across turbine blades, which generate rotational forces that turn an electrical generator. The exhaust gases are discharged directly to the stack without providing heat for a secondary steam cycle. Each Gas Turbine Generator may constitute one or two gas turbines venting to a single stack. The Gas Turbine Generators form part of the Generating Equipment and are located within the Generating Equipment Site.
Generating Equipment	Gas Turbine Generators and balance of the plant which are located on the Generating Equipment Site.
Generating Equipment Site	The site where the Generating Equipment is located.
groundwater	Water occurring in the ground which can be reasonably attributed to relatively geologically recent recharge and which can be reasonably considered to be wholesome (potable) unless it has been contaminated (altered) by anthropogenic activity.

Abergelli Environmental Impact Assessment Scoping Report

habitat	The environment in which populations or individual species live or grow.
Heavy Goods Vehicle (HGV)	A mechanically propelled road vehicle that is of a construction primarily suited for the carriage of goods or burden of any kind and designed or adapted to have a maximum weight exceeding 3,500 kilograms when in normal use and travelling on a road laden.
hectare	A unit of area (10,000 m ² / 2.471 acres).
heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets identified by the local planning authority (including local listing).
historic environment	All aspects of the environment resulting from the interaction between people and places through time including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped, planted or managed flora. Those elements of the historic environment that hold significance are called heritage assets.
Historic Environment Record (HER)	The repository for all archaeological and historical information relating to a county or district.
Historic Parks and Gardens	A register of historic parks and gardens of particular historic importance.
hydrology	The movement, distribution and quality of water throughout the earth.
impact	A physical or measurable change to the environment attributable to the Project.
kilometre (km)	Measurement of distance (1000 metres).
kilovolt (kV)	Measurement of the amount of electric potential energy.
landscape assessment	An umbrella term for description, classification and analysis of the landscape.
landscape character	The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement.
landscape effects	Change in the elements, characteristics,

Abergelli Environmental Impact Assessment Scoping Report

	character and qualities of the landscape as a result of development. These effects can be positive or negative.
Laydown Area	The area required during construction for storing materials and equipment. It is located within the Power Generation Plant Site.
Listed Building	The Secretary of State compiles a list of buildings of special architectural or historic interest for the guidance of local planning authorities in the exercise of their planning functions under the Planning (Listed Buildings and Conservation Areas) Act 1990 and the Town and Country Planning Act 1990. Buildings are graded as follows: • Grade I – Buildings of exceptional interest; • Grade II* - Particularly important buildings of more than special interest; and • Grade II – Buildings of special interest.
Local Nature Reserve (LNR)	A site of importance for wildlife, geology, education or public enjoyment. Some are also nationally important Sites of Special Scientific Interest. Local Nature Reserves must be controlled by the local authority through ownership, lease or agreement with the owner.
Local Transmission System (LTS HP Pipeline)	The LTS distributes the gas supply from the NTS to the locations where the load requirement is required, generally in smaller pipelines (<24"/600 mm diameter) operating at lower pressure (<50 barg).
magnitude	A combination of the scale, extent and duration of an effect.
metre (m)	Measurement of length.
mitigation measures	Actions proposed to prevent, reduce and where possible offset significant adverse effects arising from the whole or specific elements of a development.
millimetre (mm))	Measurement of size.
Minimum Offtake Connection (MOC)	A connection that will offtake gas directly from the National Transmission System. The MOC forms part of the AGI and therefore the Gas Connection. It is located within the Gas Connection Opportunity Area.
National Grid Electricity Transmission System (NETS)	A high-voltage electric power transmission network connecting power stations and major substations and ensuring that electricity

Abergelli Environmental Impact Assessment Scoping Report

	generated anywhere in England, Scotland and Wales can be used to satisfy demand elsewhere.
National Park	A national park is an area designated for its special landscape rich in character and distinctiveness, wildlife history and heritage.
National Policy Statement (NPS)	Overarching policy designated under the PA 2008 concerning the planning and consenting of NSIPs in the UK.
National Transmission System (NTS)	A network of gas pipelines throughout the United Kingdom that supply gas to large industrial customers from natural gas terminals situated on the coast, and also gas distribution companies which lead indirectly to homes.
Nationally Significant Infrastructure Project (NSIP)	The Project constitutes a Nationally Significant Infrastructure Project (NSIP) by virtue of s.14(1)(a) and s.15 of the PA 2008 which include within the definition of a NSIP any onshore generating station in England or Wales of 50 MW capacity or more.
Nitrous Oxides (NO _x)	Gases produced during combustion, including nitric oxide (NO) and nitrogen dioxide (NO ₂).
noise	Noise defined as unwanted sound, is measured in units of decibels, dB. The range of audible sounds is from 0dB to 140 dB. Two equal sources of sound, if added together will result in an increase in level of 3 dB i.e 50dB + 50dB = 53 dB. Increases in continuous sound are perceived in the following manner: • 1dB increase – barely perceptible • 3dB increase – just noticeable • 10dB increase – perceived as twice as loud
Noise Sensitive Receptor (NSR)	Principally houses (existing or for which planning consent is being sought / has been given) and any building used for long-term residential purposes (such as a nursing home).
Non-Technical Summary (NTS)	A report which briefly describes the main points discussed in the Environmental Statement in a clear manner, without the use of technical jargon and phraseology.
particulate matter	Solid particles or liquid droplets suspended or carried in the air.
peaking plant	Peaking plants are operated when there is a stress event.
Phase 1 Habitat Survey	An ecological survey technique that provides a

Abergelli Environmental Impact Assessment Scoping Report

	standardised system to record vegetation and wildlife habitats. It enables a basic assessment of habitat type and its potential importance for nature conservation.
photomontage	A type of visualisation or illustration that is based on photographs and that simulates the likely appearance of a proposed development in the photographic view. Photomontages are used as illustrations of the professional judgement of a landscape professional as to the significance of the effect of a project on landscape and visual receptors.
PIG Trap Facility (PFT)	PIG traps allow PIGs to be inserted into and removed from a pipeline which is to undergo a “pigging” program and which is likely to be under pressure. The PFT forms part of the AGI and therefore the Gas Connection. It is located within the Gas Connection Opportunity Area.
Pipeline Inspection Gauge (PIG)	Means a device to perform various maintenance operations on a pipeline.
Pipeline	The new underground gas pipeline connection proposed as part of the Gas Connection which is located within the Gas Connection Opportunity Area.
Planning Act 2008 (PA 2008)	UK legislation which passes responsibility for examining Development Consent Order (DCO) Applications for NSIPs to the Planning Inspectorate, who will examine applications and make recommendations for a decision by the relevant Secretary of State (the Secretary of State for Energy and Climate Change in the case of energy NSIP applications).
Preliminary Environmental Information Report (PEIR)	The report that provides information referred to in Part 1 of Schedule 4 of the EIA Regulations (information for inclusion in Environmental Statements) which has been compiled by the Applicant; and is reasonably required to assess the environmental effects of the development (and of any associated development).
Power Generation Plant	A SCGT gas fired ‘peaking’ power generating plant capable of providing up to 299 MW comprising: the Generating Equipment; Access Road; and temporary Laydown Area. It will be located within the Power Generation Plant Site.
Project	The Power Generation Plant, Electrical Connection and Gas Connection located on the

Abergelli Environmental Impact Assessment Scoping Report

	Project Site.
Project Site	The entire area covered by or required in order to deliver the Project.
public right of way (PROW)	A right of passage by the public over the surface of the land without impediment. Public Rights of Way include public footpaths, bridleways and byways open to all traffic as well as Restricted Byways.
receptor	A component of the natural, created or built environment such as a human being, water, air, a building, or a plant that has the potential to be affected by the Project.
Reciprocating Gas Engine (RGE)	An engine that employs the expansion of hot gases to push a piston within a cylinder, converting the linear movement of the piston into the rotating movement of a crankshaft to generate power.
residual effects	Those effects of a development that cannot be mitigated following implementation of mitigation proposals.
Restricted Byways	Rights of way along which it is legal to travel by any mode (including on foot, bicycle, horse-drawn carriage etc.) but excluding 'mechanically propelled vehicles'.
Rochdale Envelope	The Rochdale Envelope allows for a project to evolve over a number of years, within clearly defined parameters. The EIA takes account of the need for such evolution, within those parameters, and reflects the likely significant effects of such a flexible project in the ES.
ruderal	Plant species typical of the early stages of colonisation of disturbed ground, often short-lived species, or the community formed by a collection of such species in recently disturbed habitat.
Scheduled Monument	A building included in the Schedule of Monuments compiled under Section 1 of the Ancient Monuments, and Archaeological Area Act 1979. Scheduled Monuments have statutory protection under this Act (Section 2) and an application for Scheduled Monument Consent must be made to the Secretary of State for Culture, Media and Sport if work to a Scheduled Monument is proposed.
Scoping	An exercise undertaken pursuant to regulation 8 of the Infrastructure Planning (Environmental

Abergelli Environmental Impact Assessment Scoping Report

	Impact Assessment) Regulations 2009 to determine the topics to be addressed within the Environmental Statement.
Screening	Consideration as to whether an environmental impact assessment is required for a project.
Secretary of State (SoS)	The decision maker for a NSIP application and head of a government department.
Simple Cycle Gas Turbine (SCGT)	Gas plant technology system comprising Gas Turbine(s) fuelled by natural gas. The hot exhaust gases are routed directly to the stack without passing through a secondary steam turbine. The generating technology used for the Power Generation Plant.
Site of Importance for Nature Conservation (SINC)	Sites of Importance for Nature Conservation are usually selected within a local authority area and support both locally and nationally threatened wildlife. Many sites will contain habitats and species that are priorities under the county or UK Biodiversity Action Plans (BAP).
Site of Special Scientific Interest (SSSI)	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. SSSIs include wildlife habitats, geological features and landforms.
Special Area of Conservation (SAC)	Areas of protected habitats and species as defined in the European Union's Habitats Directive (92/43/EEC).
Special Protection Area (SPA)	Sites classified in accordance with Article 4 of the EC Birds Directive (79/409/EEC) which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex 1 of the Directive), and for regularly occurring migratory species.
Special Purpose Vehicle	A legal entity created to fulfil the specific purpose of developing projects.
species	A group of interbreeding organisms that seldom or never interbreed with individuals in other such groups, under natural conditions; most species are made up of subspecies or populations.
stress event	A surge in demand for electricity associated with a particular event (e.g. where many people across the country boil kettles following the end of a popular television programme or where there is a sudden drop in power being generated from plants which are constantly operational (e.g. a

Abergelli Environmental Impact Assessment Scoping Report

	sudden outage).
Sustainable Drainage System (SuDS)	Sustainable management practices designed to control the rate and quality of surface water runoff into receiving waters, for example the use of swales and wetlands as buffers, as opposed to conventional drainage practices.
topography	The natural or artificial features, level and surface form of the ground surface.
Transport Assessment (TA)	A quantitative assessment of transport effects of construction and operational phases of the Project.
United Kingdom	The territory of the United Kingdom
visual amenity	The value of a particular area or view in terms of what is seen.
visual effect	Change in the appearance of the landscape from available viewpoints as a result of development.
Watt Power Limited (WPL)	Watt Power Limited was established to develop flexible gas fired generation assets to support the UK Government drive to a low carbon economy. WPL has set up Abergelli Power Limited (APL), a Special Purpose Vehicle to develop the Project.
Zone of Theoretical Visibility (ZTV)	Areas from which a specified element of a development may be visible.

1 Introduction

1.1 Overview

- 1.1.1 This document is the Environmental Impact Assessment (EIA) Scoping Report for the Abergelli Power Project (hereafter referred to as the 'Project') which sets out the proposed scope and content of the EIA to support the Development Consent Order (DCO) Application and the method by which it is intended to be carried out. The report has been prepared by Orbis Energy Limited on behalf of Abergelli Power Limited (APL).
- 1.1.2 The Project as shown on Figure 1 would comprise:
- A new **Power Generation Plant** in the form of a Simple Cycle Gas Turbine (SCGT) gas fired peaking power generating station fuelled by natural gas and capable of providing an electrical capacity of up to 299 Megawatts (MW) comprising:
 - The **Generating Equipment** including the Gas Turbine Generators and Balance of Plant which are located on the **Generating Equipment Site**;
 - A new purpose built **Access Road** either from the Rhyd-y-pandy Road to the north (**Access Road – Option 1**) or the B4489 to the west (**Access Road – Option 2**) to the Generating Equipment Site; and
 - During construction a temporary construction compound (the **Laydown Area**).
 - A new **Gas Connection** to bring natural gas to the Generating Equipment from either the National Transmission System (NTS) or the Local Transmission System (LTS), which is located within the **Gas Opportunity Area**; and
 - A new **Electrical Connection** to export power from the Generating Equipment to the National Grid Electricity Transmission System (NETS) for distribution to homes and businesses which is located within the **Gas Connection Opportunity Area**.
- 1.1.3 The Generating Equipment, Access Road and Laydown Area are together known as the **Power Generation Plant**, and are located within the **Power Generation Plant Site**.
- 1.1.4 The Power Generation Plant, Gas Connection and Electrical Connection are all integral to the generation of electricity and together are referred to as the '**Project**'. The land upon which the Project would be developed, or which would be required in order to facilitate the development of the Project, is referred to as the '**Project Site**'.
- 1.1.5 The Project would be situated on farmland located north of Swansea in the City and County of Swansea, approximately 1 km southeast of Felindre, 760

m west of Llwynycelyn and 1.4 km north of Llangyfelach. The approximate centre of the Project Site lies at grid reference is 265284, 201431.

- 1.1.6 The Project is described in more detail in Section 3, including the options currently under consideration for the Access Road, Gas Connection and Electrical Connection.

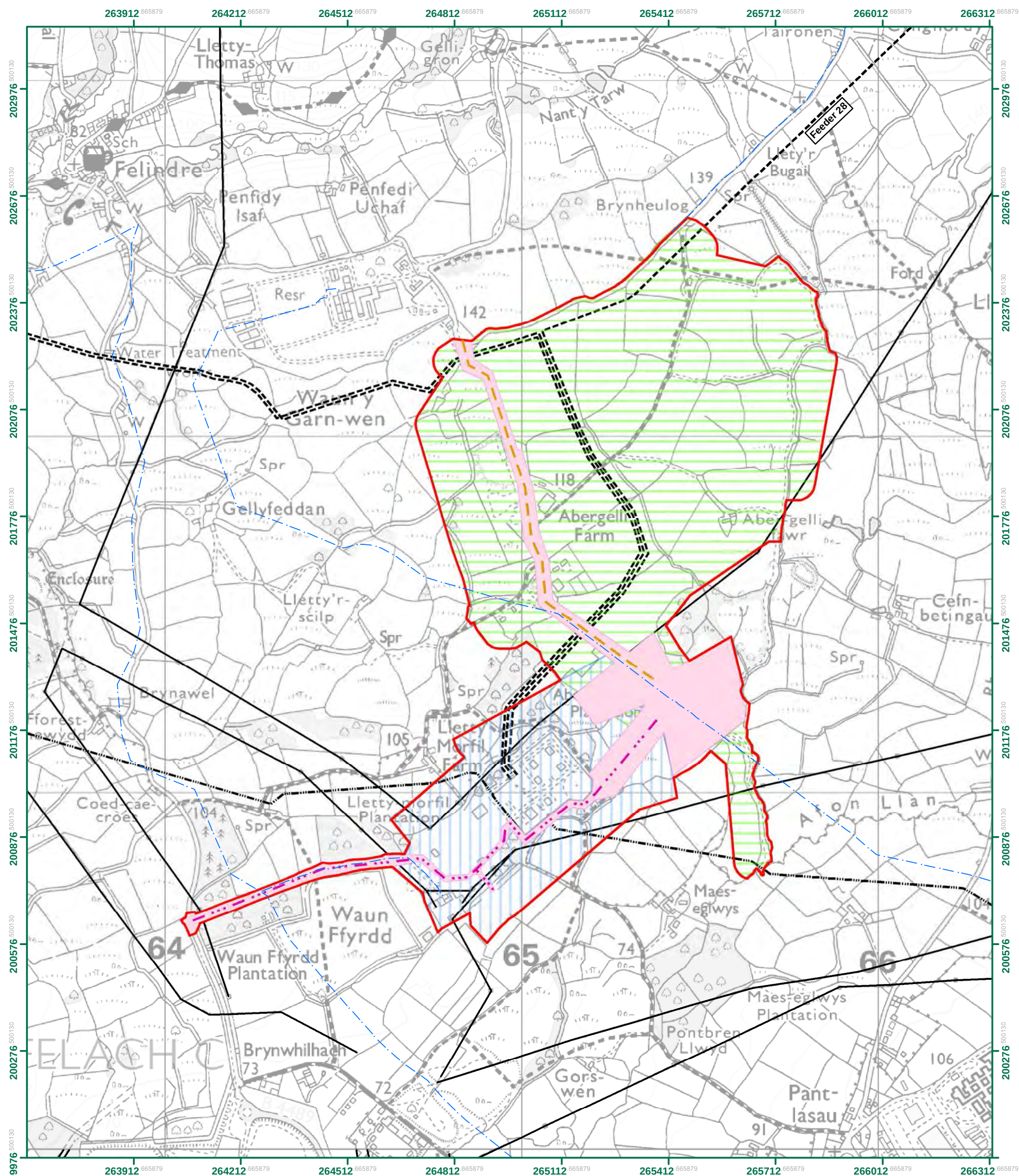
1.2 Need for and Benefits of the Project

- 1.2.1 There is considerable national need for this type of development, acknowledged at all levels of Government policy. National planning policy supports the need for new electricity infrastructure due to the current ageing and inevitable closure of older coal fired power plants and the likely increase in demand for electricity over the coming decades.
- 1.2.2 The overarching National Policy Statement for Energy (NPS EN-1)¹ states that 'gas will continue to play an important role in the electricity sector – providing vital flexibility to support an increasing amount of low-carbon generation and to maintain security of supply' (paragraph 3.6.2).
- 1.2.3 Gas is a reliable fuel source. It is acknowledged by the Government as being essential to a low-carbon economy and to underpin the country's energy security. In addition, gas peaking plants such as the Project provide back-up to power generation from renewable sources, particularly wind power, which is an increasingly prevalent but intermittent energy source. Modern gas fired power plants are among the most efficient and cleanest forms of electricity power generation.
- 1.2.4 At present, thermal peaking capacity in the UK is relatively small due to the nature of the electricity generation mix on the NETS. There is therefore a clear and significant requirement for further capacity to meet the projected need for reactive/flexible generation. A dedicated gas fired peaking plant such as the Project could allow for the rapid provision of reserve capacity to the NETS, thus playing a role in meeting the energy requirements of the UK going forward.

1.3 The Applicant

- 1.3.1 The Project Applicant is Abergelli Power Limited (APL). APL is an energy development company established for the Project by Watt Power Limited (WPL).
- 1.3.2 WPL has been established to develop flexible gas fired generation assets to support the UK Government drive to a low carbon economy. Stag Energy provides the resources through a management services agreement with WPL. Stag Energy was founded in 2002 and the company draws on a depth of experience within a team that has created and delivered over 10,000 MW of power generation and related infrastructure projects across the globe, of which 2,500 MW was delivered in the UK.

¹ Department of Energy and Climate Change (July 2011) Overarching National Policy Statement for Energy (EN-1)



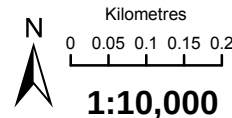
-  Proposed Draft DCO Site Boundary
-  Access Road Option 1
-  Access Road Option 2
-  Power Generation Plant Site
-  Electrical Connection Area of Opportunity
-  Gas Connection Area of Opportunity
-  Existing 400kV Overhead Line
-  Existing NTS Pipeline
-  Existing LTS HP Pipeline
-  Existing Water Pipeline

Data Sources

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Figure 1: Project Site Plan

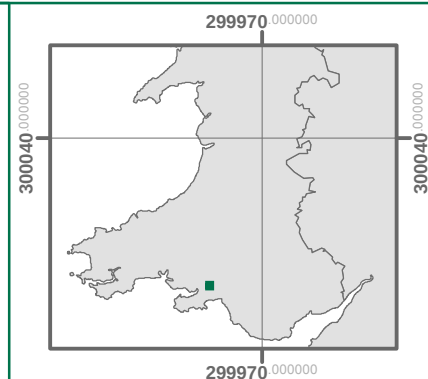


Geodetic Information

Projection: Transverse_Mercator

Spheriod: Airy_1830

Datum: D_OSGB_1936



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- 1.3.3 WPL currently has two other 299 MW projects being brought forward through the planning process. They are Progress Power Ltd at Eye Airfield in Suffolk (www.progresspower.co.uk) and Hirwaun Power Ltd at Hirwaun in South Wales (www.hirwaunpower.co.uk). Both projects are now in the pre-examination phase following acceptance of the DCO Applications by the Planning Inspectorate.
- 1.3.4 Similarly, Stag Energy provides resources to the Gateway Storage Company Ltd, which is developing an offshore salt cavern gas storage facility in the East Irish Sea. The project has been consented by the UK Government, the Marine Management Organisation and the local planning authority (Barrow-in-Furness Borough Council, Cumbria). Further information on the project is available at www.gatewaystorage.co.uk.
- 1.3.5 WPL is committed to the development of assets to support the UK Government's drive to a low carbon economy. APL recognises the need to balance commercial issues with the environmental benefits and concerns of energy projects and believes this can be responsibly delivered at a local level. The Project and supporting infrastructure will be designed and developed to high quality, safety and environmental standards.
- 1.3.6 Further information on the companies is provided at <http://www.abergellipower.co.uk> or <http://www.wattpowerltd.co.uk>.

1.4 The Consenting Regime and EIA Process

The Planning Act 2008

- 1.4.1 In England and Wales, an onshore electricity generating station is considered to be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008 (PA 2008) if its generating capacity is more than 50 MW. As the proposed Power Generation Plant would have a generating capacity of at least 50 MW, and up to 299 MW, it would be classified as a NSIP under Section 14(1)a and Section 15(2) of the PA 2008. Under Section 31 of the PA 2008, development consent is required for development that is or forms part of a NSIP and therefore a DCO Application will be made to the Secretary of State (SoS).

Requirement for an EIA and Notification under Regulation 6(1)(b)

- 1.4.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (the EIA Regulations)² and regulation 5(2)(a) of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009³ impose procedural requirements, in particular, the carrying out of EIA in relation to DCO Applications. All development in Schedule 1 (Schedule 1 development) requires EIA to be carried out. Development in Schedule 2 (Schedule 2 development) requires an EIA to be carried out if the project is likely to have significant effects on the environment.

² The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 No. 2263

³ The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 No. 2264

- 1.4.3 The Project has been identified as a Schedule 1 development and therefore the Applicant intends to carry out an EIA for the Project in accordance with the EIA Regulations. The findings of the EIA will be summarised in an Environmental Statement (ES) which along with the scoping opinion will be submitted alongside the DCO Application.

Consultation Strategy

- 1.4.4 A consultation strategy will be implemented in accordance with Sections 42, 47 and 48 of PA 2008 and its associated secondary legislation which will allow the local community, statutory consultees and interested parties, including persons with an interest in any land that is affected by the DCO Application, to comment on and input into the planning and development process. All representations made during the consultation process will be considered carefully and APL will have regard to all relevant responses prior to submission of the DCO Application. The outputs generated from the formal statutory consultation will be summarised in a consultation report, submitted alongside the DCO Application.
- 1.4.5 A Statement of Community Consultation (SoCC) will be agreed with the City and County of Swansea Council before being published. The SoCC will set out how APL intends to consult with the local community in accordance with Section 47 of the PA 2008 throughout the preparation of the DCO Application.
- 1.4.6 APL has already commenced some preliminary discussions with various departments of City and County of Swansea Council and, where relevant, the outcome of these consultations has informed this report.

1.5 Purpose of the Scoping Report

- 1.5.1 This Scoping Report represents APL's formal notification to the SoS under regulation 6(1)(b) of the EIA Regulations. The report sets out the proposed scope and content of the EIA to support the DCO Application and the method by which it is intended to be carried out.
- 1.5.2 On behalf of the SoS, the Planning Inspectorate (PINS) is requested to acknowledge the regulation 6 notification and confirm that the Project is an EIA development in accordance with regulation 4(2)(a) of the EIA Regulations. In addition, PINS is requested to provide a Scoping Opinion on the possible significant environmental effects of all elements of the Project, the proposed methodologies to assess the impacts, and the proposed structure of the Environmental Statement (ES) (as presented in Sections 4 and 5 of this report).
- 1.5.3 PINS and consultees are also invited to highlight any additional issues that they believe should be addressed within the EIA, and to identify any sources of information that may be of interest to APL and the EIA team.

1.6 Content of the Scoping Report

- 1.6.1 The Scoping Report is set out as follows:

- Chapter 1 introduces the Project and the Applicant and outlines the consenting regime, the need for and benefits of the Project, and the consultation strategy;
- Chapter 2 provides a brief description of the planning policy background and regulatory framework in which the Scoping Report has been prepared;
- Chapter 3 provides a more detailed description of the Project, Project Site and surrounding area;
- Chapter 4 provides a high level overview of the proposed scope of the EIA;
- Chapter 5 describes the content and assessment methodology of each of the impact sections in detail; and
- Chapter 6 provides a summary and conclusion of the report; and
- Appendix 1 provides the Preliminary Ecological Appraisal.

2 Regulatory and Policy Background

2.1 Introduction

- 2.1.1 This chapter summarises the main regulatory and policy framework that is relevant to the Project at international, national and local levels.
- 2.1.2 A comprehensive review of potentially relevant policy and evidence will be undertaken during the pre-application process. A detailed description of the planning policy background and its relevance to the Project will be provided in the Planning Statement, which will be produced as a separate document to support the DCO Application. A summary of the impacts of the Project on relevant and important planning policy will be discussed more fully within the Preliminary Environmental Information Report (PEIR), ES and other documents submitted for examination in support of the DCO Application.

2.2 European Union (EU)

- 2.2.1 The EU Directives of particular relevance to the Project with respect to environmental requirements are listed below:
- Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive)⁴;
 - Directive 2003/35/EC of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (the Public Participation Directive)⁵;
 - Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (the Industrial Emissions Directive (IED))⁶;
 - Directive 1992/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive)⁷;
 - Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the Birds Directive)⁸; and
 - Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe (the Ambient Air Quality Directive)⁹.

⁴ European Council Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive)

⁵ European Council Directive 2003/35/EC of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (the Public Participation Directive)

⁶ European Council Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (the Industrial Emissions Directive (IED))

⁷ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive)

⁸ Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive)

⁹ Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe (the Ambient Air Quality Directive)

2.3 Overview of Decision Making under the Planning Act 2008 and Policy Context

- 2.3.1 The Project is categorised as a NSIP and will be examined by PINS with the decision on the DCO Application made by the SoS under the regime established by the PA 2008 as described in Chapter 1.
- 2.3.2 As set out in NPS EN-1 (Overarching National Policy Statement for Energy), 'this NPS, when combined with the relevant technology-specific energy NPS, provides the primary basis for decisions' (Paragraph 1.1.1). The decision-maker 'should start with a presumption in favour of granting consent to applications for energy NSIPs' (paragraph 4.1.2) and on the basis that the urgent national need for such projects is settled.
- 2.3.3 Decisions must also be taken by the SoS having regard to the local impact reports and any other matters which the SoS 'thinks are both important and relevant to its decision' (Section 104 of the PA 2008), which may include Planning Policy Wales, Development Plan Documents (DPDs) or other documents in the Local Development Framework (LDFs).

2.4 National Policy Statements

- 2.4.1 PA 2008 required new policy to inform decisions on NSIPs in England and Wales. Policy for such infrastructure is set out in National Policy Statements (NPS). Those that are potentially relevant to the consideration of the DCO Application are:
- The Overarching National Policy Statement for Energy (NPS EN-1);
 - The National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (NPS EN-2)¹⁰;
 - NPS EN-4 National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines¹¹; and
 - NPS EN-5 National Policy Statement for Electricity Networks Infrastructure¹².

2.5 Welsh Planning

Planning Policy Wales (Edition 6, February 2014) (PPW) and Associated Technical Advice Notes (TAN)¹³

- 2.5.1 'Planning Policy Wales' (PPW) sets out the land use planning policies of the Welsh Assembly Government (WAG) and is supplemented by 21 topic based Technical Advice Notes (TANs). TANs prescribe the government's

¹⁰ Department of Energy and Climate Change (July 2011) National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2)

¹¹ Department of Energy and Climate Change (July 2011) National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipeline (EN4)

¹² Department of Energy and Climate Change (July 2011) National Policy Statement for Electricity Networks Infrastructure

¹³ Welsh Government (February 2014) Planning Policy Wales Edition 6

policies on various planning issues that shape the preparation of development plans. The principles and objectives of TANs prescribe the overarching national guidance for specific individual environmental topics. Both the PPW and TANs are material considerations in determining planning applications under the Town and County Planning Act 1990 regime. It may be determined that these policy documents are relevant and important under the PA 2008 regime.

2.5.2 Potentially relevant TANs to the Project are:

- TAN 5: Nature Conservation and Planning;
- TAN 6: Planning for Sustainable Rural Communities;
- TAN 11: Noise;
- TAN 12: Design;
- TAN 15: Development and Flood Risk; and
- TAN 18: Transport.

2.6 Local Planning Policy

The City and County of Swansea Unitary Development Plan (UDP)¹⁴

2.6.1 The City and County of Swansea Unitary Development Plan (UDP) was adopted on 10th November 2008. It is the most up to date Development Plan covering the administrative area within the City and County of Swansea and is used in the determination of planning applications. The UDP sets out a range of policies and proposals relating to future development, and deals with the use and conservation of land and buildings within the City and County up to 2016.

2.6.2 Its purpose is to promote sustainable development, protect the environment, facilitate regeneration and support community planning by ensuring that sufficient land is available for all development needs (for housing, industry etc.) and that the allocations are well located in terms of environmental, social and economic aspirations.

2.6.3 The UDP has allocated the land within the Project Site for coal (R2) as well as sand and aggregate resource management (R4).

Swansea Local Development Plan

2.6.4 The Unitary Development Plan (UDP) is to be replaced within the next few years by the Swansea Local Development Plan (LDP). The Preferred Strategy was published in July 2013¹⁵ for consultation. The Local Development Preferred Strategy is a strategic level planning document that

¹⁴ The City and County of Swansea (November 2008) The City and County of Swansea Unitary Development Plan adopted November 2008

¹⁵ The City and County of Swansea (July 2013) Preferred Strategy

sets out the broad approach being taken to ensure the City and County of Swansea is developed in a sustainable manner over the period to 2025.

2.7 Other Relevant Policy and Guidance

2.7.1 The following are considered to be potentially relevant policy and guidance in considering the potential impact of the Project:

- The Electricity Market Reform (2012)¹⁶;
- A Low Carbon Revolution: Wales' Energy Policy Statement (2010)¹⁷;
- Environment Strategy for Wales (2006)¹⁸;
- The UK Climate Change Risk Assessment (CCRA) (2012)¹⁹;
- Gas Generation Strategy (2012)²⁰;
- National Infrastructure Plan (2013)²¹;
- Annual Energy Statement (2013)²²; and
- Energy Wales – A Low Carbon Transition²³.

¹⁶ Department of Energy and Climate Change (May 2012) Electricity Market Reform: Policy Overview

¹⁷ Welsh Assembly Government (March 2010) A Low Carbon Revolution – The Welsh Assembly Government Energy Policy Statement

¹⁸ Welsh Assembly Government (May 2006) Environment Strategy for Wales

¹⁹ Department for Environment, Food and Rural Affairs (January 2012) UK Climate Change Risk Assessment: Government Report

²⁰ Department of Energy and Climate Change (December 2012) Gas Generation Strategy

²¹ HM Treasury (December 2013) National Infrastructure Plan 2013

²² Department of Energy and Climate Change (October 2013) Annual Energy Statement 2013

²³ Welsh Government (March 2012) Energy Wales: A Low Carbon Transition

3 Project Description

3.1 Project Site

- 3.1.1 The Project Site would be situated on pastoral fields north of Swansea in the City and County of Swansea, approximately 1 km southeast of Felindre, 760 m west of Llwynycelyn and 1.4 km north of Llangyfelach. The farmland is currently used for sheep and horse grazing as well as horse training and breeding. The western extent of the Project Site encompasses National Grid's two 400kV electrical substations and Felindre Gas Compressor Station. In addition areas within the Project Site have in the past, been subject to a variety of permissions for mineral extraction, inert landfill and other commercial activities.
- 3.1.2 The Power Generation Plant Site would be located primarily within fields used for grazing bounded by a mixture of drainage ditches, fencing and defunct hedgerows with substantial gaps in them. There is an existing farm road at the northern end of Access Road – Option 1. The Generating Equipment Site and Laydown Area are divided into two areas by a soft surface horse training track known as 'the gallops' with a block of broadleaved woodland to the east classified as Ancient Woodland and a Site of Importance for Nature Conservation (SINC). There are also further blocks of woodland to the west where Access Road – Option 2 is located. The land within the Generating Equipment Site is at approximately 90 m above Ordnance Datum (AOD) and gently slopes down towards the south.
- 3.1.3 The Gas Connection would lie within the Opportunity Area identified on Figure 1 and would either be located to the north, northwest or south of the Generating Equipment Site crossing grazing fields bound by hedgerows and ditches as well as a public footpath. The fields are interspersed by small deciduous copses, some of which are classified as Ancient Woodland and SINC's to the north, northeast and northwest of the Generating Equipment Site, as identified on Figure 3.
- 3.1.4 The Electrical Connection would lie within the Opportunity Area identified in Figure 1 and would be located to the southwest of the Generating Equipment Site passing through grass fields and the Aber-gelli-fach plantation which is partially designated as a SINC.
- 3.1.5 The Project Site would be accessed from Junction 46 of the M4 either from: the north via the Rhyd-y-pandy Road; or from the west via the B4489 as shown on Figure 2.

Surrounding Area

- 3.1.6 The area surrounding the Project Site is rural with a substantial amount of utilities infrastructure in the area. A gas NTS Pipeline, and water pipelines cross the Project Site and there is also a network of electricity pylons which lead to and from National Grid's two 400kV electrical substations to the southwest of Abergelli Farm. Furthermore a Water Treatment Works is

located immediately to the northwest while the Cefn Betingau Solar Park is located to the east of Project Site.

3.1.7 The closest residential dwellings to the Project Site are:

- Abergelli Farm, located within the Project Site;
- Abergelli fawr, located within the Project Site;
- Cefn-betingau approximately 400 m to the west; and
- Maes-eglwys approximately 176 m to the southwest.

3.1.8 Within the Project Site there is a small landfill and the remains of Aber-gelli Colliery, both of which are located north of Abergelli Farm.

3.1.9 Other features of the area include a number of existing public footpaths, bridleways and tracks located in and around the Project Site, linking it to the wider area. In addition within the Project Site there are a number of springs with their associated streams and drainage ditches which discharge into the Afon Llan.

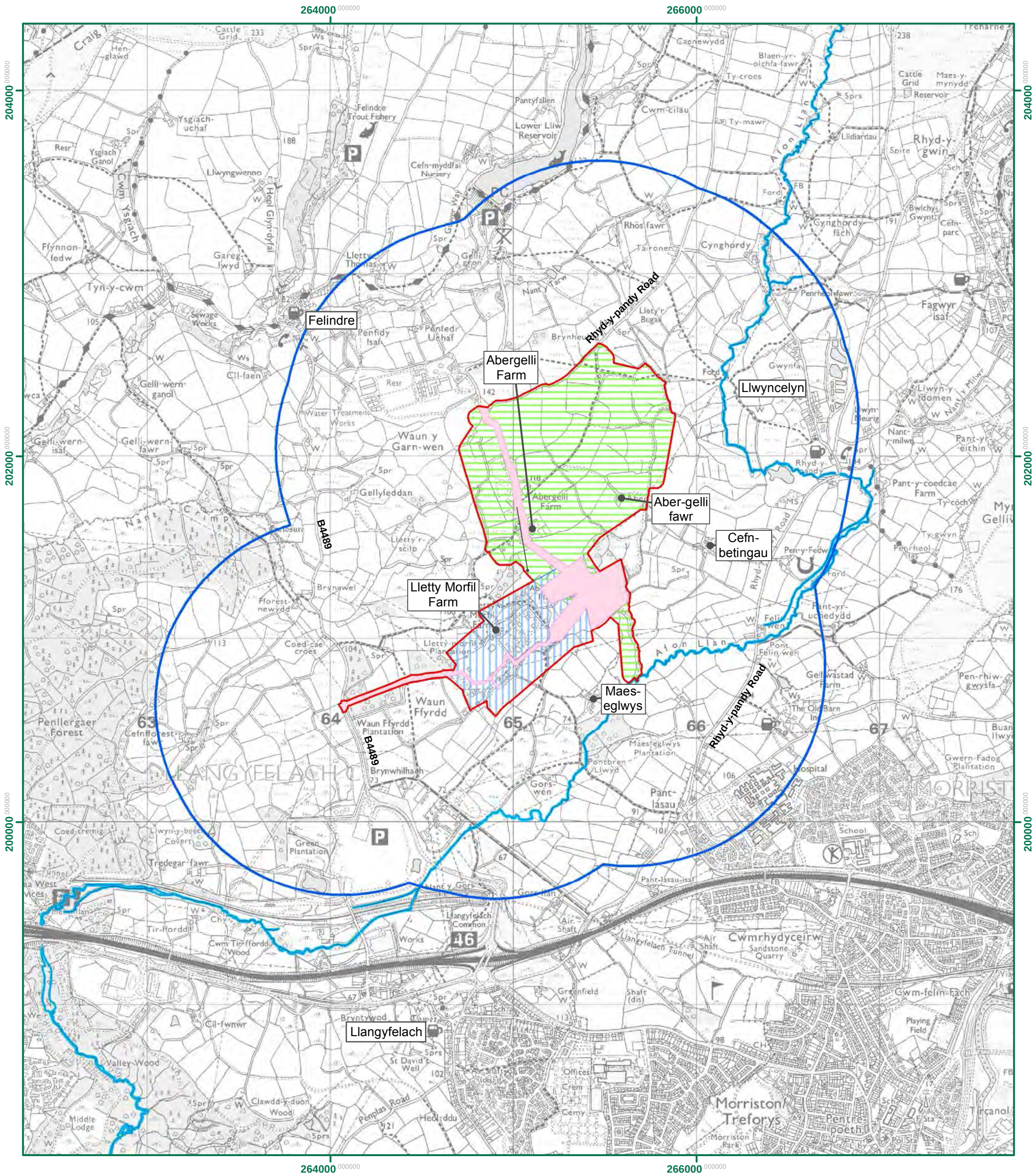
3.2 Description of the Project

3.2.1 The elements of the Project are described below. The description is based on a 'Rochdale Envelope' approach (i.e. a single project with a range of parameters). The scope of each of the technical assessments described in Chapter 5 has been based on the parameters provided below. Assessing a worst case realistic configuration from within the parameters enables an assessment of the 'worst case' likely significant environmental effects within each technical assessment. Each technical chapter within the PEIR and ES will identify which parameters represent the 'worst case' for that topic. It is acknowledged that the parameters may be refined during the design process for the Project and following consultation. If this occurs the modified parameters will be described and taken into account within the PEIR and ES as appropriate.

3.3 Power Generation Plant

3.3.1 The Power Generation Plant would be designed as a peaking plant fired by natural gas supplied by a new underground gas pipeline connecting the Power Generation Plant to the existing NTS. It would have a capacity of up to 299 MW (enough to power the equivalent of 400,000 homes).

3.3.2 As a peaking plant, the Generating Equipment would operate for up to 1,500 hours per year. Peaking plants are required to operate when there is a 'stress event'. This occurs when there is a surge in demand for electricity associated with a particular event (e.g. where many people across the country boil kettles following the end of a popular television programme) or where there is a sudden drop in power being generated from plants which are constantly operational (e.g. a sudden outage). Peaking plants also help to 'balance out' the grid at other times of peak electricity demand and help to support the grid at times when other technologies (e.g. renewable energy



- Project Site
- Power Generation Plant Site
- Electrical Connection Opportunity Area
- Gas Connection Opportunity Area
- 1km Study Area Around the Project Site

Features Of Interest
Water Resources

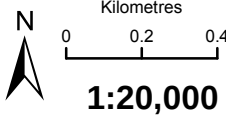
Afon Llan

Data Sources

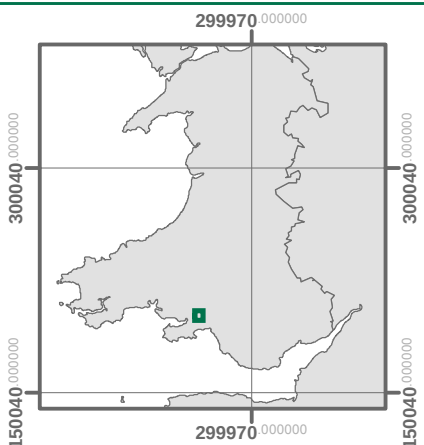
© Crown copyright and database right [2014] Ordnance Survey 0100031673; Contains Ordnance Survey data © Crown copyright and database right [2013].



Figure 2:
Features of Interest



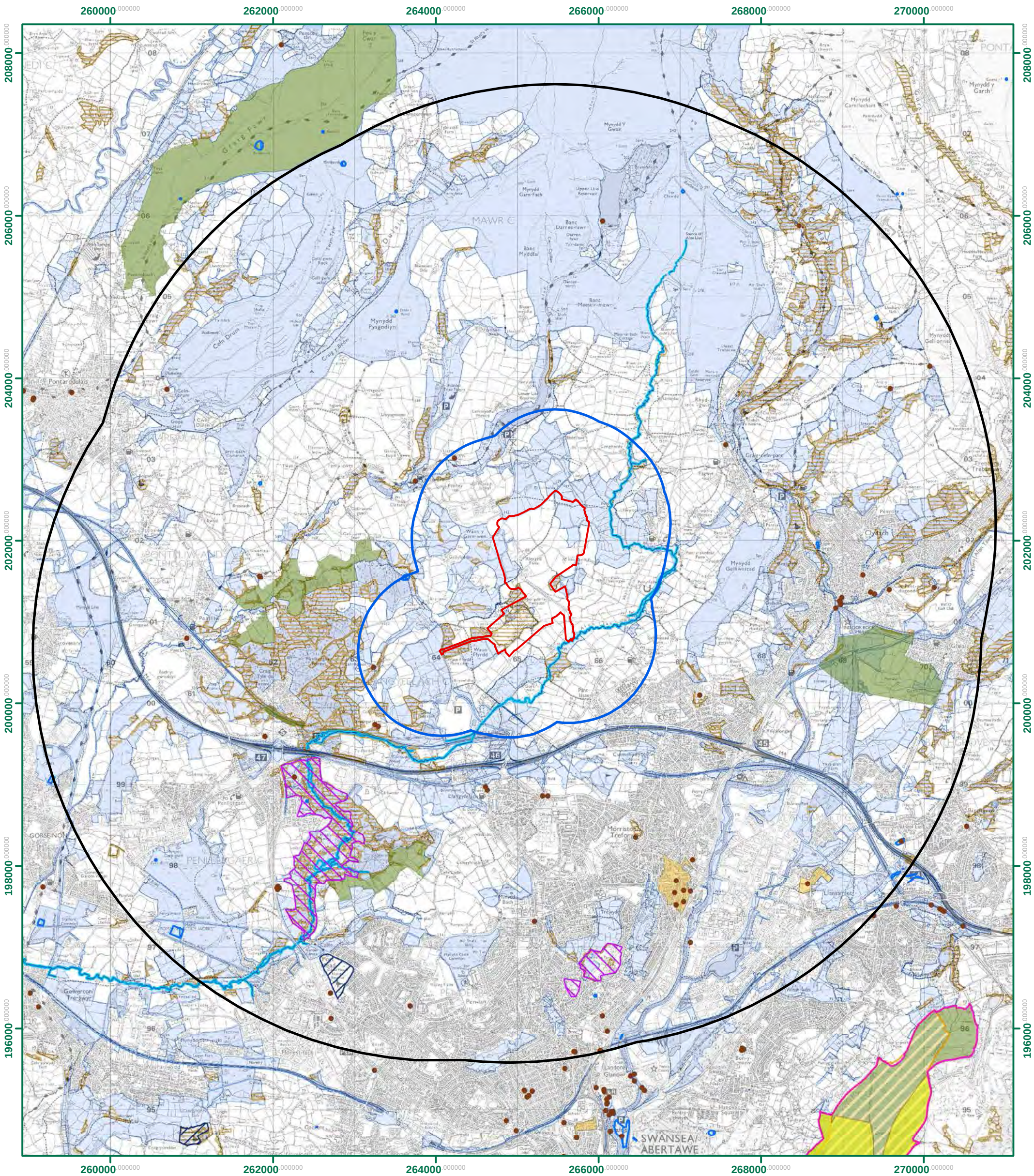
Geodetic Information
Projection: Transverse_Mercator
Spheroid: Airy_1830
Datum: D_OSGB_1936



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Figure2.mxd
Project Number: P1079



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- Project Site
- 1km Study Area Around the Project Site
- 5km Study Area Around the Project Site

Water Resources

- Afon Llan

Ecology

- Ramsar
- Local Nature Reserve
- Special Area of Conservation
- National Nature Reserve
- Site of Special Scientific Interest
- Ancient Woodland
- Site of Importance for Nature Conservation

Cultural Heritage

- Listed Building
- Scheduled Monument
- Registered Park or Garden
- Conservation Area

Data Sources

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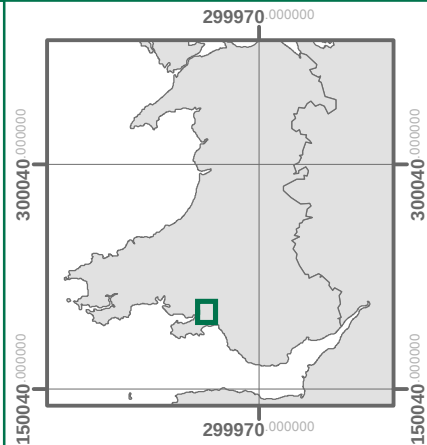
**Figure 3:
Indicative Environmentally
Sensitive Receptors**



Kilometres
0 0.5 1
1:45,000

Geodetic Information

Projection: Transverse_Mercator
Spheroid: Airy_1830
Datum: D_OSGB_1936



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P1079_03_01_Abergelli_
Figure3.mxd
Project Number: P1079

Produced by
Orbis Energy Limited

sources, such as wind and solar farms) cannot generate electricity due to their intermittent operation and reliance on weather conditions.

- 3.3.3 Given these parameters, it has been determined that a Simple Cycle Gas Turbine (SCGT) plant is the preferred and most appropriate technology choice for the Project.

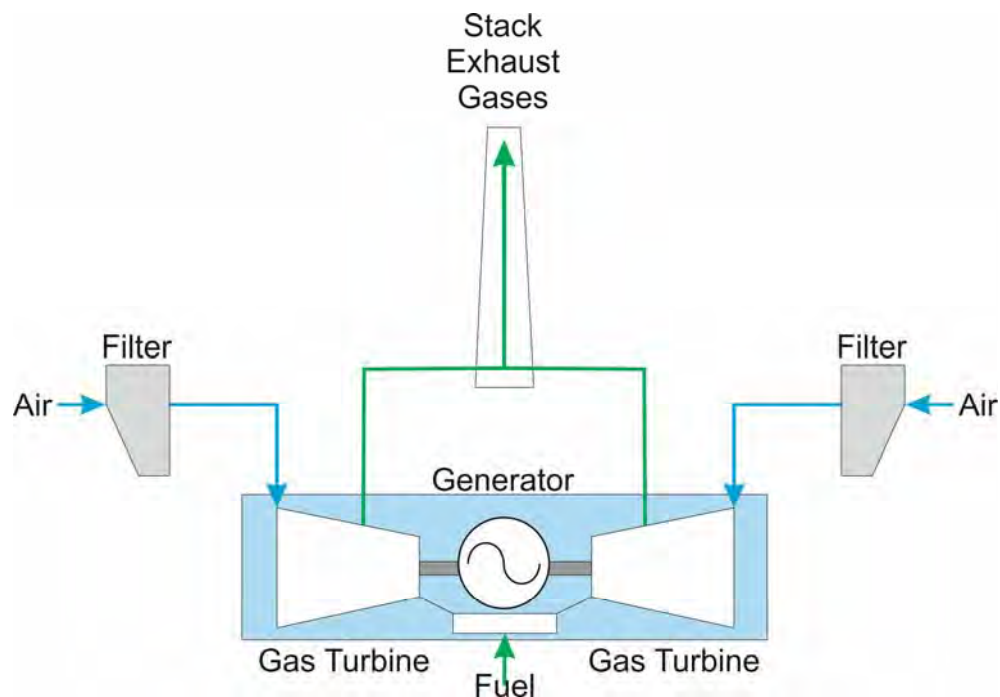
SCGT Plant

- 3.3.4 There are several alternative types of SCGT plant available to generate up to 299 MW. SCGT plants often use aero-derivative gas turbines (i.e. turbines derived from aeronautical applications), primarily because of their suitability for frequent start-ups, flexibility, high efficiency and high-availability maintenance techniques. For the aero-derivative case, APL envisages using three, four or five individual aero-derivative turbine generators to achieve 299 MW.
- 3.3.5 However, 'industrial' type gas turbines can also be used which are typically larger and often more suited to longer operational hours. They offer similar efficiency but less fast loading flexibility. Industrial gas turbines differ from aeronautical designs in that the casings, rotors and blading are of heavier construction. For the industrial gas turbine case, it is anticipated that one or two individual industrial gas turbine generators will be used to achieve 299 MW.
- 3.3.6 The main equipment in a SCGT is a Gas Turbine Generator, comprising the following components:
- Inlet air filter;
 - Air compressor;
 - Combustion chamber;
 - Power turbine(s); and
 - Exhaust silencer.
- 3.3.7 Air on entering the gas turbines, would be compressed and natural gas injected into the air. The natural gas would then burn in the combustion chamber producing hot, high pressure gases. The gas would then expand across the blades of the gas turbine driving the electrical generators to produce electricity.
- 3.3.8 The waste gases and heat produced from this process would then be released to the atmosphere via between one and five stacks (chimneys). The stack(s) would contain equipment which will reduce emissions released to the atmosphere.
- 3.3.9 A stack height sensitivity study will be undertaken for the Project to determine the minimum stack height for the Gas Turbine Generators, required for adequate dispersion of emissions and to meet legislative air quality targets. This height would apply to all technology choices, as

discussed above, and would not be dependent on the number of units present at the Generating Equipment Site.

- 3.3.10 The DCO Application will therefore be flexible enough using the Rochdale Envelope approach to allow APL to achieve a 299 MW project by building between one to five Gas Turbine Generators, with up to five exhaust gas flue stacks. Figure 4 shows a simple schematic of SCGT operation.

Figure 4: Schematic of SCGT Operation



Laydown Area

- 3.3.11 A temporary laydown area for the storage of plant and equipment during construction would be provided adjacent to the Generating Equipment Site as shown in Figure 1. It is not proposed that land would be required for a permanent maintenance/laydown area during operation.

Access Road

- 3.3.12 A new purpose built Access Road would be constructed within the Power Generation Plant Site. Two options are being considered for access to the Generating Equipment Site from Junction 46 of the M4. Access Road - Option 1 is from the north via the Rhyd-y-pandy Road and the existing access road west of Brynheulog past Abergelli Farm which would need to be extended to the Generating Equipment Site, as shown on Figure 1.
- 3.3.13 Access Road - Option 2 is from the west via the B4489, along the access road to National Grid's two 400kV electrical substations and Felindre Gas Compressor Station and then along a purpose built Access Road to be constructed, across undeveloped land to the Generating Equipment Site as shown on Figure 1.

Dimensions

- 3.3.14 The maximum area for the Generating Equipment Site would be in the order of 6 ha. The Generating Equipment may be sited in a number of locations within the wider Generating Equipment Site depending on its final design. The Generating Equipment Site may also be reduced in size during the design process with any changes acknowledged in the PEIR and/or ES.
- 3.3.15 Table 3.1 provides indicative dimensions for the main plant items which would be present at the Generating Equipment Site.

Table 3.1: Indicative Dimensions of Main Plant Items

Plant Item	Indicative Dimensions (m)
Stacks (dimensions)	Up to 60 m (height) and up to 10 m (diameter)
Stack (number)	Up to 5 stacks
Gas Turbine Generators (plant dimensions)	Up to 90 m (length) x up to 150 m (width) x up to 20 m (height)
ACC/Cooling (plant dimensions)	Up to 60 m (width) x up to 60 m (width) x up to 10 m (height)
Demineralised water tank	Up to 23 m (diameter) x up to 16 m (height).
Raw/fire water tank	Up to 15 m (diameter) x up to 18 m (height).
Administration/ workshop/ control building	Up to 30 m (length) x up to 23 m (width) x up to 6m (height)
Gas Receiving Facility (GRF)	Up to 50 m (width) x up to 50 m (length) x up to 3 m (height)

Construction, Operational and Decommissioning Timescales

- 3.3.16 Construction and commissioning of the Project would take approximately 22 months. The main works associated with the construction phase would be the removal of hardstanding, excavation and site levelling for new foundations, potential piling (if required) and the laying of the Gas and Electrical Connections.
- 3.3.17 The Power Generation Plant would be designed to have an operational life of 25 years, after which time it would be decommissioned or re-powered depending on the nature of the electricity market and energy mix at the time. For the purposes of the EIA, it would be assumed that the Power Generation Plant would be decommissioned.

- 3.3.18 Decommissioning would comprise the removal of all Power Generation Plant items and restoration of the Project Site to a similar condition compared to before the construction of the Project. This process would also take approximately 22 months. It is likely that some underground structures, including the Gas and Electrical Connections (if an underground Electrical Connection is implemented) may be capped and left in situ to avoid any adverse environmental impacts associated with their removal. Due regard would be paid to all best practice guidelines and legislation on decommissioning of projects which are relevant at the time of the decommissioning activities. Where possible, items of plant would be recycled or reused.

Carbon Capture Readiness (CCR) and Carbon Capture and Storage (CCS)

- 3.3.19 At up to 299MW, the Project would be below the threshold set out in Directive 2009/31/EC²⁴ and National Policy Statement EN-1 and EN-2 for when operators of combustion plants are required to have assessed the feasibility of: a storage site, transport facilities and economic considerations of the capture of carbon dioxide (CO₂) produced as a result of the combustion process. Therefore it is not considered necessary to assess the viability of CO₂ capture or include it further in this report.

3.4 Gas Connection

- 3.4.1 The Gas Connection would be in the form of a new underground gas pipeline connection (the Pipeline) and above ground installation (AGI) and is required to connect the Generating Equipment to the existing high pressure NTS or the LTS HP Pipeline in order to provide a reliable supply of fuel.

Gas Connection Opportunity Area

- 3.4.2 A Gas Connection Feasibility Study was undertaken in March 2014 to define and evaluate the options available for connecting the Generating Equipment to a suitable source of fuel gas. This identified Feeder 28 of the NTS or a nearby LTS HP Pipeline as possible connection points. The location of these in relation to the Project Site is shown on Figure 1.
- 3.4.3 At present, investigations to identify specific route corridor options to the NTS or LTS HP Pipelines are still ongoing. It is anticipated that the Gas Connection would be situated within the Gas Connection Opportunity Area which extends north and south from the Generating Equipment Site as shown on Figure 1. The Gas Connection Opportunity Area comprises large pastoral fields bounded by hedgerows and ditches which slope down towards the south and are interspersed by areas of woodland (some of which are classified as Ancient Woodland and SINCs) and areas of wet grassland (some of which are designated as SINCs) as shown on Figure 3. There are also a group of springs to the north of Aber-gelli fawr which feed

²⁴ Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006

into Afon Llan close to the LTS HP Pipeline. The feeder for the NTS which feeds into and out of the Felindre Gas Compressor Station crosses through the Project Site between the Gas Compressor Station and Abergelli Farm.

- 3.4.4 Specific connection options will be explored and further refined to a single Gas Connection Route prior to submission of the DCO Application. Due regard will be paid to relevant factors including environmental, planning, safety, engineering and constructability. Further details of the options being considered will be provided to consultees when they are available and the selected option will be assessed in the PEIR and ES that will be submitted in support of the DCO Application.

Connection to the NTS or LTS HP Pipeline

- 3.4.5 Connection of the Pipeline to the NTS or LTS HP Pipeline would require two Above Ground Installations (AGIs) to be installed which will include: a Minimum Offtake Connection (MOC) facility, which would be owned by National Grid Company (NGC); and a PIG Trap Facility (PTF) which will be owned by APL.
- 3.4.6 The MOC (approximately 40 x 30 m) would contain:
- Remotely operable valve (ROV);
 - Control and instrumentation kiosk; and
 - Electrical supply kiosk.
- 3.4.7 The PTF (approximately 40 x 30 m) would contain:
- PIG launching facility;
 - Emergency control valve (possible);
 - Isolation valve;
 - Control and instrumentation kiosk; and
 - Electrical supply kiosk.
- 3.4.8 Termination of the Gas Connection would be at a PTF on the Generating Equipment Site. A further facility known as the Gas Receiving Facility (GRF) would be situated downstream of the PTF within the Generating Equipment Site. The PTF would contain the following equipment:
- PIG receiving facility;
 - Emergency control valve (possible); and
 - Isolation valves.
- 3.4.9 The GRF would contain the following equipment:

- Metering, heating, filtering, compression and pressure regulation equipment;
- Isolation valve;
- Electricity supply kiosk; and
- Control and instrumentation kiosks.

3.4.10 The PTF and GRF would be sited close to each other and if possible they will be joined on a single plot.

3.5 Electrical Connection

3.5.1 The Electrical Connection will comprise all the necessary elements to enable power to be exported from the Generating Equipment to the NETS such as new electrical circuits (either in the form of an underground cable or overhead line).

3.5.2 A grid connection assessment was undertaken for the Project Site in March 2014 in order to define and evaluate the options available for connecting the Generating Equipment to the NETS. The most suitable point of connection is currently anticipated to be a cable terminal chamber on the Gas Insulated Switchgear (GIS) circuit at the point where the underground cable or overhead line emerges to facilitate its connection into the NETS.

3.5.3 If the connection is via an underground export cable then a Sealing End Compound (SEC) would be required. It is possible that the SEC would be required off site from the Generating Equipment Site depending on the configuration of the Electrical Connection.

Electrical Connection Opportunity Area (Underground or Overhead)

3.5.4 Specific route corridor options for the Electrical Connection have not been identified at present, with options being investigated within an area referred to as the Electrical Connection Opportunity Area to the southwest of the Generating Equipment Site as shown on Figure 1.

3.5.5 The area comprises gently sloping pastoral land grazed by sheep and horses with areas of wet grassland to the east and scrub and deciduous woodland to the west. Some of these areas are designated as SINCs with areas of the woodland also classified as Ancient Woodland, as shown on Figure 3. The field boundaries are delineated by fences with defunct hedgerows and drainage ditches. The nearest residential properties to the Electrical Connection Opportunity Area are Lletty Morfil, Abergelli Farm and Maes-eglwys. There is one public right of way within the area which follows the boundary of the Felindre Gas Compression Station.

3.5.6 Two existing National Grid double circuit 400kV overhead lines are located on an approximate southwest-northeast alignment through the Project Site.

3.5.7 Specific connection options will be explored and further refined to a single Electrical Connection route prior to submission of the DCO Application. Due

regard will be paid to relevant factors including environmental, planning and feasibility. Further details of the options being considered will be provided to consultees when they are available and the selected option will be assessed in the PEIR and ES that will be submitted in support of the DCO Application.

3.6 Project Site Selection/Design Evolution

3.6.1 The choice of site for the Power Generation Plant has been carefully considered with various sites and a number of relevant factors looked at during this process in accordance with paragraph 4.4.1 of the NPS EN-1 and NPS EN-2. Key factors included in the selection of the Power Generation Plant Site are:

- It is in close proximity to a suitable Electrical Connection point;
- It is in close proximity to a suitable Gas Connection point;
- It is in a developed setting dominated by the Felindre Gas Compressor Station and National Grid's two 400kV electrical substations ; and
- It has a well-developed road network and access to the Project Site.

3.6.2 The final choice of the Gas and Electrical Connection routes would be selected following further consultation and a more thorough assessment of constraints and environmental impacts.

3.6.3 In terms of design evolution of the Project, the following technology options were originally considered for the 299 MW Power Generation Plant: SCGT plant; Combined Cycle Gas Turbine (CCGT) plant; and Reciprocating Gas Engines (RGE) plant.

3.6.4 SCGT is considered to be the most suitable technology choice for generating up to 299 MW as a peaking plant at the Project Site based on the following environmental, technical and feasibility considerations:

- Visual impact: SCGT plant require shorter stack(s) compared to CCGT plant and therefore are less visually intrusive in views from the surrounding environment;
- Water resources: the water requirement of a SCGT plant is significantly lower than for a CCGT plant;
- Noise and available space: noise levels from a SCGT plant would typically be lower than for an RGE plant. A larger number of RGE units would be required at the Generating Equipment Site to generate up to 299 MW. Spatially this may not be possible;
- Financial: based on the current electricity market, it is essential that the Power Generation Plant of the size proposed will be particularly cost effective, as it will be called upon to operate flexibly to balance out the National Grid and meet changing demands of customers. SCGT plants are better suited to this type of operational regime; and

- Start up times: SCGT plants are able to start up and shut down much quicker than similar sized CCGT plants and are, therefore, better suited to meeting variable demands.
- 3.6.5 The potential for using CHP opportunities with these technologies was also considered. However it is not technically or economically feasible with a SCGT peaking power station because the profile for the generation of electrical energy from the station cannot be guaranteed to coincide with the required heat demand profile of any potential customer.
- 3.6.6 A more detailed appraisal of the Project Site selection process and design evolution would be set out in the PEIR and ES.

4 Scope and Structure of the EIA

4.1 Introduction

- 4.1.1 This Chapter describes the proposed scope and structure for the EIA that will be undertaken to support the DCO Application in accordance with the EIA Regulations. The key output of the EIA process is ultimately the ES, which sets out the likely significant environmental effects of the Project. The ES will enable PINS, consultees and the SoS to understand the anticipated environmental impacts and effects of the Project.
- 4.1.2 To allow for a precautionary approach, the assessments in the ES will be based on a realistic worst case scenario specific to each topic based on the Rochdale Envelope parameters as described in Chapter 3.

4.2 Overall ES Structure

- 4.2.1 Table 4.1 sets out the proposed structure of the ES. A number of supporting documents will also be submitted to the SoS as part of the DCO Application. These are summarised in Table 4.2.

Table 4.1: Proposed ES Structure

Section	Description
Introduction	Providing: • A brief introduction to the Applicant; • A high level description of the Project; • A description of the consenting regime; and • A description of the purpose and structure of the ES.
Project Description	Detailed description of the Project and how the different aspects (i.e. Power Generation Plant, Electrical Connection and Gas Connection) are interconnected/ interrelated. Outline of the proposed construction methods and indicative programme, including working hours etc.
Site Description	Description of the current and future site settings and surroundings of the Project Site.
Project Development and Alternatives	To include an account of: • Project Site Selection; • Alternative technology options for the Power Generation Plant; • Alternative layout/design options for the Power Generation Plant; and

Section	Description
	Assessment of alternatives for the Gas and Electrical Connection route corridors.
EIA Assessment Methodology	Detailing the assessment methodology that the EIA has followed.
ES – Main Impact Sections	The following chapters will present the results of the EIA that has been undertaken: - Air Quality; - Noise and Vibration; - Ecology; - Water Quality and Resources; - Geology, Ground Conditions and Agriculture; - Landscape and Visual; - Traffic, Transport and Access; - Cultural Heritage and Archaeology; and - Socio-Economics. The planning policy context and results of the indirect, secondary and cumulative impact assessment of the Project will be provided within each chapter listed above.
Conclusion	This chapter will present the conclusions of the residual effects of the Project as well as indirect, secondary and cumulative impact assessment of the Project.
ES Volume 2	Containing technical appendices
ES Volume 3	Containing all figures associated with the ES
Non-Technical Summary	Providing a summary of the main findings of the ES in easy to understand, non-technical language

Table 4.2: Supporting Environmental Documents to the DCO Application

Document Name	Description
Design and Access Statement	Providing details on the main access and egress routes to the Project Site and the design process and philosophy that have been followed in developing the Project.
Flood Consequences	Providing details on the risk to the Project Site from flooding and risks elsewhere that could be

Document Name	Description
Assessment	caused by the Project.
Planning Statement	Describing the planning policy background and demonstrating that the Project is in compliance with the relevant NPSs and other relevant and important considerations.
Consultation Report	Consolidating all consultations that have taken place throughout the Project, and how issues raised have been addressed.
No Significant Effects Report or Habitat Regulations Assessment	Depending on the potential for impacts on designated European sites, a Habitat Regulations Assessment or a No Significant Effects Report may be required subject to consultation with Natural Resources Wales (NRW), City and County of Swansea and PINS. This will draw on the Ecology chapter of the ES (described in Section 5.5 below).

4.3 Cumulative Assessment

4.3.1 In accordance with the EIA Regulations, the EIA will take into account other developments in the vicinity of the Project Site and will consider the cumulative impacts associated with these development in-conjunction with the Project. Developments considered within the cumulative assessment include those that are:

- In the process of being built;
- Permitted application(s) but not yet implemented;
- Submitted application(s) not yet determined;
- Projects on the National Infrastructure's programme of projects;
- Projects identified in the relevant development plan (and emerging development plans – with appropriate weight being given as they move closer to adoption) recognising that information on the relevant proposals will be limited; and
- Projects identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

4.3.2 At present, it is anticipated that the following developments will be considered as part of the cumulative assessment.

- Planning Application 2013/0795 – Installation of four 5 kW wind turbines 120.7 m to tip and associated infrastructure at Myle Coch Mawr;

- Planning Application 2013/0135 – Installation of ground mounted array of solar panels, inverter substations and 2.4 m high fencing on land at Abergelli Farm. This development would be located within the Gas Connection Opportunity Area on the Project Site.
 - Planning Application 2013/1639 (Rhyd-y-pandy Solar Park) – Construction of 7 MW solar park consisting of installation of up to 28,250 photovoltaic panels and up to six inverter/transformer cabins, a single control building and provision of security fencing.
- 4.3.3 Further to these individual planning applications, proposed development within the Swansea Vale Development Area will also be considered for assessment of any significant cumulative impacts. Swansea Vale is situated approximately 5 km from the Project Site and extends to some 190 ha south of a railway line and the M4.
- 4.3.4 In addition during the EIA other developments may be identified if more information becomes publicly available.
- 4.3.5 Any views on the inclusion of any particular cumulative scheme will be welcome as part of the Scoping Opinion.

5 Detailed Description of ES Impact Sections

5.1 Introduction

- 5.1.1 This chapter provides a description of the proposed EIA. It addresses each proposed ES technical chapter and describes the current understanding of the baseline conditions and assessment methodology for each discipline that will determine the likely significant environmental effects of the Project. Potential mitigation measures have also been identified where appropriate, although these will be set out in detail in the ES. Consultees are invited to comment on the methodologies within their scoping responses.
- 5.1.2 Although the sections below deal with the Project as a whole, it is anticipated that the ES technical chapters will be sub-divided allowing the assessment of effects during the construction, operation and decommissioning phases, description of mitigation measures and residual effects to be addressed separately for the Power Generation Plant, Gas Connection and Electrical Connections as well as together for the overall Project. Cumulative effects will be assessed for the Project as a whole.
- 5.1.3 The sections described are set out in the following list:
- Air Quality (5.3);
 - Noise and Vibration (5.4);
 - Ecology (5.5);
 - Water Quality and Resources (5.6);
 - Geology, Ground Conditions and Agriculture (5.7);
 - Landscape and Visual (5.8);
 - Traffic, Transport and Access (5.9);
 - Cultural Heritage and Archaeology (5.10); and
 - Socio-Economics (5.11).

5.2 Significance Criteria

- 5.2.1 The significance of environmental effects resulting from the construction, operation and decommissioning of the Project will generally be categorised using a series of matrices. These will be developed to describe the sensitivity of receptors and resources which have the potential to be impacted by the Project and the magnitude of any impacts that are likely to arise. The sensitivity of receptors and resources and magnitude of impact will be cross-referenced to give an overall significance of effect for any potential impact. Where it is not possible to quantify impacts, qualitative assessments will be carried out, based on available knowledge and professional judgement.

- 5.2.2 In order to provide a consistent approach and enable comparison of effects upon different environmental components, the assessments will generally follow the structure and use the terminology outlined below in Tables 5.1 to 5.3. However for some sections, significance criteria may need to differ depending on the assessment methodology used. Each technical chapter of the ES will clearly identify and explain any specific criteria used as well as defining what constitutes a significant impact and/or effect.
- 5.2.3 Potential mitigation measures described in the ES will include embedded mitigation through design/standard control measures (which will be used to produce an initial assessment of impact) and any further specific mitigation required (which will be taken into account to produce an assessment of residual impacts).

Table 5.1: Determining Receptor Sensitivity

Sensitivity	Example
Very High	Internationally designated sites (e.g. Ramsar, Special Protection Area, World Heritage Site)
High	Nationally designated sites (e.g. Sites of Special Scientific Interest (SSSI), designated landscape, National Parks, Principal Aquifers).
Medium	Regionally designated ecology, heritage sites, secondary aquifers, minor watercourses
Low (or lower)	Locally designated ecology, heritage sites, areas of hardstanding, brownfield land, industrial site, low ecological value.
Negligible	No sensitivity to change

Table 5.2: Determining Magnitude of Impact

Magnitude		Example
Major	Adverse	A permanent or long term adverse impact on the integrity and value of an environmental attribute or receptor
	Beneficial	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality
Moderate	Adverse	An adverse impact on the integrity and/or value of an environmental attribute or receptor, but recovery is possible in the medium term and no permanent impacts are predicted
	Beneficial	Benefit to, or addition of, key characteristics, features, or elements or improvement of

Magnitude		Example
		attribute quality
Minor	Adverse	An adverse impact on the value of an environmental attribute or receptor, but recovery is expected in the short term and there would be no impact on its integrity
	Beneficial	Minor benefit to, or addition of key characteristics, features or elements; some beneficial impact on attribute or a reduction in the risk of a negative impact occurring
Negligible	Adverse	Very minor loss
	Beneficial	Very minor benefit
No change		No change would be perceptible, either positive or negative

Table 5.3: Determining Significance of Effect

		Magnitude of Impact				
		No Change	Negligible	Minor	Moderate	Major
Receptor Sensitivity	Very High	Neutral	Slight	Moderate	Large	Very Large
	High	Neutral	Slight	Moderate	Large	Large
	Medium	Neutral	Slight	Slight	Moderate	Large
	Low	Neutral	Slight	Slight	Slight	Moderate
	Negligible	Neutral	Neutral	Neutral	Neutral	Neutral

5.3 Air Quality

Introduction

- 5.3.1 The air quality assessment will consider potentially significant air quality impacts and effects caused by the construction, operation and decommissioning of the Project on sensitive human and ecological receptors in and around the vicinity of the Project Site. Potential effects could include those that result from dust during construction and decommissioning and stack emissions during operation of the Gas Turbine Generators.

Baseline

- 5.3.2 Existing ambient air quality and baseline conditions will be reviewed using available air quality monitoring data and the most recent local authority publications published in accordance with their duties under the Environment Act 1995²⁵. The assessment will include particular consideration of: designated Air Quality Management Areas (AQMAs); any relevant previous studies undertaken in the area; the location of sensitive receptors (including designated ecological sites and Morriston Hospital); and other significant sources of emissions.
- 5.3.3 The nearest AQMA is Swansea Air Quality Management Area 2010 which is in the Lower Swansea Valley encompassing the areas of Hafod, Sketty and Fforestfach²⁶. It is approximately 4.5 km from the Project Site and has been declared primarily on the basis of traffic related NO₂.
- 5.3.4 Felindre Gas Compressor Station is present within the Project Site and occasionally flares and therefore the emissions will be considered as part of the baseline conditions. Further consultation will be sought with The City and County of Swansea Council and National Resources Wales (NRW) to determine a definitive list of significant emission sources to consider as part of the air quality assessment.
- 5.3.5 The existing air quality concentrations at sensitive ecologically designated sites will be obtained from DEFRA²⁷. The existing acid and nutrient nitrogen deposition rates will be obtained from the UK Air Pollution Information System (UK APIS).²⁸
- 5.3.6 Statutory ecologically designated sites within 10 km of the Project Site include:
- Caeau Afon Gwili Site of Special Scientific Interest (SSSI);
 - Cefn Gwrhyd, Rhydyfro SSSI;
 - Coed Cwm Du, Cilmaengwyn SSSI;
 - Burry Inlet Ramsar Site and Special Protection Area (SPA);
 - Burry Inlet and Loughor Estuary SSSI;
 - Carmarthen Bay and Estuaries Special Area of Conservation (SAC);
 - Crymlyn Bog Ramsar, SAC and SSSI;
 - Crymlyn Bog and Pant y sais National Nature Reserve (NNR);
 - Crymlyn Burrows SSSI;

²⁵ Environment Act 1995

²⁶ www.swansea.gov.uk

²⁷ <http://uk-air.defra.gov.uk/>

²⁸ <http://www.apis.ac.uk/>

- Earlswood Road Cutting and Ferryboat Inn Quarries SSSI;
- Fairwood, Pengwern and Welshmoor Commons SSSI;
- Blackpill, Swansea SSSI;
- Cilybebyll SSSI;
- Gwrhyd Meadows SSSI;
- Caeau Nant Garenig SSSI;
- Fforest Goch Bog SSSI;
- Frondeg SSSI;
- Graig Fawr, Potnardulais SSSI;
- Hafod Wennol Grasslands SSSI;
- Nant y Crimp SSSI;
- Pant-y-sais SSSI;
- Penplas Grasslands SSSI;
- Rhosydd Castell-du and Plas-y-bettws SSSI.

5.3.7 Non-statutory ecological sites within 2 km of the Project Site include:

- Waun Garn Wen SINC;
- Llety-Morfil SINC;
- Llangedfelach Common SINC;
- Felindre Grasslands SINC;
- Pant Lasau SINC;
- Rhyd-Y-Pandy Valley and Grassland SINC;
- Rhos Fawr SINC;
- Cilfaen SINC;
- Cefn Forest Stream SINC;
- Middle Llan SINC;
- Llangyfelach Golf Course and Surrounds SINC;
- Mynydd Gelli-wasted SINC;
- Lower Lliw Reservoir SINC;

- Middle Lliw SINC;
- Penllergaer Forest SINC;
- Penllergaer to Llangefelch Tunnel railway line SINC;
- Mynydd Bach Common SINC;
- M4 Corridor SINC;
- Cwm Rhydyceirw to Birchgrove Railway SINC;
- Cwm Clydach SINC;
- Lougher to Penllergaer Railway Line SINC; and
- Banc Darren Fawr SINC; and
- Cwm Nant-Ddu SINC.

5.3.8 Residential receptors within 1 km of the Project Site include those within the nearby settlements of Morriston, Pant-lasau, Llwynceilyn and Felindre. In addition there are also isolated dwellings and farmsteads outside of the settlements including but not exclusive to:

- Aber gelli fawr;
- Abergelli Farm;
- Cefn-betingau;
- Maes-eglwys;
- Lletty Morfil Farm;
- Felin-wen;
- Pont Felin-wen;
- Pontbren Llwyd;
- Gors-wen;
- Llety'r Bugall;
- Brynheulog;
- Taironen;
- Penfeddi Uchaf;
- Penidy Isaf;
- Gellyfedden;
- Rhos fawr;

- Brynawel;
- Brynwhilhach; and
- Lletty'r-scil.

Assessment

- 5.3.9 The assessment methodology will be agreed in consultation with the Environmental Health Officer (EHO) at City and County of Swansea Council and NRW.
- 5.3.10 The emissions of dust during the construction and decommissioning phases of the Project will be assessed in accordance with 'Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance' (IAQM, 2012)²⁹ and the Department for Transport 'Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3, Part 1: Air Quality' and the associated DMRB Screening Method, developed by the Highways Agency³⁰. The significance of the potential impacts identified will be determined based on the sensitivity of the identified receptors within the potential zones of influence outlined in the IAQM Guidance.
- 5.3.11 The air quality assessment for the operational phase will follow the Environment Agency documents 'Horizontal Guidance Note H1 – Annex (f): Air Emissions'³¹ and the Environment Agency Air Quality Modelling and Assessment Unit (AQMAU) 'Air dispersion modelling report requirements (for detailed air dispersion modelling)'³². The conversion of NO_x to NO₂, as applicable for the protection of human health under the UK Air Quality Standards Regulations 2010³³, will adopt the approach outlined in the AQMAU Guidance Note 'Conversion Ratios for NO_x and NO₂' (2006)³⁴.
- 5.3.12 As a peaking plant, the operation of the Generating Equipment will be limited through the permitting regime to 1500 hours per annum. The assessment will, therefore, be based on the operation of the Generating Equipment, at full load, for 1500 hours per annum.
- 5.3.13 The atmospheric emissions from the operation of the Generating Equipment will be quantified by obtaining information from relevant plant suppliers. Where two or more suppliers are being considered, a realistic worst case scenario will be used to ensure flexibility. However, only plant that meet national emissions limits will be considered.
- 5.3.14 The atmospheric dispersion modelling will be performed using the Cambridge Environmental Research Consultants (CERC) Air Dispersion

²⁹ IAQM (2012) Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance

³⁰ Highways Agency (various dates) Design Manual for Roads and Bridges (DMRB) Volume 11.

³¹ Environment Agency (December 2011) Horizontal Guidance Note H1 – Annex (f): Air Emissions

³² Environment Agency Air Quality Modelling and Assessment Unit (undated) Air dispersion modelling report requirements (for detailed air dispersion modelling)

³³ The Air Quality Standards Regulations 2010

³⁴ Environment Agency Air Quality Modelling and Assessment Unit (2006) Guidance Note 'Conversion Ratios for NO_x and NO₂'

Modelling Software (ADMS 5.0). An air dispersion model will be set up that considers the effects of terrain and buildings (as appropriate to the location of the Generating Equipment), together with the most recent available meteorological data covering a consecutive five year period (e.g. 2009 to 2014, inclusive) in accordance with current guidance.

- 5.3.15 The modelling assessment will estimate the mass concentration of NO_x and CO at sensitive receptors using the emission limits as specified in Part 2 of Annex V to the IED. Initial screening runs will be undertaken to determine an acceptable stack height suitable for adequate dispersion based on predicted maximum short term and long term ground level concentrations. Detailed atmospheric dispersion modelling will then be undertaken on the basis of the selected stack height.
- 5.3.16 The results of the detailed dispersion modelling will be presented as isopleths, and compared with background levels and relevant standards and guidelines (i.e. the Air Quality Standards Regulations 2010). Direct comparison will be made between the long-term and short-term process contributions from the Generating Equipment, the predicted environmental concentrations of relevant substances (i.e. process contribution plus background levels) and the limits and objectives within the relevant Air Quality Standards Regulations 2010. Where appropriate, the significance of the potential impact will be determined using the criteria set out in the 'Development Control: Planning for Air Quality' (EPUK, 2010) in conjunction with the Environment Agency Horizontal Guidance Note H1 – Annex (f).
- 5.3.17 The abatement of emissions will be discussed in relation to application of Best Available Techniques (BAT), in accordance with the Environment Agency Sector Guidance Note for Combustion Activities (EPR 1.01)³⁵ and the UK's position with regards to the on-going review of the EU IPPC Reference Document on BAT for Large Combustion Plants³⁶. Should additional mitigation prove to be necessary, the severity of impact, frequency of emissions and the resultant environmental risk associated with any residual impact will be examined.
- 5.3.18 Changes in air quality levels for NO_x will be assessed with respect to ecology for the European and nationally designated habitat sites within 10 km of the Project Site (including, but not necessarily limited to, those identified above). The non-statutory habitat sites within 2 km of the Project Site will also be considered. An assessment of the increased deposition of both nutrient nitrogen and acid due to nitrogen will also be carried out at the statutory (both EU and UK) designated sites in accordance with the methodologies described in the Environment Agency AQMAU 'AQTAG06 Technical Guidance on detailed modelling approach for an appropriate assessment for emissions to air'³⁷.

³⁵ Environment Agency (March 2009) How to comply with your environment permit. Additional guidance for Combustion Activities (EPR 1.01)

³⁶ European Commission (July 2006) Integrated Pollution Prevention and Control, Reference Document on Best Available Techniques for Large Combustion Plants

³⁷ Environment Agency AQMAU (October 2011) AQTAG06 Technical guidance on detailed modelling approach for an appropriate assessment for emissions to air

- 5.3.19 It is considered that there would not be any noticeable odours associated with the operation of the Generating Equipment at or beyond the boundary of the Generating Equipment Site and therefore it is not considered necessary to undertake a detailed assessment of odour.
- 5.3.20 The operation of the Gas and Electrical Connections would not produce any significant emissions and therefore these elements of the assessment during operation have been scoped out.

Potential Mitigation Measures

- 5.3.21 An outline Construction Environmental Management Plan (CEMP) will be drafted and appended to the ES which will set out best practice methods of limiting dust on site during construction and decommissioning.
- 5.3.22 During operation, the Generating Equipment would operate as a peaking plant, with operations limited to 1,500 hours per year. This operating limit will be set out in the site permit and will not be exceeded. In addition, embedded mitigation measures will include: incorporating stack(s) of sufficient height to achieve adequate dispersal of pollutants; and using flue gas cleaning equipment if required to ensure that all emissions are within concentrations permitted by legislation and guidance.
- 5.3.23 The need or otherwise for further, project specific mitigation measures will be addressed within the ES chapter.

5.4 Noise and Vibration

Introduction

- 5.4.1 In accordance with Section 5.11 of NPS EN-1, a noise and vibration assessment will consider potentially significant noise and vibration impacts and effects caused by the construction, operation and decommissioning of the Project on Noise Sensitive Receptors (NSRs) in and around the vicinity of the Project Site

Baseline

- 5.4.2 The Project Site would be sited within pastoral fields interspersed by scrub and deciduous woodland in a rural area with the National Grid's two 400kV electrical substations and Felindre Gas Compressor Station in the western extent of the Project Site. There are currently no sources of significant noise or vibration within close proximity to the Project Site other than that associated with nearby agricultural activities, Team Force Swansea Paintball Centre and a skip hire business as well as the M4 motorway approximately 1.5 km to the south. National Grid's two 400kV electrical substations and Felindre Gas Compressor Station are assumed to operate within agreed thresholds.
- 5.4.3 The closest NSRs within 1 km of the Project Site include those within the nearby settlements of Morriston, Pant-lasau, Llwyncelyn and Felindre. In

addition there are also isolated dwellings and farmsteads outside of the settlements including but not exclusive to:

- Aber gelli fawr;
- Abergelli Farm;
- Cefn-betingau;
- Maes-eglwys;
- Lletty Morfil Farm;
- Felin-wen;
- Pont Felin-wen;
- Pontbren Llwyd;
- Gors-wen;
- Llety'r Bugall;
- Brynheulog;
- Taironen;
- Penfeddi Uchaf;
- Penidy Isaf;
- Gellyfedden;
- Rhos fawr;
- Brynawel;
- Brynwhilhach; and
- Lletty'r-scil.

Assessment

- 5.4.4 The assessment methodology will be agreed with the EHO at the City and County of Swansea Council.
- 5.4.5 Construction and decommissioning noise and vibration assessments of the Project will be undertaken following the guidance in British Standard (BS) 5228³⁸. The assessment will be undertaken as a desk study and shall involve:
- Identification of construction and decommissioning activities that produce significant noise and vibration;

³⁸ British Standards Institute (2009) BS 5228-1: Code of practice for noise and vibration control on construction and open sites

- Identification of NSRs within 100 m of construction and decommissioning activities; and
 - Prediction of noise and vibration using the methodology contained within BS5228.
- 5.4.6 The exact construction and decommissioning methodologies are unlikely to be defined until the construction contractor is appointed, which is likely to be after the submission of the DCO Application. However, in the absence of this information, an outline construction programme will be developed based on knowledge and experience of other similar developments. Additionally, the typical make up of construction equipment at each stage of the project programme will be ascertained in the same way. For ground improvement works (e.g. piling) the noise and vibration assessment will pay due regard to the ground conditions at the Generating Equipment Site. Where uncertainties exist, realistic worst case assumptions will be used.
- 5.4.7 The quantification of impacts shall be undertaken by comparison with agreed project criteria or limits either from previous schemes and relevant guidance and standards such as BS5228, BS6472³⁹ and BS7385⁴⁰, or local legislative requirements. The desk study shall outline suitable measures for the mitigation of construction and decommissioning impacts, and an assessment of residual impacts and effects.
- 5.4.8 Operational noise will be assessed using the methodology from a combination of: BS4142⁴¹; BS8233⁴²; and WHO Guidelines for Community Noise⁴³. The likelihood of complaints about noise from industrial developments will be predicted using the following criteria from BS4142:
- When subtracting the background level from the rating level, the greater the difference, the greater the likelihood of complaints;
 - A difference of around +10 dB or more indicates that complaints are likely;
 - A difference of around +5 dB is of marginal significance; and
 - If the rating level is more than 10 dB below the measured background noise level then this is a positive indication that complaints are unlikely.
- 5.4.9 The guidance contained in BS8233 will also be used to assess the effects on indoor ambient noise levels in living rooms and bedrooms of NSRs when they are unoccupied.

³⁹ British Standards Institute (2008) BS 6472: Part 1 Guide to human exposure to vibration in buildings

⁴⁰ British Standards Institute (1993) BS 7385: Part 2 Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration

⁴¹ British Standards Institute (1997) BS 4142: 1997 Method of Rating Industrial Noise Affecting Mixed Residential and Industrial Areas

⁴² British Standards Institute (2014) BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings

⁴³ World Health Organisation (1999) Guidelines for Community Noise

- 5.4.10 The WHO 'Guidelines for Community Noise' provides health-based guidance on suitable noise levels intended to avoid or minimise community annoyance by noise. The guidance provides guideline noise levels for both indoor and outdoor areas.
- 5.4.11 It is proposed that the study area for the noise assessment of operational effects shall be defined as the region within 1 km of the Project Site. All sensitive receptors, such as residential properties, hospitals, schools, etc. within the study area shall be identified in the assessment.
- 5.4.12 A baseline noise survey will then be undertaken in the vicinity of the Project Site to establish the current baseline noise levels. The locations for the baseline noise survey (i.e. locations of the nearest NSRs) will be agreed in advance with the EHO.
- 5.4.13 Following baseline noise measurements, a noise model will be produced using Cadna software (3-dimensional noise propagation software) which will model the measured baseline levels at NSRs, together with sound power levels of proposed plant (obtained from relevant suppliers). Where sound power levels for proposed plant are not available, suitable data will be substituted, although a realistic worst case scenario would always be considered. The noise model will highlight the main noise sources and the associated noise levels at the NSR locations. Contour plots will also be produced clearly showing noise levels at the Project Site, NSRs and surrounding areas.
- 5.4.14 If the model shows that there is potential for a significant effect to be generated by noise from any of the NSRs, the level of required noise mitigation would be specified, and measures that could be used to achieve this level of mitigation will be incorporated into the model, to provide a 'with mitigation' scenario.
- 5.4.15 The ES section will be compiled using the Institute of Acoustics (IoA) / Institute for Environmental Management (IEMA) draft document 'Guidelines for Noise Impact Assessment'⁴⁴.
- 5.4.16 The operation of the Gas Connection is not anticipated to cause any significant increase in background noise or vibration and therefore this element has been scoped out of the assessment.
- 5.4.17 Operational noise from the Electrical Connection has been scoped out as there would be no significant effects associated with the potential for a low level electrical hum emanating from an overhead line option, if one is required. In addition if a SEC is required, any low level electrical hum associated with the infrastructure will not be perceptible at the NSRs and therefore this has also been scoped out of the assessment.

⁴⁴ IEMA/IOA Working Party (2002) Consultation Draft Guidelines for Noise Impact Assessment

Potential Mitigation Measures

- 5.4.18 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting noise and vibration on site during construction and decommissioning.
- 5.4.19 During operation, mitigation measures could include the use of silencers on the loudest plant items within the Generating Equipment.

5.5 Ecology

Introduction

- 5.5.1 An ecology assessment will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project on ecological resources and receptors in and around the vicinity of the Project Site.

Baseline

- 5.5.2 The Project Site is predominantly on pastoral farmland, mostly agriculturally improved but with significant areas of marshy grassland and interspersed by woodland and scrub. Some of the marshy grassland qualifies as a Section 42 habitat 'purple moor-grass and rush pastures' (under the Natural Environment and Rural Communities Act 2006 (NERC)⁴⁵) and is designated as SINCs. Furthermore areas of the woodland qualify as Section 42 habitat 'lowland mixed deciduous woodland', some of which is also classified as Ancient Woodland and SINCs. The Ancient Woodland and SINCs are shown on Figure 3.
- 5.5.3 The fields are grazed by horses and sheep and are largely bounded by fences running along the line of defunct hedgerows with large gaps. There are numerous watercourses on site, mostly in the form of ditches or streams along field boundaries. There is a potential for bats, great crested newts, dormice, otters, water voles, reptiles, badger, woodland and farmland bird species and terrestrial and aquatic invertebrates to be located within these habitats. Full details of the habitats located within the Project Site and the potential for protected species and species of conservation importance are provided in Appendix A.
- 5.5.4 A desk based assessment (DBA) and Extended Phase 1 Habitat Survey was undertaken at the Project Site during Spring 2014 (see Appendix A). The purpose of the assessment and survey were to:
- Identify the main habitats present at the Project Site;
 - Identify the sensitive ecological receptors (e.g. statutory designated sites) in the vicinity of the Project Site;

⁴⁵ Natural Environment and Rural Communities Act 2006

- Assess the potential of the Project Site to support protected species; and
- Provide recommendations for further assessment works (e.g. Phase 2 Protected Species Surveys).

5.5.5 The following European Sites are within 10 km of the Project Site:

- Burry Inlet Ramsar Site and SPA;
- Carmarthen Bay and Estuaries SAC; and
- Crymlyn Bog Ramsar Site and SAC.

5.5.6 The following statutory protected SSSIs (for nature conservation) and LNRs are located within a 5 km radius of the Project Site as shown on Figure 3:

- Nant y crimp SSSI;
- Penplas grasslands SSSI; and
- Cadle Heath LNR.

5.5.7 The following SINC's are located within 2 km radius of the Project Site as shown on Figure 3:

- Waun Garn Wen SINC;
- Llety-Morfil SINC;
- Llangefelach Common SINC;
- Felindre Grasslands SINC;
- Pant Lasau SINC;
- Rhyd-Y-Pandy Valley and Grassland SINC;
- Rhos Fawr SINC;
- Cilfaen SINC;
- Cefn Forest Stream SINC;
- Middle Llan SINC;
- Llangyfelach Golf Course and Surrounds SINC;
- Mynydd Gelli-wasted SINC;
- Lower Lliw Reservoir SINC;
- Middle Lliw SINC;
- Penllergaer Forest SINC;

- Penllergaer to Llangefelch Tunnel railway line SINC;
- Mynydd Bach Common SINC;
- M4 Corridor SINC;
- Cwm Rhydyceirw to Birchgrove Railway SINC;
- Cwm Clydach SINC;
- Lougher to Penllergaer Railway Line SINC; and
- Banc Darren Fawr SINC; and
- Cwm Nant-Ddu SINC.

5.5.8 Appendix A provides the full records of the protected species and species of conservation concern within 1 km of the Project Site. The main ecological value of the Project Site lies with the marshy grassland or 'purple moor-grass and rush pastures', 'ponds' and the 'Lowland mixed deciduous woodland' which are all Section 42 habitats under the NERC Act and are located within SINC.

Assessment

5.5.9 In accordance with NPS EN-1 (paragraph 5.3.3) the Ecological Impact Assessment (EclA) will provide an assessment of any potentially significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. Furthermore opportunities will be taken, where practicable, to conserve and enhance biodiversity and geological conservation interests. NPS EN-1 also requires that lighting effects will be considered on sensitive ecological receptors.

5.5.10 Based on the results of the extended Phase 1 Habitat Survey, the following Phase 2 protected species surveys are currently being carried out on and surrounding the Project Site.

Bats

5.5.11 A roped-access tree survey is being carried out for trees to be removed or modified that have been identified as having potential to support roosting bats. Where the potential for bats to roost in a surveyed tree is confirmed then emergence/re-entry (at dusk and/or dawn) survey will be carried out to confirm the likely use of the tree by roosting bats, and the status of any roost present.

5.5.12 In addition bat activity surveys are being carried out across the Project Site in accordance with the guidance provided by Hundt (2012)⁴⁶ which involves walked transect routes carried out monthly between April and October and

⁴⁶ Hundt, L. (2012) Bat Surveys: Good Practice Guidelines. 2nd Edition. Bat Conservation Trust, London

an automated survey using static bat detectors. These surveys will determine the species of bats present on the Project Site as well as the spatial distribution and relative activity levels of these species.

Great Crested Newts

- 5.5.13 Preliminary pond surveys (Habitat Suitability Assessment) indicated that there are a number of ponds within 250 m of the Project Site which are potentially suitable for great crested newts. An additional four to six surveys are being undertaken between mid-March to mid-June to establish presence or absence and to estimate population size if great crested newts are found during the surveys. More detail on the methodology is provided in Appendix A.

Dormouse

- 5.5.14 A dormouse survey is being undertaken following a methodology based on those prescribed in best practice guidance (Bright et al, 2006)⁴⁷. The surveys involve the use of dormouse boxes in areas of woodland and nest tubes in cluttered environments where boxes cannot be used. The survey is designed to detect the presence or absence of dormice.

Otter and Water Vole

- 5.5.15 A survey for water voles and otters along the banks of the water courses is being carried out in accordance with best practice guidelines (Chanin (2003)⁴⁸ and Strachan et al., (2011)⁴⁹ respectively). Signs that water voles may be present will be indicated by the presence of feeding remains, characteristic grass lawns, burrows, runs, footprints, latrines and droppings. Signs that otters may be present will be indicated by the presence of spraints and footprints.

Reptiles

- 5.5.16 A reptile survey is being carried out on the Project Site to establish the presence/absence of reptiles, the species present and the approximate population size. The survey uses artificial refuges (e.g. roofing felt and tin) to aid in the detection of reptiles and assessment of their distribution and abundance, following good practice guidance, including that set out in the Herpetofauna Worker's Manual (Gent & Gibson, 2003⁵⁰) and Reptile Survey Guidance (Froglife, 1999⁵¹).

⁴⁷ Bright, P. W, Morris, P. A and Mitchell-Jones, A (2006) Dormouse Conservation Handbook, 2nd Edition. English Nature, Peterborough.

⁴⁸ Chanin P (2003) Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.

⁴⁹ Strachan, R., Moorhouse, T, and Gelling, M. (2011). The Water Vole Conservation Handbook. WILDCRU, Abingdon.

⁵⁰ Gent, A.H. & Gibson, S.D. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.

⁵¹ Froglife (1999). Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesowen.

Badgers

- 5.5.17 All potential habitats within and surrounding the Project Site are being surveyed to search for and record characteristic signs of badger activity, including: setts, latrine pits, foraging holes, badger hair and paw prints following best practice guidance (Neal and Cheesman, 1996⁵²). Potential habitat includes areas of woodland, scrub and hedgerows. If the Gas Connection Route Corridor, once chosen, potentially requires the closure of any badger setts then a badger bait marking survey will be carried out between early September and mid-October.

Breeding birds

- 5.5.18 The breeding bird survey focuses on the farmland birds (occurring both within the Project Site and a buffer of up to 50 m). Their territories are being mapped using surveys based on the British Trust for Ornithology's Common Bird Census (CBC) methodology with an initial site visit carried out in mid-April, followed by additional visits in May and June.

Terrestrial and Aquatic Invertebrates

- 5.5.19 The block of marshy grassland to the west of Abergelli Farm, will be surveyed for marsh fritillary butterflies following standard methods⁵³ for walking transects during late May/June looking for adults and larval webs during mid-August to mid-September.
- 5.5.20 A survey of Lepidoptera (notably moths) will be undertaken in the woodland within the Project Site in late spring and mid-summer. The survey will involve two night-time moth surveys using Skinner or Robinson moth traps fitted with mercury vapour bulbs. Any species hard to identify from external markings alone, and those requiring further confirmation, will be retained and dissected if necessary to ascertain their identity with the use of a stereoscopic microscope.
- 5.5.21 Beetle assemblages in the woodland within the Project Site will be sampled using a method following the Natural England (ISIS) protocol (Drake et al, 2007)⁵⁴ via hand searches, sweep netting and pitfall trapping. Subsequent laboratory identification will be required for many of the specimens collected.
- 5.5.22 In order to determine the assemblage of aquatic invertebrates present on Project Site, the flowing ditches and ponds will be surveyed if a Water Framework Directive Report is required (refer to Section 5.6).
- 5.5.23 Kick-sampling for aquatic invertebrates will be undertaken at selected locations along ditches or streams. Furthermore the water chemistry status will be determined for watercourses by extracting a single water sample at three locations within as well as upstream and downstream of the Project

⁵² Neal, E and Cheeseman, C (1996) Badgers. T & AD Poyser Natural History Ltd. London.

⁵³ <http://www.ukbms.org/Downloads/UKBMS%20Ng2%20-%20Marsh%20Frit%20Webs%20guidance%20notes.pdf>

⁵⁴ Drake, C.M., Lott, D.A., Alexander, K.N.A. and Webb K (2007) Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005. Natural England, Peterborough.

Site. Samples will be dispatched to a UKAS accredited laboratory for subsequent analysis.

- 5.5.24 The national pond monitoring survey protocol will be adhered to for surveying ponds which involves timed netting and searches for invertebrates in summer (but may also cover spring and autumn).

Invasive Species

- 5.5.25 A walkover survey of the Project Site will be carried out to map all locations where Japanese knotweed and Himalayan balsam are growing. This will be done within the period June - July when both species are most in evidence.

Assessment

- 5.5.26 Following the completion of the surveys, reports will be produced, detailing the extent to which the species are present, the likely impacts that the elements of the Project would have on the species and habitats and the potential mitigation measures that could be employed to reduce impacts to an acceptable level.
- 5.5.27 The EcIA will be undertaken in accordance with the relevant guidance including the Guidelines for Ecological Impact Assessment (Institute of Ecology and Environmental Management (IEEM), 2006)⁵⁵. The potential effects will also be assessed against and informed by national and local planning guidance including the PPW and TANs as well as National and Local Biodiversity Action Plans. Consultation will be undertaken with NRW and City and County of Swansea Council to identify any particular issues of concern.

Habitats Regulation Assessment

- 5.5.28 The Conservation of Habitats and Species Regulations 2010 (as amended)⁵⁶ require an assessment to be made as to whether the Project, either alone or in combination with other plans or projects could have a likely significant effect on European sites including SPAs, SACs and Ramsar Sites. Within 10 km of the Project Site lie Burry Inlet Ramsar Site and SPA; Carmarthen Bay and Estuaries SAC and Crymlyn Bog Ramsar Site and SAC.
- 5.5.29 Consultation with the City and County of Swansea Council will determine the requirement for a screening exercise, in accordance with the Conservation of Habitats and Species Regulations 2010 (as amended). The screening exercise will identify any likely impacts of the Project upon the above European Sites, either alone or in combination with other plans and projects, and consider whether the impacts are likely to be significant.
- 5.5.30 If screening concludes there may be likely significant effects on the special features for which the European Sites are classified or designated then a report will be provided with the DCO Application showing the European Sites

⁵⁵ Institute of Ecology and Environmental Management (IEEM) (June 2006) Guidelines for Ecological Impact Assessment in the United Kingdom

⁵⁶ Conservation of Habitats and Species Regulations 2010 (as amended)

that may be affected together with sufficient information to enable the decision maker to make an appropriate assessment, if required. If screening concludes there is no likely significant effect on a European Site sufficient information will be provided with the DCO Application in the form of a 'No Significant Effects Report' to allow the Competent Authority to assess and review the information and make its own determination that there are no likely significant effects and be satisfied there is no significant residual effect.

Potential Mitigation Measures

- 5.5.31 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting effects on ecology and biodiversity during construction and decommissioning. If necessary, further, specific mitigation measures will include the consideration for provision of new habitat to suitably replace any habitat areas which would be permanently lost through development of the Project.

5.6 Water Quality and Resources

Introduction

- 5.6.1 An assessment on the effects on water quality and resources will consider all of the potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project.
- 5.6.2 The chapter will also provide a summary of the main issues and risks posed to and from flooding identified during the Flood Consequences Assessment (FCA) which will be submitted as a separate document as part of the DCO Application. The FCA will take the form of a qualitative assessment based on existing NRW data and consultation with the NRW and Lead Local Flood Authority (LLFA). Additionally, potential impacts on hydrogeology will be assessed as part of the chapter describing geology, ground conditions and agriculture (outlined in Section 5.7 of this Scoping Report).

Baseline

- 5.6.3 The main watercourse that traverses the area is Afon Llan which flows in a south-westerly direction to the west and south of the Project Site, through Swansea into Swansea Bay. In addition, there are a number of ordinary watercourses in the form of springs, streams and drainage ditches within the Project Site that ultimately flow into Afon Llan. The location of Afon Llan is shown on Figure 2.
- 5.6.4 The streams, ponds and ditches within the Gas and Electrical Connection Opportunity Areas will be carefully considered during the process of identifying the Gas and Electrical Connection Route Corridors. The design process will aim to minimise crossings or interactions with water bodies where practical.

- 5.6.5 Historical and current maps will be studied to identify abstraction points and licences in the area as well as the course of any former watercourses which may have been underground or culverted in the past.

Assessment

- 5.6.6 In accordance with NPS EN-1 the assessment will account for the existing status of, and impacts of the Project on water quality, water resources and physical characteristics of the water environment including any potential eutrophication impacts. The assessment will be undertaken using a risk based approach to determine the level of potential impacts by using a Source-Pathway-Receptor model to identify which receptors could realistically be impacted by a given action. This will include any sources of pollution that have the potential to impact on surface water bodies.
- 5.6.7 All aspects of supply, demand and disposal of water and process effluents will be addressed for the construction, operational and decommissioning phases. Furthermore the disposal of surface water drainage and the process effluents will be discussed with a view to maximising the opportunities for water recovery and re-use as far as is practicable.
- 5.6.8 Potential discharge locations for site surface waters and process waste waters will be identified and a site drainage plan, which may incorporate a sustainable drainage system (SuDS) will be discussed at a high level.
- 5.6.9 There are not anticipated to be any significant impacts on key water bodies resulting from the Project through physical works to them. It is also not anticipated that water will be directly abstracted or discharged to or from any of these sources during construction, operation or decommissioning of the Power Generation Plant.
- 5.6.10 Where projects are away from, or unlikely to interact with any water courses, it is likely that a Water Framework Directive (WFD) Report will be scoped out. However, if NRW does require the inclusion of a WFD Report, it would form an Appendix to the ES.
- 5.6.11 During construction of the Gas Connection and the Electrical Connection (if in the form of an underground cable), best working methods will be utilised at all water crossings to ensure that there are no adverse impacts on flow or drainage and that no contamination is allowed to enter the water bodies. Effects during operation and decommissioning are unlikely to occur or be significant and therefore have been scoped out.
- 5.6.12 If an overhead line is used for the Electrical Connection, there will be no need for any permanent water crossings or interaction with water bodies of any kind. However any temporary water crossings required during construction will be assessed.

Potential Mitigation Measures

- 5.6.13 Mitigation measures will be designed in accordance with BS6031⁵⁷, BS8004⁵⁸, as well as CIRIA C649⁵⁹ and C648⁶⁰. An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts on water quality and resources during construction and decommissioning. Measures would include: siting stockpiles a minimum distance from watercourses to avoid pollution runoff; and adhering to best practice working guidelines to avoid spillages near watercourses.
- 5.6.14 Where the Gas Connection and Electrical Connection (in the form of an underground cable or construction vehicles during installation of overhead lines) would cross a water body, various crossing techniques would be considered. These may include trenchless techniques such as horizontal directional drilling, particularly for larger water bodies, or temporary bunding and over-pumping where flows are lower.
- 5.6.15 Additionally, during construction, operation and decommissioning, silt traps and oil interceptors would be placed in drains on site. No untreated surface or waste waters would be allowed to drain into water bodies during construction, operation or decommissioning. SuDS would be used if found to be required.
- 5.6.16 During all phases of the Project all aqueous process effluents would be discharged via the plant drainage systems in accordance with NRW limits. The use of biocides would be optimised to ensure that the least amount possible is required.
- 5.6.17 All oil and chemical storage tanks and areas where drums are stored would be surrounded by an impermeable bund sized to contain 110% of capacity. In addition multiple tanks or drums would be within bunds sized to contain the greater of 110% of the capacity of the largest tank or 25% of the total tank's contents.
- 5.6.18 During operation, NRW would set limits on the quality of water that is discharged from the Power Generation Plant under an Environmental Permit. The need, or otherwise for further, specific mitigation measures will be determined through the EIA process.

5.7 Geology, Ground Conditions and Agriculture

Introduction

- 5.7.1 An assessment on the effects of geology, ground conditions and agriculture will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project. It will also detail the baseline conditions in terms of ground and groundwater contamination

⁵⁷ British Standard Institute (2009) BS 6031:2009 Code of Practice for Earthworks

⁵⁸ British Standard Institute (1986) BS 8004: 1986 Code of Practice for Foundations

⁵⁹ CIRIA (2006) C649 Control of water pollution from linear construction projects Site Guide

⁶⁰ CIRIA (2006) C648 Control of water pollution from linear construction projects Technical Guidance

and the risks posed to human health particularly in relation to future site users.

Baseline

- 5.7.2 The Project Site is located in an area where the geology is characterised by boulder clay and the underlying Grovesend Beds, Upper Carboniferous sandstones and thin coals⁶¹. These are overlain by glacial sand and gravel, alluvium and some peat. Overlying this geology are raw gley and brown soils. There are no aquifers or groundwater protection zones in the vicinity of the Project Site.
- 5.7.3 The agricultural land classification for the land within and surrounding the Project Site is grade 4 (poor quality agricultural land)⁶² and is dominated by improved grassland fields used for grazing sheep and horses. In addition within the Project Site, are located a disused coal mine, a landfill as well as small areas of marshy grassland and woodland copses interspersing the improved grassland to the north and east.

Assessment

- 5.7.4 The assessment will be underpinned by the DEFRA/EA publication Contaminated Land Report 11, 2004, 'Model Procedures for the Management of Land Contamination'⁶³ and associated subsequent guidance.
- 5.7.5 The assessment approach will be undertaken with a clear understanding of the following:
- Previous land uses – through a review of historical maps;
 - Underlying ground conditions – thorough review of BGS maps, a review of previous site investigations (where available) and by undertaking geotechnical investigations where deemed necessary; and
 - Existing physical baseline conditions through a site walkover survey and review of a Landmark Envirocheck Report.
- 5.7.6 The Landmark Envirocheck Report (or equivalent) will identify groundwater vulnerability, sites designated for geological importance, details of any previous pollution events, details of landfills, waste management sites and Control of Major Accident Hazards (COMAH) sites within the Project Site and surrounding area.
- 5.7.7 A conceptual site model approach will be used to assess the risks posed by contaminants to sensitive receptors using a Source-Pathway-Receptor model, based on the following:

⁶¹ <http://www.cdw.gov.uk/landmap>

⁶² Department for Environment Food and Rural Affairs (1988) Agricultural Land Classification of England. Archive.defra.gov.uk

⁶³ Department for Environment Food and Rural Affairs and Environment Agency (2004) Contaminated Land Report 11, 2004, Model Procedures for the Management of Land Contamination

- Source – potential source of contamination;
 - Pathway – means by which contamination can reach and impact upon a receptor; and
 - Receptor – that which may be adversely affected by the presence of contamination.
- 5.7.8 Desk studies will identify potential environmental and geotechnical liabilities associated with the Project, including an assessment of potential impacts of previous uses of the Project Site and surrounding area. This will enable the identification of any potential environmental and geotechnical risks, and the design of a focussed and cost efficient intrusive investigation (if required).
- 5.7.9 In undertaking the desk studies, all available information on the Project Site and surrounding area will be reviewed to establish local ground conditions and the environmental settings. Furthermore, consultation will be held with the City and County of Swansea Council and the NRW to obtain any other environmental records available for the Project Site, and to further refine the assessment methodology.
- 5.7.10 A site walkover will be undertaken of the Project Site and immediate surrounding areas. This will help ensure all potential source, pathway and receptor linkages for potential contamination issues have been identified.
- 5.7.11 Based on the findings of the desk studies, site walkovers and preliminary risk assessment, recommendations will be provided for any further intrusive investigation work required to satisfy current standards and guidance and fill any data gaps identified to fully inform the assessments of environmental and geotechnical risks or liabilities.
- 5.7.12 Using the information obtained, suitable remediation strategies will be developed to render the Project Site ready for development. These will include estimates of the types and volumes of waste material that will need to be removed from the Project Site prior to development.
- 5.7.13 Additionally, an assessment will be made of the amount of agricultural land, if any, that may become sterilised by the Gas and Electrical Connections. Should an overhead Electrical Connection be considered, the same methodology will be used, although it is considered likely that the potential impact on geology, ground conditions and agriculture would be significantly less than for a buried connection.

Potential Mitigation Measures

- 5.7.14 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts during construction and decommissioning. Embedded mitigation measures would include adherence to good practice guidelines and could potentially involve the following:
- Any additional soil materials that are to be imported to the Project Site would be required to have certification of their chemical

concentrations to ensure that contaminative materials are not being introduced to the area;

- In order to further limit disturbance, the site access tracks would be constructed first to allow movement of vehicles around the Project Site on areas of soft-standing;
- Any vegetation, topsoil and subsoil would be removed to expose a suitable sub-grade. Any soils, sub-soils or aggregate suitable for reuse would be stockpiled on impermeable liners;
- Soils which are to be reused onsite would be tested for contamination and geotechnical suitability. This would form part of a site waste management strategy which would be drafted prior to construction and would focus on the re-use, recycling and reduction of waste spoil;
- Surface water, perched waters or groundwater from dewatering operations would not be discharged to surface water bodies, foul or surface water drains without the appropriate consents from the local water or sewage company and / or NRW. The disposal of this effluent would be the responsibility of the principal construction contractor. If necessary, this water would be tanked off-site for disposal at a suitable facility;
- All foundations would be appropriately specified to resist chemical attack from soils or groundwater; and
- Foundations would also be designed so as not to present a preferential pathway for contaminant migration, if present at the Project Site.

5.8 Landscape and Visual Impact

Introduction

5.8.1 A landscape and visual impact assessment will consider potentially significant impacts and effects caused by construction, operation and decommissioning of the Project. The assessment will establish:

- A clear understanding of the Project Site and its wider landscape setting, identifying the landscape character, resources, value and sensitivity to the development;
- An assessment of the composition, character and aesthetic value of views from visual receptors including occupiers of residential properties and people using amenity landscapes, and the sensitivity of views;
- The nature of the different development scenarios and mitigation measures; and

- The likely significant direct and indirect effects of the Project on the landscape resource (i.e. landscape elements and character) and on visual receptors.

Baseline

- 5.8.2 The Project Site is located within an area of lowland rolling farmland known locally as the 'Welsh Gower'. It is within an essentially rural landscape, criss-crossed by networks of minor roads, overhead wires on steel pylons and other utilities infrastructure.
- 5.8.3 The Welsh Gower was historically part of the Lordship of Gower, but is now separated physically and perceptibly from the historic area. It consists largely of moorland, with any settlements of size - Craig Cefn Parc and Pontarddulais - on the southern fringes. Economic activity is confined largely to upland farming and forestry, although there is a commercial fishery and two large reservoirs to the north of the Project Site. The area also contains extensive evidence of human exploitation and occupation over millennia, with a proliferation of cairns and earthworks, evidence of a Roman fort and marching camps.
- 5.8.4 The area around the Project Site is rural in character, although there is a large amount of utilities infrastructure in the area due to its close proximity to Swansea. Gas and water pipelines cross the Project Site and there is also a network of electricity pylons southwest of Abergelli Farm, which lead to and from Felindre Gas Compressor Station and National Grid's two 400kV electrical substations. Furthermore a Water Treatment Works is located immediately to the northwest while Cefn Betingau Solar Park is operational to the east of the Project Site.
- 5.8.5 Amongst this wider landscape, the Project Site is located within open gently sloping grass fields used for grazing sheep and horses interspersed by woodland copses, some of which are classified as Ancient Woodland as shown on Figure 3.
- 5.8.6 Residential receptors within 1 km of the Project Site include those within the nearby settlements of Morriston, Pant-lasau and Llwyncelyn, Felindre. In addition there are also isolated dwellings and farmsteads outside of the settlements including but not exclusive to:
- Aber gelli fawr;
 - Abergelli Farm;
 - Cefn-betingau;
 - Maes-eglwys;
 - Lletty Morfil Farm;
 - Felin-wen;
 - Pont Felin-wen;

- Pontbren Llwyd;
- Gors-wen;
- Llety'r Bugall;
- Brynheulog;
- Taironen;
- Penfeddi Uchaf;
- Penidy Isaf;
- Gellyfedden;
- Rhos fawr;
- Brynawel;
- Brynwhilhach; and
- Lletty'r-scil.

Assessment

5.8.7 The assessment will be carried out in accordance to NPS EN-1 using the methodology set out in the Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management and Assessment, 3rd Edition, 2013)⁶⁴ and Countryside Council for Wales / CADW (2007) 'Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process'⁶⁵. It will include:

- A desk review of all relevant documents and landscape planning policy and guidance;
- A field survey to assess baseline landscape character and visual amenity;
- A description of the key features associated with the Project that have the potential to alter the characteristics of the landscape and visual baseline;
- Appropriate generic and site specific mitigation that is reasonable and possible;
- Assessment of the predicted significance of residual effects on the landscape resource / character and visual amenity and compliance with landscape policy; and

⁶⁴ Landscape Institute and Institute of Environmental Management and Assessment, (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition

⁶⁵ Countryside Council for Wales/Cadw (2007) Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process

- An assessment of cumulative impacts arising from the Project, in combination with other proposed large scale industrial developments in the locality.
- 5.8.8 Initially, a Zone of Theoretical Visibility (ZTV) plan will be generated for the Power Generation Plant using specialist software. The ZTV will show a maximum theoretical visibility of the Power Generation Plant and any overhead line towers, should an overhead Electrical Connection be pursued across the surrounding area. The ZTV will be based solely on topography and the proposed height of the plant envelope, and any overhead line towers. No allowance will be made for intervening screening vegetation or buildings, although in practice this tends to have a substantial mitigating effect.
- 5.8.9 A review of all relevant landscape planning policy and LANDMAP (the national information system, devised by CCW (now NRW), for taking landscape into account in decision-making) will be undertaken. Particular attention will be paid to AONBs, popular tourist spots and viewpoints, and Public Rights of Way. The nearest AONB is the Gower which is remote from the Project Site and visually separated from the Project Site by intervening topography and therefore has been scoped out of the assessment.
- 5.8.10 The Project will be discussed in detail including dimensions of the larger buildings, the stack heights, and any other ancillary infrastructure that may have an impact on the landscape character or visual amenity.
- 5.8.11 To assist in the impact assessment, a site visit will be made by a qualified Chartered Landscape Architect, who will assess the study area in detail. Additionally, and following consultation with relevant stakeholders, a selection of photomontages will be taken from key sensitive viewpoints (e.g. residential receptors, designated ecological sites, cultural heritage assets and key rights of way). Suggested viewpoint locations of photomontages for consultation are:
- View north east from the Public Right of Way to the west of Maes-eglwys;
 - View south from the Public Right of Way junction south of Brynheulog;
 - View east from the Public Right of Way junction north of Lletty Morfil Farm;
 - View northeast from B4489 at the junction with the Public Right of Way close to Brynwhilhach;
 - View north from the road and Public Right of Way junction at Pant-lasau;
 - View south from the Gower Way at Lower Lliw Reservoir;
 - View north from Kilvey Hill in Swansea; and

- View north from the A48 to the south of the M4.
- 5.8.12 Photomontages will be produced with reference to 'Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11'⁶⁶. The photomontages will show a representation of how the Project would be viewed within the landscape and will be used to illustrate the potential impact of the Project.
- 5.8.13 Given that the majority of the Gas Connection would be underground, the landscape and visual impact assessment for this element will focus solely on the impact of the AGI and the impacts and effects that will result from the construction phase.
- 5.8.14 As for the Gas Connection, if the underground Electrical Connection is carried forward, then the LVIA for this element of the work will focus solely on the impacts resulting from the presence of a SEC, if required, and the impacts and effects that will result from the construction phase.
- 5.8.15 If an overhead line is taken forward, the assessment will follow the standard LVIA methodology as described above, but will make reference to the Holford Rules where appropriate.

Potential Mitigation Measures

- 5.8.16 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts during construction and decommissioning. Embedded mitigation measures would include the careful consideration of siting stockpiles and cranes to avoid detrimental impacts on the visual amenity of closest receptors.
- 5.8.17 During operation, the main embedded mitigation measures would be the careful siting and arrangement of the: Power Generation Plant; AGI for the Gas Connection; and SEC for the Electrical Connection, if required. The final architectural design of the buildings and upstanding structures would be carefully considered to provide a high standard of visual amenity, given practical and economic constraints.
- 5.8.18 Further, detailed mitigation measures could include the consideration for onsite or off-site screen planting to screen views of the Power Generation Plant.
- 5.8.19 Due regard will be paid to NPS EN-1, EN-2, and EN-5 and the guidance they provide on 'good design' in relation to the Gas and Electrical Connections and include (to the extent relevant in the case of an underground connection for Gas and Electrical Connection):
- Avoid altogether, if possible, the major areas of highest amenity value, by planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence;

⁶⁶ Landscape Institute (2011) Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11

- Avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers, i.e. the bigger structures which are used when lines change direction;
- Other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers;
- Choose tree and hill backgrounds in preference to sky backgrounds wherever possible. Where a line has to cross a ridge, secure this opaque background as long as possible, cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees;
- Prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees;
- Where country is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration of lines or 'wirescape'; and
- Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line, National Grid's two 400kV electrical substations and Felindre Gas Compressor Station carefully assess the comparative costs of undergrounding.

5.9 Traffic, Transport and Access

Introduction

- 5.9.1 An assessment on traffic, transport and access effects will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project.
- 5.9.2 The main impacts of the Project on traffic, transport and access would occur during construction and decommissioning resulting from the movement of vehicles for the transport of construction or decommissioning personnel, equipment and materials to and from the Project Site. The transport of abnormal loads, which may lead to delays and cause inconvenience to other road users, would be timed following consultation with the relevant authorities to minimise disruption to the other road users.
- 5.9.3 Normal activities during operation would result in fewer traffic movements and would be associated with personnel required for operation and maintenance of the Project. As such, during operation no significant increase in traffic in the area of the Project Site is expected, and no effect on local traffic patterns and infrastructure would therefore be anticipated.

Baseline

- 5.9.4 There are two options being considered in regards to accessing the Project Site from Junction 46 of the M4. Access Road – Option 1 would be via the Rhyd-y-pandy Road and the access road west of Brynheulog past Abergelli Farm. Access Road – Option 2 is via the B4489, along the access road to the National Grid's two 400kV electrical substations and Felindre Gas Compressor Station and then along an access road to be constructed as part of the Project, across undeveloped land to the Generating Equipment Site. Both options are shown on Figure 1.

Assessment

- 5.9.5 The assessment will be undertaken in accordance with the 'Welsh Transport Planning and Appraisal Guidance WelTAG⁶⁷ and the Institute of Environmental Assessment's (IEA) 'Guidelines for the Environmental Assessment of Road Traffic' (1993)⁶⁸ in order to assess the likely significant impacts of the Project on the local road network.
- 5.9.6 Comparisons between existing traffic flows and estimates of likely traffic flows on potentially affected roads will be made to help establish whether significant effects are likely. This will take into account: the sensitivity of receptors and resources likely to be affected; any potential for disruption to local routes; and any changes in the composition of traffic. If considered necessary, traffic surveys will be undertaken which will further quantify the number of vehicle movements on the existing road network in the vicinity of the Project Site.
- 5.9.7 The majority of the proposed access routes are 'main roads' that do not have pavements for pedestrian use. Nonetheless, the traffic assessment will also take full account of the potential impact on pedestrians, and will ensure that pedestrians and other road users (cyclists and equestrians) are not cut off from amenity areas as a result of the works.
- 5.9.8 The assessment will consider the following: access and construction routes and the types of vehicles used; local highway and rail networks; existing traffic flows; current traffic generation; road traffic accident information; predicted traffic trends; local highway improvements and planned works; and, potential receptors. The full appraisal will be presented (if appropriate) in a Transport Assessment which will be accompanied by a draft Construction Traffic Management Plan.
- 5.9.9 Discussions will be held with the Highways Agency and the City and County of Swansea Council to identify any existing issues relating to traffic in the area. Information will also be sought on future development projects in the area that could give rise to a significant cumulative impact when considered in conjunction with the Project.

⁶⁷ Welsh Assembly (June 2008) Welsh Transport Planning and Appraisal Guidance

⁶⁸ Institute of Environmental Assessment (IEA) (1993) Guidelines for the Environmental Assessment of Road Traffic

Potential Mitigation Measures

- 5.9.10 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts during construction and decommissioning. Opportunities for reducing traffic movements will be explored, such as car share schemes or shift working (i.e. not all construction traffic arriving at site at once).
- 5.9.11 Details of the proposed measures to improve access by public transport, walking and cycling will be provided for the operational phase.

5.10 Cultural Heritage and Archaeology

Introduction

- 5.10.1 An assessment of the effects on cultural heritage and archaeological assets will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project.

Baseline

- 5.10.2 The Project Site is within an area of pastoral farmland which has evolved as a result of gradual enclosure of the uplands and foothills in the area. There is some evidence for enclosure in the pre-Norman period, and the process has continued through time into the second half of the 19th century. In addition there are some areas of unenclosed land and woodland (some which is classified as Ancient Woodland) remaining as shown on Figure 3.
- 5.10.3 Also within the area there has been some industrial activity in the form of mining and tinplate works which took place in the 19th century. In the areas where industrial activity has taken place associated ribbon development occurs. In the rest of the area the settlement pattern is mainly dispersed with isolated dwellings.
- 5.10.4 The following cultural heritage assets are located within 5 km of the Project Site:
- Clydach Upper Forge Scheduled Monument;
 - Landore New Quay Scheduled Monument;
 - Gwernllwynchwyth Engine House Scheduled Monument;
 - Garn Goch Round Barrow Scheduled Monument;
 - Llangyfelach Cross Base Scheduled Monument;
 - Morris Castle Scheduled Monument;
 - Mynydd Pysgodlyn Round Barrow Scheduled Monument;
 - Ring Cairn on Craig Fawr Scheduled Monument;
 - Pant-y-Ffa Round Cairn Schedule Monument;

- Remains of Astronomical Observatory at Penllergaer Scheduled Monument;
- Cae Castell (Rhyndwyclydach Medieval Earthwork) Scheduled Monument;
- Ring Cairn on Tor Clawdd Scheduled Monument;
- Scott's Pit Engine House and Traces of Ancillary Buildings Scheduled Monument;
- Mynydd Carn-Goch Roman Earthworks Scheduled Monument;
- Earthwork 1,080 m NNW of Fforest Newydd Scheduled Monument;
- Penllergaer Orchideous House Scheduled Monument;
- Townshend's Great Leat & Waggonway Scheduled Monument;
- Capel Tabernacl, Woodfield Street (East side) Grade I Listed Building;
- The Water Mill / Melin Felindre Grade II* Listed Building;
- New Siloh (Seilo Newydd) Congregational Chapel including gates and railings Grade II* Listed Building;
- Capel Gellionnen (Gellionnen and Graig Unitarian Church) Grade II* Listed Building;
- Church of St David and St Cyfelach Grade II* Listed Building;
- Tower of Church of St David and St Cyfelach Grade II* Listed Building;
- The Equatorial Observatory, Penllergare Grade II* Listed Building;
- Scott's Pit Engine House Grade II* Listed Building;
- Penllergaer Grade II Historic Park and Garden;
- Cwmgelli Cemetery Grade II Historic Park and Garden;
- Parc Llewelyn Grade II Historic Park and Garden;
- Morriston Conservation Area; and
- LLansamlet Conservation Area.

5.10.5 In addition there are 47 Grade II Listed Buildings and also records of undesignated cultural heritage assets within 5 km of the Project Site. These include standing buildings, earthworks, areas of ancient woodland, sites of structures known only from documentary sources, sub-surface archaeological remains, sites recorded only as cropmarks and isolated findspots.

Assessment

5.10.6 In accordance with NPS EN-1, the objectives of this assessment are to:

- Describe the survival and extent of any archaeological features that may be disturbed by the construction, operation and decommissioning of the Project;
- Provide an assessment of the importance of these assets;
- Assess the likely scale of any impacts on the cultural heritage and archaeological resource posed by the construction, operation and decommissioning of the Project;
- Outline suitable mitigation measures to prevent, reduce and where possible offset any significant adverse effects; and
- Provide an assessment of any residual effects remaining after mitigation.

5.10.7 Initially, a Desk Based Assessment (DBA) will be undertaken, and will include the following detailed searches:

- The Royal Commission on Ancient and Historical Monuments Wales which is the investigative body and national archive for the historic environment of Wales and hosts an online search facility (Coflein);
- Swansea Historic Environment Record (HER) (which includes records of any previous archaeological interventions within the Scheme Area). The HER will also include details of Registered Parks and Gardens, Listed Buildings and Registered Battlefields;
- Historic Mapping; and
- Conservation Areas and Historic Landscape Characterisation.

5.10.8 The DBA will be undertaken in accordance with 'Standard and Guidance for Archaeological Assessments' (Institute for Archaeologists, 2011)⁶⁹.

5.10.9 It is proposed that initially, searches are limited to 1 km from the Project Site for HER entries for archaeology as the Project will potential impact archaeology within the development footprint and the immediate surroundings. The 1 km Study Area provides the opportunity to better understand the context of any archaeology present within the development footprint.

5.10.10 As part of the DBA, a site inspection will be undertaken of the Project Site to identify any previously unknown archaeological features and their condition. During the site inspection a detailed photographic record will be maintained and an assessment of the setting of the cultural heritage assets will be undertaken.

⁶⁹ Institute for Archaeologists (2011) Standard and Guidance for Archaeological Assessments

5.10.11 In order to gather baseline cultural heritage setting data, and to undertake an assessment of the potential impacts that the Project Site may have on the setting of any above ground remains, selected cultural heritage assets will be visited. This will follow an initial study making reference to the results of desk-based research, and the ZTV including searches of the records listed above. Assets will be visited where this initial study indicates potential for significant impacts. Both the asset and its surrounding area will be visited to identify locations that might be relevant to the asset's setting.

5.10.12 For the purposes of the setting study, the following cultural heritage assets will be considered:

- Scheduled Monuments;
- Listed Buildings;
- Registered Parks and Gardens;
- Registered Battlefields;
- World Heritage Sites; and
- Any other non-scheduled building which is considered to be important in terms of cultural heritage and archaeological significance.

5.10.13 It is proposed that the search area for these cultural heritage assets will be limited to 5 km from the Project Site, as significant impacts on setting are unlikely to occur beyond 5 km. However, should significant impacts be identified at 5 km, then the search area will be expanded accordingly.

5.10.14 The following factors are also considered to be relevant when assessing impacts upon setting:

- Visual dominance;
- Scale;
- Intervisibility;
- Vistas and sight lines;
- Movement and light; and
- Unaltered settings.

5.10.15 The DBA will form the baseline data for the cultural heritage and archaeology section of the ES. The ES will discuss the nature and location of all cultural heritage and archaeological sites within the study area. Further to this, the ES will provide an assessment of the significance of any impacts to the cultural heritage and archaeology sites.

5.10.16 At this stage, no intrusive investigations are proposed for cultural heritage or archaeological purposes, although this will be confirmed (or otherwise) based on the findings of the DBA, and in consultation with the City and

County of Swansea Planning Archaeologist and representative of Cadw. Should intrusive investigations be necessary, their scope will be agreed with the Planning Archaeologist through a Written Scheme of Investigation (WSI).

Potential Mitigation Measures

- 5.10.17 Prior to construction, the nature and extent of archaeology present at the Project Site and surrounding areas will be established. However, should any archaeological remains be found during construction, work will be halted and advice sought from the Planning Archaeologist. Where necessary, recommendations will be made for a mitigation strategy to preserve in-situ or if not practicable to preserve by record any significant archaeological assets. The ES will also include a mitigation strategy for any significant impacts to listed buildings and other above ground assets.
- 5.10.18 During operation, there may be an opportunity to provide screen planting, should the Project give rise to any adverse impacts on above ground heritage assets.

5.11 Socio-Economics

Introduction

- 5.11.1 An assessment on the effects on socio-economics resulting from the Project will be undertaken and reported in the ES. This will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project on socio-economic resources and receptors in and around the vicinity of the Project Site.
- 5.11.2 At its peak, the construction and decommissioning workforces are expected to employ between 150 and 250 personnel. Subject to procurement rules it is anticipated that as many as possible of these workforces would be recruited locally.
- 5.11.3 Operation of the Generating Equipment would require up to 15 full time staff over the lifetime of the Project working in shifts which means that less than 15 people will be on site at any one time during normal operations. In addition there would be further indirect jobs for contracted engineering staff during regular maintenance shutdowns and maintenance of the Gas and Electrical Connections.
- 5.11.4 The total capital cost of the Project is anticipated to be of the order of £200 million. Up to approximately 35% of this will be construction, civils and fabrication work which would be open to tender from companies in the area.
- 5.11.5 During construction and decommissioning, those workers from outside of the local area would require places to stay, and regular sustenance, delivering knock on benefits to local businesses and services. In addition the Project would also represent an additional income source to the local economy during the operational phase in terms of local employment and the use of local services and suppliers.

Baseline

- 5.11.6 The area surrounding the Project Site has a long history of both mining and agriculture.
- 5.11.7 The Project Site lies within the City and County of Swansea. It is located within the region of South West Wales. South West Wales has a resident population of approximately 685,000 and supports some 280,000 jobs in around 20,000 businesses, making it a major driver of the Welsh economy. It is a large and diverse region that contains a wide range of urban and rural places, with distinctive, though inter-connected, economies and communities. Within the region, Swansea forms the second largest City in Wales and the regional centre for South West Wales. The population of the City and County of Swansea is approximately 239,023⁷⁰ which has been increasing steadily for nearly a decade. The County has a diverse character, covering an area of approximately 380 km², and can be broadly divided into:
- The sparsely populated open moorlands of the north;
 - The Gower Peninsula and its hinterlands in the west;
 - The urban settlements and communities that are generally spread along the main transport corridors into the City where the main populations reside; and
 - The conurbation of Swansea City Centre and the urban waterfront.
- 5.11.8 In 2011, 102,793 or 43% of residents aged between 16 to 74 were in employment which is comparable to 44.5% of the population of Wales⁷¹. The key sources of employment in the City and County of Swansea in 2011 were:
- Wholesale and Retail Trade; Repair of Motor Vehicles and Motor Cycles at 17%;
 - Human health and social work activities at 15%;
 - Education at 11%;
 - Manufacturing at 7%; and
 - Construction at 7%.
- 5.11.9 Swansea Bay is a popular tourist destination due to the sandy beaches of Gower, the Victorian seaside village of Mumbles and Wales' Waterfront City with its Blue Flag marina. The nearest tourist destination to the Project Site is the Team Force Swansea Paintball Centre approximately 50 m south of the Project Site.

⁷⁰ Office for National Statistics (2011) Neighbourhood Statistics, Population Density, 2011 (QS102EW)

⁷¹ Office for National Statistics (2011) Neighbourhood Statistics, Industry 2011 (QS605EW)

Assessment Methodology

- 5.11.10 In accordance with NPS EN-1 paragraph 5.12.3 the assessment will consider all relevant socio-economic impacts such as tourism, influxes of workers, and cumulative impacts.
- 5.11.11 There is currently no established EIA methodology for the assessment of socio-economic impacts. To assess the socio-economic impacts the 'Guidelines and Principles for Social Impact Assessment' (May 1994) produced by the Interorganizational Committee on Guidelines and Principles for Social Impact Assessment⁷², HM Treasury's Green Book⁷³ and the English Partnerships(EP) Additionality Guide⁷⁴ will be used.
- 5.11.12 The study area will extend to cover the immediate area of City and County of Swansea and the wider area of South West Wales, in order to assess the likely effects that may be experienced within the local community.
- 5.11.13 The methodology for the socio-economic impact assessment will be based on the collection of a wide range of data and information from published materials, plus consultation with the local authority and key stakeholders. Key sources of information will include:
- Population characteristics (population dynamics);
 - Community and institutional structures (employment, training, skills and qualifications, economic investment, business development and equal opportunities);
 - Individual and family changes (perceptions of risk, attitudes towards the Project, social well-being); and
 - Community resources (security, access to local amenities including Public Rights of Way (PRoWs)).

Potential Project Enhancements

- 5.11.14 During construction, operation and decommissioning, an effort will be made to use local goods and services, wherever possible.

⁷² Interorganizational Committee on Guidelines and Principles for Social Impact Assessment (May 1994) Guidelines and Principles for Social Impact Assessment

⁷³ http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

⁷⁴ Homes and Communities Agency (2014) Additionality Guide Fourth Edition.

6 Summary and Conclusions

- 6.1.1 This report sets out the proposed scope and content of the EIA to support the DCO Application for the development of a Power Generation Plant with a capacity of up to 299 MW with its associated Gas and Electrical Connections in the City and County of Swansea. It has been prepared in order to support a request for a Scoping Opinion from the SoS under regulation 8 of the EIA Regulations.
- 6.1.2 The following topics have been scoped into the assessment:
- Air Quality;
 - Noise and Vibration;
 - Ecology;
 - Water Quality and Resources;
 - Geology, Ground Conditions and Agriculture;
 - Landscape and Visual;
 - Traffic, Transport and Access;
 - Cultural Heritage and Archaeology; and
 - Socio-Economics.
- 6.1.3 In view of the above, and on behalf of the SoS, PINS is requested to provide a Scoping Opinion on the possible significant environmental effects of all elements of the Project, the proposed methodologies to assess the impacts, and the proposed structure of the ES.
- 6.1.4 PINS and other consultees are also invited to highlight any additional issues that they believe should be addressed within the EIA, and to identify any sources of information that may be of interest to APL and the EIA team.

Appendix 1: Ecological Appraisal

Abergelli

Abergelli Power Project

Preliminary Ecological Appraisal

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Client	Stag Energy
Job	Abergelli Power Project
Report title	Preliminary Ecological Appraisal
Draft version/final	FINAL
File reference	7399_R_Phase 1_non-confidential_APPR(4)_180614

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Reviewed	Jim Fairclough	Principal Ecologist	07 March 2014
Approved for issue to client	Matthew Hobbs	Principal Ecologist	07 March 2014
Issued to client	Matthew Hobbs	Principal Ecologist	07 March 2014
Amended	Matthew Hobbs	Principal Ecologist	20 March 2014
2nd Issue to client	Matthew Hobbs	Principal Ecologist	20 March 2014
Updated	Anna Gundrey	Senior Ecologist	28 May 2014
3rd Issue to client	Matthew Hobbs	Principal Ecologist	02 June 2014
Updated	Anna Gundrey	Senior Ecologist	09 June 2014
4th Issue to client	Matthew Hobbs	Principal Ecologist	10 June 2014
Amended	Matthew Hobbs	Principal Ecologist	18 June 2014
5th issue to client	Matthew Hobbs	Principal Ecologist	18 June 2014

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Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that BSG Ecology performed the work.

Nothing in this report constitutes legal opinion. If legal opinion is required the advice of a qualified legal professional should be secured.

Contents

1 Summary 1

2 Introduction 3

3 Methods 4

4 Results and Interpretation 6

5 Recommendations 17

6 References 22

Appendix 1: Target Notes 23

Appendix 2: Photographs 27

Appendix 3: Bat Tree Survey Results 35

Appendix 4: HSI Results 37

Appendix 5: Bird species recorded during Phase 1 survey. 39

Appendix 6: Summaries of Relevant Legislation, Policy and Other Instruments 40

1 Summary

- 1.1 Abergelli Power Limited (APL) is promoting a new Power Generation Plant on agricultural land within Abergelli Farm north of Swansea in the City and County of Swansea (approximately at National Grid Reference 265284, 201431).
- 1.2 The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical capacity of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting the Power Generation Plant to the existing National Grid Gas (NGG) National Transmission System (NTS).
- 1.3 BSG Ecology has been appointed as the ecological consultant to undertake a preliminary ecological appraisal, which includes a desk study and Extended Phase 1 Habitat Survey. This preliminary survey will inform the subsequent need for further, targeted surveys of protected and otherwise notable species and habitats.
- 1.4 The preliminary ecological survey has identified two European designated sites within 10km, five statutory designated sites for ecology (four Sites of Special Scientific Interest (SSSIs) and one Local Nature Reserve (LNR)) within 5km, and twenty-three non-statutory designated Sites of Importance for Nature Conservation (SINC) within 2km of the Survey Site boundary. Three of the SINC are partially within the Survey Site boundary, and a further two are adjacent. Much of the woodland on the Survey Site is also designated as Ancient Woodland. Direct impacts on SINC and Ancient Woodland within and close to the Survey Site boundary could occur, depending on the final layout of the Power Generation Plant.
- 1.5 Three Section 42¹ habitats ('lowland mixed deciduous woodland', 'purple moor-grass and rush pasture' and 'ponds') are present within the Survey Site.
- 1.6 There is habitat in the Survey Site that has the potential to support European Protected Species (EPS) including bats, great crested newts *Triturus cristatus*, dormouse *Muscardinus avellanarius* and otter *Lutra lutra*. There are also habitats suitable for nationally protected species such as reptiles and water voles *Arvicola amphibius*. Information on badgers is contained in a confidential version of this report.
- 1.7 The following surveys are recommended to inform the ecology baseline chapter of the Environmental Statement and full details are provided in Section 5:
- Extended Phase 1 habitat survey of inaccessible land at the south-west end of the Survey Site and new land that has been identified since the survey was carried out – an access route to the west of the site.
 - A National Vegetation Classification (NVC) botanical survey of marshy grassland and woodland that may be affected within the Survey Site as well as any areas identified as SINC within or adjacent to the site;
 - A survey of invasive plant species within the Survey Site;
 - Roped access survey of trees identified as having potential to support bat roosts and internal and external building inspections, where trees/buildings may be affected directly or indirectly by the Project. Inspection surveys should include surveys for barn owls. Subsequent dusk emergence / dawn return to roost surveys should be undertaken if roosting potential or evidence of roosting is found;
 - Bat activity surveys including walked transects and automated bat detector surveys;
 - A survey for otter and water vole along water courses within the Survey Site;
 - Dormouse surveys in areas of woodland and scrub within the Survey Site;

¹ Species referred to within The Natural Environment and Rural Communities Act 2006 (NERC 2006) as species of principal importance for the conservation of biodiversity in Wales which are listed on the Natural Resources Wales website. The Welsh Assembly Government must take steps to "further the conservation" of these species under Section 42 of the NERC ACT 2006.

- Great-crested newt surveys of all accessible ponds up to 250m from the Survey Site;
- Reptile surveys on suitable habitat across the Survey Site;
- A walkover breeding bird survey of all of the Survey Site plus a 50m buffer;
- Invertebrate surveys of woodland and marshy grassland for *Lepidoptera* (notably moths and marsh fritillary butterfly *Euphydryas aurinia*) and *Coleoptera* (beetles) within the Survey Site; and
- Invertebrate surveys of freshwater habitats (ponds and watercourses) may be needed where these habitats are to be affected within the Survey Site.

2 Introduction

Site Description

- 2.1 The Phase 1 Habitat Survey Site (hereafter referred to as the 'Survey Site'), in which the Project would be located, consists of approximately 150 ha of pastoral farmland primarily grazed by horses. The Survey Site is contained within the red line boundary shown in Figure 1 and is centred at National Grid Reference 265284, 201431. The nearest town is Felindre, which is located approximately 2 km to the north of the Survey Site, with Swansea approximately 5 km to the south.
- 2.2 The Survey Site is largely agriculturally improved pasture with several areas of marshy grassland, particularly in the north, south and north-western ends of the Survey Site. The fields are bounded by fences, running along the line of defunct hedgerows, and often accompanied by ditches. There is a block of broadleaved woodland on the eastern boundary of the Survey Site and areas around the marshy grassland to the west of the Survey Site, and around Felindre Gas Compressor Station and the two National Grid 400kV electrical substations that lie at the south-west end of the Survey Site. The habitats in the surrounding landscape are similar to those within the Survey Site boundary – a mixture of improved and marshy grassland interspersed with occasional patches of woodland.
- 2.3 The Survey Site boundary is shown on Figures 1a, 1b, 2a and 2b (photographs of the Survey Site are found in Appendix 2).

Description of Project

- 2.4 APL is promoting a new Power Generation Plant within Abergelli Farm. The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical capacity of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting the thermal generating station to the existing National Grid Gas (NGG) National Transmission System (NTS).
- 2.5 BSG Ecology has been appointed as the ecological consultant to undertake a preliminary ecology survey, which includes a desk study and Extended Phase 1 Habitat Survey. This preliminary ecological survey will inform the subsequent need for further, targeted surveys of protected and otherwise notable species and habitats. These baseline surveys will be included in an appendix to an ecology chapter of an Environmental Statement, which is presently intended for submission, as an integral part of the Development Consent Order (DCO) Application.

Aims of Study

- 2.6 BSG Ecology was commissioned to undertake a preliminary ecological appraisal of the Survey Site within which the Project would be located. The main aims of this report are to:
- present the findings of the desk study and site surveys;
 - assess the potential for the Survey Site to support protected or otherwise notable species;
 - set out the legislative and/or policy protection afforded to any habitats present or any species potentially associated with the Survey Site; and
 - provide recommendations for any further surveys necessary to inform a subsequent ecology chapter for an Environmental Statement for the site.

3 Methods

Desk Study

- 3.1 Existing ecological information for the Survey Site and its surrounding area was requested from the South East Wales Biodiversity Records Centre (SEWBRc). Information on European designated sites was requested from within 10 km with information on national statutory designated sites was requested covering the Survey Site and land up to 5 km from the Survey Site boundary and information regarding non-statutory designated sites and records of protected² or notable species (particularly those identified as priority or Section 42 species and/or of local conservation importance or LBAP³ species) was requested covering the Survey Site and land up to 2 km from the Survey Site boundary. Information on locally designated Sites of Importance for Nature Conservation (SINC) within 2 km of the Survey Site boundary was requested from the Swansea Council Ecologist. In addition, on-line resources including the Multi Agency Geographic Information for the Countryside (MAGIC, www.magic.gov.uk) website and aerial photography of the area were also reviewed.

Field Survey

Phase 1 Habitat Survey

- 3.2 The initial field survey was undertaken by Anna Gundrey MCIEEM and Matthew Hobbs MCIEEM on 24 February 2014. The Project Site boundary and therefore the Survey Site was subsequently extended after a design review, and a second field survey was carried out by Stephanie Boocock MCIEEM on 14 April 2014 of the additional area. Habitats within the Survey Site, and up to at least 50m from the Survey Site boundary, were identified and described following standard JNCC Phase 1 Habitat Survey methodology as detailed in the Phase 1 Habitat Survey Handbook (JNCC, 2010). This uses a system of codes to describe different habitat types based on the dominant vegetation present, which are recorded by means of habitat maps and target notes. All plant names in this report follow The New Flora of British Isles (Stace, 2010).
- 3.3 The survey was extended to give particular consideration to the potential of the habitats present to support protected species or species of local conservation importance; recorded as incidental information as part of the target notes.
- 3.4 It should be noted that species lists derived from the target notes are not necessarily an exhaustive inventory of all species occurring at a site. They are intended to illustrate the character of habitats present, general species richness of a particular area, and draw attention to any species that may be considered uncommon or unusual.
- 3.5 Weather conditions during both surveys were clear and largely dry.

Habitat Suitability Index

- 3.6 During the February field survey a Habitat Suitability Index (HSI) assessment (Oldham *et al.*, 2000) of all ponds/water bodies within a 500m radius of the Survey Site (where access was possible) was undertaken. In the case of this survey, a wider buffer than 250m was used because of the high number of ponds within 250 and 500m of the Survey Site. The additional information collected is useful to provide context of how ponds within or in proximity to the Survey Site may connect with habitat available for newts in the surrounding landscape, and also to give greater confidence to the assessment carried out on each pond.
- 3.7 Information on the physical features and characteristics of each pond were collected in order to allow a great crested newt Habitat Suitability Index (HSI) score to be derived for each pond by applying the scoring system developed by the Herpetological Conservation Trust (HCT, 2008). The suitability index is calculated by allocating scores to features associated with each pond; these

² Wildlife and Countryside Act 1981 Schedules 1, 5 & 8; Conservation of Habitats and Species Regulations 2010; Protection of Badgers Act.

³ Those listed under Local Biodiversity Action Plans for Swansea.

include features such as size, quality of surrounding habitat and presence of fish. These scores are then used to calculate the overall HSI for each pond as a number between 0 and 1, with 0 being the least suitable and 1 being the most suitable. The HSI score allows each pond to be placed in one of five categories defining its suitability for great crested newts as follows:

- <0.5 = poor
- 0.5 – 0.59 = below average
- 0.6 – 0.69 = average
- 0.7 – 0.79 = good
- >0.8 = excellent

Tree Assessment

- 3.8 All the trees on site were examined for their potential to support roosting bats, graded according to the scale provided in the Bat Conservation Trust survey guidelines (Hundt, 2012), and summarised in Table 1 below. Those that were rated Category 2 and above were described and their locations recorded on a GPS.

Table 1: Bat tree survey categories

Category	Description
1*	Tree with multiple highly suitable features for bats. Potential to support large numbers of bats.
1	Tree with some definite suitable features and potential to support low numbers of bats.
2	No obvious potential although tree is of a size and age that elevated surveys may reveal suitable cracks and crevices. Or, tree supports some limited features for bats.
3	No potential

Limitations to Methods

- 3.9 Although records secured through the desk study and supplied by third parties provide useful background information for initial ecological assessment, they often comprise individual records supplied by members of the public or are the result of ad hoc surveys. The data trawl information can therefore help to inform the likelihood of a particular species being present in the area, but should not be relied upon to definitively determine presence or absence of individual species.
- 3.10 The first site visit was undertaken at a sub-optimal time of year (February) for a survey of this type, being outside the main growing season, when the greatest variety of plants is in evidence. However the habitats on site are readily identifiable to an experienced botanist, and those that require further survey work in order to confirm their quality have been identified. In addition, a robust assessment of the Survey Site's potential to support protected species could also be made. Therefore, it is considered that the timing of the survey in this instance is not a significant constraint with regard to the findings of this assessment. The second survey on the 14th April was undertaken at a time when most plant species are evident and was less constrained in this respect.
- 3.11 Most parts of the Survey Site were accessed and surveyed. Some of the ponds outside of the Survey Site could not be accessed (see Figures 2a and 2b) as they were located on private land and access was denied to a number of them. Ponds within 250-500m of the Survey Site, where accessible, were inspected to gather contextual information and enough have been inspected to allow suitable additional background information to be gathered.
- 3.12 The extreme south-west end of the Survey Site could not be surveyed as the land here is in a separate ownership and access had not been granted by land owners at the time of survey. The route of the access track (that leads west to the B4489) was added to the Survey Site boundary after the April Phase 1 visit, so this was also not included in the survey. A recommendation has been made below to survey the remainder of the Survey Site as soon as access has been granted.

4 Results and Interpretation

- 4.1 In this section the results of the desk study and fieldwork are brought together. The implications of these results are then considered.
- 4.2 Figures 1a (the northern part of the site) and 1b (the southern part of the site) illustrate the results of the extended Phase 1 habitat survey. Numbers on the map and in the text below can be cross-referenced with Target Notes (TN) in Appendix 1. Photographs of the site can be found in Appendix 2. Figures 2a (the northern part of the site) and 2b (the southern part of the site) illustrate areas of the site that support, or have the potential to support, protected species.

Designated Sites

Statutory

- 4.3 There are two Special Areas of Conservation (SAC)⁴ designated under the EC Habitats Directive within 10km. One of these, Carmarthen Bay and Estuaries SAC, has been afforded multiple designations and is referred to under the umbrella term European Marine Site (EMS)⁵ which comprises the SAC, and is also split into two Special Protection Areas (SPA)⁶ and two Ramsar Wetlands of International Importance (Ramsar)⁷ the details of each designation are provided below. There are also four statutory protected Sites of Special Scientific Interest (SSSI) and one Local Nature Reserve (LNR) within 5km of the Survey Site. These are described in Table 2 below.

Table 2: Statutory designated sites within 5km of the Survey Site and European sites within 10 km.

Site name	Grid ref.	Distance and direction from site	Reason for Designation
Carmarthen Bay and Estuaries SAC	SS357991	7.2km W	Annex I habitats (primary reason for selection) – ‘Sandbanks which are slightly covered by sea water all the time’, ‘Estuaries’, ‘Mudflats and sandflats not covered by water at low tide’, ‘Large shallow inlets and bays’, ‘ <i>Salicornia</i> and other annuals colonising mud and sand’, ‘Atlantic salt meadows. Annex II species (primary reason for selection) – twaite shad <i>Allosa fallax</i> . Annex II species (qualifying feature) – sea lamprey <i>Petromyzon marinus</i> , river lamprey <i>Lampetra fluviatilis</i> , allis shad <i>Alosa alosa</i> and otter.
Burry Inlet SPA and Ramsar (within the boundary of the SAC above)		9.7km WSW	This area is designated as a SPA and Ramsar site due to its internationally important assemblage of wintering birds with qualifying populations of wintering oystercatcher <i>Haematopus ostralegus</i> , and northern pintail <i>Anas acuta</i> (SPA) and additionally of common redshank <i>Tringa totanus</i> , and red knot <i>Calidris canutus</i> (Ramsar).
Crymlyn Bog SAC and Ramsar (contiguous boundaries)	SS694947	7.3 km SE	Annex I habitats (primary reason for selection) – ‘Transition mires and quaking bogs’, ‘Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> ’, Annex I habitats (qualifying feature) – Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>). The site is selected as Ramsar as it supports a substantial population of the nationally-rare slender cotton-grass <i>Eriophorum gracile</i> , and

⁴ Special Areas of Conservation (SACs) are strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended).

⁵ The term ‘European Marine Site’ (EMS) (as defined by the Habitats Regulations) refers to those marine areas that area both Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). For management advice see <http://www.severnestuary.net/asera/docs/Regulation%2033%20Advice.pdf>

⁶ Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

⁷ Ramsar sites are wetlands of international importance designated under the Ramsar Convention.

			a rich invertebrate fauna including many rare and highly localised species. The site also supports 199 vascular plant species including 17 regionally-uncommon and one nationally rare species.
Glais Moraine SSSI	SN696005	4 km E	Designated for its geological interest.
Nant Y Crimp SSSI	SN623015	2.5 km W	Designated for its wet pastures, species-rich neutral grasslands and semi-natural woodland, which are host to several uncommon plant species. In addition, there is a colony of marsh fritillary butterfly on site.
Penllergaer Railway Cutting SSSI	SS622998	2.8 km NW	Designated for its geological interest.
Penplas Grasslands SSSI	SS634979	3.2 km NW	Designated for the eight different grassland types that have been identified on the site, including three types of purple moor-grass pasture, two of rush pasture, fen meadow, acid grassland and damp heath. Notable plant species recorded at Penplas include petty whin <i>Genista anglica</i> and royal fern <i>Osmunda regalis</i> .
Cadle Heath LNR	SS627966	4.5 km NW	Designated for wet heath, species-rich grassland, ponds, scrub and woodland. There is also a significant colony of wood bitter vetch.

- 4.4 Glais Moraine SSSI and Penllergaer Railway Cutting SSSI are both designated for their geological interest, which is unlikely to be impacted upon by the Project and will therefore not be considered further in this report.

Non-statutory

- 4.5 There are 23 Sites of Interest for Nature Conservation (SINC) within 2 km of the Survey Site. These are described in Table 3 below and their locations are shown on Figure 3. Three SINC lie partially within the Survey Site boundary. Rhyd-Y-Pandy Valley Grasslands is a large SINC, which includes three fields that lie within the north-east corner of the Survey Site. Wern Garn Wen is also an extensive SINC which includes the marshy grassland that lies within the western boundary of the Survey Site. Llety Morfil SINC is a collection of three areas of ancient woodland with some areas of marshy grassland, that includes the woodland on the eastern boundary of the site and at the south-west end of the Survey Site.
- 4.6 There are two SINC located adjacent to the boundary. Rhos Fawr SINC is a block of land immediately to the north of the Site boundary, and Felindre Grasslands SINC lies adjacent to the southern tip of the proposed access route.
- 4.7 Most of the woodland within the Survey Site is also designated as Ancient Woodland (See Figure 3).

Table 3: Non-statutory sites within 2km of the Survey Site. Citations for some of the SINC sites are not yet available and will be added when they are.

Site name	Grid ref.	Distance and direction from site	Site Description
Waun Garn Wen	SN645012	Onsite	Purple moor grass and rush pasture, wet woodland, scrub and watercourse habitats. Section 42 invertebrates and birds recorded.
Llety –Morfil	SN644006	Onsite	Wet and ancient semi-natural woodland, purple moor grass and rush pasture, and scrub habitats. Section 42 invertebrate species recorded.

Rhyd-Y-Pandy Valley and Grasslands	SN661022	Onsite	Wet woodland and woodland with assemblage of ancient woodland indicator species, scrub, purple moor grass and rush pasture, lowland meadow, neutral grassland, scrub, reed bed and water course habitats. Section 42 bird species recorded.
Rhos Fawr	SN652029	Adjacent N	Woodland containing assemblage of ancient woodland indicator species, scrub, purple moor grass and rush pasture, neutral grassland habitats. Section 42 bird species recorded.
Felindre Grasslands	SS638998	Adjacent SW	Wet woodland and lowland mixed deciduous woodland, purple moor grass and rush pasture and scrub habitats. Section 42 birds and invertebrates recorded.
Llangefelach Common SINC	SS648994	1.3 km SW	Common cotton grass <i>Eriophorum angustifolium</i> , ragged-robin <i>Lychnis flos-cuculi</i> , western gorse <i>Ulex gallii</i> , various orchid species, tormentil <i>Potentilla erecta</i> and whorled caraway <i>Carum verticillatum</i> are present along with adder, common lizard and slow worm.
Lower and Upper Lliw Reservoirs SINC	SN653035	1 km N	The lower and upper Lliw reservoirs are surrounded by a mosaic of habitats including bracken, scrub, broadleaved woodland and lowland acid grassland.
Cwm Nant-Ddu		2 km NW	Data not yet received
Middle Lliw		1 km NW & W	Data not yet received
Cilfaen	SN641021	0.5 km W	Wet woodland and woodland containing ancient woodland assemblage, and purple moor grass and rush pasture habitat.
Cefn Forest Stream	SS635997	1 km SW	Range of woodland types. Lowland meadow, heath and fen. Purple moor grass and rush pasture, ponds and watercourses.
Penlleagaer Forest	SS627005	1 km SW	Range of woodland types. Purple moor grass and rush pasture, reedbeds watercourses. Section 42 birds and invertebrates recorded.
Penlleagaer to Llangefelach Tunnel and Railway Line	SS632996	1 km S	Range of woodland types. Purple moor grass and rush pasture, scrub and watercourses. Section 42 birds recorded.
M4 Corridor		1.5 km S	Data not yet received
Mynydd Bach Common	SS652978	2km S	Woodland scrub and purple moor grass and rush pasture habitats.
Pant Lasau	SN652004	0.25 km S	Woodland, scrub, purple moor grass and rush pasture, and water course habitats
Middle Llan	SN659009	0.5 km S	Watercourse habitat
Cwm Rhydceinw to Birchgrove Railway		1.5 km SE	Data not yet received

Mynydd Gelli-wasted	SN677016	1.5 km E	Woodland, scrub, heath, purple moor grass and rush pasture habitats.
Ynysforgan Wood	SN677002	2 km SE	Ancient woodland habitat.
Lougher to Penlleger Railway Line		2 km SW	Data not yet received
Banc Darren Fawr		2 km N	Data not yet received
Cwm Clydach		2 km NE	Data not yet received

Habitats

- 4.8 The Survey Site is roughly an 'L' shape, with the majority of the Survey Site running approximately north-south and the foot of the 'L' branching off to the south-west around either side of Felindre Gas Compressor Station and the two National Grid 400kV electrical substations. The topography drains the land to the south with the highest elevation in the Survey Site along the northern boundary (approximately 140m above ordnance datum (aod)). The land slopes away to the south and the lowest elevation is around the Felindre Gas Compressor Station and the two National Grid 400kV electrical substations (approximately 80m aod). The land is predominantly pastoral farmland, mostly agriculturally improved but with significant areas of marshy grassland. The fields are grazed by horses and sheep and are largely bounded by fences with occasional trees, scrub and one defunct hedgerow. There are numerous water courses on site, mostly in the form of ditches along field boundaries, but also four streams; one which runs along the eastern boundary of the Survey Site; another that runs north-west from the woodland in the eastern part of the site; a stream that runs through the marshy grassland to the west; and another around Felindre Gas Compressor Station and the two National Grid 400kV electrical substations. There is a small woodland on the eastern boundary of the Survey Site and the land around Felindre Gas Compressor Station and the two National Grid 400kV electrical substations is also largely wooded. There are also copses and stands of mature trees around the edges of the marshy grassland in the north-western part of the site, as well as along field boundaries in the northern part of the site.

Improved grassland

- 4.9 The majority of the land on site is agriculturally improved grassland (Photo 1, 2a). This was all grazed short when surveyed, and consists of abundant perennial rye-grass *Lolium perenne*, and varying quantities of common grassland herbs such as white clover *Trifolium repens*, common mouse ear *Cerastium fontanum*, and dandelion *Taraxacum fontanum* agg.

Marshy grassland

- 4.10 There are marshy grassland fields at TN3, TN3a, TN4a, TN5, TN9a, TN13a and TN21a and a block of marshy grassland at the southern end of the Survey Site. Although all fit within the same Phase 1 category, the habitats in these fields vary across the Survey Site. The field at TN3 (Photo 2) had a short, close-grazed sward when surveyed. It has numerous tussocks of soft rush *Juncus effusus* and frequent sedge species. These include common sedge *Carex nigra* and glaucous sedge *C. flacca*. Other species noted include creeping bent *Agrostis stolonifera*, a cinquefoil *Potentilla* sp., creeping buttercup *Ranunculus repens* and sharp-flowered and/or jointed rush *Juncus acutiflorus* / *J. articulatus*.
- 4.11 The field at TN5 (Photo 3) was also grazed extremely short, when surveyed, to the point where individual species are difficult to distinguish. Soft rush is frequent, along with purple-moor grass *Molinia caerulea*, sheep's fescue *Festuca ovina* and a sedge species (not possible to identify to

species level). Heather *Calluna vulgaris* and bilberry *Vaccinium myrtillus* plants are occasional and there are patches of sphagnum moss *Sphagnum* sp. present.

- 4.12 The fields marked TN3a, TN4a and TN13a, are wet semi-improved grassland, with marshy species such as lesser spearwort *Ranunculus flammula*, sedges, soft rush and water figwort *Scrophularia aquatica*.
- 4.13 The fields marked TN20 all have over 25% soft rush which places them in the 'marshy grassland' category, but the intervening grassland is agriculturally improved, with abundant perennial rye-grass and frequent white clover. The fields marked TN21 and TN22 (Photo 4) have a much higher cover of soft rush - approximately 75% in TN21 and 100% in TN22 and intervening species are more typical of wet grassland, such as creeping bent *Agrostis stolonifera*, creeping buttercup and Yorkshire fog *Holcus lanatus*.
- 4.14 Areas of purple-moor grass dominated vegetation, which also falls into the 'marshy grassland' category are present at TN14 (Photo 5), TN9a and TN21a where the purple moor grass is dominant with very occasional cross-leaved heath *Erica tetralix* and heather plants in evidence and scattered willow *Salix* sp. scrub. At TN9a additional species recorded include soft rush, bracken, common haircap moss *Polytrichum commune*, unidentified sphagnum moss, heather, cross-leaved heath and bilberry along the margins with some birch and willow regeneration in small scattered copses. TN21a (Photo 4a) is a large field which is superficially similar to that at TN9a but appears to have been managed. Purple moor-grass is not as dominant with numerous patches of bare earth and young ling and cross-leaved heath plants. In addition hare's-tail cotton grass *Eriophorum vaginatum*, (Photo 1a) deergrass *Trichophorum germanicum* and lousewort *Pedicularis* sp. are common.

Semi-improved Grassland

- 4.15 The field to the south of the woodland at TN10 appears to be slightly less agriculturally improved, having a lower cover of perennial rye-grass, and a wider range of grasses such as Yorkshire fog, crested dog's tail *Cynosurus cristatus* and creeping and common bent *Agrostis capillaris*. The field is nevertheless species-poor. There are also two species-poor semi-improved fields in the north-east corner of the site (TN3a, TN13a, Photo 3a).

Woodland and scrub

- 4.16 There is a block of broadleaved woodland along the eastern boundary of the Survey Site at TN10. The western end is on a hill, and is dry with widely-spaced trees and a grazed grassland ground flora including species such as Yorkshire fog, common mouse-ear and creeping buttercup. The trees here are small to medium-stemmed with very little understory, and include birch *Betula pendula*, crab-apple *Malus sylvestris*, holly *Ilex aquifolium* and pedunculate oak *Quercus robur*. The hill slopes down steeply to the east, where a stream delineates a lower, wetter area of woodland. Here the tree species composition is similar but the understorey is much thicker with bramble predominating. On wetter areas, where the bramble thins out, carpets of opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium* are present. There are also extensive areas of purple moor-grass dominated ground flora with sphagnum moss species also present.
- 4.17 To the north of this woodland there is a thin strip of deciduous woodland running along the banks of a stream running north to south at TN42. The species composition includes occasional birch, willow, ash and holly. There is an understory made up largely of gorse with bramble scrub and soft rush grading into improved grassland to the east.
- 4.18 Another relatively extensive area of broad-leaved woodland is present at the south-west end of the Survey Site around Felindre Gas Compressor Station and the two National Grid 400kV electrical substations. This forms a strip to the south and a more continuous block to the north of Felindre Gas Compressor Station and the two National Grid 400kV electrical substations. The woodland is generally quite wet, with alder *Alnus glutinosa* and willow species frequent along with pedunculate oak, birch and holly. The trees are growing close together and are generally small-stemmed and straggly. The understorey is dense bramble and ground flora was largely absent when surveyed, although where the woodland opens out, for example around the margins of Felindre Gas Compressor Station and the two National Grid 400kV electrical substations, soft-rush dominated marshy grassland is present.

4.19 There are also patches of deciduous woodland around the edges of the marshy grassland on the block of land to the west of the road that runs through the Survey Site. At TN6a there is a small wooded spur with tree species including oak, birch, holly, hawthorn and an understorey dominated by brambles and including ivy *Hedera helix*, creeping bent, Yorkshire fog, soft rush, hard fern *Blechnum spicant*, scaly male fern *Dryopteris affinis*, and bracken *Pteridium aquilinum*. At TN23a there is a wooded copse comprised of young birch and willow with an understorey of bramble scrub. The ground flora includes nettle, lady fern *Athyrium filix-femina*, scaly male fern *Dryopteris affinis* and wood false brome *Brachypodium sylvaticum*. A continuous area of scrub is present to the south of the woodland at TN10 and around the pond at TN15. These areas are quite wet and include willow species (including grey and goat willow *Salix cinerea*, *S. caprea*), alder and bramble. At TN15 the scrub merges into stands of purple moor grass that are present around the pond. There are also blocks of scrub to the south of Abergelli Farm, along the stream that runs along the eastern boundary, at the northernmost point of the Survey Site, and within the marshy grassland to the west. Scattered scrub (mostly common gorse *Ulex europaeus*) is present along some fence lines, and there is a bramble scrub-covered bund at TN4.

4.20 Many of the trees within the Survey Site are along site boundaries and are remnant hedgerow stools, as described in the section below.

Boundary features

4.21 All boundaries on site are fences, except one length of species-poor hedgerow running north of Abergelli Farm. The fences often run along the line of defunct hedges (Photo 1). These generally take the form of a degraded stone-faced hedge banks, with occasional small sections of overgrown hedge. The overgrown hedges include mature standard trees, large coppice stools and clumps of bramble and gorse scrub. Species present include pedunculate oak, holly, birch, ash *Fraxinus excelsior*, hazel *Corylus avellana* and hawthorn *Crataegus monogyna*.

4.22 Some of the fields on site have overgrown margins where the vegetation is less trampled and grazed along the fence line. For example the northern boundary of the improved field to the north of the field marked TN3 has a ditch lined with purple moor-grass and gorse, and further east along this boundary fence bracken is frequent. The western boundary of the field marked TN22 has purple moor-grass and heather growing along the fence.

Water Courses

4.23 There are numerous small water courses within the Survey Site. These are mostly ditches along field boundaries (TN22a, Photo 5a), but there is also some larger streams. The block of marshy grassland to the west is criss-crossed by numerous ditches, which were largely dry or with marshy bases when visited in April. There is also a stream that runs through this block of land – this is shaded by flanking woodland, with a stone bed and shallow banks. Another stream (Photos 8, 9 and 6a) runs south-east through the Survey Site and splits into smaller tributaries through the woodland at TN10. There are also small watercourses present around the margin of Felindre Gas Compressor Station and the two National Grid 400kV electrical substations. All features that were visited in February had flowing water, reflecting a period of prolonged wet weather preceding the survey. Aquatic vegetation is not apparent in any of the water courses, but marginal vegetation includes frequent soft rush, occasional purple moor-grass and scattered gorse and bramble.

Water Bodies

4.24 There are four water bodies within the Survey Site. The pond at TN15 (Pond17 – see 4.39) is approximately 10m in diameter, shallow, and completely covered in an unidentified sedge species. It has a small tree-covered island in the centre. The pond is ringed by small willow and alder trees. The surrounding vegetation is dominated by purple moor-grass with occasional heather and cross-leaved heath plants, with densely growing small trees and scrub (grey willow, bramble and alder). A small pond immediately to the south is shown on OS maps. This was not apparent amongst the scrub, but there were small patches of standing water (including wheel ruts) within purple moor grass in this area.

4.25 A small pond is present at TN19 (P18 – see 4.39) adjacent to an electricity pylon. The pond is approximately circular and 5m in diameter. It is in woodland and completely surrounded by small saplings. There was no evidence of marginal or emergent aquatic vegetation when surveyed.

- 4.26 Two ponds are also present immediately to the west of TN30a (Ponds 11 and 12). Pond 12 is approximately 10m in diameter, open and unshaded with both aquatic and marginal vegetation present. It appears to be an extension of two field drains that meet at this point. Pond 11 is a small wet depression containing no vegetation.

Invasive Species

- 4.27 Japanese knotweed *Fallopia japonica* was noted on at least two locations on the block of land to the west of the road that runs through the site. At Target Note 15a several stands of the species were noted on an embankment to a large raised area. At Target Note 18a a stand of the species was noted on a bend in the stream. There are also several stands of this species growing on the edge of the road that leads into Abergelli Farm from the west. These extend just beyond the western site boundary and into the Survey Site.
- 4.28 Himalayan balsam *Impatiens glandulifera* was also noted in two areas. Abundant seedlings of the species were noted in the wooded copse at Target Note 23a and on an area of deciduous woodland at Target Note 28a.

Protected Species and Species of Conservation Importance

- 4.29 This section presents the protected species records provided by SEWBReC along with any evidence of the species, or potential for it to be present gathered during the field survey. Where relevant it also evaluates the potential for the Survey Site to support Section 42 species identified within the desk study area. The legislation and policy relevant to each species or species group is described in Appendix 6.

Bats

- 4.30 There were 126 bat records provided by SEWBREC from the 2 km radius search area. Of these the majority were recorded during bat transects carried out to inform a separate unrelated development proposal, named 'Felindre development site in the records' approximately 1 km to the south west of the Survey Site boundary.
- 4.31 The bat species recorded from the desk study include brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, Natterer's bat *Myotis nattereri*, noctule *Nyctalus noctula*, and whiskered bat *Myotis mystacinus*. There were also unidentified *Pipistrellus* sp. and records where the bat species was not specified.
- 4.32 There are four bat roosts amongst the records provided. The closest of these is a record of 50 unspecified bat species 1.8 km to the south-east of the Survey Site at Ynystawe, Swansea from 1992. The next closest is a night / feeding roost of an unspecified species 1.9 km south west of the Survey Site boundary in Tredegar-Fawr farm buildings from 1998. A record of a roost of 87 whiskered bats also comes from approximately 1.9 km to the north west of the Survey Site boundary in Felindre, Swansea from 1993. The fourth record is a roost of 70 bats of unspecified species, 2.5 km to the south east of the Survey Site in Ynysforgan, Swansea from 1993.
- 4.33 There are a number of buildings associated with Abergelli Farm that fall within the Survey Site. These are all situated along the road that runs between the Water Treatment Works to the north of the Survey Site and Felindre Gas Compressor Station and the two National Grid 400kV electrical substations to the south. Abergelli Farm consists of a rendered brick-built building (Photo 26) with a tiled pitched roof. It has overhanging eaves with wooden soffits. The associated stable block (Photo 27) is of the same construction with an 'L'-shaped footprint. Opportunities for roosting bats are fairly limited as the buildings appear to be in good condition, although gaps in the woodwork around the eaves would allow entry into the soffits.
- 4.34 At TN4 is a small concrete bunker (Photo 31) within an area of waste land. It is formed of 2 m high brick walls with a flat roof formed from concrete sleepers. There is an open doorway on the south elevation and a 30 cm x 30 cm hole at the top of the west-facing wall. This has some potential to support roosting bats.
- 4.35 Immediately to the north (Photo 29) and south (Photo 28) of Abergelli Farm are large barns constructed of corrugated metal and asbestos. Potential for roosting bats in these buildings is low.

There are also two brick-built sheds with corrugated metal/asbestos pitched roofs (Photo 30) adjacent to the northern barn which may have greater potential to support bats, having some gaps in the brickwork that could allow entry in to the buildings.

- 4.36 Further south, to the south of TN25a, is a pair of houses set within plots of hard-standing and amenity grassland. These are newly built and in good condition with no opportunities for roosting bats.
- 4.37 There are 21 trees on or within 50 m of the Survey Site that have the potential to support roosting bats. Of these two have been classed as Category 1 (with definite suitable features that may support larger roosts of bats – see Table 1), and the remainder are Category 2 (with some limited roost features – see Table 1). The locations of the trees (T1-21) are illustrated in Figures 2a and 2b and full details of the trees are provided in Appendix 3.
- 4.38 The northern end of the Survey Site offers limited foraging and commuting potential for bats. The boundaries are fences and short sections of remnant hedgerows and the fields are closely grazed. The block of marshy grassland, woodland and scrub to the west of the road that runs through the Survey Site, and the wooded stream that runs along the eastern boundary offer more potential, and both areas have good wooded connections with a network of hedgerows, tree-lines and marshy pastures off-site. The damp wooded area around Felindre Gas Compressor Station and the two National Grid 400kV electrical substations at the south-west end of the Survey Site also offers foraging potential and connects to off-site blocks of woodland to the north and south that may be good habitat for bats.
- 4.39 It is concluded that the Survey Site is likely to have moderate value for bats. There are a few potential roosting opportunities, and some areas (woodland and marshy grassland) of the Survey Site which offer foraging opportunities, but the Survey Site as a whole does not have good linear commuting features and the majority of the habitats (tightly grazed improved grassland) are of low foraging value.

Great crested newt

- 4.40 There were no records for great crested newts provided by SEWBREC within 2 km of the Survey Site.
- 4.41 Nineteen ponds have been identified within 500 m of the Survey Site boundary with the aid of aerial photographs and OS maps. Of these, two were identified within the Survey Site boundary (Pond 17 turned out to be a single pond when surveyed) and eight within 250 m of the Survey Site. An additional two on-site ponds (Ponds 11 and 12) were found during a reptile survey on 21 May 2014 in the marshy grassland in the north-west of the Survey Site that had not previously been seen during any other survey, as well as one within 100 m of the Survey Site boundary during the first February Phase 1 survey (Pond 18). An HSI assessment was carried out on the seven ponds that were accessible within 500 m of the Survey Site boundary during the first Phase 1 survey visit. This included the two on-site ponds (P17 and P18); one pond within 100 m of the Survey Site boundary (P16); and the remainder are those ponds within 500 m of the Survey Site boundary for which access was possible (P07, P08, P09 and P10). Figures 2a and 2b shows which ponds were surveyed and which were inaccessible, either on private land or not accessible given the presence of horses⁸.
- 4.42 Table 4 below summarises the results of the HSI, and Appendix 4 gives more detailed results.

⁸ The landowner requested that we do not access fields with horses in for our own safety.

Table 4: HSI Results

Pond	HSI	Value for great crested newts
P07	0.67	Average
P08	0.77	Good
P09	0.47	Poor
P10	0.64	Average
P16	0.66	Average
P17 on site	0.61	Average
P18 on site	0.53	Below average

- 4.43 The Survey Site lies in a part of the country where the distribution of great crested nested newts is patchy, with the species largely absent to the west of the Survey Site. Whilst this might reduce the probability that great crested newts would be present on site, it does not rule out their presence. There are a number of ponds in and around the Survey Site, and suitable habitat for newts in their terrestrial phase, including old hedge banks, marshy grassland and woodland within the Survey Site. Those ponds surveyed, whilst most did not have a 'good' or 'excellent' HSI score, do have potential to provide breeding habitat for great crested newts and the possible presence of the species on site should be considered further. In addition the cluster of inaccessible ponds within the grounds of the water treatment works (to the north-west of the Survey Site) are likely to be of similar 'good' quality as Pond 08 (which was visible through the gate).

Dormouse

- 4.44 SEWBRc did not provide any records of dormouse *Muscardinus avellanarius*. The woodland areas on the eastern boundary, at the south-west end and within the marshy grassland in the north-west of the Survey Site do not provide optimum dormouse habitat although they are suitable for the species. Most of the woodland consists of relatively immature trees with little hazel understorey, limited foraging opportunities for this species and a lack of connectivity in the canopy. However, these areas of woodland have good connections to a complex of woodland and thick hedgerows to the west, south and east, and consequently could potentially form part of a wider network of dormouse-supporting habitat. There are a number of recent examples of dormouse occurring in sub-optimal habitat, such as coniferous plantation and species-poor hedges, in south and mid-Wales and their presence should not be ruled out if the habitat is sub-optimal but still has clear potential to support the species, as in this case.
- 4.45 Figures 2a and 2b illustrate which areas of the Survey Site have the highest potential to support dormouse.

Otter

- 4.46 There are a number of water courses on site, most of which are ditches, but also a small stream running from north-west to south-east along the centre and eastern flank of the Survey Site and through the woodland in the centre of the Survey Site. SEWBRc provided 32 records of otter within the 2 km search radius, all recorded between 1991 and 2013. The closest record to the Survey Site is 0.5 km to the south west from the River Llan. At its closest point the River Llan is approximately 0.3 km south of the southern Survey Site boundary, and it links to the Survey Site via the stream running through the woodland in the centre of the Survey Site. None of the water courses on site are likely to provide good foraging opportunities because of their size, but they may offer lying up sites for otter, and it is possible that individuals might use the water courses to commute along from time to time.

Water Vole

- 4.47 No evidence of water voles was noted along the water courses on site when surveyed in February and April, although February is a time of low activity for the species, when field signs may not be evident. The water courses that were visited in February all had flowing water in them when

surveyed, following a prolonged period of extremely wet weather during the winter. It is likely that many of these are usually dry or hold only a small amount of water and this was confirmed during the April survey. As such they do not provide good habitat for water voles. The stream that runs along the eastern boundary of the site; however, does provide suitable habitat for water vole, particularly at TN41-43. At TN43, a number of vole tunnels and holes were seen along the western side of the bank in long tussocks of grass, although it was not possible to ascertain which species had made them.

- 4.48 Water voles have been present in the vicinity: SEWBRc provided three records of water vole from the River Llan approximately 1.9 km from the Survey Site boundary, all from 1996. This River is hydrologically linked to the Survey Site (see other section above), so it is possible, if any of the water courses retain water, particularly those linked to the River Llan, that water voles could be present on site.

Reptiles

- 4.49 There were 12 records of reptiles provided by SEWBRc, between 1998 and 2010. These included records of all the common reptile species: adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara*, and slow worm *Anguis fragilis*. The closest record is of a common lizard, approximately 0.8 km to the west of the Survey Site boundary. Most records are from the south-west side of tinplate workings near to Bryn Whilach Farm, approximately 1 km to the southwest of the Survey Site boundary.
- 4.50 There are several areas of the Survey Site that provide suitable habitat for common reptile species (see Figures 2a and 2b). This includes areas of marshy grassland to the south of the Survey Site, mounds of wood to the south of the woodland at TN10 (Photo 11), scrubby woodland fringes (Photo 12) and overgrown field margins either along remnant hedge banks or ditch banks. In addition a common lizard was seen during the April Phase 1 survey in the marshy grassland area in the north-west of the site and this area is particularly suitable for reptiles providing high quality habitat for foraging, sheltering and basking.

Badger

- 4.51 Information on badgers is provided in a confidential version of this report.

Birds

- 4.52 During the Phase 1 survey a number of common woodland and farmland bird species were recorded and these are listed in Appendix 5. The trees and woodland on site may provide nesting habitat for a range of common bird species. The marshy grassland on site could also provide nesting habitat for ground-nesting bird species. The Survey Site does not appear to be of particular importance for wintering birds with no notable aggregations of common species or any rarer species recorded during the walkover survey, except for a red kite *Milvus milvus* seen in flight over the Survey Site (see below) in both February and April.
- 4.53 SEWBRc provided a number of records of ground nesting birds in the search area. These included records for Eurasian curlew *Numenius arquata*, northern lapwing *Vanellus vanellus* and skylark *Alauda arvensis*. The closest of these records are located at the tinplate workings site near to Bryn Whilach Farm, approximately 1 km to the southwest of the Survey Site boundary. There was one record of curlew, located at the Lliw reservoir, 1 km north of the Survey Site boundary.

Schedule 1 Birds

- 4.54 SEWBRc provided 21 records of barn owl *Tyto alba*. The closest of these records is 0.7 km to the west of the Survey Site boundary from 1997, with the nearest breeding record 3 km to the south west near Penllergaer Woods in 2000. It is possible that some of the farm buildings within the Survey Site may support breeding barn owl, although no trees were found that appear, from a ground level inspection, to have sufficiently large cavities to support nesting barn owls. The marshy fields at the southern end of the Survey Site, although probably sub-optimal, could provide habitat for field vole *Microtus agrestis* (a preferred prey species) given the thick, tussocky structure of some parts of the sward. The marshy grassland in the north-west of the Survey Site provides

optimal foraging habitat for barn owls due to its extensive areas of tussocky grassland that may support breeding field voles *Microtus agrestis*, their preferred prey species.

- 4.55 A red kite was noted circling above the field at TN3 and also over Abergelli Farm. Red kites generally breed in valley woodlands of which there is extensive habitat to 2-3 km to the east and west of the Survey Site. It is considered likely that the Survey Site is part of a much wider area of potential foraging habitat for the species. SEWBrEC provided 54 records for red kite between 1999 and 2013.

Terrestrial Invertebrates

- 4.1 SEWBrEC provided 40 records of Section 42 terrestrial invertebrate species. The species recorded are marsh fritillary, dingy skipper *Erynnis tages*, narrow-bordered bee hawk-moth *Hemaris tityus*, and small pearl-bordered fritillary *Boloria selene*. Twenty-nine of the records are of marsh fritillary; the closest of these is located approximately 0.7 km west of the Survey Site boundary in 2009. This location also contains the closest of the four dingy skipper records, as well as the closest of the five small pearl-bordered fritillary records and the only narrow-bordered bee hawk-moth record.
- 4.2 The marshy grassland to the west provides suitable habitat for marsh fritillaries, although the food plant devil's-bit scabious *Succisa pratensis* was not noted in any quantity during the April survey. Of the other Section 42 species recorded from the desk study, suitable habitat is present for narrow-bordered bee hawk-moth *Hemaris tityus*, which largely relies on devil's bit scabious, like marsh fritillary. For dingy skipper, there are few areas of bare ground, where this species prefers to bask and no areas where its usual food plant, bird's foot trefoil *Lotus corniculatus*, is found in any quantity. Small pearl-bordered fritillary is reliant on violets (*Viola* spp.) as its foodplant and violets have not been recorded during either Phase 1 survey (the April survey was well timed to record them in flower). It is unlikely that either of these latter two species is present.
- 4.3 Other habitats that may be suitable for diverse assemblages of terrestrial invertebrates include the areas of broad-leaved ancient woodland at Target Note 10, for example, which represents a fairly extensive area of semi-natural habitat that may be important for terrestrial invertebrates, particularly *Lepidoptera* (notably moths) and beetles (*Coleoptera*); which are both strongly represented in wooded habitats.

Aquatic Invertebrates

- 4.4 No records of Section 42 aquatic invertebrate species were provided by SEWBrEC, and it is unlikely that any of the ponds on or close to the site support unusual or diverse assemblages of aquatic invertebrates.

5 Recommendations

- 5.1 For the purposes of this report it has been assumed at this stage that direct impacts will potentially occur across the Survey Site, and that indirect impacts will need to be considered beyond this, within the 'zone of influence' that will vary dependent on the receptor (habitat, protected species, designated site) concerned. The recommendations presented below are based on preliminary assumptions of the potential impacts and the corresponding requirement to confirm presence / absence, and where present the distribution and abundance of protected and otherwise notable species or habitats that may occur within the Survey Site and a zone of influence surrounding it.

Statutory Designated Sites

- 5.2 Nant Y Crimp SSSI, Penplas Grasslands SSSI and Cadle Heath LNR are located within 5 km of the Survey Site boundary. These sites are designated for their habitat interest and as all are over 2 km from the Survey Site, direct impacts resulting from the development are considered unlikely. Nant Y Crimp SSSI also has a colony of marsh fritillary butterflies. The larval food plant (devil's-bit scabious) for this species was found in small patches in the western area of marshy grassland during the Phase 1 survey, so this species may be present. However this assessment will need to be reviewed once a botanical survey (see below) of the western block of marshy grassland has been carried out.

Habitat Regulations Assessment

- 5.3 Consultation with the Planning Authority, Natural Resources Wales and PINS will determine the requirement for a screening exercise (under the Habitat Regulations) that considers the proximity of potentially sensitive ecological receptors (notably European protected sites, but potentially extended to SSSIs) within a search area that may extend to or beyond a 5 km radius of the Survey Site (for example, Camarthen Bay and Estuary SAC, Crymlyn Bog SAC, SPA and Ramsar, and Burry Inlet SPA and Ramsar all lie within 10 km of the Survey Site), and whether these could be affected by CO, NO_x and NO₂ emissions as well as nitrogen and acid deposition.
- 5.4 The requirement for further surveys or desk based investigation will be determined following review of the scoping opinion (and consultation) on this matter.

Non-statutory Designated Sites

- 5.5 Three SINC's lie partially within the site boundary and could therefore be directly affected by the proposed development. Indirect impacts could also potentially occur on those sites lying adjacent or close to the boundary.
- 5.6 The woodland on site that falls within Llety-Morfil SINC and the southern part of Waun Garn Wen SINC is also designated as Ancient Woodland and as such is irreplaceable. Direct impacts on this resource may therefore also occur as a result of the proposals.

Habitats

- 5.7 The marshy grasslands within the Survey Site potentially qualify as a Section 42 habitat 'purple moor-grass and rush pastures'. The area to the west of Abergelli Farm is also a SINC. These habitats require a NVC botanical survey at an appropriate time of year (June/July) to establish their ecological value and inform the level of mitigation required to compensate if they are to be lost or modified as a consequence of the Project. The marshy grassland in the north-west of the site is potentially of high ecological value, and this needs to be confirmed through botanical and other Phase 2 survey work. The semi-improved grasslands in the north-east corner of the site, whilst not having obvious high botanical value, are included within a larger SINC. As such it is recommended that a botanical survey is carried out on these areas to establish their value in the wider context of the SINC, and therefore the likely mitigation that would be required for their loss.
- 5.8 'Lowland mixed deciduous woodland' is also a Section 42 habitat. The woodland on site all falls into this category and the majority of the resource also falls within a SINC and is designated as

Ancient Woodland. A botanical survey of these areas in spring/early summer when the ground flora is in evidence would allow an evaluation of their ecological value to be made.

- 5.9 There are no other habitats on site of high intrinsic ecological value. The improved grassland habitat is common and widespread in south Wales and of minimal ecological value. In addition, all (bar one species poor example) of the hedgerows on the Survey Site are defunct.

Invasive species

- 5.10 Japanese knotweed and Himalayan balsam have both been noted on the Survey Site. It is recommended that a walkover survey of the Survey Site is carried out once access is available to all areas, including the proposed access route to map all locations where these species are growing. This should be done within the period June - July when both species are most in evidence.
- 5.11 If work is to take place in any areas where these species are present, a Management Plan will need to be drawn up detailing the methods that will be used to remove these species under controlled conditions as detailed by the Environment Agency (The Knotweed Code of Practice 2003 and guidance on Environment Agency website).

Protected Species and Species of Conservation Importance

Bats

Trees and Buildings

- 5.12 Twenty one trees within the Survey Site have been identified as having potential to support roosting bats. If these trees are to be removed or modified, it is recommended that a roped-access tree survey is carried out in order to confirm whether any of the features initially identified support roosting bats or have the potential to do so. Where the potential for bats to roost in the tree is confirmed then emergence/re-entry (at dusk and/or dawn) survey may need to be carried out to confirm the likely use of the tree by roosting bats, and the status of any roost present. If a bat roost is confirmed, either through emergence/re-entry survey or through roped-access survey a European Protected Species (EPS) Licence is likely to be required before the tree can be felled.
- 5.13 It is recommended that all buildings to be directly or indirectly affected by the Project (if any) should be inspected for signs of roosting bats and features with the potential to support roosting bats, where access allows.
- 5.14 If signs of roosting bats or features with the potential to be used by roosting bats are identified during these inspection surveys, further survey in the form of dusk emergence/ dawn re-entry surveys may be required. The level of survey effort required will depend on the potential that the building or tree has been assigned in these initial inspection surveys. These further surveys (if required) should be undertaken in accordance with current best practice guidance (Hundt, 2012) at a time of year when breeding roosts may be present (i.e. between mid-May and mid-August).

Activity Survey

- 5.15 The areas of marshy grassland, woodland and streams on site potentially provide good foraging habitat for bats. It is recommended that bat activity surveys are carried out in order to inform an assessment of the Survey Site's value for bats and to guide the evolution of the Project and mitigation accordingly. Following the guidance provided in Hundt (2012), this would involve two walked transect routes (given the size of the Survey Site) carried out monthly between April and October, as specified in the guidelines. An automated survey using four static bat detectors (two per transect route) recording for at least three nights would also be carried out. Rather than deploying detectors at four locations every month, it is recommended that surveys are carried out at four locations for three months and another four locations for the other four months so that half the locations would be surveyed in April, June, August and October and the other four in May, July and September. This would increase the spatial coverage of the Survey Site but ensure that sampling was undertaken at each location in spring, summer and autumn to allow a robust seasonal comparison to be made.

Great Crested Newt

5.16 The presence of four ponds on site with several more in the vicinity of the Survey Site, and the occurrence of suitable terrestrial habitat on site indicate that great crested newts could potentially be using the Survey Site. This should be established through further targeted survey work.

5.17 Section 5.4 of the GCN Mitigation Guidelines (English Nature, 2001) recommends that:

“For a common situation, where a plot of land containing a pond is proposed for development, the pond itself should be surveyed, and other ponds up to 500m away should also be checked, if it is thought likely that great crested newt populations centred on these ponds would be affected by changes to the plot.”

5.18 Natural England guidance(2001) is further developed in the GCN Method Statement which states that:

‘The decision on whether to survey depends primarily on how likely it is that the development would affect newts using those ponds. For developments resulting in permanent or temporary habitat loss at distances over 250m from the nearest pond, carefully consider whether a survey is appropriate..... normally appropriate only when all of the following conditions are met:

1. *maps, aerial photos, walk-over surveys or other data indicate that the pond(s) has potential to support a large great crested newt population,*
2. *the footprint contains particularly favourable habitat, especially if it constitutes the majority available locally,*
3. *the development would have a substantial negative effect on that habitat, and*
4. *there is an absence of dispersal barriers.’*

5.19 The second piece of guidance, which supersedes the first, specifies that all four conditions should be met for surveys to be required of ponds beyond 250m of the Survey Site boundary. In this case, condition 1. is not met as there is no indication from desk study data or the HSI assessment that any of the ponds is likely to support a large population of GCN or that they provide particularly suitable habitat (condition 2.) with no ponds within 250m of the Survey Site recording better than an ‘average’ score on the HSI assessment.

5.20 As a consequence, it is recommended that all ponds within 250m (not 250-500m) would need to be further surveyed. This would initially involve four surveys within the period mid-March to mid-June to establish presence/absence (with at least two surveys during mid-April to mid-May), with an additional two surveys (six in total) required to estimate population size if newts are found during the first four surveys.

Dormouse

5.21 If the woodland on the Survey Site is to be removed, damaged or significantly modified, it is recommended that dormouse surveys are carried out with the aim of establishing whether the species is present on site, and therefore whether a EPS Licence will be required before woodland can be cleared or significantly modified. It is recommended undertaking a dormouse survey, following methods based on those prescribed in best practice guidance (Bright *et al.* 2006). The surveys will involve the use of dormouse boxes in areas of woodland and nest tubes in cluttered environments where boxes cannot be used. The survey will be designed to detect the presence or absence of dormice rather than to provide an abundance estimate or monitor a population of the species. Surveys would be carried out monthly during April-November.

Otter and Water Vole

5.22 Otter usage of the Survey Site is likely to be occasional although there are suitable resting/lying up places present along the eastern stream corridor within the Survey Site. Mitigation measures to avoid potential killing or injury to individuals during the construction and decommissioning phases should be considered, for example covering open workings overnight.

- 5.23 A survey for water voles along the banks of the water courses on site should be carried out as a precautionary measure to establish whether the species is likely to be present on site and to design mitigation accordingly. This would involve one visit and should be carried out ideally in spring when field signs are likely to be most in evidence but the vegetation has not grown up to obscure them. It will also be possible to carry out additional checks for signs of otter at the same time as the water vole survey, for completeness. The survey would be carried out in accordance with best practice guidelines (Chanin (2003) and Strachan *et al.*, (2011), respectively).

Reptiles

- 5.24 A reptile survey should be carried out on the Survey Site to establish the presence/absence of reptiles, the species present and the approximate population size. The survey will be conducted using artificial refuges (e.g. roofing felt and tin) to aid in the detection of reptiles and assessment of their distribution and abundance, following good practice guidance, including that set out in the Herpetofauna Worker's Manual (Gent & Gibson, 2003) and Reptile Survey Guidance (Froglife, 1999). This requires a minimum of seven visits conducted at an appropriate time of year (either spring/early summer and/or late summer/early autumn) during suitable weather conditions.

Badger

- 5.25 Information on badgers is provided in a confidential version of this report.

Breeding Birds

- 5.26 Breeding bird surveys of the Survey Site should be carried out with the aim of establishing the ecological value of the breeding bird population and to inform mitigation measures. Farmland birds (occurring both within the Survey Site and a buffer of up to 50m) would be the main target of the survey. Territory mapping surveys based on the British Trust for Ornithology's Common Bird Census (CBC) methodology will be undertaken. These would be conducted on three occasions during the breeding season. It is recommended that an initial visit is carried out in mid-April, followed by additional visits in May and June.
- 5.27 The Phase 1 survey was partly conducted in winter with an experienced ornithologist (Matt Hobbs) part of the survey team. As there was no evidence of notable aggregations of common species or habitat that may support rarer species it is considered that there is no justification for carrying out targeted wintering bird surveys.

Barn owls

- 5.28 It is recommended that all buildings and mature trees on site to be directly or indirectly affected by the Project (if any) should be inspected for signs of roosting or nesting. Signs to be searched for include: nest debris, barn owl pellets, white splashes from barn owl droppings and live or dead barn owls themselves (Barn Owl Trust, 2012). Barn owl roost inspections can be conducted all year round.

Terrestrial Invertebrates

- 5.29 The block of marshy grassland to the west, provides potential habitat for marsh fritillary butterflies due to the presence of their food plant, devil's-bit scabious. As such a survey of adults during late May/June and also the larval webs should be carried out in mid-August to mid-September. Both surveys would involve walking transects over the marshy grassland, the former noting adult marsh fritillary butterflies and the latter checking all patches of the food plant for larval webs and larvae and following standard methods⁹.
- 5.30 The woodland at Target Note 10, for example represents a fairly extensive area of semi-natural habitat that may be important for terrestrial invertebrates; which are both strongly represented in wooded habitats. If the woodland at TN10 is to be affected by the Project it is proposed that further survey will be appropriate that targets both *Lepidoptera* (notably moths) and beetles (*Coleoptera*).

⁹<http://www.ukbms.org/Downloads/UKBMS%20Ng2%20-%20Marsh%20Frit%20Webs%20guidance%20notes.pdf>

A moth survey should also be undertaken of the marshy grassland area in the north-west of the site.

- 5.31 Survey of *Lepidoptera* should involve two night-time moth surveys to be undertaken in late spring and mid-summer. Trapping using Skinner or Robinson moth traps fitted with mercury vapour bulbs is most suitable in terms of attracting an extensive and variable moth fauna. Lights should be switched on at dusk and remain lit until dawn the following day. The traps should be checked periodically throughout the night to log any new arrivals. Any species hard to identify from external markings alone, and those requiring further confirmation, should be retained and dissected if necessary to ascertain their identity with the use of a stereoscopic microscope.
- 5.32 For beetles, a method should be developed that follows Natural England (ISIS) protocol (Drake et al., 2007) to sample beetle assemblages directed at woodland habitats, via hand searches, sweep netting and pitfall trapping. To align with the *Lepidoptera* surveys, this can be undertaken in late spring/early summer and mid/late summer/early autumn. Subsequent laboratory identification will be required for many of the specimens collected.
- 5.33 Analysis of the results should use the ISIS protocol to determine whether any broad or specialist assemblage types of *Lepidoptera* and / or *Coleoptera* are present. Consideration should also be given to any rare, scarce or nationally threatened species present, including Section 42 species.

Aquatic Invertebrates

- 5.34 On the assumption that watercourses will be affected by the Project, it may be appropriate to undertake an assessment of water quality, compliant with the Water Framework Directive (WFD). A main aim of the WFD is to prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters. The requirement for such an assessment would be driven in consultation with Natural Resources Wales. Should such an assessment be required it may be appropriate to assess the ecological quality and surface water chemistry of watercourses to be affected.
- 5.35 To determine ecological quality kick-sampling for aquatic invertebrates should be undertaken at selected locations along the ditch / stream, and the Biological Monitoring Working Party (BMWP) score applied to inform an assessment of water quality and species present. This survey is best undertaken in spring or autumn in swift flowing waters, or in summer in stationary ditches or those with a slow flow. All macro-invertebrates should be identified to species level in order to determine the presence of any scarce or nationally notable species.
- 5.36 To determine water chemistry status a single water sample should be extracted at three locations; within the Survey Site and upstream and downstream of this. Samples should be dispatched to a UKAS accredited laboratory for subsequent analysis, to cover a standard range of parameters including: Biological Dissolved Oxygen, Total Suspended Solids, nutrient composition (e.g. nitrite as nitrogen, total oxidised nitrogen, total ammoniacal nitrogen, total phosphorus), hardness, calcium, alkalinity, conductivity and pH.
- 5.37 The condition of the watercourse can subsequently be analysed by recording and comparing the aggregated number of taxa, and average score per taxon from the sampling points along the watercourse within, upstream and downstream from the Survey Site. The statistical model (RICT) developed for WFD classification would be used to calculate the Ecological Quality Ratio (EQR) that compares observed with expected results for a watercourse of the same type. The EQR is then used to identify the Biological Status of the watercourse which is separated into five bands (Bad to High) required by the WFD.
- 5.38 It may also be necessary to undertake invertebrate surveys of any ponds that are likely to be affected by the development proposals. These are likely to involve surveys of aquatic beetles in June and August

Un-surveyed Land

- 5.39 There are a number of small parcels of land that have not yet been surveyed in the southern part of the site. These are indicated on Figure 1b and will be surveyed once access has been arranged. The Phase 1 report will be updated once these surveys are complete.

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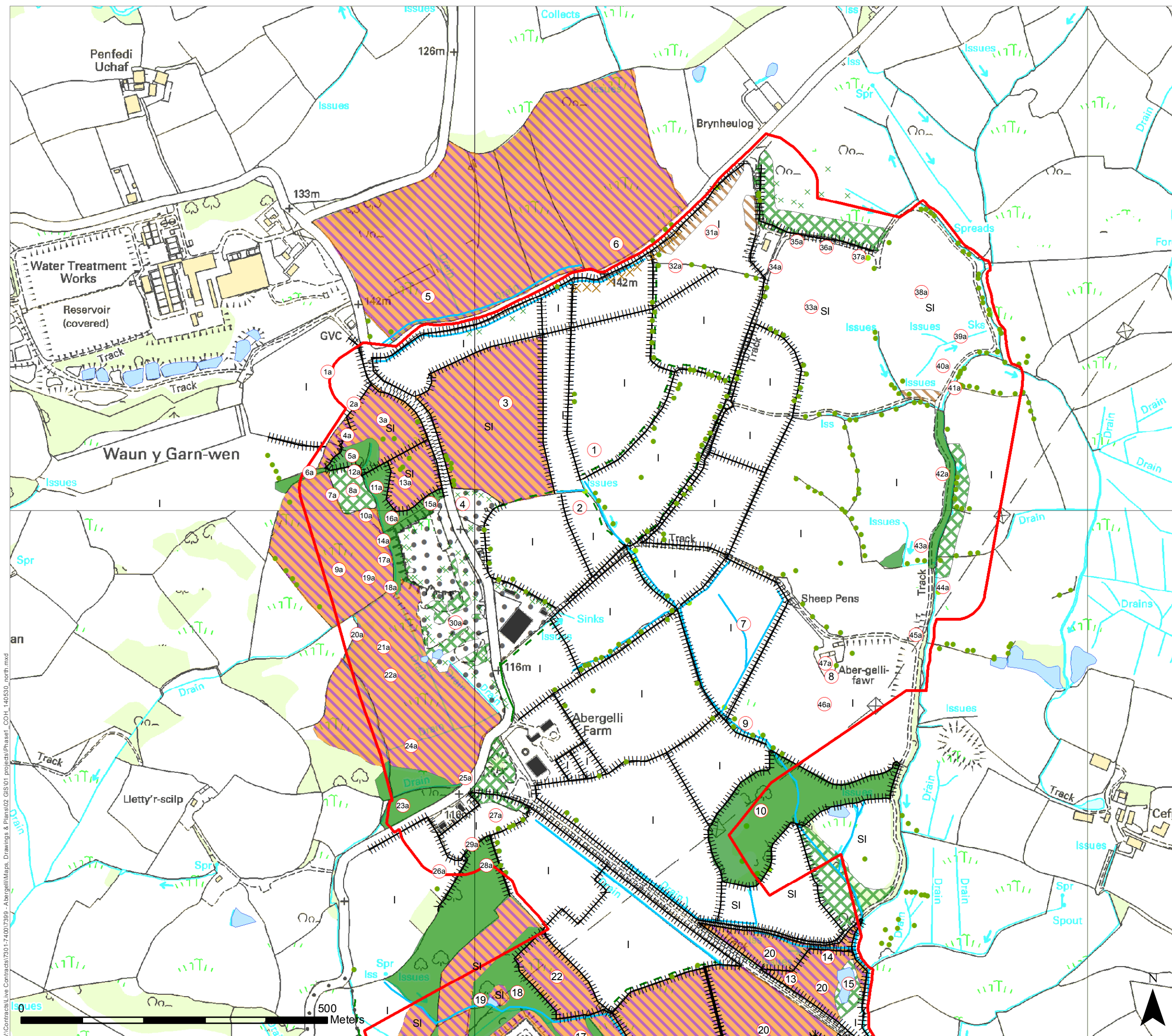
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MAGIC: www.magic.gov.uk



LEGEND

Site boundary

Broadleaved woodland

 Dense scrub

Improved grassland

Marshy grassland

Semi-improved grassland

Tall ruderal

● Bare ground

Buildings

Standing water

Species-poor defunct hedge

⦏ Fence

Scattered scrub

Broadleaved tree

Bracken

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ABERGELLI POWER PLANT

Figure 1a - Phase 1 Habitat Survey North

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SCALE: 1:6,000

DRAWN: COH

APPROVED:MH

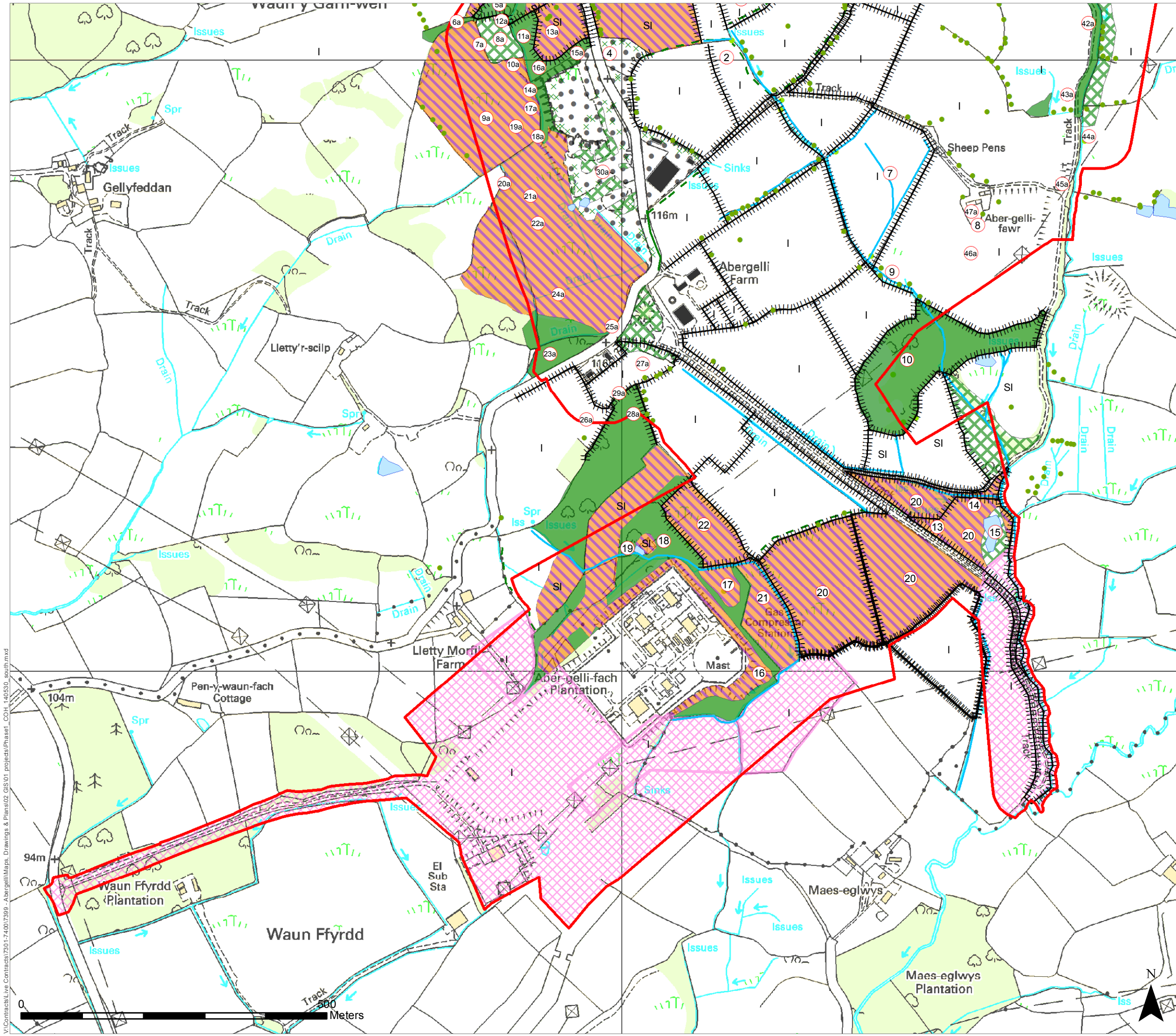
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LEGEND

- Site boundary
- Target notes
- Broadleaved woodland
- Dense scrub
- Improved grassland
- Marshy grassland
- Semi-improved grassland
- Tall ruderal
- Bare ground
- Not surveyed
- Buildings
- Standing water
- Water course
- Species-poor intact hedge
- Species-poor defunct hedge
- Fence
- Scattered scrub
- Broadleaved tree
- Bracken

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PROJECT TITLE
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DRAWING TITLE
Figure 1b - Phase 1 Habitat Survey South

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DRAWN: COH	APPROVED: MH	STATUS: FINAL

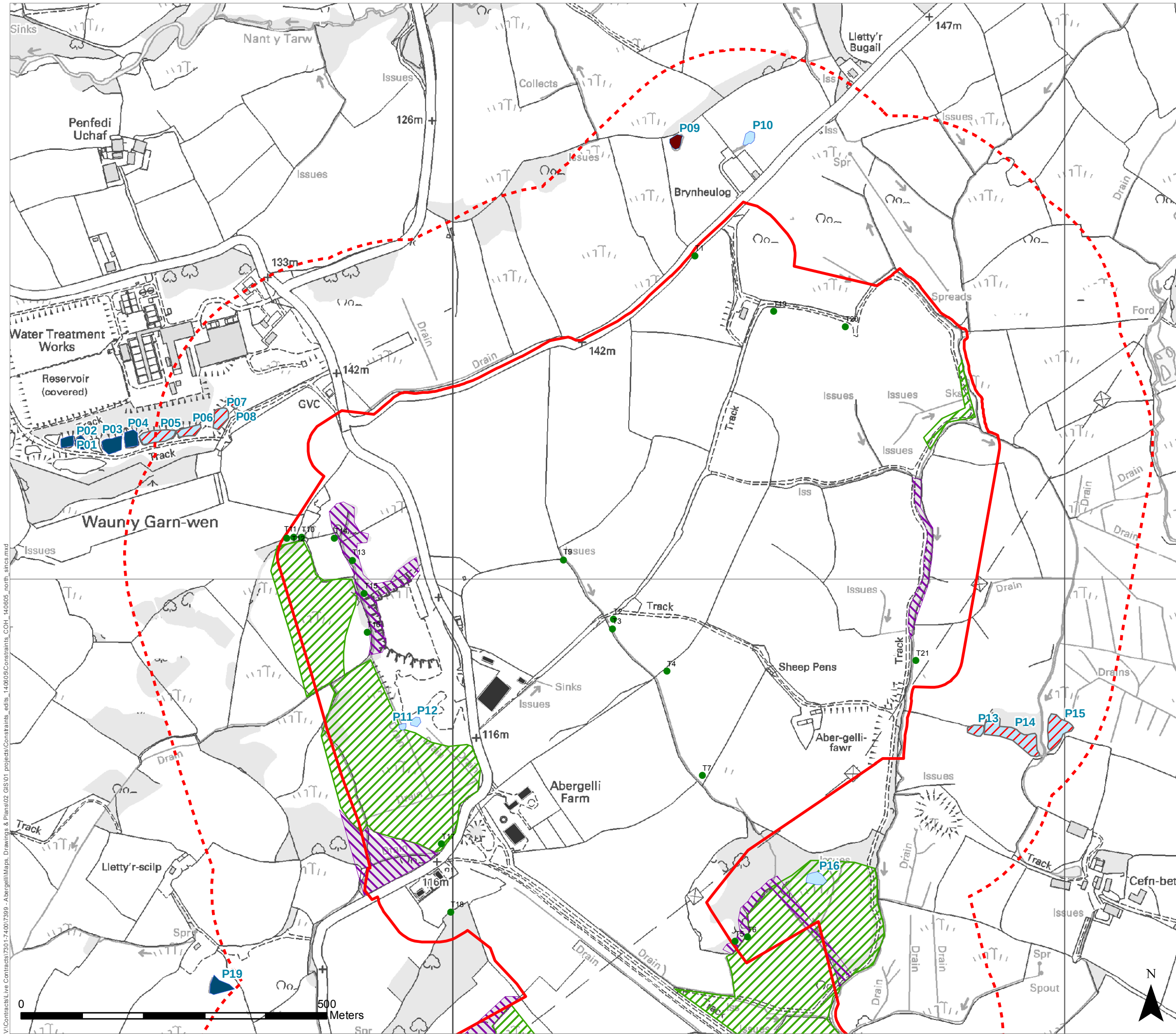
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LEGEND

Site boundary

250m buffer of survey site

Great crested newts

Pond within 250m of Survey Site that should be surveyed for GCN

Ponds within 250m of the Survey Site for which access was denied

Ponds within 250m of the Survey Site that are unsuitable for amphibians

Ponds within 250-500m of the Survey Site

Bats

Buildings with potential to support roosting bats

Trees with potential to support roosting bats

Dormice

Areas with highest potential to support dormice

Reptile Potential

Areas with highest potential to support reptiles

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PROJECT TITLE
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DRAWING TITLE
Figure 2a - Ecological Constraints Map North

DATE: 05.06.2014
DRAWN: COH

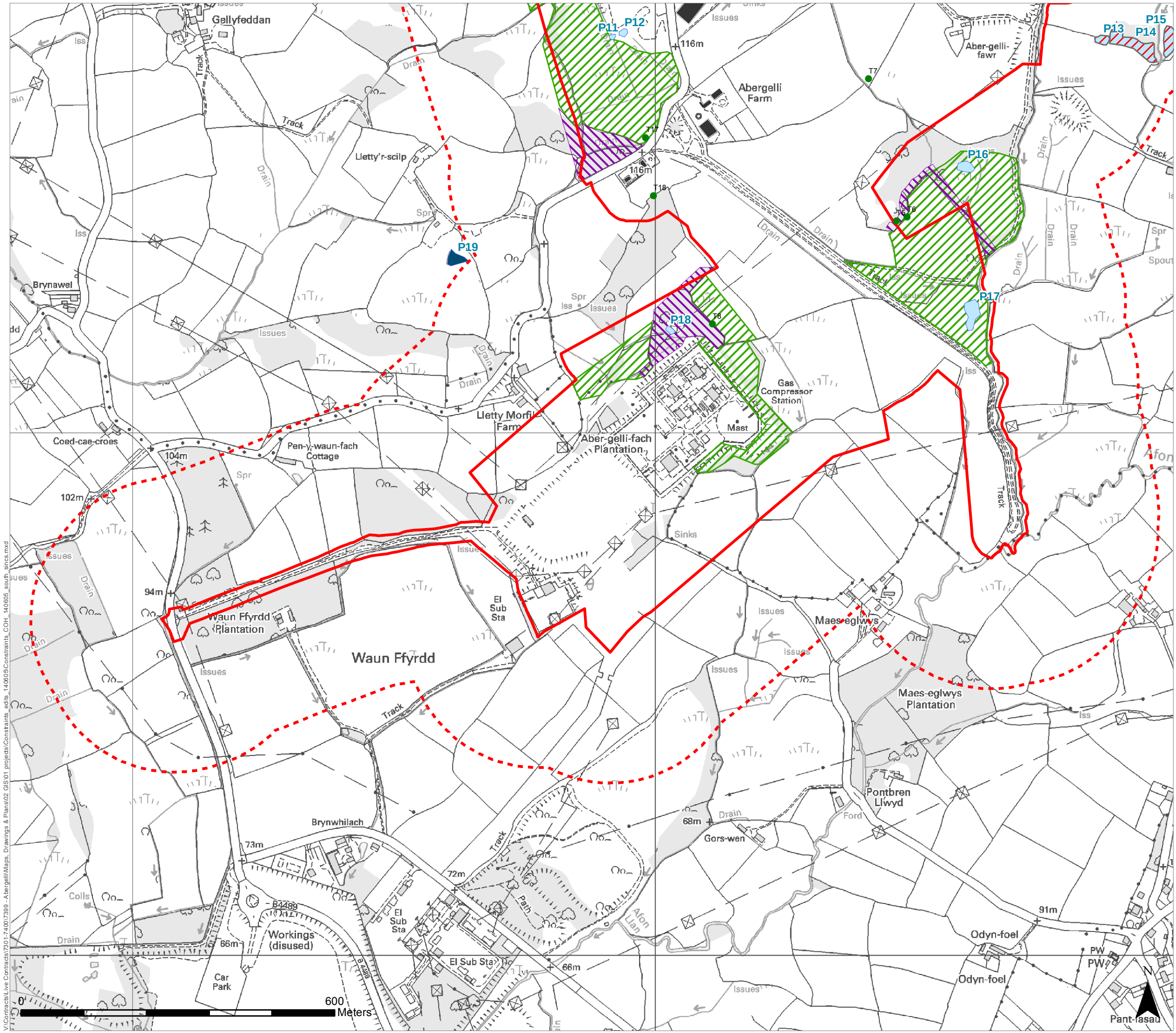
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LEGEND

Site boundary

250m buffer of survey site

Great crested newts

Pond within 250m of Survey Site that should be surveyed for GCN

Ponds within 250m of the Survey Site for which access was denied

Ponds within 250m of the Survey Site that are unsuitable for amphibians

Ponds within 250-500m of the Survey Site

Bats

Buildings with potential to support roosting bats

Trees with potential to support roosting bats

Dormice

Areas with highest potential to support dormice

Reptile Potential

Areas with highest potential to support reptiles

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PROJECT TITLE
ABERGELLI POWER PLANT

DRAWING TITLE
Figure 2b - Ecological Constraints Map South

DATE: 05.06.2014
DRAWN: COH

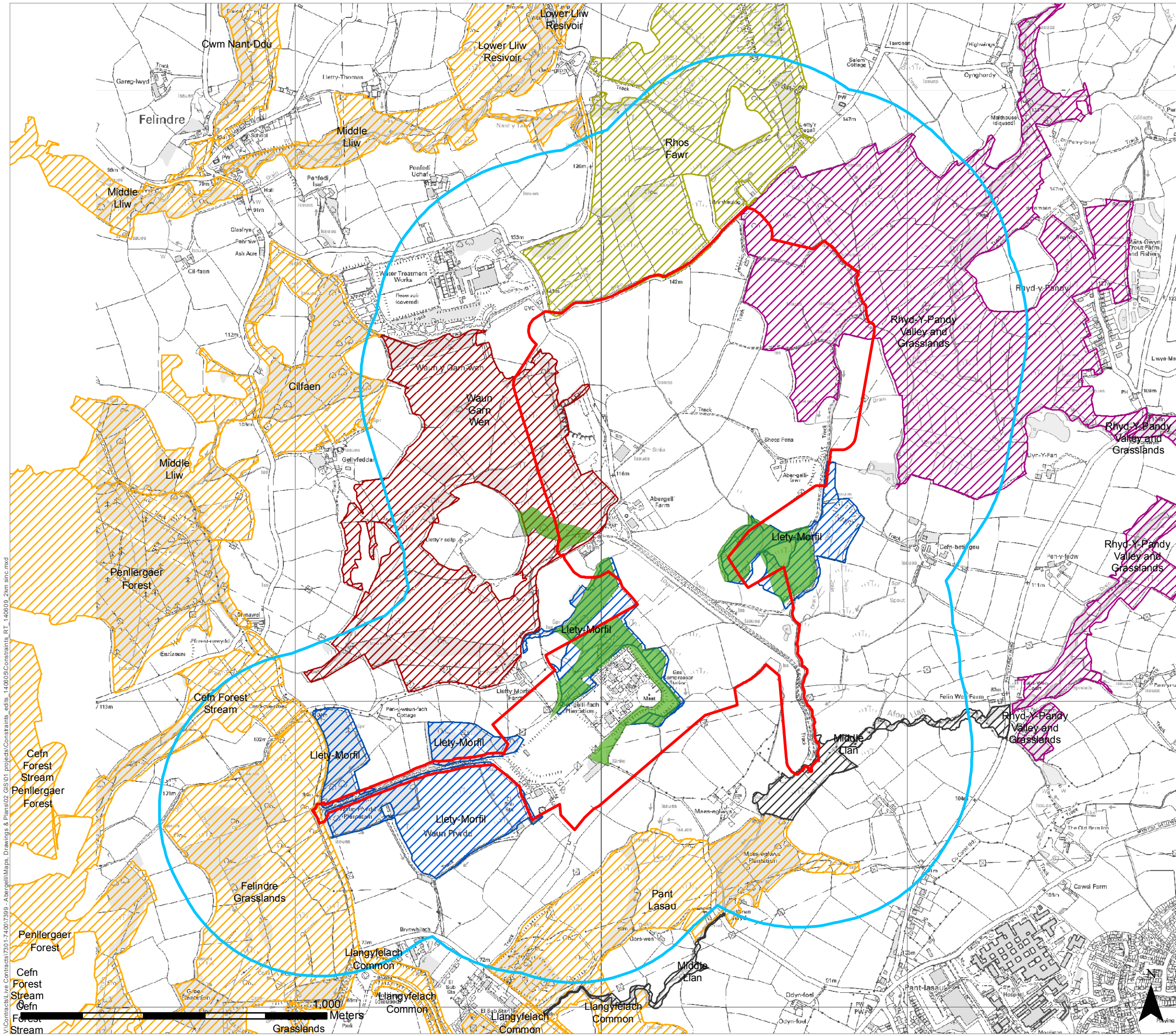
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LEGEND

Site boundary

500m radius from site boundary

Site of Importance for Nature Conservation (SINC)

SINC: Llety-Morfil

SINC: Middle Llan

SINC: Rhos Fawr

SINC: Rhod-y-Pandy Valley and Grasslands

SINC: Waun Garn Wen

Other SINC location

Ancient Woodland

Ancient Woodland

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Figure 3 - SINC and Ancient Woodland map

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SCALE: 1:12,000

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Appendix 1: Target Notes

February Survey

1. A spring running into a wet ditch. The ditch has a muddy base with sweet-grass *Glyceria* sp. and soft rush the dominant plant species. Frog spawn was present.
2. A wet ditch fenced on either side. The ditch meets a spring which runs into it flowing southwards. The ditch has steeply sloping grassy banks, is open and unshaded with great willow herb *Epilobium hirtum* and soft rush present. A newly planted hedge runs along the south side – gapping up a defunct hedge. Also, occasional large coppices of holly were recorded.
3. Marshy grassland with abundant soft rush. The sward is grazed very short by horses. Frequent patches of sedge species were recorded including common sedge and glaucous sedge. Other species noted include sharp-flowered rush and/or jointed rush (difficult to separate in winter and when closely grazed), cinquefoil species, daisy and creeping bent.
4. A small concrete bunker with wasteland area. The concrete bunker is formed of 2m high brick walls with a flat roof formed from concrete sleepers. There is an open doorway on the south elevation and a 30cm x 30cm hole at the top of the west-facing wall. No evidence of bats was recorded. The surrounding land is compacted coarse aggregate which is becoming colonised with common grassland species. There is an earth bund around the south-east and north-east boundary, topped with dense bramble and gorse scrub.
5. An area of marshy grassland which is very closely grazed. Occasional heather and bilberry plants and patches of sphagnum moss were recorded. Purple moor grass is frequent and forms dominant tussocks at the north end of the field. Other species include sheep's fescue and a sedge species.
6. An area of marshy grassland dominated by soft rush. The field was not entered as it is outside the ownership boundary, but inspection from the roadside suggests that rushes are interspersed with agriculturally improved grassland.
7. A wet ditch running through the middle of the field containing fast flowing water with orange discolouration. The ditch is overgrown with bramble and joins another ditch on its eastern boundary, which is lined with purple moor grass, greater willowherb, and soft rush. The surrounding field is agriculturally improved with patches of soft rush.
8. A derelict stone farmhouse with only the bottom halves of walls still present. Patches of rubble and overgrown vegetation are present, which may provide good habitat for reptiles.
9. A stream lined with trees, which is fast-flowing with a stony substrate.
10. An area of broadleaved woodland. The western end is on a hill, which slopes steeply down to the east. This end (delineated by a stream running north-south) is dry with widely spaced trees and a grazed grassland ground flora (Yorkshire fog, common mouse-ear, and creeping buttercup were the most prominent species) and very little understorey was noted. The eastern end is much wetter, with carpets of opposite-leaved golden-saxifrage, extensive areas of purple moor-grass dominated ground flora with some sphagnum moss species. The understorey is thicker here and is predominantly bramble. Tree species include birch, crab-apple, holly and pedunculate oak. Most specimens are small-medium in size.
- 11 and 12. These Target Notes relate to evidence of badger activity and are provided in a confidential version of this report. They are also omitted from Figures.
13. A ditch along a line of small-medium trees (beech, holly, pedunculate oak) and a fence. Bilberry is growing along the fence.
14. A marshy grassland field with abundant soft rush tussocks. The area indicated by this target note is dominated by purple moor-grass with occasional cross-leaved heath and scattered small trees/scrub.
15. A shallow pond (less than 10cm deep), approximately 10m in diameter, completely covered in a sedge species (only dead leaves were evident so identification was not possible) and with a small tree-covered island in the centre. The pond is ringed by small trees. The surrounding vegetation includes purple moor-grass with occasional heather and cross-leaved heath and densely growing small trees and scrub (willow species, bramble and alder. A small pond immediately to the south is shown on OS maps. This consisted of small patches of standing water (including wheel ruts) within marshy (rushes, purple moor grass) vegetation.
16. A strip of land around the gas station, which is higher than the surrounding land. There is a gravel strip immediately surrounding the boundary fence then a steep slope covered in soft-rush dominated grassland. At the base of the slope is a mosaic of marshy rush-dominated grassland with dense bramble scrub and wet

woodland. The woodland consists of closely spaced, small and straggly trees composed largely of holly, pedunculate oak, birch, willow and alder.

17. A patch of marshy grassland almost totally dominated by soft rush. Small patch of bulrush were found towards centre of field. The field is surrounded by encroaching scrub and straggly woodland.

18. An area of wet woodland with dense bramble understorey. The species present and structure are as for Target Note 16. Wet underfoot.

19. A small pond within woodland fed by a stream. No emergent/marginal vegetation was in evidence and the pond is surrounded by small saplings.

20. Marshy grassland fields consisting of more than 25% soft rush. The intervening grassland is agriculturally improved, including perennial rye-grass *Lolium perenne*, common mouse-ear and white clover *Trifolium repens*.

21. An area of marshy grassland with approximately 75% soft rush cover. The intervening grassland is semi-improved.

22. An area of marshy grassland almost totally dominated by soft rush. The western boundary fence has heather and purple moor-grass growing along it.

April Survey

1a Improved grassland with short sward grazed by horses. Access to field restricted by presence of horses. Species observed from track include creeping thistle *Cirsium arvense*, perennial rye-grass, broad-leaved dock *Rumex obtusifolius* and creeping bent.

2a Species-poor hedge with hawthorn *Crataegus monogyna* and willow *Salix* sp., grading into old bank boundary with overgrown hedge with oak *Quercus* sp. and holly *Illex aquifolium* and drainage ditch along north side.

3a Semi-improved marshy grassland with very short sward, grazed by horses. Species recorded include soft rush *Juncus effusus*, Yorkshire fog *Holcus lanatus*, perennial rye-grass, creeping buttercup *Ranunculus repens*, silverweed *Potentilla anserina*, white clover *Trifolium repens*, dandelion *Taraxacum officinale* agg., ribwort plantain *Plantago lanceolata*, lesser spearwort *Ranunculus flammula*, mouse-ear-hawkweed *Pilosella officinarum*, unidentified sedges *Carex* spp.

4a Marshy grassland with small copse of willow, oak and birch *Betula* sp., fenced off from horses with head of spring in centre. Potential for terrestrial phase amphibians and reptiles in sunny hedgebank and refugia provided by piles of dead wood and nesting birds in trees. Species recorded include common bent *Agrostis capillaris*, Yorkshire fog, soft rush, creeping bent, sweet grass *Glyceria* sp., wavy bittercress *Cardamine flexuosa*, creeping buttercup, curled dock *Rumex crispus*, broad-leaved willowherb *Epilobium montanum*, bird's-foot-trefoil *Lotus corniculatus*, lady fern *Athyrium filix-femina*.

5a Area of dense bramble *Rubus fruticosus* agg. scrub and willow regeneration immediately beneath power lines which links to wooded spur to west and marshy grassland copse to east.

6a Small wooded spur with tree species including oak, birch, holly, hawthorn with an understorey dominated by brambles and including ivy *Hedera helix*, creeping bent, Yorkshire fog, soft rush, hard fern *Blechnum spicant*, scaly male fern *Dryopteris affinis*, and bracken *Pteridium aquilinum*.

7a Bank feature delineating boundary of small field (see 8) with birch and willow regeneration and mature oak to southern end. Ground flora dominated by bracken and bramble with bluebell *Hyacinthoides non-scripta* and bilberry *Vaccinium myrtillus* to south.

8a Small field dominated by bramble scrub with bracken, broad-leaved willowherb and soft rush. Grades into copse of birch and willow regeneration to east with ephemeral ditch along south and east boundaries.

9a Large field of wet dwarf shrub heath, dominated by purple moor grass *Molinia caerulea* with soft rush, bracken, common haircap moss *Polytrichum commune*, unidentified sphagnum moss *Sphagnum* sp., ling *Calluna vulgaris*, cross-leaved heath *Erica tetralix* and bilberry along margins. Some birch and willow regeneration in small scattered copses.

10a Badger snuffle holes and intermittent trails.

11a Mature oak.

12a Mature alder *Alnus glutinosa*.

13a Semi-improved grassland with high proportion of herbs and low proportion of grass. Species recorded include soft rush, ribwort plantain, mouse-ear-hawkweed, dandelion, daisy *Bellis perennis*, self-heal *Prunella vulgaris*, white clover, creeping buttercup, broad-leaved willowherb, bird's-foot-trefoil, common mouse-ear *Cerastium fontanum*, yarrow *Achillea millefolium*, marsh thistle *Cirsium palustre* and with lesser spearwort, water figwort *Scrophularia aquatica* and horsetails *Equisetum* sp. in the southern corner.

14a Wooded stream corridor with oak, hawthorn, birch and occasional alder. Understorey dominated by bramble scrub.

15a Embankment of large raised area with mature trees on banks. Northern side with young willow, hawthorn, birch, elder *Sambucus nigra*, rowan *Sorbus aucuparia* and semi-mature / mature oak. Ground flora dominated by brambles but with hart's-tongue fern *Asplenium scolopendrium*, lady fern, hard fern, scaly male fern, unidentified polypody fern *Polypodium* sp., common nettle *Urtica dioica* and dog's mercury *Mercurialis perennis*. Several stands of Japanese knotweed *Fallopia japonica* identified.

16a Mature oak tree.

17a Mature oak tree.

18a Wooded stream corridor with willow and elder and intermittent bramble scrub. Species recorded include common nettle, broad-leaved willowherb, horsetails, water figwort, soft rush, hard fern, bracken, angelica *Angelica sylvestris*, herb Robert *Geranium robertianum* and pendulous sedge *Carex pendula*. Stand of Japanese knotweed at bend in stream.

19a Stand of bramble scrub within willow and birch regeneration with damp substrate supporting reed canary grass *Phalaris arundinacea*. Lots of piles of dead wood.

20a Irrigation ditch, occasional young birch and willow with purple moor-grass, soft rush and bracken. Ditch dry.

21a Large field superficially similar to 9a but appears to have been managed. Purple moor-grass not as dominant, lots of bare earth and young ling and cross-leaved heath plants. In addition hare's-tail cotton grass *Eriophorum vaginatum*, deergrass *Trichophorum germanicum* and lousewort *Pedicularis* sp.

22a Field drain holding water with common reed *Typha latifolia*, broad-leaved pondweed *Potamogeton natans* and water-plantain *Alisma plantago-aquatica*. Common lizard *Lacerta vivipara* directly observed on bank of ditch.

23a Wooded copse comprised of young birch and willow with understorey of bramble scrub and ground flora comprising common nettle, lady fern, scaly male fern, wood false brome *Brachypodium sylvaticum*. Himalayan balsam *Impatiens glandulifera* seedlings abundant. There is also a ditch with very shallow, ponded, oily water with no aquatic vegetation.

24a Drainage ditch holding water, and with dense stands of sphagnum moss in bottom of ditch. Steep sides with ling, cross-leaved heath and purple moor-grass.

25a Birch.

26a Improved grassland with very short sward, grazed by horses. Horses present, not surveyed in detail.

27a Area of partially colonised tipped spoil, being re-graded at time of survey. Bramble and willow scrub around margins / banks and horse training area to North. Species recorded in this area include bramble, gorse *Ulex europea*, curled dock, broad-leaved dock, common nettle, a brassica *Brassicaceae*, creeping thistle, colt's foot *Tussilago farfara*, foxglove *Digitalis purpurea*, wavy bittercress, bird's-foot trefoil, Yorkshire fog and white clover.

28a Area of deciduous woodland and scrub comprising occasional mature oak with hazel *Corylus avellana*, holly, birch, rowan, willow, a scrub layer of bramble and a ground flora including bluebells, hard fern, soft rush, creeping bent, common bent, a spurge *Euphorbiaceae*, wood false-brome and abundant Himalayan balsam seedlings. Area contains many piles of fallen deadwood and there is a bank feature along part of the northern boundary.

29a Mature ash *Fraxinus excelsior*.

30a Earth works with large percentage bare, waterlogged earth. In undisturbed marginal sloped areas gorse, willow and bramble scrub is present.

31a Improved grassland with very short sward, grazed by horses. Species recorded include perennial rye-grass, common bent, occasional soft rush, daisy, broad-leaved dock, mouse-ear hawkweed, white clover, dandelion, cocksfoot *Dactylis glomerata*, annual meadow grass *Poa annua* and couch grass *Elymus repens* with approximately 20% bare earth.

- 32a Bank field boundary with many mature but small holly trees and ground flora of grazed improved grassland.
- 33a Semi-improved grassland similar in composition to 38 but with very short sward, grazed by horses.
- 34a Stone wall / bank delineating eastern edge of domestic property.
- 35a Mature oak.
- 36a Treeline along track with mature / semi-mature oak, and scrub layer comprising gorse and bramble. There are many loose rocks and exposed tree roots with a wet ditch along the northern side fringed by soft rush. The water is ponded and shallow with no aquatic plants observed.
- 37a Mature oak.
- 38a Semi-improved grassland on a sloped field with a spring issuing in the centre. There are occasional scrub stands comprised of hawthorn, bramble, willow, gorse with common nettles and cleavers *Galium aparine*. The slope is not uniform and there are wetter areas indicated by stands of soft rush. Other species recorded include perennial rye-grass, creeping bent, common bent, Yorkshire fog, cocksfoot, creeping thistle, marsh thistle, broad-leaved dock, dandelion, daisy, yarrow, creeping buttercup.
- 39a Damp drainage ditch with soft rush, common reed, broad-leaved willowherb and occasional pendulous sedge. No visible standing water as vegetation very dense. Likely to be ephemeral.
- 40a Area where soft-rush dominant and very low percentage of grass. Herbs recorded include common sorrel *Rumex acetosa*, knotgrass *Polygonum aviculare*, common mouse-ear, creeping buttercup, wavy bitter-cress and cleavers.
- 41a Stream, flowing water approximately 30cm deep, good water quality, moderate flow. Bankside vegetation including lesser water-parsnip *Berula erecta*, horsetails *Equisetum* sp., reed canary-grass, angelica, broad-leaved willowherb, bramble, bracken, soft rush, common nettle, hard fern, common haircap moss, cuckoo pint and lesser celandine *Ranunculus ficaria*. Stream fringed by regenerating birch and willow scrub.
- 42a Tree-lined stream corridor with mature / semi-mature oak trees along Eastern edge with occasional birch, willow, ash and holly. Understory of gorse with bramble scrub and soft rush grading into improved grassland to east. Along western bank, grassland typical of wider area but with longer sward (low-density sheep-grazing) and also including sweet vernal grass *Anthoxanthum odoratum*, crested dog's tail *Cynosurus cristatus*, a fescue *Festuca* sp. and field wood rush *Luzula campestris*.
- 43a Large mammal slide and run to hole under bank / tree on eastern side of bank. Many vole tunnels along western side of bank in long tussocky grass.
- 44a Mature oak.
- 45a Drainage ditch and area of marshy grassland including species such as horsetails, flote-grass, lesser water-parsnip, angelica and soft rush.
- 46a Area of improved grassland with short sward, grazed by sheep. Contains piles of semi-colonised rubble with common nettles and gorse.
- 47a Curtilage of old barns containing a number of mature / dead ash trees.

Appendix 2: Photographs

Habitats

Photo 1: Improved grassland with defunct hedge.



Photo 2: Marshy grassland at TN3.



Photo 3: Marshy grassland at TN5.



Photo 4: Marshy grassland at TN22.



Photo 5: Marshy grassland at TN14.



Photo 6: Woodland at TN10.



Habitats – April Survey

Photo 1a: Hare's-tail cottongrass



Photo 2a: Improved grassland



Photo 3a: Semi-improved grassland at TN3a



Photo 4a: Marshy grassland at TN21a



Photo 5a: TN22a Field drain



Photo 6a: Stream corridor at TN42



Photo 7: Woodland at TN18.



Photo 8: Stream in woodland TN10.



Photo 9: Stream at TN9.



Ponds surveyed with HSI method**Photo 10: Pond P1 within water treatment works.****Photo 11: Pond P1 within water treatment works.****Photo12: Pond P3.****Photo 13: Pond P4.****Photo 14: Pond P5.****Photo 15: Pond P6.**

Photo 16: Pond P7.



Trees with potential for roosting bats

Photo 17: T1



Photo 18: T2



Photo 19: T3



Photo 20: T4



Photo 21: T5



Photo 22: T6



Reptiles – examples of suitable habitat.

Photo 24: Mounds of wood south of TN10.



Photo 25: Tussocky grassland suitable for reptiles.



Badger – images providing evidence of badgers are provided in a confidential version of this report.

Buildings

Photo 26: Abergelli Farm



Photo 27: Abergelli Farm Stables



Photo 28: Barn to south of Abergelli Farm



Photo 29: Barn to North of Abergelli Farm



Photo 30: Building adjacent to barn at Photo 4



Photo 31: Bunker at TN4



Appendix 3: Bat Tree Survey Results

6.1

ID	OSGR	Species	Category	Height	DBH (cm)	Type	Aspect	Extent	Height	Canopy	U-storey
T1	SN6539002532	Oak	2	12m	110	Extensive ivy cover on stem with lifted plates	N		4-8m	20	0
T2	SN6525601938	Birch	2	5m	40	Cavity- small hollows on both stems	E	0.4x0.2m	1-2m	0	0
T3	SN6530601421	Birch	2	8m	100	Woodpecker hole	SW		4m	0	0
T4	SN6534301853	Oak	1	10m	90	Two splits one open one less obvious	S		5 and 5 m	0	0
T5	SN6545501412	Birch	2	14m	160	Rot hole – extent unknown			4m	50	10
T6	SN6547501418	Birch	2	15m	80	Rot hole	NW	0.5m	2-3m	50	0
T7	SN6540101683	Oak	2	17m	80	Thick ivy and hollow trunk exposed	N		Throughout	0	0
T8	SN6509901209	Oak	2	17m	200	Recently cut limb has revealed rot hole within	S	0.1m	2m	50	25
T9	SN6517002031	Oak	2	15m	80	Split limb	N			0	0
1404-01	TN6 – N edge	Oak	2		30	WPH x 5	All	2-4m AGL	2-4m AGL	50	20
1401-02	TN6 – N edge	Oak	2		30	Hollow @ base	N	0.2 x 0.5	0-1m AGL	50	20
						Split in branch	?		8m AGL	50	20
1404-03	TN6 – N edge	Oak	2		100	Cavity / rot back			6m AGL		
						Split limb	E		6m AGL		
1404 - 04	TN11	Oak	2		50	Dense ivy	All	All	All	50	50
1404 -05	TN12	Alder	2		40	Hollow limb			6mAGL	50	50
1404 - 06	TN16	Oak	2		60	Multiple splits	N and E		4m AGL	50	50
1404 -07	TN17	Oak	2		40	WPH	S	10cm diameter	4mAGL	50	50
1404-07	TN 25	Birch	2		60	Dense ivy	All	All	All	50	50
1404-08	TN29	Ash	1		75	Rot hole	N		3mAGL	50	50
						Hollow limb	N		7mAGL		
1404-09	TN35	Oak	2		60	Hollow limb	N		5mAGL	50	50
						Cavity main stem	W		4mAGL		

						Split / hollow limb	W		5mAGL		
1404-10	TN37	Oak	2		40	Slit main stem	Up		6mAGL	50	50
						Rot hole /hollow	S		3mAGL		
1404-11	TN44	Oak	2		100	Dense ivy	All	All	All	50	50

Appendix 4: HSI Results

Pond	HSI	Value for great crested newts
P07	0.67	Average
P08	0.77	Good
P09	0.47	Poor
P10	0.64	Average
P16	0.66	Average
P17 on site	0.61	Average
P18 on site	0.53	Below average

Pond Ref.	Location	Pond Area M ²	Pond permanence	Water Quality	Pond Shading %	No. of waterfowl	Occurrence of fish	Pond density	Proportion of newt friendly habitat around pond within 500m – Any Barriers?	Macrophyte content (est % total of emergent and submerged macrophytes)	Notes
P08	SN6463502258	240	Never dries	Good	10	Minimal	Possible	Y	Good	30	Typha and rushes around edge. Close access not possible.
P07	SN6464602272	150	Never dries	Good	30	Minimal	Possible	Y	Good	0	Not well vegetated.
P10	SN6548702727	70	Sometimes dries	Good	5	Minimal	Possible	Y	Good	20	Small and shallow.
P09	SN6535602709	20	Annually dries	Moderate	30	Absent	No	Y	Good	0	Very shallow and unlikely to fill up – probably mostly dry.
P16	SN6558701536	25	Sometimes	Good	60	Absent	No	Y	Good	40	
P17	SN6559801237	100	Annually dries	Good	80	Absent	No	Y	Good	100	Water shallow and covered in Carex species. To south consists of patches of standing water within Molinia
P18	SN6503101199	50	Never	Moderate	100	Absent	No	Y	Moderate	0	Small pond within woodland – water dark and no aquatic vegetation in evidence.

Appendix 5: Bird species recorded during Phase 1 survey.

Latin Name	Common Name
Mallard	<i>Anas platyrhynchos</i>
Buzzard	<i>Buteo buteo</i>
Red kite	<i>Milvus milvus</i>
Woodpigeon	<i>Columba palumbus</i>
Great spotted woodpecker	<i>Dendrocopos major</i>
Meadow pipit	<i>Anthus pratensis</i>
Pied Wagtail	<i>Motacilla alba yarrellii</i>
Dunnock	<i>Prunella modularis</i>
Wren	<i>Troglodytes troglodytes</i>
Robin	<i>Erithacus rubecula</i>
Blackbird	<i>Turdus merula</i>
Song Thrush	<i>Turdus philomelos</i>
Mistle thrush	<i>Turdus viscivorus</i>
Redwing	<i>Turdus iliacus</i>
Blue Tit	<i>Parus caeruleus</i>
Great Tit	<i>Parus major</i>
Long tailed tit	<i>Aegithalos caudatus</i>
Magpie	<i>Pica pica</i>
Jackdaw	<i>Corvus monedula</i>
Carrion crow	<i>Corvus corone</i>
Rook	<i>Corvus frugilegus</i>
House sparrow	<i>Passer domesticus</i>
Chaffinch	<i>Fingilla coelebs</i>
Greenfinch	<i>Carduelis chloris</i>
Goldfinch	<i>Carduelis carduelis</i>
Reed bunting	<i>Emberiza schoeniclus</i>

Appendix 6: Summaries of Relevant Legislation, Policy and Other Instruments

National Planning Policy

- 6.2 Technical Advice Note (TAN) 5 provides Welsh Assembly Government advice about how the land use planning system in Wales should contribute to protecting and enhancing biodiversity and geological conservation.
- 6.3 It follows that the TAN provides guidance to local planning authorities on: the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and, development affecting protected and priority habitats and species.
- 6.4 Planning considerations with regard to habitats and species are of greatest relevance to the Abergelli Farm proposal. For a full account, the TAN should be referred to, but some of the key principles are summarised as follows:
- i. *When dealing with cases where a European protected species of plant or animal may be affected, a local planning authority needs to have regard to the requirements of the Habitats Directive in the exercise of its functions.*
 - ii. *The TAN refers to the Wildlife and Countryside Act 1981 (as amended), which makes it an offence (with certain limited exceptions and in the absence of a licence) to intentionally to kill, injure or take any wild bird, or to damage, take or destroy the nest of any wild bird whilst that nest is being built or in use, or to take or destroy its eggs. Further offences apply to species listed under Schedule 1 of the Act.*
 - iii. *The above Act also affords protection to wild animals of the species listed in Schedule 5, and to wild plants listed in Schedule 8, most of which are not European protected species. Actions that are likely to result in an offence are identified;*
 - iv. *With regard to badger, Meles meles, the TAN refers to the provisions of the Protection of Badgers Act, 1992;*
 - v. *The TAN makes reference to Sections 40 and 42 of the Natural Environment and Rural Communities Act 2006, which place a duty on the Welsh Assembly Government to have regard to the purpose of conserving biodiversity (see Section 1.10 of this report);*
 - vi. *In section 2.4 it is noted that when deciding planning applications that may affect nature conservation, local planning authorities should protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;*
 - vii. *When determining planning applications, planning authorities should ensure that all material considerations are taken into account, that decisions are informed by adequate information about the potential effects of development on nature conservation, and that the range and population of protected species is sustained;*
 - viii. *Planning applications should demonstrate a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation.*

UK Post-2010 Biodiversity Framework

- 6.5 The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework' covers the period from 2011 to 2020.

- 6.6 Most work which was previously carried out under the UK Biodiversity Action Plan (UK BAP) is now focussed in the four countries of the UK through the new framework. The UK BAP partnership no longer operates but includes detailed Action Plans for priority habitats and species, which are still in use and of relevance. The list of priority habitats and species included within the UK BAP list is equivalent to the list of Section 42 habitats and species.
- 6.7 The UK BAP is supported by a series of Local Biodiversity Action Plans (LBAPs), usually set up on a local authority administrative boundary basis. Each LBAP identifies those habitats and species considered to be most important in that area (usually referred to as priority habitats and species). Commonly, an LBAP will identify a number of habitats and species for which “action plans” have been prepared. The Swansea LBAP is was created in 2005 but is unavailable as it is under review.

Wildlife Legislation

- 6.8 Legislation of most relevance to this assessment includes the following:

Natural Environment and Rural Communities (NERC) Act 2006

- 6.9 Section 40 of the Natural Environment and Rural Community Act (NERC) 2006 sets out the duty which public authorities have to conserve biodiversity. Section 40 States that: “every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”. The term Public Authority includes local authorities and local planning authorities.
- 6.10 Paragraph 40(3) goes on to state that “conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat”.
- 6.11 Paragraph 42(1) states that “the Secretary of State must, as respects Wales, publish a list of the living organisms and types of habitat which in the Secretary of State’s opinion are of principal importance for the purpose of conserving biodiversity”. This replaces a similar reference to the list that was found in Section 74 of the Countryside and Rights of Way Act 2000 (the CRoW Act).

The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)

Protection afforded to birds

- 6.12 Section 1 of the Wildlife and Countryside Act 1981 (WCA) prohibits the intentional killing, injuring or taking of any wild bird and the taking, damaging or destroying of the nest (whilst being built or in use) or eggs. Section 1 also prohibits disturbing any bird listed on Schedule 1 of the Act whilst at or near the nest and prohibits disturbing the dependent young of such birds.

Protection afforded to other animals

- 6.13 Species listed on Schedule 5 that may be of relevance to this site include GCNs, bats, otter, water vole and all species of reptiles. The places of shelter used by otter and water vole are protected, but reptiles are protected from killing and injury only.

Protection afforded to Sites of Special Scientific Interest (SSSIs)

- 6.14 Section 28 allows for the creation of SSSIs by the government (through Natural Resources Wales in Wales) where Natural Resources Wales (NRW) “is of the opinion that any area of land is of special interest by reason of any of its flora, fauna, geological or physiographical features.”
- 6.15 Section 28G specifies the duty of specific public authorities (including local authorities) to further the conservation and enhancement of the features by reason of which the site is designated and also to notify NRW of operations likely to damage such features in order that NRW may consent to or refuse permission for such operations.

The Conservation of Habitats and Species Regulations 2010

- 6.16 The Conservation of Habitats and Species (Amendment) Regulations 2012 consolidates the various amendments that have been made to the Regulations. The original (1994) Regulations transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.
- 6.17 “European protected species” (EPS) are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are subject to the provisions of Regulation 41 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:
- a) Intentionally or deliberately capture, injure or kill any wild animal included amongst these species;
 - b) Possess or control any live or dead specimens or any part of, or anything derived from a these species;
 - c) Deliberately disturb wild animals of any such species;
 - d) Deliberately take or destroy the eggs of such an animal; or
 - e) Intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place.
- 6.18 For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—
- a) to impair their ability—
 - I. to survive, to breed or reproduce, or to rear or nurture their young, or
 - II. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- 6.19 To affect significantly the local distribution or abundance of the species to which they belong.
- 6.20 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by NE for development works. In accordance with the requirements of the Regulations (2012), a licence can only be issued where the following requirements are satisfied:
- a) The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’;
 - b) ‘There is no satisfactory alternative’; and
 - c) The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range’.
- 6.21 EPS that may be relevant to this proposal include GCNs, bats, dormouse and otter.

Invasive Species Legislation

- 6.22 Japanese knotweed and Himalayan balsam are both listed on Part 2, Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Section 14 of the Act states that it is an offence for a person to plant or otherwise cause to grow in the wild any species listed on Part 2, Schedule 9. The Environmental Protection Act 1990 contains a number of legal provisions concerning ‘controlled waste’. Any soil or plant material contaminated with Japanese knotweed that is to be discarded is classified as controlled waste.

Appendix 4.2

Abergelli Scoping Opinion



SCOPING OPINION

Proposed Abergelli Power Project



August 2014



CONTENTS

EXECUTIVE SUMMARY

1.0	INTRODUCTION.....	1
2.0	THE PROPOSED DEVELOPMENT	4
3.0	EIA APPROACH AND TOPIC AREAS	14
4.0	OTHER INFORMATION	28

APPENDIX 1 – LIST OF CONSULTEES

APPENDIX 2 – RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

APPENDIX 3 – PRESENTATION OF THE ENVIRONMENTAL STATEMENT



EXECUTIVE SUMMARY

This is the Scoping Opinion (the Opinion) provided by the Secretary of State in respect of the content of the Environmental Statement for Abergelli Power Project.

This report sets out the Secretary of State's opinion on the basis of the information provided in the report prepared by Abergelli Power Limited ('the applicant') entitled Abergelli Power Project, Environmental Impact Assessment Scoping Report June 2014 ('the Scoping Report'). The Opinion can only reflect the proposals as currently described by the applicant.

The Secretary of State has consulted on the Scoping Report and the responses received have been taken into account in adopting this Opinion. The Secretary of State is satisfied that the topic areas identified in the Scoping Report encompass those matters identified in Schedule 4, Part 1, paragraph 19 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended).

The Secretary of State draws attention both to the general points and those made in respect of each of the specialist topic areas in this Opinion. The main potential issues identified are:

- Air Quality
- Landscape and Visual
- Water Quality and Resources

Matters are not scoped out unless specifically addressed and justified by the applicant, and confirmed as being scoped out by the Secretary of State.

The Secretary of State notes the potential need to carry out an assessment under the Habitats Regulations¹.

¹ The Conservation of Habitats and Species Regulations 2010 (as amended)

1.0 INTRODUCTION

Background

- 1.1 On 26 June 2014, the Secretary of State (SoS) received the Scoping Report submitted by Abergelli Power Limited under Regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) in order to request a scoping opinion for the proposed Abergelli Power Project ('the Project'). This Opinion is made in response to this request and should be read in conjunction with the applicant's Scoping Report.
- 1.2 The applicant has formally provided notification under Regulation 6(1)(b) of the EIA Regulations that it proposes to provide an ES in respect of the proposed development. Therefore, in accordance with Regulation 4(2)(a) of the EIA Regulations, the proposed development is determined to be EIA development.
- 1.3 The EIA Regulations enable an applicant, before making an application for an order granting development consent, to ask the SoS to state in writing their formal opinion (a 'scoping opinion') on the information to be provided in the environmental statement (ES).
- 1.4 Before adopting a scoping opinion the SoS must take into account:
 - (a) the specific characteristics of the particular development;
 - (b) the specific characteristics of the development of the type concerned; and
 - (c) environmental features likely to be affected by the development'.

(EIA Regulation 8 (9))
- 1.5 This Opinion sets out what information the SoS considers should be included in the ES for the proposed development. The Opinion has taken account of:
 - i the EIA Regulations
 - ii the nature and scale of the proposed development
 - iii the nature of the receiving environment, and
 - iv current best practice in the preparation of environmental statements.

- 1.6 The SoS has also taken account of the responses received from the statutory consultees (see Appendix 2 of this Opinion). The matters addressed by the applicant have been carefully considered and use has been made of professional judgement and experience in order to adopt this Opinion. It should be noted that when it comes to consider the ES, the SoS will take account of relevant legislation and guidelines (as appropriate). The SoS will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with that application when considering the application for a development consent order (DCO).
- 1.7 This Opinion should not be construed as implying that the SoS agrees with the information or comments provided by the applicant in their request for an opinion from the SoS. In particular, comments from the SoS in this Opinion are without prejudice to any decision taken by the SoS (on submission of the application) that any development identified by the applicant is necessarily to be treated as part of a nationally significant infrastructure project (NSIP), or associated development, or development that does not require development consent.
- 1.8 Regulation 8(3) of the EIA Regulations states that a request for a scoping opinion must include:
- (a) 'a plan sufficient to identify the land;
 - (b) a brief description of the nature and purpose of the development and of its possible effects on the environment; and
 - (c) such other information or representations as the person making the request may wish to provide or make'.
- (EIA Regulation 8 (3))*
- 1.9 The SoS considers that this has been provided in the applicant's Scoping Report.

The Secretary of State's Consultation

- 1.10 The SoS has a duty under Regulation 8(6) of the EIA Regulations to consult widely before adopting a scoping opinion. A full list of the consultation bodies is provided at Appendix 1. The list has been compiled by the SoS under their duty to notify the consultees in accordance with Regulation 9(1)(a). The applicant should note that whilst the SoS's list can inform their consultation, it should not be relied upon for that purpose.

- 1.11 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided at Appendix 2 along with copies of their comments, to which the applicant should refer in undertaking the EIA.
- 1.12 The ES submitted by the applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.
- 1.13 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the applicant and will be made available on the Planning Inspectorate's website. The applicant should also give due consideration to those comments in carrying out the EIA.

Structure of the Document

- 1.14 This Opinion is structured as follows:

- Section 1 Introduction
- Section 2 The proposed development
- Section 3 EIA approach and topic areas
- Section 4 Other information.

This Opinion is accompanied by the following Appendices:

- Appendix 1 List of consultees
- Appendix 2 Respondents to consultation and copies of replies
- Appendix 3 Presentation of the environmental statement.

2.0 THE PROPOSED DEVELOPMENT

Introduction

- 2.1 The following is a summary of the information on the proposed development and its site and surroundings prepared by the applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the proposed development and the potential receptors/resources.

The Applicant's Information

Overview of the proposed development

- 2.2 The proposed development would comprise a new Power Generation Plant, capable of providing an electrical capacity of up to 299MW. It would be fuelled by natural gas and connected to the National Grid. The proposal would be located on pastoral fields at Abergelli Farm, to the north of Swansea, in the City and County of Swansea, South West Wales.
- 2.3 The proposed development would comprise the following principal components (Section 1.1.2 of the Scoping Report):
- Generating equipment, including gas turbine generators and balance of plant (Simple Cycle Gas Turbine (SCGT));
 - New purpose built access road;
 - A temporary construction compound (laydown area);
 - New gas connection;
 - New electrical connection.

Description of the site and surrounding area

The Application Site

- 2.4 The application site is located within an area of lowland farmland known locally as the 'Welsh Gower'; approximately 1km south of Felindre, 760m west of Llwynceilyn and 1.4km north of Llangyfelach. Swansea lies approximately 5km to the south of the site. The site is roughly an 'L' shape and approximately 150ha in total, including the power generation plant site, and the electrical and gas connection opportunity areas. Three residential dwellings, Abergelli Farm, Abergelli fawr, and Lletty Morfil Farm are located within the site boundaries, as shown on Figure 2.

- 2.5 The Scoping Report identifies that the land is currently used for sheep and horse grazing, along with horse training and breeding. Most of the farmland is agriculturally improved grassland and classified as Grade 4 agricultural land; but also contains significant areas of marshy grassland and scattered woodland and scrub. The fields are largely bound by fences, with one section of species-poor hedgerow running north of Abergelli Farm.
- 2.6 A gas Nation Transmission System (NTS) Pipeline and water pipelines cross the site, while the western part of the site encompasses two National Grid 400KV electrical substations and Felindre gas compressor substation. Areas of the site have been previously subject to various permissions for mineral extraction, inert landfill and other commercial activities.
- 2.7 The Afon Llan flows in a south-westerly direction to the west and south of the site. The site is primarily within EA Flood Zone 1, although a small area to the south east of the site appears to lie within Zones 2 and 3. A number of springs issue on the site, with their associated drainage ditches and streams running along the field boundaries and discharging into the Afon Llan. Four water bodies have been identified within the survey site (see Appendix A: Preliminary Ecological Appraisal, paragraphs 4.24, 4.25 and 4.26). Numerous public footpaths, bridleways and tracks run through the site.
- 2.8 The geology of the site is characterised by boulder clay and the underlying Grovesend Beds, Upper Carboniferous sandstones and thin coals; overlain by glacial sand and gravel, alluvium and peat. The geology is overlain by raw gley and brown soils.
- 2.9 The Scoping Report states that the land within the power generation plant site (See figure 1: Project Site Plan) is approximately 90m Above Ordnance Datum (AOD), gently sloping downwards in a southerly direction. The wider application site also appears to be gently sloping.
- 2.10 Three Sites of Importance for Nature Conservation (SINCs) lie partially within the site (Rhyd-Y-Pandy Valley Grasslands, Warn Garn Wen and Llety Morphil). A further two SINCs are adjacent to the site, with Rhos Fawr SINC to the north, and Felindre Grasslands SINC to the south. The majority of woodland within the site is designated as Ancient Woodland.
- 2.11 There is potential habitat on the site to support European Protected Species, including bats, great crested newts, dormice and otters. The site could also support Barn Owls (Schedule 1 species) and nationally protected species, including reptiles, badgers and water voles. Breeding birds may also use the site. Figures 2a and 2b of the Preliminary Ecological Appraisal illustrate the areas on and around the site which have the potential to support protected species.

- 2.12 Following the results of the Phase 1 Habitat Survey, further Phase 2 protected species surveys are currently being carried out.
- 2.13 The invasive species Japanese knotweed and Himalayan balsam are present on the site.

The Surrounding Area

- 2.14 The area surrounding the application site is rural, but with a substantial amount of utilities infrastructure. A water treatment works is located immediately to the northwest, with the Cefn Betingau Solar Park to the east. A network of electricity pylons, to the south west of Abergelli Farm, link to the National Grid electrical substations. The surrounding habitats are similar to those on site, with areas of improved and marshy grassland interspersed with areas of woodland.
- 2.15 The closest Noise Sensitive Receptors (NSRs) are the settlements of Morriston, Pant-lasau, Llwynceilyn and Felindre, all within 1km of the site. The Scoping Report also identifies 19 isolated dwellings and farmsteads outside of these settlements but within 1km of the site.
- 2.16 The following nature conservation sites have been identified within 10km of the site:
- Nant Y Crimp Site of Special Scientific Interest (SSSI) – approximately 2.5km from the site.
 - Penllergaer Railway Cutting SSSI – approximately 2.8km from the site.
 - Penplas Grasslands SSSI – approximately 3.2km from the site.
 - Glais Moraine SSSI – approximately 4km from the site.
 - Cadle Heath Local Nature Reserve (LNR) – approximately 4.5km from the site.
 - Camarthen Bay and Estuaries Special Area of Conservation (SAC) – approximately 7.2km from the site.
 - Crymlyn Bog SAC and Ramsar – approximately 7.3km from the site.
 - Burry Inlet Special Protection Area (SPA) and Ramsar (within the boundary of the Camarthen Bay and Estuaries SAC) – approximately 9.7km from the site.

- 2.17 The Burry Inlet SPA and Ramsar have been designated for their avian assemblage, including wintering oystercatcher, northern pintail, common redshank and red knot. The Camarthan Bay and Estuaries SAC is designated for a number of Annex I habitats, including sandbanks, estuaries, mudflats, sandflats; while the Crymlyn Bog SAC is designated for Annex I habitats including transition mires and quaking bogs, calcareous fens and alluvial forests.
- 2.18 There are 23 SINCs within 2km of the site. The locations and details of these features are identified in paragraph 4.7 of the Preliminary Ecological Appraisal.
- 2.19 The Scoping Report identifies 17 Scheduled Ancient Monuments (SAMs), a Grade I listed building, 7 Grade II* listed buildings, three Grade II Registered Parks and Gardens and 2 Conservation Areas within 5km of the site. The locations of these features are identified on Figure 3 of the Scoping Report. In addition, 47 Grade II listed buildings are located within 5km of the site.
- 2.20 The nearest Air Quality Management Area (AQMA) is Swansea Air Quality Management Area 2010, located in the Lower Swansea Valley, approximately 4.5km from the site. It has been declared primarily on the basis of traffic related nitrogen dioxide (NO₂).

Description of the proposed development

- 2.21 The proposed development would operate as a SCGT peaking plant, fuelled by natural gas and capable of producing electricity up to 299MW. To achieve 299MW, between one and five gas turbine generators would be built, with up to five exhaust gas flue stacks.
- 2.22 The gas turbine generators would comprise the following components:
- Inlet air filter;
 - Air compressor;
 - Combustion chamber;
 - Power turbine(s);
 - Exhaust silencer.
- 2.23 On entering the gas turbine(s), air would be compressed and natural gas injected into the air. The natural gas would then burn in the combustion chamber, before expanding across the blades of the gas turbine, driving the electrical generators to produce energy.

- 2.24 The waste gases and heat would then be released into the atmosphere via between one and five stacks. The stack(s) would contain equipment to reduce the emissions released into the atmosphere.
- 2.25 In order to adequately disperse emissions and to meet legislative air quality targets, a study would be undertaken to determine the minimum height of the stack(s).
- 2.26 The maximum area for the generating equipment site would be approximately 6ha. Depending on its final design, the generating equipment may be sited in a number of locations within this area (see Scoping Report, Figure 1: Project Site Plan). The detailed dimensions of the main plant items, which would be present in the generating equipment site, are stated in paragraph 3.3.15 of the Scoping Report. These figures indicate that the tallest element of the proposal (the stack(s)) would be a maximum of 60m in height.
- 2.27 The new gas connection would connect the generating equipment to a suitable fuel source, and would comprise a new underground gas pipeline connection and two above ground installations. The gas connection would be situated within the Gas Connection Opportunity Area as identified on Figure 1: Project Site Plan; with the exact location not yet decided. Termination of the gas connection would be at a Pipeline Inspection Gauge (PIG) Trap Facility (PTF) on the generating equipment site; incorporating a PIG receiving facility, emergency control valve (possible) and isolation valves.
- 2.28 The new electrical connection would comprise new electrical circuits (either in the form of an underground cable or overhead line) to allow power to be exported from the generating equipment to the National Grid. The electrical connection would be situated within the Electrical Connection Opportunity Area as identified on Figure 1: Project Site Plan; with the exact location not yet decided.
- 2.29 The final choice of the gas and electrical connection routes would be decided following further consultation and more thorough assessments of constraints and environmental impacts.
- 2.30 To accommodate the storage of plant and equipment during the construction phase, a temporary laydown area would be provided adjacent to the generating equipment site store. It is not proposed to allocate any land for this purpose beyond the construction phase. The exact location of the laydown area is not identified within the Scoping Report.

Alternatives

- 2.31 The following technology options were also considered for the generator plant: Combined Cycle Gas Turbine (CCGT) plant and Reciprocating Gas Engines (RGE) plant. SCGT was considered the most suitable technology choice for environmental, technical and financial reasons, as detailed in paragraph 3.6.4 of the Scoping Report.

Proposed access

- 2.32 The proposal site would be accessed from Junction 46 of the M4, via one of two routes currently being considered. Access Road Option 1 would be from the north via the Rhyd-y-pandy Road, following the access road west of Brynheulog past Abergelli Farm. Access Road Option 2 would be from the west via the B4489, along the access road to the National Grid electrical substations and then via a new access road to be constructed as part of the proposal. Both access options are illustrated on Figure 1 of the Scoping Report: Project Site Plan.

Construction

- 2.33 Construction and commissioning of the project would take approximately 22 months.
- 2.34 The main works would be the removal of hard standing, excavation and site levelling for new foundations, piling (if required) and the laying of the gas and electricity connections.
- 2.35 Construction is expected to employ between 140 and 250 workers.
- 2.36 A construction programme has not been included in the Scoping Report. The Scoping Report states that the ES will provide details of the construction programme, including construction activities, methods and working hours. An outline Construction Environmental Management Plan (CEMP) would be drafted and appended to the ES, providing details of specific mitigation measures required to reduce the construction related impacts.

Operation and maintenance

- 2.37 Once operational, the proposed development would generate up to 15 full time jobs, with staff working in shifts.
- 2.38 The generating equipment would operate for up to 1,500 hours per year.
- 2.39 The power generation plant would have an operational life of 25 years, after which time it would be decommissioned or re-powered.

Decommissioning

- 2.40 Decommissioning of the project would involve the removal of all power generation items, and the restoration of the site to a similar condition as before the development took place. This process would take approximately 22 months.
- 2.41 Some underground structures, such as the gas and electrical connections, may be left in situ for the purpose of avoiding any adverse environmental impacts arising from their removal. Where possible, items would be reused or recycled.
- 2.42 The decommissioning phase is expected to employ between 140 and 250 workers.

The Secretary of State's Comments

Description of the application site and surrounding area

- 2.43 In addition to detailed baseline information to be provided within topic specific chapters of the ES, the SoS would expect the ES to include a section that summarises the site and surroundings. This would identify the context of the proposed development, any relevant designations and sensitive receptors. This section should identify land that could be directly or indirectly affected by the proposed development and any auxiliary facilities, landscaping areas and potential off site mitigation or compensation schemes.
- 2.44 The ES should include a clear description of the application site which is to be the subject of the DCO, including detailed land levels, existing vegetation species, hard surfaces and the location of existing buildings. The ES should confirm if the application site has been previously developed, and if so, whether it has been subject to any remediation works.
- 2.45 The Scoping Report did not detail whether any areas of the site are at risk from flooding. EA data indicates that an area to the south west of the application site is within EA Flood Zones 2/3. The SoS notes that the ES is to contain a Flood Consequences document. This document should include a description of which areas of the site are at risk from flooding and the exact locations of all water courses on site, including springs, streams and drainage ditches.

Description of the proposed development

- 2.46 The applicant should ensure that the description of the proposed development that is being applied for is as accurate and firm as possible as this will form the basis of the environmental impact assessment. It is understood that at this stage in the evolution of the scheme the description of the proposals and even the location of the site may not be confirmed.

The applicant should be aware however, that the description of the development in the ES must be sufficiently certain to meet the requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations and there should therefore be more certainty by the time the ES is submitted with the DCO.

- 2.47 If a draft DCO is to be submitted, the applicant should clearly define what elements of the proposed development are integral to the NSIP and which is 'associated development' under the Planning Act 2008 (PA 2008) or is an ancillary matter.
- 2.48 Any proposed works and/or infrastructure required as associated development, or as an ancillary matter, (whether on or off-site) should be considered as part of an integrated approach to environmental assessment.
- 2.49 The SoS recommends that the ES should include a clear description of all aspects of the proposed development, at the construction, operation and decommissioning stages, and include:
- Land use requirements;
 - Site preparation;
 - Construction processes and methods;
 - Transport routes;
 - Operational requirements including the main characteristics of the production process and the nature and quantity of materials used;
 - Maintenance activities including any potential environmental impacts;
 - Emissions - water, air and soil pollution, noise, vibration, light, heat, radiation.
- 2.50 The environmental effects of all wastes to be processed and removed from the site should be addressed. The ES will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off site. All waste types should be quantified and classified.
- 2.51 The area identified on Figure 1 of the Scoping Report as 'Power Generation Plant Site' appears to be referred to as 'Generating Equipment Site' in other parts of the Scoping Report, for example in paragraph 3.3.11. To ensure clarity, it is requested that this area is consistently referred to by the same description.

- 2.52 When considering Figure 3 of the Scoping Report: Indicative Environmentally Sensitive Receptors, the SoS notes that due to the chosen colours, it is difficult to distinguish the Scheduled Monuments from some other features (e.g. SINCs, water bodies and LNRs). The ES should ensure to provide clearly distinguishable colours/symbols on all maps and figures, in order to ensure that specific features can be easily identified.

Alternatives

- 2.53 Schedule 4 Part 1 of the EIA Regulations requires that the applicant provides *'An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects'* (See Appendix 3). The SoS welcomes the consideration of alternative technology choices included in the Scoping Report (paragraph 3.6.4) and recommends these details are included in the ES. In addition, the ES should also provide details of other locations considered for the Power Generation Plant.

Flexibility

- 2.54 The applicant's attention is drawn to Advice Note 9 'Using the 'Rochdale Envelope' which is available on the Planning Inspectorate's website and to the 'Flexibility' section in Appendix 3 of this Opinion which provides additional details on the recommended approach.
- 2.55 The SoS notes, from the comments in paragraph 3.3.14 of the Scoping Report, that the detailed design and location of the power station is still being developed. The applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the scheme have yet to be finalised and provide the reasons. At the time of application, any proposed scheme parameters should not be so wide ranging as to represent effectively different schemes. The scheme parameters will need to be clearly defined in the draft DCO and therefore in the accompanying ES. It is a matter for the applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the proposed development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations.
- 2.56 It should be noted that if the proposed development changes substantially during the EIA process, prior to application submission, the applicant may wish to consider the need to request a new scoping opinion.

Proposed access

- 2.57 The ES should detail the proposed access routes for both construction and operational traffic.

Construction

- 2.58 The Secretary of State notes that no information has been provided in the Scoping Request regarding the size and exact location of the temporary laydown area. Whilst it is appreciated that this information may not be available at this stage in the evolution of the project, applicants are reminded that this information will be required in the ES.
- 2.59 The SoS considers that information on construction including: phasing of programme; construction methods and activities associated with each phase; siting of construction compounds (including on and off site); lighting equipment/requirements; and number, movements and parking of construction vehicles (both HGVs and staff) should be clearly indicated in the ES.

Operation and maintenance

- 2.60 Information on the operation and maintenance of the proposed development should be included in the ES and should cover but not be limited to such matters as: the number of full/part-time jobs; the operational hours and if appropriate, shift patterns; the number and types of vehicle movements generated during the operational stage.

Decommissioning

- 2.61 In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment is to enable the decommissioning of the works to be taken into account in the design and use of materials such that structures can be taken down with the minimum of disruption. The process and methods of decommissioning should be considered and options presented in the ES. The SoS encourages consideration of such matters in the ES.
- 2.62 The Scoping Report (paragraph 3.3.17) indicates that the design life of the power generation plant is 25 years. The SoS recommends that the EIA covers the life span of the proposed development, including construction, operation and decommissioning.

3.0 EIA APPROACH AND TOPIC AREAS

Introduction

- 3.1 This section contains the SoS's specific comments on the approach to the ES and topic areas as set out in the Scoping Report. General advice on the presentation of an ES is provided at Appendix 3 of this Opinion and should be read in conjunction with this Section.
- 3.2 Applicants are advised that the scope of the DCO application should be clearly addressed and assessed consistently within the ES.

Environmental Statement (ES) - approach

- 3.3 The information provided in the Scoping Report sets out the proposed approach to the preparation of the ES. Whilst early engagement on the scope of the ES is to be welcomed, the SoS notes that the level of information provided at this stage is not always sufficient to allow for detailed comments from either the SoS or the consultees.
- 3.4 The SoS would suggest that the applicant ensures that appropriate consultation is undertaken with the relevant consultees in order to agree wherever possible the timing and relevance of survey work as well as the methodologies to be used. The SoS notes and welcomes the intention to finalise the scope of investigations in conjunction with on-going stakeholder liaison and consultation with the relevant regulatory authorities and their advisors.
- 3.5 The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

Matters to be scoped out

- 3.6 The applicant has identified in the relevant sections of the Scoping Report the matters proposed to be 'scoped out'. These include:
 - Operational Air Quality Emissions of the Gas and Electrical Connections
 - Operational Noise and Vibration Impacts of the Gas Connection

- Operational Noise Impacts of the Electricity Connection
 - Water Framework Directive (WFD) Report (pending NRW agreement)
 - Drainage / water quality impacts of the gas and electricity connections during the operational and decommissioning phases.
 - Visual impacts upon the Gower AONB
- 3.7 Matters are not scoped out unless specifically addressed and justified by the applicant, and confirmed as being scoped out by the SoS.
- 3.8 It is stated within the Scoping Report that it is not intended to include the operational air quality emissions of the gas and electrical connections as these sections of the proposed development would not produce any significant emissions during the operational phase of the development; the SoS agrees that these impacts can be scoped out of the assessment.
- 3.9 Within the Scoping Report it is stated that it is not intended to include the operational noise or vibration impacts of the gas connection as this aspect of the proposed development would not produce any significant noise or vibration emissions during the operational phase; the SoS agrees that these impacts can be scoped out of the assessment.
- 3.10 It is stated within the Scoping Report that it is not intended to include the operational noise impacts of the electrical connection as this aspect of the proposed development would not produce any significant noise emissions during the operational phase. The SoS recommends that further justification be provided by the applicant for scoping out these potential effects, the SoS draws the attention of the applicant to the comments made by NRW in this respect.
- 3.11 Within the Scoping Report it is stated that the need for a Water Framework Directive Report has been scoped out of the assessment, pending agreement from NRW, as the development is not predicted to have any significant effects on any key water bodies. The SoS agrees that providing NRW indicates that no Water Framework Directive Report will be required for this development the provision of this report can be scoped out of the assessment.
- 3.12 It is stated within the applicants scoping report that any impact on drainage or water quality caused by the gas or electrical connections during the operational and decommissioning phases of the development will be scoped out of the assessment, as no significant drainage or water quality impacts are predicted to occur as a result of the presence of the connections during these phases of the proposed development.

The SoS recommends that the applicant provides further information regarding the potential for any below ground connections to form pathways for the transport of pollutants which may result from previous use of the land. NRW noted that at least part of the site was previously used as landfill.

- 3.13 Within the Scoping Report it is stated that visual impacts of the proposed development on the Gower Area of Outstanding Natural Beauty (AONB) will be scoped out of the assessment as the site is visually separated from the AONB by topography. The SoS expects that the ES should contain confirmation that the stacks required as part of the development, which will be up to 60m in height, will not be visible from the AONB. On the basis of providing such confirmation, the SoS agrees that these impacts may be scoped out of the assessment.
- 3.14 Whilst the SoS has not agreed to scope out certain topics or matters within the Opinion on the basis of the information available at the time, this does not prevent the applicant from subsequently agreeing with the relevant consultees to scope matters out of the ES, where further evidence has been provided to justify this approach. This approach should be explained fully in the ES.
- 3.15 In order to demonstrate that topics have not simply been overlooked, where topics are scoped out prior to submission of the DCO application, the ES should still explain the reasoning and justify the approach taken.

National Policy Statements (NPSs)

- 3.16 Sector specific NPSs are produced by the relevant Government Departments and set out national policy for nationally significant infrastructure projects (NSIPs). They provide the framework within which the Examining Authority will make their recommendations to the Secretary of State and include the Government's objectives for the development of NSIPs.
- 3.17 The relevant NPSs [EN-1, EN-2, EN-4 and EN-5] for the proposed development set out both the generic and technology-specific impacts that should be considered in the EIA for the proposed development. When undertaking the EIA, the applicant must have regard to both the generic and technology-specific impacts and identify how these impacts have been assessed in the ES.
- 3.18 The Secretary of State must have regard to any matter that the Secretary of State thinks is important and relevant to the Secretary of State's decision. This could include the draft NPS if the relevant NPS has not been formally designated.

Environmental Statement - Structure

- 3.19 Section 4.2 of the Scoping Report sets out the proposed structure of the ES on which the applicant seeks the opinion of the SoS.
- 3.20 The SoS notes that from the ES structure table (Scoping Report Table 4.1) that the EIA would cover a number of assessments under the broad headings of:
- Air Quality
 - Noise and Vibration
 - Ecology
 - Water Quality and Resources
 - Geology, Ground Conditions and Agriculture
 - Landscape and Visual
 - Traffic, Transport and Access
 - Cultural Heritage and Archaeology; and
 - Socio-Economics
- 3.21 The SoS recommends that the ES should include a description of how waste generated by the proposed development will be dealt with. The SoS also recommends that the potential impacts of electric and magnetic fields are addressed within the ES. The SoS draws the applicant's attention to the comments of Public Health England on this subject.

Topic Areas

Air Quality (see Scoping Report Section 5.3)

- 3.22 The nearest Air Quality Management Area (AQMA) is Swansea AQMA; it lies approximately 4.5 km from the Project Site and has been declared primarily on the basis of traffic related nitrogen dioxide (NO₂). The SoS considers that adverse change to air quality should be assessed in relation to compliance with European air quality limit values and any impact upon AQMAs.
- 3.23 The SoS considers that the site lies within a sensitive area that includes nationally and European-designated wildlife sites. Within 10 km of the site there are twenty SSSI's, 1 SPA, 2 SAC's, 1 National Nature Reserve and 23 SINCS, the potential impacts on which should be carefully assessed. There is the need to consider potential related effects due to an increase in airborne pollution including fugitive dust especially during site preparation, demolition and construction.

- 3.24 The ES should also include an assessment of potential air quality impacts on the Lower Lliw Reservoir as a result of both deposition and affected rainfall. The SoS notes the comments of Dwr Cymru (Welsh Water) in this respect.
- 3.25 The air quality assessment should use the APIS critical load function tool in order to calculate acid deposition process contributions/exceedances. The SoS draws attention to the comments of NRW in this respect.
- 3.26 The assessment should take account of the air emissions from the proposed development and emissions related to vehicular movements associated with the proposal. The SoS recommends that the implications of stack height and dispersion of the discharge be clearly explained within the ES.
- 3.27 The SoS recommends that the applicant agrees all modelling receptor locations with the City and County of Swansea and also that the applicant consults the City and County of Swansea regarding the proposed data inputs for the air quality model.
- 3.28 The SoS recommends that the applicant agrees which pollutants are to be modelled and the meteorological data to be used with the City and County of Swansea.
- 3.29 The SoS recommends that dispersion modelling considers a range of possibilities and seeks to ensure that the 'worst case' scenario is assessed, for example the 'worst case' may occur as a short term impact. There are a number of residential receptors within 1 km of the project site and suitable receptor locations for modelling purposes should be agreed with the relevant local authority and NRW. This may need to extend to densely populated areas just outside of the proposed study area. The SoS notes the comments of NRW in relation to the village of Llangyfelach in this respect. The SoS recommends that the applicant consider extending the proposed air quality study area to incorporate this village.
- 3.30 The SoS recommends that air quality and dust levels are considered not only on site but also off site, including along access roads, local footpaths and other public rights of way. Consideration should also be given to appropriate mitigation measures and to monitoring dust complaints.
- 3.31 The SoS recommends that the applicant works toward submitting their Environmental Permit application at least six months prior to the submission of their DCO application.

Noise and Vibration (see Scoping Report Section 5.4)

- 3.32 The SoS welcomes that the noise and vibration assessment methodology will accord with NPS EN-1 and will be agreed with the appropriate EHO at the City and County of Swansea.

The SoS notes the intention for noise monitoring locations for the baseline assessment to be agreed with the local EHO but draws attention to the comment from NRW that the discussion on noise monitoring also needs to be communicated to NRW with particular reference to an A1 EPR permit which will include noise conditions.

- 3.33 The SoS draws attention to the comments of NRW regarding the requirements of the Environmental Noise Directive, and the Environmental Noise (Wales) (Amendment) Regulations 2009, which have introduced a 'Noise Action Plan for Wales.' This covers industrial noise sources, impacts on designated Quiet Areas and the impact of creeping background, and should be taken into consideration by the applicant.
- 3.34 The SoS recommends that information be provided on the types of vehicles and plant to be used during the construction phase. Noise impacts on people should specifically be addressed and in particular any potential noise disturbance at night and other unsocial hours such as weekends and public holidays.
- 3.35 The SoS welcomes that the CEMP will set out best practice methods of limiting noise and vibration on site during construction and decommissioning.
- 3.36 The SoS recommends that the noise and vibration assessment takes account of traffic movements along access routes during the construction phase.
- 3.37 The noise assessment should accurately identify the proximity of the identified noise sensitive receptors to the proposed development. With regards to the operational noise assessment, this should cover all modes of operation of the proposed development. The applicant's attention is drawn to NRW's comments in these respects.

Ecology (see Scoping Report Section 5.5)

- 3.38 The SoS recommends that surveys are thorough, up to date and take account of other development proposed in the vicinity. The SoS notes the comments from NRW in support of the proposed further species surveys as proposed in the Phase 1 Habitat Survey; these surveys should follow best practice, current guidelines and be carried out by suitably qualified ecologists at appropriate times of the year. These should include surveys for otter in accordance with the recommendations of NRW. The SoS notes that the proposed development is within 10km of three European sites: Burry Inlet Ramsar Site and SPA, Carmarthen Bay and Estuaries SAC and Crymlyn Bog Ramsar Site and SAC.
- 3.39 The SoS directs the applicant to the comments of the City and County of Wales regarding the Afon Llan and its links to the Loughor Estuary / Burry Inlet.

The SoS recommends that the assessment considers any potential impacts on the nature conservation sites in this area. The SoS welcomes that the assessment will be carried out in accordance with NPS EN-1 and that the results of the Phase 1 Habitat Survey have informed which Phase 2 protected species surveys will be carried out.

- 3.40 The SoS notes the comments from NRW welcoming the re-surveying of the locally significant habitats in Spring/Summer, and expects there to be discussions with the Planning Ecologist for the local planning authority with regards to sensitive siting of the development to mitigate impacts to nature conservation interests. The SoS recommends that the proposals should fully address the need to protect and enhance biodiversity. The assessment should cover habitats species and processes.
- 3.41 The assessment should take into account air quality (including dust) and noise and vibration impacts, and cross reference should be made to these specialist reports.
- 3.42 The SoS welcomes that the CEMP will set out best practice methods of limiting effects on ecology and biodiversity during construction and decommissioning and that further specific mitigation measures will include the consideration of the provision of new habitat to suitably replace any habitat areas that would be permanently lost through the development of the project.
- 3.43 The SoS notes the comments of NRW regarding the presence of peat on site, and expects the ES to contain further clarification about the location of the peat and the impact of the proposed development upon it.
- 3.44 The SoS notes the comments of NRW regarding the potential impact to local watercourses and recommends the maintenance of open watercourses with wide buffer strips in the design of the development.

Water Quality and Resources (see Scoping Report Section 5.6)

- 3.45 The SoS welcomes that the applicant intends to consult both NRW and the Lead Local Flood Authority (LLFA) on the Flood Consequences Assessment. The SoS notes the comments of NRW that the assessment should include consideration of surface water drainage impacts and options for improving site surface water drainage to prevent localised flooding during extreme rainfall events.
- 3.46 The SoS recommends that the applicant considers temporary attenuation ponds to allow adequate settlement of site generated run-off during the construction and decommissioning phases of the development.

The SoS draws the attention of the applicant to NRW's comments that silt fencing, scour protection and Sedimats alone have been proven ineffective in this catchment due to its flashy nature.

- 3.47 The SoS recommends that the applicant ensures that it can be demonstrated that the surface water disposal scheme would cause no harm to local watercourses upon discharge.
- 3.48 The SoS welcomes that the CEMP will set out best practice methods of limiting impacts and on water quality and resources during construction and decommissioning.
- 3.49 The SoS notes the concerns of NRW regarding how sewage and waste waters would be managed at the site, the SoS recommends that details of proposed discharges are provided within the ES.
- 3.50 The SoS welcomes that during construction, operation and decommissioning silt raps and oil interceptors would be placed in drains on the site.
- 3.51 The SoS notes the applicant's intention to use SuDS if required and to minimise the amount of biocides used.
- 3.52 The SoS welcomes that oil and chemical storage tanks and drum storage areas are to be surrounded by an impermeable bund sized to contain 110% of capacity.
- 3.53 The SoS notes that NRW would set limits on the quantity of water that is discharged from the Power Generation Plant under an Environmental Permit.
- 3.54 The SoS notes the concerns of NRW regarding cooling water, it should be stated within the ES whether any cooling water would be required and if so where it would be derived from and discharged to.
- 3.55 The SoS notes the concerns of Dwr Cymru (Welsh Water) regarding the potential impact of the development on water quality within the Lower Lliw Reservoir. It is recommended that the applicant assesses potential impacts on this reservoir including potential impacts from deposition and affected rainfall.
- 3.56 The SoS recommends that the applicant consults Dwr Cymru regarding the 48" strategic water main that crosses the application site.

Geology, Ground Conditions and Agriculture (see Scoping Report Section 5.7)

- 3.57 The SoS welcomes that the assessment will follow the DEFRA / EA publication Contaminated Land Report 11, 2004 'Model Procedures for the Management of Land Contamination'.

- 3.58 The SoS welcomes that the CEMP will include best practice methods of limiting impacts on the land during both construction and decommissioning.
- 3.59 The SoS welcomes that any soils, sub-soils or aggregate suitable for reuse will be stockpiled on impermeable liners.
- 3.60 The SoS welcomes that the foundations of the development will be designed so as not to present a preferential pathway for contaminant migration if present at the project site. The SoS notes that this consideration should be extended to other works forming part of the development, including underground gas and electricity connections.
- 3.61 The SoS draws the attention of the applicant to the comments of the Coal Authority indicating that the site is in a Development High Risk Area, as the site has been subject to past coal mining activity and is located within an area of surface coal resource.
- 3.62 The SoS recommends that the applicant takes into consideration the location and stability of abandoned mine entries, the extent and stability of shallow mine workings, outcropping coal seams, unrecorded mine workings, hydrogeology, minewater and minegas.
- 3.63 The SoS recommends that the applicant consider, if surface coal resources are present, whether prior extraction of the mineral resource is practical and viable. The applicant should also consider whether Coal Authority permission is required to intersect, enter, or disturb any coal or coal workings during site investigation or development work.

Landscape and Visual (see Scoping Report Section 5.8)

- 3.64 The SoS welcomes that the assessment will be carried out in accordance with NPS EN-1, using the methodology set out in the Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013).
- 3.65 The SoS notes that there are a number of residential receptors within 1 km of the project site including those in the nearby settlements of Morriston, Pant-lasau and Llwyncelyn, Felindre, there are also 19 isolated dwellings or farmsteads. National Grid's two 400kV electrical substations and Felindre Gas Compressor Station lie in the western extent of the project site. Team Force Swansea Paintball Centre and a skip hire business as well as the M4 motorway lie approximately 1.5 km to the south.
- 3.66 The SoS welcomes the use of photomontages for key sensitive viewpoints. The SoS notes NRW's offer to provide advice on selected viewpoints and recommends consultation with both NRW and the City and County of Swansea on selected viewpoints.

Consideration should also be given to potential views from Brecon Beacons National Park and the National Park Authority should be consulted about viewpoints, given that the proposed development includes stacks up to 60m in height.

- 3.67 The SoS recommends that the applicant provides a description of existing landscape interests within and in the vicinity of the proposed development site.
- 3.68 The SoS recommends that lighting impacts be considered in the ES.
- 3.69 The SoS recommends that the applicant consider the inclusion of the following developments identified by the City and County of Swansea within the cumulative assessment:
- Planning Application 2012/1221 Mynydd y Gwair Wind Farm - Installation of 16 wind turbines (maximum height to blade tip of 127 metres with a hub height of 80 metres), with a maximum generating capacity of 48MW, associated tracks and ancillary infrastructure (including permanent and temporary anemometer masts, electrical substation compound, hardstandings, transformers and underground cabling) and construction of new access track from A48 (Bolgoed Road at Pontarddulais) (approximately 14.54km in length) incorporating improvements to 3.9km of existing road across Mynydd Pysgodlyn – Planning Permission March, 2013
 - Planning Application 2006/0773 Felindre Business Park - Outline Planning Permission has been granted for a strategic business park for B1 and B2 uses to accommodate emerging industries, high tech manufacturing, high level services, ancillary uses, associated car parking, landscaping and access roads; and
 - Planning Application 2014/1022 Solar park consisting of 47,000 solar panels with the installed capacity of 12.69 MW on land at Brynwhilach Farm.
- 3.70 The SoS also recommends that the proposed sustainable urban village at Felindre is considered within the assessment.
- 3.71 The SoS notes the comments of the Civil Aviation Authority (CAA) with regard to the proposed development. It is recommended that the applicant takes into account any concerns raised by the relevant aerodrome license holders / operators.
- 3.72 It is recommended that the applicant gives consideration to whether there would be any need for aviation warning lighting. The applicant should also seek the opinion of the local emergency services air support units.

- 3.73 The SoS draws the attention of the applicant to the comments of National Grid Electricity Transmission Plc in regard to the four high voltage electricity overhead transmission line which lie within the proposed order limits. The applicant should note National Grids right of access to maintain, repair and inspect their asset, the need to maintain the statutory electrical safety clearances at all times and the requirement that no permanent structures are built directly beneath overhead lines.
- 3.74 The SoS recommends that site staff should have an awareness of the Health and Safety Executive's guidance in relation to working safely near existing overhead lines Guidance Note GS 6 'Avoidance of Danger from Overhead Electric Lines'. Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any high voltage conductors when those conductors are in their worst conditions of maximum 'sag' and 'swing'.
- 3.75 The SoS recommends that where any landscaping is proposed, only slow and low growing species of trees and scrubs should be planted beneath and adjacent to the existing transmission line. The applicant should note that drilling and excavation work should not be undertaken if it has the potential to disturb or adversely affect the foundations of an existing tower.
- 3.76 The SoS notes the comments of National Grid Gas Plc in regard to the three existing gas pipelines and associated equipment which lie in close proximity to the proposed order limits. The applicant should remain aware that National Grid has a Deed of Grant of Easement for each pipeline, preventing the erection of permanent or temporary buildings or structures, changes to existing ground levels, storage of materials etc.
- 3.77 The SoS recommends that where construction traffic can not use existing roads it is agreed with National Grid at which locations construction traffic would cross any pipelines. The applicant should also note that written permission is required from National Grid before any works can commence in the National Grid easement strip.
- 3.78 The SoS recommends that the applicant takes note of National Grids requirements regarding the laying of cables across any pipeline as appropriate.
- 3.79 The SoS recommends that the applicant has an awareness of the Health and Safety Executive's guidance document HS(G) 47 'Avoiding Danger from Underground Services' and National Grid's specification for Safe Working in the vicinity of National Grid High Pressure gas pipelines and associated installations – requirements for third parties T/SP/SSW22.

- 3.80 The SoS notes that any excavations within 3m of a National Grid High Pressure Pipeline or within 10m of an above ground installation the exact depth and position of the pipeline will need to be confirmed on site under the supervision of a National Grid representative.
- 3.81 The SoS notes the comments made by the Health and Safety Executive in relation to electrical safety, it is recommended that it is ensured that the proposed design and future operations are compliant with the Electricity at Work Regulations 1989 and the Electricity, Safety, Continuity and Quality Regulations 2002 as amended.
- 3.82 The SoS notes the comments of Network Rail in regard to the installation of any cables under or over the railway, any methods of electricity transmissions across Network Rail's land or any access rights temporary or otherwise. Where applicable the applicant will be required to gain property agreements with Network Rail's Easements and Wayleaves Team.

Traffic, Transport and Access (see Scoping Report Section 5.9)

- 3.83 The SoS welcomes that the assessment will be undertaken in accordance with the 'Welsh Transport Planning and Appraisal Guidance (Wel TAG) and the Institute of Environmental Assessment's (IEA) 'Guidelines for the Environmental Assessment of Road Traffic' (1993).
- 3.84 The SoS welcomes that the CEMP will set out best practice methods of limiting impacts during construction and decommissioning.
- 3.85 The SoS welcomes that opportunities for reducing traffic movements will be explored such as car share schemes or shift working.
- 3.86 The SoS welcomes that proposed measures to improve access by public transport, walking and cycling will be provided for the operational phase.
- 3.87 The SoS recommends that the applicant consults Network Rail's Asset Protection Engineers if the development could result in abnormal loads using routes that include Network Rail assets such as level crossings / bridges etc.

Cultural Heritage and Archaeology (see Scoping Report Section 5.10)

- 3.88 The SoS notes that there are 17 Scheduled Monuments within 5 km of the project site there are also two conservation areas one Grade I and seven Grade II listed buildings and three Grade II Historic Parks and Gardens.

- 3.89 The SoS welcomes that the assessment will be carried out in accordance with NPS EN-1.
- 3.90 The SoS notes that the applicant may provide screen planting should the project give rise to any adverse impact on above ground heritage assets.
- 3.91 The SoS recommends the inclusion of aerial photographs within search information and draws the applicant's attention to the comments of Cadw in this regard.
- 3.92 The SoS directs the applicant to Cadw's comment regarding the referenced Standard and Guidance for Archaeological Assessment (2011) being superseded by the Standard and Guidance for historic environment desk-based assessment (2012).
- 3.93 The SoS notes the comments of Cadw in regard to the assessment on the setting of designated assets, it is recommended that photographs from each asset towards the development be produced and where an adverse impact is thought likely to occur a photomontage should be produced.
- 3.94 The SoS directs the applicant to Cadw's comment regarding the reference to Registered Battlefields; as not applicable in Wales this reference should be removed, but the ES should include consideration of potential impacts to Registered Historic Landscapes.
- 3.95 The SoS recommends that tranquillity be added to the list of factors considered relevant when assessing impacts on setting.

Socio Economics (see Scoping Report Section 5.11)

- 3.96 The SoS notes that the applicant intends to employ between 150 and 250 personnel and that subject to procurement rules it is anticipated that as many as possible of these staff will be recruited locally.
- 3.97 The SoS notes that the operation of the generating equipment will require up to 15 full time staff over the lifetime of the project working in shifts and that in addition there will be indirect jobs for contracted engineering staff during regular maintenance shutdowns and maintenance of the Gas and Electrical connections.
- 3.98 The SoS welcomes that the assessment will be carried out in accordance with NPS EN-1 and will consider all relevant socio-economic impacts such as tourism, influxes of workers and cumulative impacts.
- 3.99 The SoS welcomes that during construction, operation and decommissioning an effort will be made to use local goods and services, wherever possible.

3.100 The SoS recommends that the applicant provides justification for this choice of simple cycle gas turbine within the ES and directs the applicant to the comments of NRW indicating that this turbine choice is not considered to represent Best Available Technique (BAT).

4.0 OTHER INFORMATION

- 4.1 This section does not form part of the SoS's Opinion as to the information to be provided in the environmental statement. However, it does respond to other issues that the SoS has identified which may help to inform the preparation of the application for the DCO.

Habitats Regulations Assessment (HRA)

- 4.2 The applicant's attention is drawn to The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (The APFP Regulations) and the need to include information identifying European sites to which the Habitats Regulations applies or any Ramsar site or potential SPA which may be affected by a proposal. The SoS notes that Burry Inlet Ramsar Site and SPA, Carmarthen Bay and Estuaries SAC and Crymlyn Bog Ramsar Site and SAC are all located within 10km of the proposed development site. The submitted information should be sufficient for the Competent Authority (CA) to make an appropriate assessment (AA) of the implications for the site if required by Regulation 61(1) of the Habitats Regulations. The applicant should note that the CA is the SoS.
- 4.3 The report to be submitted under Regulation 5(2)(g) of the APFP Regulations with the application must deal with two issues: the first is to enable a formal assessment by the CA of whether there is a likely significant effect; and the second, should it be required, is to enable the carrying out of an AA by the CA.
- 4.4 When considering aspects of the environment likely to be affected by the proposed development; including flora, fauna, soil, water, air and the inter-relationship between these, consideration should be given to the designated sites in the vicinity of the proposed development.

Sites of Special Scientific Interest (SSSIs)

- 4.5 The Secretary of State notes that two SSSIs are located within 5km of the proposed development; Nant y Crimp SSSI and Penplas grasslands SSSI. Where there may be potential impacts on the SSSIs, the SoS has duties under sections 28(G) and 28(I) of the Wildlife and Countryside Act 1981 (as amended) (the W&C Act). These are set out below for information.
- 4.6 Under s28(G), the SoS has a general duty '... to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest'.

- 4.7 Under s28(1), the SoS must notify the relevant nature conservation body (NCB), NRW in this case, before authorising the carrying out of operations likely to damage the special interest features of a SSSI. Under these circumstances 28 days must elapse before deciding whether to grant consent, and the SoS must take account of any advice received from the NCB, including advice on attaching conditions to the consent. The NCB will be notified during the examination period.
- 4.8 If applicants consider it likely that notification may be necessary under s28(1), they are advised to resolve any issues with the NCB before the DCO application is submitted to the SoS. If, following assessment by applicants, it is considered that operations affecting the SSSI will not lead to damage of the special interest features, applicants should make this clear in the ES. The application documents submitted in accordance with Regulation 5(2)(1) could also provide this information. Applicants should seek to agree with the NCB the DCO requirements which will provide protection for the SSSI before the DCO application is submitted.

European Protected Species (EPS)

- 4.9 Applicants should be aware that the decision maker under the Planning Act 2008 (PA 2008) has, as the CA, a duty to engage with the Habitats Directive. Where a potential risk to an EPS is identified, and before making a decision to grant development consent, the CA must, amongst other things, address the derogation tests² in Regulation 53 of the Habitats Regulations. Therefore the applicant may wish to provide information which will assist the decision maker to meet this duty.
- 4.10 If an applicant has concluded that an EPS licence is required the ExA will need to understand whether there is any impediment to the licence being granted. The decision to apply for a licence or not will rest with the applicant as the person responsible for commissioning the proposed activity by taking into account the advice of their consultant ecologist.
- 4.11 Applicants are encouraged to consult with NRW and, where required, to agree appropriate requirements to secure necessary mitigation. It would assist the examination if applicants could provide, with the application documents, confirmation from NRW whether any issues have been identified which would prevent the EPS licence being granted.
- 4.12 Generally, NRW are unable to grant an EPS licence in respect of any development until all the necessary consents required have been secured in order to proceed.

² Key case law re need to consider Article 16 of the Habitats Directive: Woolley vs East Cheshire County Council 2009 and Morge v Hampshire County Council 2010.

For NSIPs, NRW will assess a draft licence application in order to ensure that all the relevant issues have been addressed. Within 30 working days of receipt, NRW will either issue 'a letter of no impediment' stating that it is satisfied, insofar as it can make a judgement, that the proposals presented comply with the regulations or will issue a letter outlining why NRW consider the proposals do not meet licensing requirements and what further information is required before a 'letter of no impediment' can be issued. The applicant is responsible for ensure draft licence applications are satisfactory for the purposes of informing formal pre-application assessment by NRW.

4.13 Ecological conditions on the site may change over time. It will be the applicant's responsibility to ensure information is satisfactory for the purposes of informing the assessment of no detriment to the maintenance of favourable conservation status (FCS) of the population of EPS affected by the proposals³. Applicants are advised that current conservation status of populations may or may not be favourable. Demonstration of no detriment to favourable populations may require further survey and/or submission of revised short or long term mitigation or compensation proposals. In Wales, the focus is on evidencing the demonstration of no detriment to the maintenance of favourable conservation status (FCS) of the population or colony of EPS potentially affected by the proposals. This approach will help to ensure no delay in issuing the licence should the DCO application be successful.

4.14 In Wales, assistance may be obtained from NRW's Regional Species Teams. These Teams provide advice on a range of issues concerning EPS including advice on compensation site design, measures to mitigate incidental capture/killing, evidencing compliance and post project surveillance. The service is free of charge and entirely voluntary. Regional Species Teams can be contacted via NRW's Enquiry Service. Further information is available from the following link:

<http://naturalresourceswales.gov.uk/apply-buy-report/apply-buy-grid/protected-species-licensing/european-protected-species-licensing/?lang=en>

Health Impact Assessment

4.15 The SoS considers that it is a matter for the applicant to decide whether or not to submit a stand-alone Health Impact Assessment (HIA).

³ Key case law in respect of the application of the FCS test at a site level: Hafod Quarry Land Tribunal (Mersey Waste (Holdings) Limited v Wrexham County Borough Council) 2012, and Court of Appeal 2012.

However, the applicant should have regard to the responses received from the relevant consultees regarding health, and in particular to the comments from Public Health England in relation to emissions to air and the Health and Safety Executive in relation to electrical safety issues (see Appendix 2).

- 4.16 The methodology for the HIA, if prepared, should be agreed with the relevant statutory consultees and take into account mitigation measures for acute risks.

Other regulatory regimes

- 4.17 The SoS recommends that the applicant should state clearly what regulatory areas are addressed in the ES and that the applicant should ensure that all relevant authorisations, licences, permits and consents that are necessary to enable operations to proceed are described in the ES. Also it should be clear that any likely significant effects of the proposed development which may be regulated by other statutory regimes have been properly taken into account in the ES.
- 4.18 It will not necessarily follow that the granting of consent under one regime will ensure consent under another regime. For those consents not capable of being included in an application for consent under the PA 2008, the SoS will require a level of assurance or comfort from the relevant regulatory authorities that the proposal is acceptable and likely to be approved, before they make a recommendation or decision on an application. The applicant is encouraged to make early contact with other regulators. Information from the applicant about progress in obtaining other permits, licences or consents, including any confirmation that there is no obvious reason why these will not subsequently be granted, will be helpful in supporting an application for development consent to the SoS.

Transboundary Impacts

- 4.19 The SoS has noted that the applicant has not indicated whether the proposed development is likely to have significant impacts on another European Economic Area (EEA) State.
- 4.20 Regulation 24 of the EIA Regulations, which *inter alia* require the SoS to publicise a DCO application if the SoS is of the view that the proposal is likely to have significant effects on the environment of another EEA state and where relevant to consult with the EEA state affected. The SoS considers that where Regulation 24 applies, this is likely to have implications for the examination of a DCO application.

- 4.21 The SoS recommends that the ES should identify whether the proposed development has the potential for significant transboundary impacts and if so, what these are and which EEA States would be affected.

APPENDIX 1

List of Consultees

APPENDIX 1

LIST OF BODIES FORMALLY CONSULTED DURING THE SCOPING EXERCISE

CONSULTEE	ORGANISATION
SCHEDULE 1	
The Welsh Ministers	Welsh Government
The Health and Safety Executive	Health and Safety Executive
The Relevant Fire and Rescue Authority	Mid and West Wales Fire and Rescue
The Relevant Police and Crime Commissioner	Dyfed-Powys Police
The Relevant Parish Council(s) or Relevant Community Council	Llanedi Community Council
	Pontarddulais Community Council
	Betws Community Council
	Pontardawe Town Council
	Cwmaman Town Council
	Mawr Community Council
	Pontlliw and Tircoed
	Penllergaer
	Llangyfelach
The Equality and Human Rights Commission	Clydach Community Council
	Equality and Human Rights Commission
Royal Commission On Ancient and Historical Monuments Of Wales	Royal Commission On Ancient and Historical Monuments Of Wales
The Natural Resources Body for Wales	Natural Resources Wales
The Civil Aviation Authority	Civil Aviation Authority
The Relevant Highways Authority	City and County of Swansea - Highways
The Passengers Council	Passenger Focus
The Disabled Persons Transport Advisory Committee	Disabled Persons Transport Advisory Committee
The Coal Authority	The Coal Authority
The Office Of Rail Regulation	Office of Rail Regulation (Customer Correspondence Team Manager)
Approved Operator	Network Rail Infrastructure Ltd
Approved Operator	Network Rail (CTRL) Ltd
The Gas and Electricity Markets Authority	OFGEM
The Water Services Regulation Authority	OFWAT
The Canal and River Trust	The Canal and River Trust
Public Health England, an executive agency to the Department of Health	Public Health England

The Relevant Local Resilience forum	Dyfed Powys LRF Partnership Team
The Crown Estate Commissioners	The Crown Estate
The Natural Resources Body for Wales	Natural Resources Wales
The relevant local health board	Abertawe Bro Morgannwg University LHB
The National Health Service Trusts	Health Protection Team Public Health Wales
The National Health Service Trusts	Welsh Ambulance Services Trust
The National Health Service Trusts	Velindre NHS Trust
RELEVANT STATUTORY UNDERTAKERS	
Relevant Statutory Undertakers (s.8 ALA 1981)	
Railway	Network Rail Infrastructure Ltd
Railways	Highways Agency Historical Railways Estate
Water Transport	The Canal and River Trust
Dock	Swansea Port
Civil Aviation Authority	Civil Aviation Authority
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route (NERL) Safeguarding
Universal Service Provider	Royal Mail Group
Water and Sewage Undertakers	Dwr Cymru (Welsh Water)
Public Gas Transporter	Energetics Gas Limited
	ES Pipelines Ltd
	ESP Connections Ltd
	ESP Networks Ltd
	ESP Pipelines Ltd
	Fulcrum Pipelines Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	LNG Portable Pipeline Services Limited
	National Grid Gas Plc
	National Grid Plc
	Quadrant Pipelines Limited
	SSE Pipelines Ltd
	Scotland Gas Networks Plc
	Southern Gas Networks Plc
Electricity Distributors With CPO Powers	Wales and West Utilities Ltd
	Energetics Electricity Limited
	ESP Electricity Limited
	Independent Power Networks Limited
	The Electricity Network Company Limited

Electricity Transmitters With CPO Powers	National Grid Electricity Transmission Plc
	National Grid Plc
LOCAL AUTHORITIES (SECTION 43)	
A county council, or county borough council , in Wales	Swansea Council
	Neath Port Talbot County Borough Council
	Camarthenshire Council
NON-PRESCRIBED CONSULTATION BODIES	
Welsh Language Commissioner	Welsh Language Commissioner
CADW	Cadw

APPENDIX 2

Respondents to Consultation and Copies of Replies

APPENDIX 2

LIST OF BODIES WHO REPLIED BY THE STATUTORY DEADLINE

Betwys Community Council
Cadw
City and County of Swansea
Civil Aviation Authority
Dwr Cymru (Welsh Water)
Energetics Gas Limited
E S Pipelines Ltd, ESP Electricity Ltd, ESP Pipelines Ltd, ESP Connections Ltd and ESP Networks Ltd
Fulcrum Pipelines Limited
GTC Pipelines Limited
Health and Safety Executive
NATs Safeguarding
National Grid Electricity Plc
National Grid Gas Plc
Natural Resources Wales
Neath Port Talbot County Borough Council
Network Rail
Public Health England
The Coal Authority

Cyngor Cymuned **BETWS** Community Council

Cerith W Griffiths
Clerc i'r Cyngor

77, Heol Cwmfferws
Tycroes
Rhydaman
Sir Gaerfyrddin
SA18 3TU

Ffôn: 01269 268541

Cyfeiriad e-bost:
Betwscommunitycouncil@hotmail.co.uk



Cerith W Griffiths
Clerk to the Council

77, Cwmfferws Road
Tycroes
Ammanford
Carmarthenshire
SA18 3TU

Tel: 01269 268541

Email Address:
Betwscommunitycouncil@hotmail.co.uk

Eich cyf / Your ref: **EN100069**

Fy nghyf / My ref:

Dyddiad / Date: 10th July 2014

The Planning Inspectorate
3/18, Eagle Wing
Temple Quay House
2, The Square
Bristol
BS1 6PN

Dear Sir/Madam,

**RE: APPLICATION BY ABERGELLI POWER LTD. FOR AN ORDER GRANTING
DEVELOPMENT CONSENT FOR THE ABERGELLI POWER PROJECT**

I refer to your letter dated 26th June 2014 regarding the above application, and confirm that Betws Community Council have no comments to make.

Yours sincerely

C W Griffiths (Clerk)

From: Smailes Baggy <Baggy.Smailes@caa.co.uk>
Sent: 30 June 2014 08:47
To: Environmental Services
Subject: Abergelli Power Project Scoping Comment - EN010069

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Sirs,

Proposed Abergelli Power Project – Scoping Comment

Thank you for The Planning Inspectorate's recent correspondence relating to the subject development. The Inspectorate sought related Civil Aviation Authority (CAA) scoping comment; I trust the following is useful.

I note from the Scoping Report (SR) that the tallest associated structures are expected to be between 1 and 5 chimney stacks that would each have a height of up to 60metres (m). On that basis I believe the following (potential) issues are worthy of consideration:

- **Aerodromes.** In respect of any potential aerodrome related issue, I should highlight the need to check any safeguarding maps lodged with relevant planning authorities to identify any aerodrome specific safeguarding issues. To that effect, I note the relatively close proximity of Swansea Airport to the development site. Noting that aerodrome safeguarding responsibility rests in all cases with the relevant aerodrome operator / licensee, not the CAA, it is important that the related viewpoints of any relevant aerodrome license holders / operators is established and any concerns expressed appropriately mitigated.
- **Aviation Warning Lighting:**
 - In the UK, the need for aviation obstruction lighting on 'tall' structures depends in the first instance upon any particular structure's location in relationship to an aerodrome. If the structure constitutes an 'aerodrome obstruction' it is the aerodrome operator that with review the lighting requirement. For civil aerodromes, they will, in general terms, follow the requirements of CAP 168 - Licensing of Aerodromes. This document can be downloaded from the Civil Aviation CAA website at www.caa.co.uk/docs/33/CAP168.PDF - Chapter 4 (12.8) refers to obstacle lighting.
 - **Away from aerodromes** Article 219 of the UK Air Navigation Order applies. This Article requires that for en-route obstructions (ie away from aerodromes) lighting only becomes legally mandated for structures of a height of 150m or more. However, structures of lesser height might need aviation obstruction lighting if, by virtue of their location and nature, they are considered a significant navigational hazard.
 - **Cranes**, whether in situ temporarily or long term are captured by the points heighted above. Note that if a crane is located on top of another structure, it is the overall height (structure + crane) that is relevant.
 - In this case, given the assumed maximum height of 60m, Article 219 would not apply. In the event that there is no aerodrome issue I can advise that the CAA would not in isolation make any case for lighting.
- **Gas Venting and/or Flaring.** It is assumed that the new facility is not intended to vent or flare gas either routinely or as an emergency procedure such as to cause a danger to overlying aircraft. If

that is not the case parties are invited to use myself as an appropriate point of contact for any further related discussion.

- **Aviation Promulgation.** There is a civil aviation requirement in the UK for all structures over 300 feet high to be charted on aviation maps. It follows that, at 60m (197ft) high, there is no en-route (ie non-aerodrome specific) civil aviation charting requirement. However, if crane usage in the construction phase involves heights of 300ft or more, the temporary structure will need to be appropriately notified. For temporary structures this notification can be achieved through the publication of a **Notice to Airmen (NOTAM)**. If needed by virtue of temporary use of cranes such that the 300ft threshold is breached a NOTAM can be arranged through the developer providing related details to the CAA's Airspace Utilisation Section (ausops@caa.co.uk / 0207 453 6599).
- **Military Aviation.** For completeness, the Ministry of Defence position in regards to the proposed development and military aviation activity should be established.
- I should also add that due to the unique nature of associated operations in respect of operating altitudes and potentially unusual landing sites, it would also be sensible to establish the related viewpoint of local emergency services air support units.

I believe that any associated Environmental Statement / Development Consent Order (or equivalent / similar) would be expected to acknowledge and where applicable address the issues highlighted above and accordingly the scoping opinion should make related comment.

Whilst none of the above negates any aforementioned need to consult in line with Government requirements associated with the safeguarding of aerodromes and other technical sites (Government Circular 1/2003 refers), I hope this information matches your requirements. Please do not hesitate to get in touch if you require any further comment or needs clarification of any point.

Mark Smailes

Airspace Regulator
Safety and Airspace Regulation Group
Civil Aviation Authority
CAA House
45-59 Kingsway
London WC2B 6TE
Tel: 0207 453 6545

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Web www.cadw.wales.gov.uk

Jenny Colfer
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Eich cyfeirnod Your reference	EN010069
Ein cyfeirnod Our reference	AD
Dyddiad Date	24 July 2014
Llinell uniongyrchol Direct line	01443 336097
Ebost Email:	Adele.davies42@wales.gsi.gov.uk

Dear Ms Colfer

**PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING
(ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (AS AMENDED) –
REGULATION 8**

**APPLICATION BY ABERGELLI POWER LIMITED FOR AN ORDER GRANTING
DEVELOPMENT CONSENT FOR THE ABERGELLI POWER PROJECT**

SCOPING CONSULTATION WITH NON PRESCRIBED CONSULTATION BODIES

Thank you for your letter of 26 June 2014 inviting Cadw's comments on the above.

This consultation is in regard to the scoping of the Cultural Heritage and Archaeology section of an Environmental Impact Assessment for a proposed Power Station.

The designated historic assets listed in the document as being inside 5km of the application area concurs with the information on Cadw's database.

In section 10.5.7 searches should include aerial photographs as held by Central Register of Air Photography for Wales and also LiDAR information held by National Resources Wales.

Section 5.10.8 Standard and Guidance for archaeological assessment (Institute for Archaeologists 2011) has been superseded by Standard and Guidance for historic environment desk-based assessment (Institute for Archaeologists 2012) and the work should be undertaken in accordance with that document.

Section 5.10.11 In order to assist the assessment on the setting of designated assets, photographs from each asset towards the development site should be produced. Where it is clear that an adverse impact will occur than a photomontage should be produced.

Section 5.10.12 Registered Battlefields should be removed from this list as no such register exists in Wales, although Registered Historic Landscapes should be added.



Section 5.10.14 Tranquillity should be added to this list.

Finally, as the work required to determine the magnitude of impact will need to be assessed using professional judgement by a competent expert, it is strongly recommended that this work should be undertaken by a Member of the Institute for Archaeologists (IfA) and ideally an IfA registered organisation.

Yours sincerely

A solid black rectangular box used to redact the signature of Adele Davies.

Adele Davies
Diogelu a Pholisi/ Protection and Policy

Hannah Nelson

From: Alan Slee <alans@espipelines.com>
Sent: 28 July 2014 15:59
To: Environmental Services
Subject: RE: Reference: PE126442. Plant Not Affected Notice from ES Pipelines

Dear Jenny,

Thanks for your call and this often raises some confusion. ESP Gas Group has been renamed ESP Utilities Group Limited and this standard response template is embedded in our database and is subject to revision at some stage soon on the next update tranche. The company status has not changed in as much that ESP Utilities Group Ltd consists of the 5 licensed companies (referred to as 'subsidiary brands' on our website) consisting E S Pipelines Ltd, ESP Electricity Ltd, ESP Pipelines Ltd, ESP Connections Ltd and ESP Networks Ltd. They are all operated from our offices in Leatherhead and to avoid confusion and multiple and voluminous copies prefer to respond in 'bulk'. All our asset data is held at one location and the response is based upon a companywide search incorporating all gas and electricity assets that we own and manage and that fall under our statutory undertakers obligations.

Regards,

Alan Slee
Operations Manager

DD 01372 227567
Mobile 07766 802070
Fax 01372 386203
www.esputilities.com

From: Environmental Services [mailto:EnvironmentalServices@infrastructure.gsi.gov.uk]
Sent: 28 July 2014 15:54
To: Alan Slee
Subject: RE: Reference: PE126442. Plant Not Affected Notice from ES Pipelines

Dear Mr Slee

Thank you for your response to the scoping consultation in relation to the Abergelli Power Project. Please can you confirm by reply to this email that you are responding on behalf of E S Pipelines Ltd, ESP Electricity Ltd, ESP Pipelines Ltd, ESP Connections Ltd and ESP Networks Ltd.

Kind Regards

Jenny

Jenny Colfer
Senior EIA and Land Rights Advisor
Major Applications and Plans

The Planning Inspectorate, 3/18 Eagle Wing, Temple Quay House, Temple Quay,
Bristol BS1 6PN

Direct Line: 0303 444 5532
Helpline: 0303 444 5000
Email: jenny.colfer@pins.gsi.gov.uk

Web: www.planningportal.gov.uk/planninginspectorate (Planning Inspectorate casework and appeals)

Web: www.planningportal.gov.uk/infrastructure (Planning Inspectorate's National Infrastructure Planning portal)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

This communication does not constitute legal advice.

Please view our [Information Charter](#) before sending information to the Planning Inspectorate.

From: ES Pipelines [<mailto:email@espipelines.com>]

Sent: 01 July 2014 11:41

To: Environmental Services

Subject: Reference: PE126442. Plant Not Affected Notice from ES Pipelines

Environmental Services
The Planning Inspectorate

1 July 2014

Reference: EN010069 Abergelli Power Project Scoping Consultat

Dear Sir/Madam,

Thank you for your recent plant enquiry at: Abergelli Power Project

I can confirm that ESP Gas Group Ltd has no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works.

ESP are continually laying new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your enquiry.

Important Notice

Please be advised that any enquiries for ESP Connections Ltd, formerly known as British Gas Connections Ltd, should be sent directly to us at the address shown above or alternatively you can email us at: PlantResponses@espipelines.com

Yours faithfully,

Alan Slee
Operations Manager

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Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes.

Hannah Nelson

From: Claire Ferguson <claire.ferguson@energetics-uk.com>
Sent: 27 June 2014 11:48
To: Environmental Services
Subject: EN010069

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Sir/Madam,

Thank you for submitting your recent plant enquiry.

Based on the information provided, I can confirm that Energetics **does not** have any plant within the area(s) specified in your request.

Please be advised that it may take around 10 working days to process enquiries. In the unlikely event that you have been waiting longer than 10 working days, or require further assistance with outstanding enquiries, please call 01698 404945.

Please ensure all plant enquiries are sent to plantenquiries@energetics-uk.com

Regards

Claire Ferguson

Technical Clerical Team

Energetics Design & Build
International House
Stanley Boulevard
Hamilton International Technology Park
Glasgow
G72 0BN

t: 01698 404979

f: 01698 404940

e: claire.ferguson@energetics-uk.com

w: www.energetics-uk.com

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Correspondents should note that all communications to Department for Communities and Local Government may be automatically logged, monitored and/or recorded for lawful purposes.

Hannah Nelson

From: Penlington, Graham <Graham.Penlington@fulcrum.co.uk> on behalf of &box_FPLplantprotection_conx, <FPLplantprotection@fulcrum.co.uk>
Sent: 02 July 2014 16:27
To: Environmental Services
Subject: RE: EN010069 Abergelli Power Project Scoping Consultation

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you for asking Fulcrum Pipelines Limited to examine your consultation document for the above project.

We can confirm that Fulcrum Pipelines Limited have no comments to make on this scoping report. Please note that we are constantly adding to our underground assets and would strongly advise that we are consulted prior to undertaking any excavations.

Please note that other gas transporters may have plant in this locality which could be affected.

We will always make every effort to help you where we can, but Fulcrum Pipelines Limited will not be held responsible for any incident or accident arising from the use of the information associated with this search. The details provided are given in good faith, but no liability whatsoever can be accepted in respect thereof.

If you need any help or information simply contact Fulcrum on 0845 641 3060

To save you time, any future requests for information about our plant, can be emailed to FPLplantprotection@fulcrum.co.uk

GRAHAM PENLINGTON
Process Assistant



Tel: 0845 641 3060
Direct Dial: 01142 804 175
Email: Graham.Penlington@fulcrum.co.uk
Web: www.fulcrum.co.uk



FULCRUM NEWS

FULCRUM ENGINEER SCOOPS TOP GAS INDUSTRY AWARD

Fulcrum's Paul Leighton named as the UK gas industry's 2014 Engineer of The Year. [Learn more.](#)

FULCRUM TOASTS SUCCESSFUL COMPLETION OF HISTORIC £7.6MILLION, 16 MILE GAS PIPELINE

16-mile link to Scotland's main gas network completed six-months ahead of schedule despite winter temperatures of-12°C. [Learn more.](#)

Hannah Nelson

From: Tom.Anderson@gtc-uk.co.uk
Sent: 27 June 2014 10:56
To: Environmental Services
Subject: EN010069

Follow Up Flag: Follow up
Flag Status: Flagged

Hi

With regard to the above ref we have no comment to make

Kind Regards

Tom Anderson
Engineering Support Officer

GTC
Engineering
Energy House
Woolpit Business Park
Woolpit
Bury St. Edmunds
Suffolk
IP30 9UP
Tel: 01359 243376 (ext. 3376)
Fax: 01359 244046
Email: tom.anderson@gtc-uk.co.uk
Web: www.gtc-uk.co.uk

NOTE:

This E-Mail originates from GTC, Energy House, Woolpit Business Park, Woolpit, Bury St Edmunds, Suffolk, IP30 9UP

VAT Number: GB688 8971 40. Registered No: 029431.

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HID Policy - Land Use Planning
NSIP Consultations
Building 5.S.2, Redgrave Court
Merton Road, Bootle
Merseyside, L20 7HS

Your ref: EN010069
Our ref: 4.2.1.4172

HSE email: NSIP.applications@hse.gsi.gov.uk

FAO Jenny Colfer
The Planning Inspectorate
3/18 Eagle Wing,
Temple Quay House
2 The Square, Bristol
BS1 6PN

Dear Ms Colfer

21st July 2014

**PROPOSED ABERGELLI POWER PROJECT (the project)
PROPOSAL BY ABERGELLI POWER LTD (the applicant)
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (as amended) – Regulations 8 and 9**

Thank you for your letter of 26th June 2014 regarding the information to be provided in an environmental statement relating to the above project.

HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

HSE's land use planning advice

Will the proposed development fall within any of HSE's consultation distances?

By necessity, the proposal will be in close proximity to a number of Major Accident Hazard pipelines located mainly to the north of the proposed site.

If the site has occupied buildings, the positioning should take into account HSE land-use planning guidance (<http://www.hse.gsi.gov.uk/landuseplanning/index.htm>). If these are buildings necessarily considered to be part of the establishment, HSE is unlikely to advise against the proposed development in its current form.

Hazardous Substance Consent

The developer is advised to consider whether storage of hazardous substances is involved and, if so, whether Hazardous Substances Consent would be required. Further information on Hazardous Substances Consent should be sought from the Hazardous Substances Authority.

The presence on, under or above land of certain hazardous substances, at above se threshold quantities (Controlled Quantities), may require Hazardous Substances Consent under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which Consent is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 1992 as amended by the Planning (Control of Major Accident Hazards) Regulations 1999 and The Planning (Hazardous Substances) (Amendment) (England) Regulations 2009 & 2010.

Hazardous Substances Consent would be required if the proposal includes storage or use any of the named or generic categories of substances/preparations at or above the controlled quantities set out in Schedule 1 of these Regulations.

Explosives sites

The proposed Abergelli Power Project development does not impinge on the separation distances of any explosives licensed site in the vicinity of the application.

Electrical Safety

The project involves connections to electrical power distribution systems and has an impact on the existing generation, transmission and distribution assets on the UK mainland. In the light of that, HSE offers the following comments:

As well as satisfying general health and safety legislation (ie the Health and Safety at Work etc Act 1974 and supporting regulations), the proposed design and future operations must comply with the Electricity at Work Regulations 1989 and the Electricity, Safety, Continuity and Quality Regulations 2002 as amended. Generators, distributors, their contractors and others have defined duties in order to protect members of the public from the dangers posed by the electrical equipment used. HSE enforces the safety aspects of these regulations. If you have any doubts about the particular application of these regulations in terms of either the operation or construction of generators, substations, overhead lines or underground cables please contact Mr J C Steed, Principle Specialist Electrical Inspector, either at john.steed@hse.gsi.gov.uk or Rose Court GSW, 2 Southwark Bridge Road, London, SE1 9HS.

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively any hard copy correspondence should be sent to:

Miss Laura Evans
NSIP Consultations
5.S.2 Redgrave Court
Merton Road
Bootle, Merseyside
L20 7HS

Yours sincerely,



Laura Evans
HID Policy - Land Use Planning

3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

SUBMITTED VIA EMAIL TO:
enviromentalservices@infrastructure.gsi.gov.uk

Land and Development

Laura Kelly
Town Planner
Laura.kelly@nationalgrid.com
Direct tel: +44 (0)1926 654686

www.nationalgrid.com

08 July 2014

Your Ref: EN010069

Dear Sir/Madam,

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (As Amended)- Regulations 8 and 9

Application by Abergelli Power Limited for an order granting development consent for the Abergelli Power Project

Scoping consultation and notification of the applicants contact details and duty to make available information to the applicant if requested

This is a joint response by National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG)

I refer to your letter dated 26th June 2014 regarding the above proposed application. Having reviewed the Scoping report documents, I would like to make the following comments:

National Grid Infrastructure within or in close proximity to the Proposed Order Limits

National Grid Electricity Transmission

National Grid Electricity Transmission has four high voltage electricity overhead transmission lines which lie within the proposed order limits. These lines form an essential part of the electricity transmission network in England and Wales and details are as follows:

- 4YV-400kV Overhead Transmission Line – Pembroke- Walham
Pembroke- Swansea
- 4YW- 400kV Overhead Transmission Line- Pembroke-Swansea
- 4YW- 400kV Overhead Transmission Line- Clifynydd- Swansea
- 4YU – 400kV Overhead Transmission Line- Pembroke- Walham
Clifynydd- Swansea

The following two substations are also located within the proposed order limits:

- Swansea North 400kV Substation
- Swansea North 275kV Substation

I enclose plans showing the routes of our overhead line and the location of our substation within the area shown on the 'DCO Site & Development Land Parcels' plan.

The following points should be taken into consideration:

- National Grid's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for "overhead line clearances Issue 3 (2004) available at:
http://www.nationalgrid.com/uk/LandandDevelopment/DDC/devnearohl_final/appendixIII/applIII-part2
- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 "Avoidance of Danger from Overhead Electric Lines" and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum "sag" and "swing" and overhead line profile (maximum "sag" and "swing") drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or "pillars of support" of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation ("pillar of support") drawings can be obtained using the contact details above

To view the Development Near Lines Documents. Please use the link below:

<http://www2.nationalgrid.com/uk/services/land-and-development/planning-authority/development-near-ohl/>

National Grid Gas Transmission

National Grid has three high pressure gas transmission pipelines and associated equipment located within and in close proximity to the proposed order limits. Details are as follows:

- FM28- Herbrandston- Felinfre
- FM28- Felindre- Three Cocks
- FM28- Felindre- Clifrew

National Grid Gas Distribution

National Grid has no gas distribution apparatus within the proposed order limits

Specific Comments – Gas Infrastructure

The following points should be taken into consideration:

- National Grid has a Deed of Grant of Easement for each pipeline, which prevents the erection of permanent / temporary buildings, or structures, change to existing ground levels, storage of materials etc.

Pipeline Crossings:

- Where existing roads cannot be used, construction traffic should ONLY cross the pipeline at previously agreed locations.
- The pipeline shall be protected, at the crossing points, by temporary rafts constructed at ground level. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.
- The type of raft shall be agreed with National Grid prior to installation.
- No protective measures including the installation of concrete slab protection shall be installed over or near to the National Grid pipeline without the prior permission of National Grid.
- National Grid will need to agree the material, the dimensions and method of installation of the proposed protective measure.
- The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to National Grid.
- Please be aware that written permission is required before any works commence within the National Grid easement strip.

- A National Grid representative shall monitor any works within close proximity to the pipeline to comply with National Grid specification T/SP/SSW22.
- A Deed of Consent is required for any crossing of the easement

Cables Crossing:

- Cables may cross the pipeline at perpendicular angle to the pipeline i.e. 90 degrees.
- A National Grid representative shall supervise any cable crossing of a pipeline.
- Clearance must be at least 600mm above or below the pipeline.
- Impact protection slab should be laid between the cable and pipeline if cable crossing is above the pipeline.
- A Deed of Consent is required for any cable crossing the easement.
- Where a new service is to cross over the pipeline a clearance distance of 0.6 metres between the crown of the pipeline and underside of the service should be maintained. If this cannot be achieved the service shall cross below the pipeline with a clearance distance of 0.6 metres.

General Notes on Pipeline Safety:

- You should be aware of the Health and Safety Executives guidance document HS(G) 47 "Avoiding Danger from Underground Services", and National Grid's specification for Safe Working in the Vicinity of National Grid High Pressure gas pipelines and associated installations - requirements for third parties T/SP/SSW22.
- National Grid will also need to ensure that our pipelines access is maintained during and after construction.
- Our pipelines are normally buried to a depth cover of 1.1 metres however; actual depth and position must be confirmed on site by trial hole investigation under the supervision of a National Grid representative. Ground cover above our pipelines should not be reduced or increased.
- If any excavations are planned within 3 metres of National Grid High Pressure Pipeline or, within 10 metres of an AGI (Above Ground Installation), or if any embankment or dredging works are proposed then the actual position and depth of the pipeline must be established on site in the presence of a National Grid representative. A safe working method agreed prior to any work taking place in order to minimise the risk of damage and ensure the final depth of cover does not affect the integrity of the pipeline.
- Excavation works may take place unsupervised no closer than 3 metres from the pipeline once the actual depth and position has been confirmed on site under the supervision of a National Grid representative. Similarly, excavation with hand held power tools is not permitted within 1.5 metres from our apparatus and the work is undertaken with NG supervision and guidance.

To view the SSW22 Document, please use the link below:

National Grid is a trading name for:
National Grid Electricity Transmission plc
Registered Office: 1-3 Strand, London WC2N 5EH
Registered in England and Wales, No 2366977

National Grid is a trading name for:
National Grid Gas plc
Registered Office: 1-3 Strand, London WC2N 5EH
Registered in England and Wales, No 2006000

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/GasElectricNW/safeworking.htm>

To download a copy of the HSE Guidance HS(G)47, please use the following link:

<http://www.hse.gov.uk/pubns/books/hsg47.htm>

Further information in relation to National Grid's gas transmission pipelines can be accessed via the following internet link:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/gastransmission/gaspipes/>

Further Advice

We would request that the potential impact of the proposed scheme on National Grid's existing assets as set out above is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.

Where the promoter intends to acquire land, extinguish rights, or interfere with any of National Grid apparatus protective provisions will be required in a form acceptable to it to be included within the DCO.

Where any diversion of apparatus may be required to facilitate a scheme, National Grid is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by National Grid. Further information relating to this can be obtained by contacting the email address below.

National Grid requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following: DCOConsultations@nationalgrid.com as well as by post to the following address:

The Company Secretary
1-3 The Strand
London
WC2N 5EH

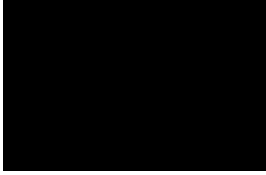
In order to respond at the earliest opportunity National Grid will require the following:

- Draft DCO including the Book of Reference and relevant Land Plans
- Shape Files or CAD Files for the order limits

I hope the above information is useful. If you require any further information please do not hesitate to contact me.

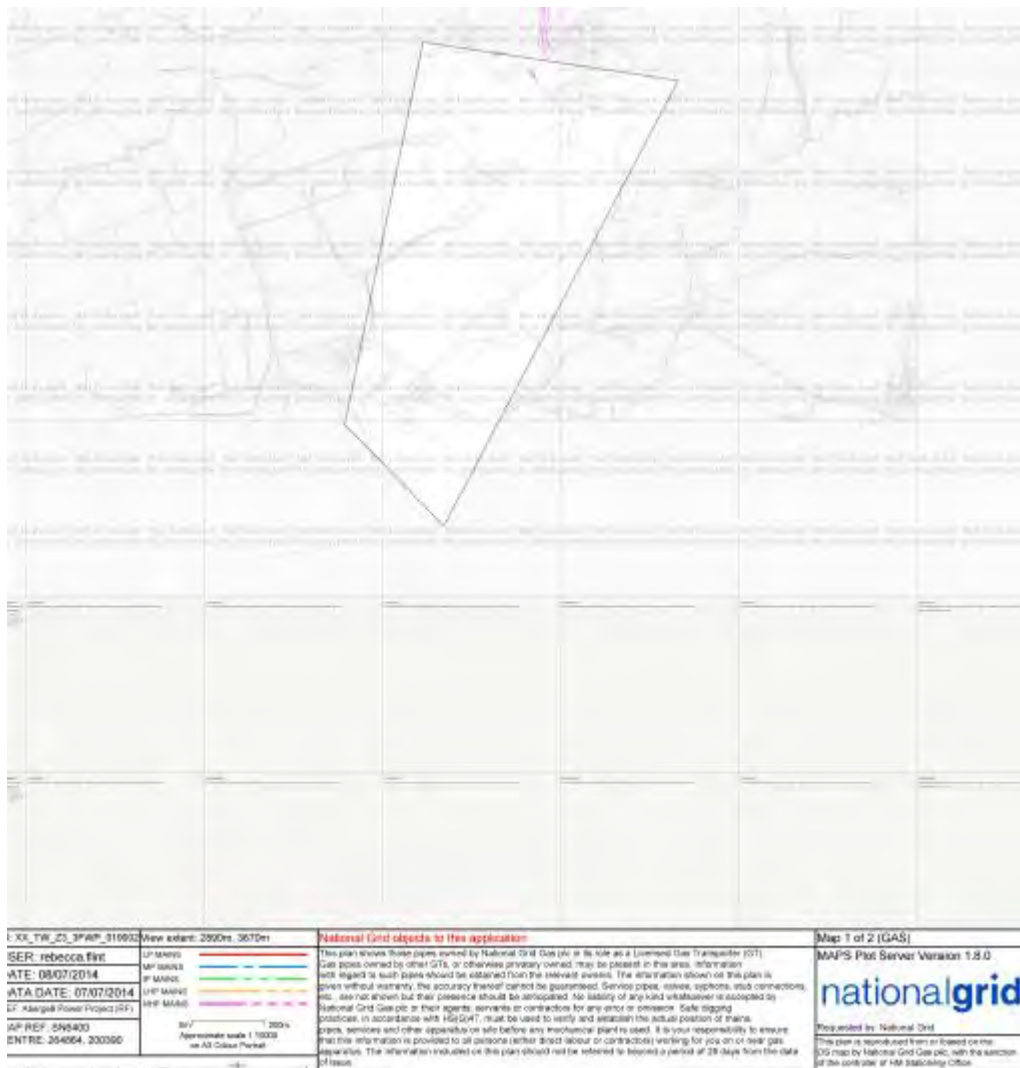
The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity or gas customer services.

Yours sincerely



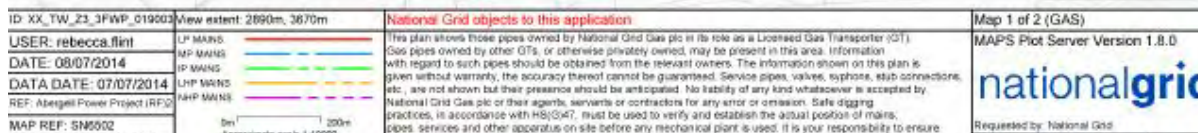
Laura Kelly

(Submitted Electronically)





XX_TW_Z3_3FWP_019002	View extent: 2890m, 3670m	National Grid objects to this application	Map 2 of 2 (ELECTRIC)
ISER: rebecca.flint	Underground cables	This plan shows those cables owned by National Grid Electricity Transmission plc in its role as a Licensed Electricity Transporter (ET). Electricity cables owned by other ETs, or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Ancillary equipment such as cooling systems and communication cables are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Electricity Transmission plc or their agents, servants or contractors for any error or omission. Data derived from: in accordance with H&M147. Users are advised to verify and establish the actual location of cables.	MAPS Plot Server Version 1.8.0
DATE: 08/07/2014	Overhead lines		nationalgrid
DATA DATE: 22/11/2013			
EF: Abercrombie Power Project (RP)			



Hannah Nelson

From: ROSSI, Sacha <Sacha.Rossi@nats.co.uk>
Sent: 26 June 2014 17:17
To: Environmental Services
Cc: NATS Safeguarding
Subject: RE: EN010069 Abergelli Power Project Scoping Consultation

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Sir/Madam,

NATS does not anticipate an impact from this development and has no comments to make.

Regards
S. Rossi
NATS Safeguarding Office

Mr Sacha Rossi
ATC Systems Safeguarding Engineer

☎: 01489 444 205
✉: sacha.rossi@nats.co.uk

NATS Safeguarding
4000 Parkway,
Whiteley, PO15 7FL

<http://www.nats.co.uk/windfarms>

From: Environmental Services [<mailto:EnvironmentalServices@infrastructure.gsi.gov.uk>]
Sent: 26 June 2014 14:17
To: NSIP.applications@hse.gsi.gov.uk; owenj@cyngorllanedicouncil.org; phil.owen@mawrcommunity.org.uk; officers@pontlliw-tircoed.org.uk; david.jenkins80@virgin.net; correspondence@equalityhumanrights.com; Hilary.Malaws@rcahmw.gov.uk; Baggy.Smailes@caa.co.uk; highways@swansea.co.uk; dptac.enquiries@dft.gsi.gov.uk; planningconsultation@coal.gov.uk; gail.harris@ofwat.gsi.gov.uk; NSIPconsultations@PHE.gov.uk; NATS Safeguarding; alans@espipelines.com; FPLplantprotection@fulcrum.co.uk; planning@npt.gov.uk; direct@cararthenshire.gov.uk
Subject: EN010069 Abergelli Power Project Scoping Consultation

Dear Sir or Madam

Please see attached correspondence in relation to the request for a Scoping Request for the proposed Abergelli Power Project.

Kind Regards

Jenny

Jenny Colfer
Senior EIA and Land Rights Advisor
Major Applications and Plans

Ms Jenny Colfer
Senior EIA and Land Rights Advisor on
behalf of the Secretary of State
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Ein cyf/Our ref: SH/2014/116929/01
Eich cyf/Your ref: EN010069

Dyddiad/Date: 22 July 2014

Annwyl/Dear Ms Colfer

**PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING
(ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (AS
AMENDED) – REGULATIONS 8 AND 9**

**APPLICATION BY ABERGELLI POWER LIMITED FOR AN ORDER GRANTING
DEVELOPMENT CONSENT FOR THE ABERGELLI POWER PROJECT**

Thank you for referring the above scoping opinion to Cyfoeth Naturiol Cymru (CNC)/Natural Resources Wales (NRW) which we received on 26 June 2014.

Our advice and comments in relation to the above Nationally Significant Infrastructure Project (NSIP) are provided in the context of the full remit of NRW. As you are aware we are a statutory consultee under the Planning Act 2008, advising the decision maker on the land use planning implications of the development. For those developments which involve a regulated activity requiring an Environmental Permit under the Environmental Permitting Regulations 2010, NRW is the permitting authority. We wish to make you aware that we have different roles under different legislation which are independent of one another.

Primarily we would question the need and benefit of such a development at the proposed location in relation to the current and predicted demand for electricity supply in South West Wales, given existing power stations, along with other proposed schemes (Abernedd, Swansea Bay Tidal Lagoon) and generation through renewables (wind and solar farms both existing and due to be developed imminently).

The proposals place the Simple Cycle Gas Turbine among what is beginning to develop into an area of renewable energy generation, which would not appear to be in fitting with solar and wind power already being generated and further proposed in the vicinity. The proposals suggest enough power being generated to power 400,000 homes, yet the population of Swansea is less than 250,000. In addition to this, a Tidal Lagoon if developed will power 150,000 homes. There would not appear to be this level of demand in South West Wales and with regard to the proximity principle, such a development would be better suited to a more heavily industrialised area where demand is much greater.

In view of the above, we would request to see justification as to why the development is proposed at this location.

Environmental Permitting Regulations.

The proposal will require an environmental permit to operate and a successful application will need to be made under the Environmental Permitting (England & Wales) Regulations 2010 (as amended) to determine whether the plant can be permitted.

Pre-application discussions with Natural Resources Wales should commence immediately and applicants are encouraged to “twin track” environmental permit (EPR) applications with their Development Consent Order (DCO) applications in order to facilitate timely decision-making.

NRW would also like to draw the applicant's attention to **Annex D of the Planning Inspectorate's Advice Note 11: Working with Public Bodies** which recommends that applicants should work towards submitting the EPR permit application at least 6 months prior to the submission of an application for a DCO.

Technology Selection

Open (simple) cycle gas turbine (GT) operation is not usually considered to represent Best Available Technique (BAT) for normal power plant GT operation and rigorous justification of efficiency penalties would be required if this type of operation were to be proposed.

The technology selection process should also consider the best achievable efficiency, in particular the potential for CHP (see below). It is noted that air cooled condensers or coolers are proposed as the cooling system for the project. Alternative cooling options need to be considered and technique selection justified based upon efficiency, water resources and waste water discharge as well as economic considerations.

Combined Heat and Power (CHP)

A combustion power plant with a thermal input of 50MW or more must include combined heat and power (CHP) or alternatively be CHP-ready (*The term CHP-Ready in this context represents a plant which is initially configured to generate electrical power only but which is designed to be ready, with minimum modification, to supply heat in the future*).

Guidance on determining BAT for CHP readiness can be found in the Environment Agency guidance document: ***CHP Ready Guidance for Combustion and Energy from Waste Power Plants***

Accident Management

Flood risk assessment – should include consideration of surface water drainage impacts and options for improving site surface water drainage to prevent localised flooding during extreme rainfall events.

Air Quality (AQ) Assessment

The proposals are noted and the applicant is advised that particular attention should be given to acid and nutrient deposition at sensitive habitat receptors.

NRW agrees with the use of AQTAG06 to reference methodologies in relation to aerial emission process contributions on protected sites (as in section 5.3.18). However, the applicant should be aware that AQTAG06 methodologies are no longer used for calculating acid deposition figures as a function of relevant critical loads. The applicant should instead use the APIS critical load function tool found at <http://www.apis.ac.uk/critical-load-function-tool>, in order to calculate acid deposition process contributions/exceedences. Please note, the methodology relating to Nitrogen deposition is unchanged from that described in AQTAG06.

The village of Llangyfelach is just outside of the proposed consultation distance of 1km, though is in direct line of site to the proposed development and is a densely populated residential receptor. The scope of the Environmental Impact Assessment should widen to include any impact upon this village in addition to any cumulative impact in relation to air quality arising from other sources of pollution e.g. the M4 motorway, the A48, B4489 and Morriston Crematorium

Noise Impact Assessment

The noise assessment baseline assessment (5.4.3) states that the “*The closest NSRs within 1 km of the Project Site include those within the nearby settlements of Morriston, Pant-lasau, Llwyncelyn and Felindre. In addition there are also isolated dwellings and farmsteads outside of the settlements including but not exclusive to: Aber gelli fawr; Abergelli Farm; Cefn-betingau; Maes-eglwys; Lletty Morfil Farm; Felin-wen; Pont Felinwen; Pontbren Llwyd; Gors-wen; Llety’r Bugall; Brynheulog; Taironen; Penfeddi Uchaf; Penidy Isaf; Gellyfedden; Rhos fawr; Brynawel; Brynwhilhach; and Lletty’r-scil.*”

However, the assessment needs to clearly identify the NSR, as some of the above receptors are much closer than the 1km outlined. It is important to note that NRW would carry out the assessments at the nearest receptor to the installation as outlined in the **BS4142:1997 Method of Rating Industrial Noise Affecting Mixed Residential and Industrial Areas**.

The report also states that the location of the baseline assessment/s will be agreed with the local EHO. This being the case this discussion on monitoring locations needs to also be communicated with NRW as the installation will require an A1 EPR Permit from NRW which will also include noise conditions.

The report does reference the BS4142 standard in assessing noise, which should also consider noise characteristics. This being the case it is recommended that the company also capture the existing noise characteristics. I.e. tonal assessment/third octave baseline data.

We would recommend that this is carried out as part of the baseline to identify, firstly any existing tonal issues and subsequently would be beneficial in identifying the impact of the operation on the noise environment once in operation. Due to the type of operation we (NRW) have experienced noise issues as a result of the tonal aspects rather than the actual increase in noise level. There is another procedure which we and the Local Authority use to identify low frequency noise (20Hz – 160Hz). The ***“DEFRA NANR45 Procedure for the assessment of low frequency noise complaints”*** is used but it is important that the company also reference other standards: ***“BS 7445:1991 Part 2 – Description and measurement of environmental noise”***, suggests that if the level in one 1/3rd octave band is 5dB or more higher than the level in the two adjacent bands, then an audible tone is likely to be perceived. The ***“ISO 1996-2:2007 Description, measurement and assessment of environmental noise Part 2”*** can be used to measure with any frequency weighting or in any frequency band. The standard also outlines how to evaluate the uncertainty of the result of a noise assessment. Section 5.4.17 of the scoping report also states: *“Operational noise from the Electrical Connection has been scoped out as there would be no significant effects associated with the potential for a low level electrical hum emanating from an overhead line option, if one is required. In addition if a SEC is required, any low level electrical hum associated with the infrastructure will not be perceptible at the NSRs and therefore this has also been scoped out of the assessment.”*

This states that low frequency noise aspects has been scoped out for the overhead lines, however it is important to understand why this has been scoped out and how was this conclusion made, this justification needs to be provided for assessment. Based on the inclusion of frequency analysis of the background data, this statement could be verified after commissioning to ensure that the operation has not introduced an additional noise aspect.

Section 5.4.1 of the scoping report states: *“During operation, mitigation measures could include the use of silencers on the loudest plant items within the Generating Equipment.”* Noise mitigation measures on an EPR Installation should be in accordance with our (EA/NRW) ***Horizontal Guidance Note (H3) Part 2 – Noise Assessment and Control.***

In relation to the noise assessment there is another piece of legislation that has not been outlined, the requirements of the Environmental Noise Directive which were given legal force in Wales through the ***Environmental Noise (Wales) (Amendment) Regulations 2009***. These regulations have introduced a ***“Noise Action Plan for Wales”*** which does cover industrial noise sources and impacts on designated Quiet Areas. The plan also considers the impact of creeping background especially with the introduction of new sources of noise into the environment. It is suggested that as part of the noise impact assessment the above standards and regulations are given due consideration by the applicant.

In relation to the impact of operational noise from the installation, this is quite limited, and should consider all modes of operation from the installation. The application does state that the applicant will consider worst case scenarios for the modelling however has not explicitly stated what would be the worst case. Construction Noise will be covered by the Local Authority.

The majority of the environmental noise from the operation will be assessed using the BS4142:1997 Standard, however an important factor to consider is that this standard is being reviewed and the new draft consultation has been passed, therefore the new updated version could be available in the next 6 months. The new draft standard introduces number of changes, e.g. duration of monitoring times.

In relation to the design aspects of the plant, we would suggest that the applicant designs the operation with no additional noise load on to background in line with the “*Noise Action Plan for Wales*”. Noise mitigation measures should also include reference to use of acoustic enclosures and cladding for plant and pipe work or ducting likely to produce noise under all operating conditions including abnormal operation.

Site Condition

Site survey work undertaken should take into account current environmental permitting and likely future requirements under the Industrial Emissions Directive (IED) to undertake intrusive works to gather baseline contamination data as part of the environmental permitting process.

Water Quality

Water Quality (WQ) Impact Assessment

Assessment of WQ impacts should also include consideration of periodic or intermittent waste water effluent arising from commissioning procedures, HRSG make up water treatment, plant maintenance and cleaning procedures and cooling system blow down in the event that wet or hybrid cooling technology is considered to be appropriate.

Water treatment and recovery options should be considered in addition to treatment and discharge.

Surface Waters

Section 5.6.3 of the report refers to the Afon Llan being the main watercourse that traverses the project site through Swansea and into Swansea Bay. The Llan in fact discharges to the Loughor Estuary on North Gower via Penllergaer, Fforestfach and Gowerton. Shellfish are harvested in the vicinity and so any impact assessment should also consider any potential for impact upon Designated Shellfisheries.

Section 5.6.9 states that “There are not anticipated to be any significant impacts on key waterbodies resulting from the project through physical works to them. It is also not anticipated that water will be abstracted or discharged to or from any of these sources during construction, operation or decommissioning”. In which case, where will cooling water be derived from and where will waste water be discharged to?

Section 5.6.18 then states that “during operation, NRW would set limits on the quality of water that is discharged from the Power Generation Plant under an Environmental Permit”. The EIA should therefore consider the impacts of any discharge to a watercourse, with particular regard to the effects of temperature and the addition of biocides or chlorination etc. of cooling waters. The temperature of a discharge can be critical to fish migration and so any discharge must not be above 21°C beyond the mixing zone in order to prevent a temperature barrier from being created. Temperature also has a bearing on the fate and behaviour of ammonia, amongst other physical and chemical characteristics, in the water environment and the Afon Llan is not without other water quality impacts from, for example, sewage pollution. An increase in temperature could therefore have a downstream impact upon ammonia. This will need to be assessed.

The Afon Llan is a very flashy rapid response catchment in terms of the way in which it reacts to rainfall and so this would need to be considered in relation to any construction and mitigation proposals. In recent years the river has been significantly impacted by silt pollution arising from several development schemes. We would need to be satisfied that any proposals would adequately mitigate against the possibility of further pollution e.g. from stripping and exposure of materials, increasing run-off rates and/or the location and protection of stockpile locations. The drainage of any constructed access roads should be designed to prevent silt/mud contaminated run-off from entering any watercourses.

Any proposals should also consider the installation of temporary attenuation ponds to allow adequate settlement of site generated run-off during the construction and decommissioning phases. The design of these ponds should demonstrate that adequate retention and settlement time has been calculated. Silt fencing, scour protection and Sedimats alone have been proven to be ineffective in mitigation in this catchment due to its flashy nature.

Any surface water disposal scheme would need to demonstrate that it will not cause any impact upon the local watercourses upon discharge e.g. silt run-off from any retention ponds, storage tanks, soakaways, swales, wetlands etc. We would advise that all disposal techniques be explored and are demonstrated as fit for purpose for all parts of the site.

Flood Consequence Assessment

A small part of the site is located within flood zone C2, as defined by the development advice maps referred to under TAN 15 Development and Flood Risk (July 2004). Our Flood Map information, which is updated on a quarterly basis, confirms this part of the site to be at risk of flooding in the 1% flood event.

A number of ordinary watercourses cross the site and a small section runs adjacent to the Main River Llan. Section 5.6.2 of the scoping report indicates that a Flood Consequences Assessment (FCA) will be submitted as a separate document. This should assess the flood risk at the site and as a result of the development in line with TAN15 guidelines. We would be in favour of this approach and strongly advise that the developer consults with both ourselves and the Lead Local Flood Authority (LLFA) concerning the site as mentioned in the report.

The impact of the development upon surface water will also need to be considered as part of the FCA as mentioned in section 5.6.8.

The developer should also be aware that any works which affect the flow in the ordinary watercourses across the site may require prior consent from the Lead Local Flood Authority (LLFA) and any works in, under, over or within 7m from the Afon Llan will require prior consent from NRW.

Groundwater (in addition to surface waters)

Our mapping system indicates various groundwater vulnerability zones and minor aquifers at the proposed location. A thorough assessment of the historic mine workings would need to be conducted to ensure that development would not potentially disturb or contaminate groundwater and surface waters in the vicinity. Likewise, a geophysical survey should determine the local geological setting to ensure that new pathways are not created that could cause contamination.

This should also be a consideration when dealing with the landfill at the location. Although this landfill was operated as an inert landfill, this is not to say that it is exclusively filled with inert wastes. Any disturbance, or excavation, reuse, temporary storage and disposal of this material should not preclude the possibility of it containing non-inert and potentially hazardous substances. An assessment of this element of the scheme may be necessary in the form of trial pits or boreholes in order to determine materials present. NRW should be made aware of any adverse findings.

The scoping report does not appear to mention foul water drainage arrangements. There is no mains sewer in the vicinity of this proposed development. Details of how sewage and other waste waters will be managed at the site need to be included and again, assessment of whether there is likely to be any impact arising from this upon receiving waters.

Waste Arisings

Section 5.7.12 states that “using the information obtained, suitable remediation strategies will be developed to render the Project Site ready for development. These will include estimates of the types and volumes of waste material that will need to be removed from the Project Site prior to development”. The development is likely to generate significant quantities of waste. The reuse/recovery of as much of this should be considered as part of the scheme within the spirit of the Waste Hierarchy i.e. 1. Reduction, 2. Reuse, 3. Recovery (Recycling, Composting, Incineration or landfill with energy recovery), 4. Rubbish (Incinerate, Landfill – contained, Landfill – dilute and disperse). A cost benefit analysis of using suitable waste versus virgin materials should be considered. The Site Waste Management Strategy should encompass the above principles.

Ecology

We welcome the submission of the report entitled ‘*Abergelli Power Project – Preliminary Ecological Appraisal*’, produced by BSG Ecology, dated March 2014.

Species

We note that a Phase 1 Habitat Survey of the site has been conducted, which highlighted the habitats on site and its potential to support protected or notable species. We support the recommendation that further species surveys will be carried out (as detailed in sections 5.12-5.38 of the above report). We advise that all surveys are carried out following best practice, up to date guidelines and conducted by qualified, experienced and (where necessary) licensed ecologists at appropriate times of the year.

We note that in sections 4.46 and 5.22 of the report that it has been identified that some of the watercourses may offer resting/lying up sites for otter, along with some commuting use. We note that no further survey work of the watercourses for otter potential is proposed to be carried out. As you are aware, Otter are fully protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 which includes protection of their breeding or resting sites. We advise that further survey work is considered at the site in the areas identified with suitability to support otters.

Please note that we cannot provide any comment on issues relating to Badgers at the site as we have not received the confidential version of the report as stated in section 4.5.1.

Habitats

We note from the report that the site is a very significant locally important site, with marshy grassland/wet heath and ancient woodland habitats present as outlined in the report.

We welcome the re-surveying of these habitats during Spring/Summer, given the proximity to known sites surrounding the area. Given the quality of the habitat present as surveyed in the Phase 1 habitat survey, we recommend early discussions with your local authority's Planning Ecologist with a view to avoiding destruction of the most significant habitats and mitigation and/or compensation for loss of any significant habitats. We would also welcome justification on the choice of habitat to be destroyed/removed as part of the planning application and justification on why the development cannot be constructed on the improved land only.

We hold a record of a Phase 2 grassland survey of the fields which lie adjacent to the proposed access track. We will be able to provide this information to the developer should it be required. Please get in touch if you would like a copy of this survey.

We note in section 5.7.2 of the main scoping report that there is a brief mention of peat present on site. We seek clarification and further detail on the location of the peat on site and how it will be affected by the development.

The proposals have the potential to affect riverine and wetland habitats as there are a number of watercourses on the site including the Afon Llan. We would like the EIA to consider these as a separate habitat and look at options for maintaining open watercourses with wide buffer strips.

Diversion of small watercourses would be preferable to culverting them as long as the new watercourses are well designed to offer the best habitat for wildlife. Connectivity between small watercourses, areas of retained wetland habitat and the Afon Llan should also be a consideration for the final site layout and any mitigation proposed. NRW Biodiversity staff are happy to offer further advice on these matters, should it be required.

Landscape and Visual Impact Assessment

We welcome that a Landscape and Visual Assessment (LVIA) will be conducted, following the most up to date guidelines as outlined in section 5.8.7 of the main scoping report.

The EIA must include a description of all the existing landscape interests within and in the vicinity of the proposed development. This should be done using former Countryside Council for Wales' LANDMAP methodology (www.landmap.ccw.gov.uk). LANDMAP is an all-Wales GIS based landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent data set. LANDMAP comprises five spatially related datasets known as Evaluated Aspects; the five layers are the Geological Landscape, Landscape Habitats, Visual & Sensory, Historic Landscape and Cultural Landscape. All information is managed through a Geographical Information System and associated Collector database.

Where all five layers of LANDMAP data for the local authority are available, they should all be referred to. If the developer experiences difficulty in getting this data from the LANDMAP website it should be possible for the data to be obtained by contacting Jill Bullen, our LANDMAP Wales Coordinator at our Bangor offices. NRW would expect any Environmental Statement (ES) to demonstrate use of all five data sets in the LVIA for the application. We recommend that the impacts of any development proposals on the landscape character of the area and its visual effects are assessed against the findings of this study.

Such issues should all be addressed in the ES and visual appraisal of the scheme in addition to specific site issues such as:

- Development infrastructure – including cabling, ancillary buildings, working compounds should all be considered in the assessment, even if 'temporary' (i.e. only for the duration of construction works).
- The removal and disposal of any excavated materials such as soil or rock;
- Creation of new access tracks and re-profiling of existing ones;
- Transmission route connections to the main power grid; it is important that a landscape assessment of the connection route from the development to the power grid is included for consideration

The ES should also consider the presence of any historic landscapes in the area and the potential impact that the proposed development may have on these, which is noted in section 5.8.7 of the report.

The ES should consider protected landscapes in the vicinity of the proposals. It is vital that the LVIA utilises appropriate viewpoints to consider the impacts of the proposals on these protected landscapes as there is potential for it to be visible from a wide area surrounding it. We note that section 5.8.11 refers to a follow up consultation with the relevant stakeholders on a selection of photomontages from key sensitive viewpoints. NRW would be happy to provide advice on these viewpoints. It is noted that some viewpoints have been suggested; however these do not include detailed grid references therefore we cannot comment on their suitability at this stage. We advise that consideration is made for an additional viewpoint from the Brecon Beacons National Park. We note that the Gower Area of Outstanding Natural Beauty (AONB) has been scoped out of the assessment as it is visually separated from the project site by intervening topography.

We advise that views in photographs and photomontages taken to assist with this process should be representative of that observed from each viewpoint and not partially obscured by structures such as buildings, pylons, telegraph poles, trees etc.

The ES should also consider the potential impact of any proposed lighting impacts upon receptors in the vicinity of the project. The development has the potential to significantly increase the level of light pollution in the area. We advise that a night time visual effects is carried out to assess the level of night time illumination (should there be any).

Habitats Regulation Assessment

We welcome that a Habitats Regulation Assessment (HRA) will be conducted as outlined in sections 5.5.28 – 5.5.30 of the report. The HRA must follow the consultation process as set out in the **Planning Inspectorate's Advice Note 10: Habitat Regulations Assessment relevant to nationally significant infrastructure projects** (Link below).

<http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/09/Advice-note-10-HRA.pdf>.

We hope the above comments are helpful, however, if you have any further queries please do not hesitate to contact me at the address below.

Yn gywir / Yours sincerely



Hannah Thomas

Ymgynghorydd Cynllunio Datblygu / Development Planning Advisor
Abertawe, Castell Nedd Port Talbot / Swansea, Neath Port Talbot

Ebost/Email Hannah.Thomas@cyfoethnaturiolcymru.gov.uk

Ffôn/Tel 03000 65 3358

23rd June 2014
01639 686726
c.j.davies@neath-porttalbot.gov.uk

Mr.C J Davies

The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Your Ref: EN010069

Scoping consultation for a SCGT gas fired 'peaking' power generating plant capable of providing up to 299 MW comprising: the Generating Equipment, Access Road and temporary Laydown Area submitted under the Planning Act 2008 (as amended) and the Infrastructure Planning (EIA) Regulations 2009 (as amended)

Thank you for your consultation of the 26th June 2014 in relation to the above.

Neath Port Talbot County Borough Council offer **no comments** on the acceptability of the Scoping Report submitted for the above project. I enclose a copy of the report, that sets out the responses provided to our own internal consultation.

As the development is located approximately 5.6km from the administrative boundary it is unlikely that this development would result in any cross boundary impacts. As such we would advise you that we would not wish to be consulted on any future applications/consultations on this project, unless the proposals alter significantly.

Yours Faithfully

C. Davies
Team Leader
Development Management.

Report Template

Application Reference: P2014/0631

Planning History:

N/A.

Publicity and Responses if applicable:

Biodiversity Section- No Objection.

Air Quality- No Objection.

Head of Engineering and Transport, Highway Section- No reply, therefore no observations to make.

Description of Site and its Surroundings:

The proposed development is located close to Felindre in the City and County of Swansea, approximately 5.6km from this Authority's administrative boundary.

Brief description of proposal:

The current consultation is from the Planning Inspectorate in relation to The Planning Act 2008 (as amended) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9.

The Project comprises;

A new **Power Generation Plant** in the form of a Simple Cycle Gas Turbine (SCGT) gas fired peaking power generating station fuelled by natural gas and capable of providing an electrical capacity of up to 299 Megawatts (MW) comprising:

The **Generating Equipment** including the Gas Turbine Generators and Balance of Plant which are located on the **Generating Equipment Site**;

A new purpose built **Access Road** either from the Rhyd-y-pandy Road to the north (**Access Road – Option 1**) or the B4489 to the

west (**Access Road – Option 2**) to the Generating Equipment Site; and

During construction a temporary construction compound (the **Laydown Area**).

A new **Gas Connection** to bring natural gas to the Generating Equipment from either the National Transmission System (NTS) or the Local Transmission System (LTS), which is located within the **Gas Opportunity Area**; and

A new **Electrical Connection** to export power from the Generating Equipment to the National Grid Electricity Transmission System (NETS) for distribution to homes and businesses

In terms of the process, The Planning Act 2008 (as amended by the Localism Act 2011) made significant changes to the planning system for major infrastructure projects such as this. An application must therefore be made for the development as a National Strategic Infrastructure Project (NSIP) to the Planning Inspectorate (PINS) for permission under a development consent order (DCO) from the Secretary of State for Energy and Climate Change.

This consultation seeks the Authority's view of the scope of the EIA to support this application at a pre-application stage.

Material Considerations:

Any potential impacts that will require to be assessed as part of the scope of the supporting ES submitted with any future planning application for the above development.

Policy Context:

n/a

Content of Scoping Report.

The site is located such a distance from this Authority's boundary that it unlikely to result in any cross boundary impacts, and therefore we have no significant comment to provide on the adequacy of the scoping report.

The Air Quality Section have been consulted, as have the Highway Section, and Biodiversity Section, as these are the main potential areas of the ES that could have cross-boundary impacts.

Officer Report

The consultees offer no objection, and confirm that there is a low potential for any impacts from the development affected Neath Port Talbot.

Others (including objections):

Not applicable.

Conclusion:

The Authority has no comment to offer on the Scoping Report carried out by the Applicant.

Recommendation:

No Comments.

Hannah Nelson

From: Hodgson Helen <Helen.Hodgson@networkrail.co.uk>
Sent: 21 July 2014 13:42
To: Environmental Services
Subject: Abergelli Power Limited Development Consent Order - Scoping Consultation (Your Ref. EN010069)

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms Colfer,

I refer to your letter dated 26th June 2014 in respect of the Scoping Consultation being undertaken on Abergelli Power Limited's application for a Development Consent Order in relation to the proposed power generation plant and associated underground gas pipeline infrastructure and access road. The following outlines Network Rail's comments:

Network Rail is the statutory undertaker responsible for maintaining and operating the country's railway infrastructure and associated estate. It owns, operates, maintains and develops the main rail network. Network Rail aims to protect and enhance the railway infrastructure and therefore any proposed development which is in close vicinity to the railway line, or could potentially affect Network Rail's specific land interests, will be carefully considered.

The physical railway infrastructure must be protected and the development must ensure that it does not have an adverse affect upon the safety of the railway line. This may be through increased usage of a level crossing or rail bridge by construction traffic associated with the proposed development or disruption to rail services during installation or maintenance of the overhead lines across the railway line. If there is any impact upon rail infrastructure this must be examined and addressed within Abergelli Power Limited's Environmental Statement.

Any proposals that include the installation of cables under or over the railway, any methods of electricity transmissions across Network Rail's land, or any access rights, temporary or otherwise will require the necessary property agreements to be entered into with our Easements and Wayleaves Team who can be contacted on easements&wayleaves@networkrail.co.uk. Please note that Network Rail will seek protection from the exercise of compulsory purchase powers over operational land whether for permanent or temporary purposes.

Network Rail would have strong concerns if, during the construction or operation of the power generation plant, abnormal loads would use routes that include Network Rail assets (e.g. level crossings, bridges etc) and would advise that contact is made with our Asset Protection Engineers to confirm if any proposed route is viable. A strategy must also be agreed to protect our assets from potential damage caused by abnormal loads in association with the implementation of the Abergelli Power Project. I would also advise that where damage, injury or delay to the rail network is caused by abnormal load (related to the development), Abergelli Power Limited or relevant contractors would incur full liability.

Notwithstanding the above, to mitigate the risks outlined above, Abergelli Power Limited must contact Network Rail's Asset Protection Team (assetprotectionwales@networkrail.co.uk) well in advance of commencing any works.

Although this consultation considers the scope of the Environmental Statement, we would also take this opportunity to highlight that Network Rail will expect to see its standard Protective Provisions in a schedule to the Development Consent Order, which is well preceded in both TWAOs and DCOs.

Please don't hesitate to contact me if you require any further information in relation to the above.

I would be grateful if you could confirm receipt of this email.

Kind regards

Helen Hodgson

21/7/2014



Property

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FAO: Jenny Colfer
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Your Ref: EN010069
Our Ref: 140626 331

23rd July 2014

Dear Jenny,

Re: Abergelli Power Project – Scoping Consultation

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Our response focuses on health protection issues relating to chemicals and radiation. Advice offered by PHE is impartial and independent.

In order to ensure that health is fully and comprehensively considered, the Environmental Statement (ES) should provide sufficient information to allow the potential impact of the development on public health to be fully assessed.

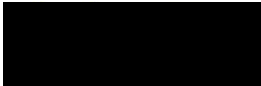
PHE, which includes PHE's Centre for Radiation, Chemical and Environmental Hazards (Wales), has evaluated the submitted Environmental Impact Assessment Scoping Report (June 2014) alongside the request for a scoping opinion and can confirm that the proposed methodology for assessing possible impacts affecting human health and the mitigation measures suggested so far appear acceptable. However, the Environmental Impact Assessment report should also include possible risks on human health due to electric and magnetic fields (EMFs) produced by the electrical connection system and other electrical equipment.

In order to assist the promoter in the production of the Environmental Impact Assessment report (i.e. subsequent ES) we have included an appendix which outlines the generic considerations that PHE advises should be addressed by all promoters when they are preparing ESs for NSIPs. The ES report should include

any cumulative impacts upon the local vicinity that may occur during the lifetime of the proposed project.

PHE will provide further comments when the ES becomes available. Should the promoter or their agents wish to discuss our recommendations or to seek any specific advice prior to the submission of the ES, PHE would of course be pleased to assist.

Yours sincerely

A black rectangular box used to redact the signature of Antonio Peña-Fernández.

Antonio Peña-Fernández
Health Protection Scientist

nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

Appendix: PHE recommendations regarding the scoping document

General approach

The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA¹. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases.

The EIA Directive² requires that ESs include a description of the aspects of the environment likely to be significantly affected by the development, including "population". The EIA should provide sufficient information for PHE to fully assess the potential impact of the development on public health. **PHE will only consider information contained or referenced in a separate section of the ES summarising the impact of the proposed development on public health:** summarising risk assessments, proposed mitigation measures, and residual impacts. This section should summarise key information and conclusions relating to human health impacts contained in other sections of the application (e.g. in the separate sections dealing with: air quality, emissions to water, waste, contaminated land etc.) without undue duplication. Compliance with the requirements of National Policy Statements and relevant guidance and standards should be highlighted.

It is not PHE's role to undertake these assessments on behalf of promoters as this would conflict with PHE's role as an impartial and independent body.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES³.

The following text covers a range of issues that PHE would expect to be addressed by the promoter. However this list is not exhaustive and the onus is on the promoter to ensure that the relevant public health issues are identified and addressed. PHE's advice and recommendations carry no statutory weight and constitute non-binding guidance.

Receptors

The ES should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and

¹ Environmental Impact Assessment: A guide to good practice and procedures - A consultation paper; 2006; Department for Communities and Local Government. Available from:

<http://www.communities.gov.uk/archived/publications/planningandbuilding/environmentalimpactassessment>

² Directive 85/337/EEC (as amended) on the assessment of the effects of certain public and private projects on the environment. Available from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1985L0337:20090625:EN:PDF>

³ DCLG guidance, 1999 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf>

industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land. Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

Impacts arising from construction and decommissioning

Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.

Emissions to air and water

Significant impacts are unlikely to arise from installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters. However, PHE has a number of comments regarding emissions in order that the EIA provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these:

- should include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary
- should encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment
- should consider the construction, operational, and decommissioning phases
- should consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts
- should fully account for fugitive emissions

- should include appropriate estimates of background levels
- should identify cumulative and incremental impacts (i.e. assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e. rail, sea, and air)
- should include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data
- should compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels)
 - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1
 - This should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion
- should identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

Whilst screening of impacts using qualitative methodologies is common practice (e.g. for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure.

Additional points specific to emissions to air

When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these:

- should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)
- should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions)
- should include modelling taking into account local topography

Additional points specific to emissions to water

When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:

- should include assessment of potential impacts on human health and not focus solely on ecological impacts
- should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)
- should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc) alongside assessment of potential exposure via drinking water

Land quality

We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.

Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed⁴ and the potential impact on nearby receptors and control and mitigation measures should be outlined.

Relevant areas outlined in the Government's Good Practice Guide for EIA include:

- effects associated with ground contamination that may already exist

⁴ Following the approach outlined in the section above dealing with emissions to air and water i.e. comparing predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as Soil Guideline Values)

- effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination
- impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.

Waste

The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).

For wastes arising from the installation the EIA should consider:

- the implications and wider environmental and public health impacts of different waste disposal options
- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

Other aspects

Within the EIA PHE would expect to see information about how the promoter would respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

The EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the these Regulations.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report⁵, jointly published by Liverpool John Moores University and PHE, examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: "Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible." PHE supports the inclusion of this information within EIAs as good practice.

⁵ Available from: <http://www.cph.org.uk/showPublication.aspx?pubid=538>

Electric and magnetic fields (EMF)

There is a potential health impact associated with the electric and magnetic fields around substations and the connecting cables or lines. The following information provides a framework for considering the potential health impact.

In March 2004, the National Radiological Protection Board, NRPB (now part of PHE), published advice on limiting public exposure to electromagnetic fields. The advice was based on an extensive review of the science and a public consultation on its website, and recommended the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP):-

<http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/>

The ICNIRP guidelines are based on the avoidance of known adverse effects of exposure to electromagnetic fields (EMF) at frequencies up to 300 GHz (gigahertz), which includes static magnetic fields and 50 Hz electric and magnetic fields associated with electricity transmission.

PHE notes the current Government policy is that the ICNIRP guidelines are implemented in line with the terms of the EU Council Recommendation on limiting exposure of the general public (1999/519/EC):

http://www.dh.gov.uk/en/Publichealth/Healthprotection/DH_4089500

For static magnetic fields, the latest ICNIRP guidelines (2009) recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council Recommendation. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT as advised by the International Electrotechnical Commission.

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to the field. The ICNIRP guidelines give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m^{-1} (kilovolts per metre) and $100 \text{ } \mu\text{T}$ (microtesla). If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with the basic restrictions and reducing the risk of indirect effects. Further clarification on advice on exposure guidelines for 50 Hz electric and magnetic fields is provided in the following note on PHE website:

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733805036

The Department of Energy and Climate Change has also published voluntary code of practices which set out key principles for complying with the ICNIRP guidelines for the industry.

http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/consents_planning/codes/codes.aspx

There is concern about the possible effects of long-term exposure to electromagnetic fields, including possible carcinogenic effects at levels much lower than those given in the ICNIRP guidelines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia, could not be used to derive quantitative guidance on restricting exposure. However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

The Stakeholder Advisory Group on ELF EMFs (SAGE) was then set up to take this recommendation forward, explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government. In the First Interim Assessment of the Group, consideration was given to mitigation options such as the 'corridor option' near power lines, and optimal phasing to reduce electric and magnetic fields. A Second Interim Assessment addresses electricity distribution systems up to 66 kV. The SAGE reports can be found at the following link:

<http://sagedialogue.org.uk/> (go to "Document Index" and Scroll to SAGE/Formal reports with recommendations)

The Agency has given advice to Health Ministers on the First Interim Assessment of SAGE regarding precautionary approaches to ELF EMFs and specifically regarding power lines and property, wiring and electrical equipment in homes:

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1204276682532?p=1207897920036

The evidence to date suggests that in general there are no adverse effects on the health of the population of the UK caused by exposure to ELF EMFs below the guideline levels. The scientific evidence, as reviewed by PHE, supports the view that precautionary measures should address solely the possible association with childhood leukaemia and not other more speculative health effects. The measures should be proportionate in that overall benefits outweigh the fiscal and social costs, have a convincing evidence base to show that they will be successful in reducing exposure, and be effective in providing reassurance to the public.

The Government response to the SAGE report is given in the written Ministerial Statement by Gillian Merron, then Minister of State, Department of Health, published on 16th October 2009:

<http://www.publications.parliament.uk/pa/cm200809/cmhansrd/cm091016/wmstext/91016m0001.htm>

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124

PHE and Government responses to the Second Interim Assessment of SAGE are available at the following links:

http://www.hpa.org.uk/Publications/Radiation/HPAResponseStatementsOnRadiationTopics/rpdadvice_sage2

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_130703

The above information provides a framework for considering the health impact associated with the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

Liaison with other stakeholders, comments should be sought from:

- the local authority for matters relating to noise, odour, vermin and dust nuisance
- the local authority regarding any site investigation and subsequent construction (and remediation) proposals to ensure that the site could not be determined as 'contaminated land' under Part 2A of the Environmental Protection Act
- the local authority regarding any impacts on existing or proposed Air Quality Management Areas
- the Food Standards Agency Wales for matters relating to the impact on human health of pollutants deposited on land used for growing food/ crops
- the Natural Resources Wales for matters relating to flood risk and releases with the potential to impact on surface and groundwaters
- the Natural Resources Wales for matters relating to waste characterisation and acceptance
- The Local Authority Directors of Public Health for matters relating to wider public health.

Environmental Permitting

Amongst other permits and consents, the development will require an environmental permit from the Environment Agency to operate (under the Environmental Permitting (England and Wales) Regulations 2010). Therefore the installation will need to comply with the requirements of best available techniques (BAT). PHE is a consultee for bespoke environmental permit applications and will respond separately to any such consultation.

Annex 1

Human health risk assessment (chemical pollutants)

The points below are cross-cutting and should be considered when undertaking a human health risk assessment:

- The promoter should consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- Where available, the most recent United Kingdom standards for the appropriate media (e.g. air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used
- When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account
- When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach⁶ is used

⁶ Benford D et al. 2010. Application of the margin of exposure approach to substances in food that are genotoxic and carcinogenic. Food Chem Toxicol 48 Suppl 1: S2-24



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The Planning Inspectorate
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Temple Quay House
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Bristol
BS1 6PN

Please ask for:

David Owen

Direct Line:

01792 635701

E-Mail:

planning@swansea.gov.uk

Date:

23rd July 2014

For the attention of Jenny Colfer

Dear Jenny

APP NUMBER: ENQ2014/0800
SITE LOCATION: Abergelli Power Project, Felindre, Swansea
PROPOSAL: Power Generation Plant – 299 MW (EIA Scoping Report)

I refer to your letter dated 26 June 2014 (Ref:ENO10069) regarding the EIA Scoping Consultation. The Local Planning Authority would wish to highlight the following issues:

4.3 Cumulative Assessment

In addition to the listed developments, the EIA should also have regard to the following:

Planning Application 2012/1221 Mynydd y Gwair Wind Farm - Installation of 16 wind turbines (maximum height to blade tip of 127 metres with a hub height of 80 metres), with a maximum generating capacity of 48MW, associated tracks and ancillary infrastructure (including permanent and temporary anemometer masts, electrical substation compound, hardstandings, transformers and underground cabling) and construction of new access track from A48 (Bolgoed Road at Pontarddulais) (approximately 14.54km in length) incorporating improvements to 3.9km of existing road across Mynydd Pysgodlyn – Planning Permission March, 2013

Planning Application 2006/0773 – Felindre Business Park - Outline Planning Permission has been granted for a strategic business park for B1 and B2 uses to accommodate emerging industries, high tech manufacturing, high level services, ancillary uses, associated car parking, landscaping and access roads.

The application site area extends to 195 hectares, however, the application master plan indicates the development area to be 60.9 hectares of the south eastern area of the site and is focussed on the main brownfield area of the site formerly occupied by the Felindre tinplate works. It is envisaged that this developable area on the master

To receive this information in alternative format, please contact the above.
I dderbyn yr wybodaeth hon mewn fformatt arall, cysylltwch a'r person uchod.
We welcome communications in English and Welsh.
Rydym yn croesawu gohebiaeth yn y Gymraeg a'r Saesneg.

plan will become the first phase of the overall concept and act as the catalyst for further potential phases of development. However, this is outside the scope of this particular application.

The development of the Strategic employment site would represent the first stage in the implementation of a high level employment site at Felindre which envisages the following types of uses as appropriate within each of the high value added economic groups:

- emerging industries (media/multi-media, biotechnology and nanotechnology).
- High tech manufacturing (semiconductors, telecoms equipment, pharmaceuticals & fine chemicals, advanced materials, aerospace).
- High level services (IT services & software, HQ functions, R & D, financial and business services, publishing).

The site is not considered suitable for general manufacturing, processing and office services. The main elements of the scheme are as follows:

- 80,065 sq. m/861,900 sq. ft of employment floor space for specific B1 and B2 use classes.
- Ancillary uses associated with a Strategic Business Park.
- Associated parking, landscaping and highway works.

Additionally, the **Felindre LDP / Candidate Site should be considered**. The assessment fails to have regard to the Local Development Plan: Preferred Strategy, July 2013. Within its Sustainable Growth Strategy, at Felindre, it is proposed to establish a new sustainable urban village to complement the proposed strategic employment development site at this location of 1000 new houses, together with supporting community facilities, leisure opportunities and integrated green infrastructure.

5 ES Impact Sections

5.3 Air Quality

The Council's Pollution Control team have assessed the scoping report and in respect of air quality are of the view that the main issues have been covered / identified.

The proposed use of ADMS for the dispersion modelling is welcomed but Pollution Control would want to agree all selected receptor locations for the modelling studies and also some of the data inputs. The modelling studies would need to consider human receptor points and also any SAC/SSSI etc etc. It is noted that they also plan to include an assessment of all non designated ecological receptor sites i.e. the Lliw

and Llan reservoirs. The pollutants of interest would be NO_x, NO and NO₂, PM₁₀ and CO. In addition, and as increasing research is pointing to significant health effects from PM_{2.5} this pollutant should be included in any impact assessment. Pollution Control would also be interested in seeing predicted ground level ozone concentrations as a result of photochemistry from any increased NO_x made available. (Ozone is known to be higher in rural areas due to ongoing photochemistry resulting from the wind mass laden with NO_x passing overhead from the urban areas with ongoing photochemistry taking place – high ozone concentrations can have human health implications as well as effects on vegetation etc)

Local meteorological data should be used for any modelling studies and not be sourced from Cardiff Airport / Tutu Head Mumbles for example as these locations would in all probability not reflect conditions at the proposed site. Pollution Control can make available both boundary scaling data and the climatological dataset from their 30m mast at Cwm Level Park for their use. However, if they are planning to source meteorological data from any other source i.e. the Mynydd y Gwair wind farm development then this may prove an even better local source. Pollution Control would also consider making their SODAR wind profiler available (AQ500) should a suitable remote site be found and made available to site the equipment trailer. This AQ500 produces detailed wind speed/wind direction measurements every 15m up to its maximum height range of 300m which would be useful in any modelling undertaken.

5.4 Noise and Vibration

The Council's Pollution Control team would require an assessment of the effects from all tonal noise from the development at existing receptor locations. Additionally, regard should be made to the committed development of the Felindre Strategic Business Park and the proposed residential development of the Felindre LDP urban village.

5.5 Ecology

The Council's Ecologist has assessed the ecological sections scoping report and confirms that it would appear that all of the relevant areas for ecological survey have been identified in the preliminary ecological appraisal (appendix 1). The surveyors have identified some areas requiring further work some of which is being carried out now. This additional work is summarised in sections 5.5.9 to 5.5.25 of the report. Once the full report has been completed it will be possible to fully assess any potential impact.

5.6 Water Quality and Resources

Immediately to the north of the site Dwr Cymru Welsh Water operate their Felindre Water Treatment Works (WTW) and further to the north the Upper and Lower Lliw reservoirs form an important water storage asset for the provision of treated water to over 400,000 customers extending as far west as Carmarthen and as far east as the

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Vale of Glamorgan and additionally there is a strategic watermain in the vicinity. The 66" diameter strategic water pipeline, along with the Lliw Reservoirs and Felindre WTW form integral parts of the largest water supply scheme ever constructed in Wales and were built in 1968 under an Act of Parliament known as the River Towy Water Supply Scheme. The 66" watermain is 17 miles long running from Nantgaredig Pumping Station to Felindre Water Treatment Works, and has no isolation valves along its entire length. It carries 240 Megalitres of water per day. This asset is the sole supply from the Llyn Brianne reservoir, via Nantgaredig Pumping Station to Felindre Water Treatment Works (WTW). Critical dependencies on this water supply include heavy and light industry, commercial centres and major health care facilities, such as the Morriston Hospital. Felindre WTW is one of only five DCWW assets in Wales which is classified by UK Government as of Critical National Importance. The strategic and importance of this asset therefore cannot be overstated.

No doubt consultation has been undertaken with DCWW, but impacts about the water quality in the reservoir and the structural integrity of the strategic water mains will need to be fully considered. It has previously been indicated by DCWW in association with other projects, that any works that would impact the integrity of the watermain would be of significant concern. It should also be noted that a fracture to this important watermain is likely to result in a major flooding incident as the water from the pipe drains out. Should the supply of water from this watermain to Felindre WTW be interrupted, water would be sourced from the Lower Lliw reservoir. Although the Lower Lliw would provide storage for a time, once half of the reservoir's stored water has been used the remaining water will be of very poor quality. The amount of treatment required for the water extracted at lower water is likely to exceed the treatment which can be provided at Felindre WTW in the quantities required for 400,000 customers.

Burry Inlet Habitat Regulations Assessment

The Scoping Opinion indicates that the Afan Llan flows in Swansea Bay. This is incorrect as the Afan Llan flows into the Loughor Estuary / Burry Inlet. This forms part of a European protected site which potentially affects the Carmarthen Bay and Estuaries European Marine Site (CBEEMS), the Carmarthen Bay Special Protection Area (SPA) and the Burry Inlet SPA and RAMSAR site. The conservation status of the sites has for some time been a matter of concern, with the issues centre around deficiencies in the sewerage infrastructure and the resulting storm spills and nutrients that may discharge into the protected sites.

The local authorities, Carmarthenshire County Council and City and County of Swansea Council, are required to meet their obligations under the EU Habitats Directive to ensure that no new developments adversely affect a protected site. This has led to a precautionary approach to new applications for development that may add additional loading on the public sewerage infrastructure in the area. To this end

a Memorandum of Understanding has been agreed between the relevant Councils, Dwr Cymru Welsh Water, Environment Agency and Countryside Council for Wales (Sept. 2011). The Memorandum of Understanding ("MoU") relating to the Safeguarding the Environment of the Carmarthen Bay and Estuaries European Marine Site (CBEEMS) whilst enabling Social and Economic Development for Communities around Burry Inlet indicates that to allow developments to proceed within the Gowerton Catchment *foul flows generated by a development will only be allowed to connect to the sewerage system once existing flows of surface water or foul have been removed from the system as a compensatory measure.*

5.7 Geology, Ground Conditions and Agriculture

No comments

5.8 Landscape and Visual Impact

It is noted that a landscape and visual assessment will be undertaken and it is noted that a Zone of Theoretical Visibility (ZTV) will be generated for the Power Generation Plant and that a selection of photomontages will be taken from key sensitive viewpoints, and a suggested list is included in the Scoping Report for consultation. Whilst the suggested viewpoint locations appear to be indicative of the surrounding area, following a meeting with the developer the ZTV has been requested to assist in assessing the adequacy of the proposed viewpoints.

5.9 Traffic, Transport and Access

The Council's Head of Transportation has a meeting arranged for the 7th August to scope out the transport/traffic/access elements.

5.10 Cultural Heritage and Archaeology

No comments

5.11 Socio-Economics

No comments

I hope this is of assistance to you.

Yours sincerely

DAVID OWEN
PRINCIPAL PLANNING OFFICER

Hannah Nelson

From: Owen, David <David.Owen@swansea.gov.uk>
Sent: 24 July 2014 14:05
To: Environmental Services
Subject: FW: Abergelli Power Project
Attachments: mvmt1259.doc

Follow Up Flag: Follow up
Flag Status: Flagged

Jenny

Further to yesterday's email in terms of the cumulative assessment I would also wish to highlight a new planning application I have just become aware of.

Planning Application no. 2014/1022 for the installation of a solar park consisting of 47,000 solar panels with the installed capacity of 12.69 MW on land at Brynwhilach Farm. This site is almost immediately to the west of the proposed Abergelli Power Plant.

Regards

David

From: Owen, David
Sent: 23 July 2014 11:30
To: 'environmentalservices@infrastructure.gsi.gov.uk'
Subject: Abergelli Power Project

For the attention of Jenny Colfer

Please find attached the LPA's consultation response to the EIA Scoping Report for the above project.

Regards

David Owen
Principal Planning Officer

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**The Coal
Authority**



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For the Attention of: Ms J. Colfer – Senior EIA and Land Rights Advisor
The Planning Inspectorate

[By Email: environmentalservices@infrastructure.gsi.gov.uk]

Your Ref: EN010069

24 July 2014

Dear Ms Colfer

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9

Application by Abergelli Power Limited for an Order Granting Development Consent for the Abergelli Power Project – Scoping Consultation

Thank you for your consultation letter of 26 June 2014 seeking the views of The Coal Authority on the EIA Scoping Opinion for the above proposal.

The Coal Authority is a non-departmental public body sponsored by the Department of Energy and Climate Change. As a statutory consultee, The Coal Authority has a duty to respond to planning applications and development plans in order to protect the public and the environment in mining areas.

The Coal Authority Response

I have reviewed the proposals and confirm that the application site falls within the defined Development High Risk Area; the site therefore has been subject to past coal mining activity and is located within an area of surface coal resource.

In accordance with the agreed risk-based approach to development management in Development High Risk Areas, the past coal mining activities and the presence of surface coal resources within the site should be fully considered as part of the Environmental Statement (ES) accompanying the Development Consent Order; this should take the form of a risk assessment, together with any necessary mitigation measures.

The Coal Authority is therefore pleased to note that the Environmental Impact Assessment Scoping Report (June 2014) submitted at section 5.7 proposes the inclusion of a chapter

in the Environmental Statement on geology, ground conditions and agriculture and also demonstrates awareness in paragraph 5.7.3 that part of the proposed development site has been subject to past coal mining activity.

Consideration of Coal Mining Issues in the ES

There are a number of coal mining legacy issues that can potentially pose a risk to new development and therefore should be considered as part of an Environmental Statement for development proposals within coalfield areas:

- The location and stability of abandoned mine entries
- The extent and stability of shallow mine workings
- Outcropping coal seams and unrecorded mine workings
- Hydrogeology, minewater and minegas

In addition, consideration should be afforded as part of development proposals and the ES to the following:

- If surface coal resources are present, whether prior extraction of the mineral resource is practicable and viable
- Whether Coal Authority permission is required to intersect, enter, or disturb any coal or coal workings during site investigation or development work

Coal Mining Information

Information on these issues can be obtained from The Coal Authority's Property Search Services Team (via The Coal Authority's [website](#)) or book an appointment to visit The Coal Authority's Mining Records Centre in Mansfield to view our mining information (Tel: 01623 637 000).

An assessment of the risks associated with the presence of coal mining legacy issues on a proposed development should be prepared by a "competent body". Links to the relevant professional institutions of competent bodies can be found at; <http://coal.decc.gov.uk/en/coal/cms/services/planning/strategy/strategy.aspx>

In accordance with our consultation requirements, we look forward to being consulted on the Development Consent Order and accompanying Environmental Statement in due course.

I trust this is acceptable, please do not hesitate to contact me if you require any additional information or would like to discuss this matter further.

Yours sincerely

Mark Harrison

Mark E. N. Harrison B.A.(Hons), DipTP, LL.M, MInstLM, MRTPI
Planning Liaison Manager

The Planning Inspectorate
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Temple Quay House
2 The Square
Bristol,
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Issued via email only

Date: 24/07/2014
Our Ref: OG/NSIP/Abergelli

Dear Sir / Madam,

Planning Act 2008 (as amended) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulation 8

Application by Abergelli Power Limited for an Order Granting Development Consent for the Abergelli Power Project

Scoping Consultation

I refer to your consultation letter received in accordance with the above regulations. We have reviewed the documents available at this stage in the process and specifically the Scoping Request received. We therefore have the following comments to make.

The application site lies in close proximity to the Lower Lliw Reservoir which supplies Felindre Water Treatment Works. The Scoping Request is silent on the potential impact of the development upon the water quality within the reservoir, which is approximately 1km from the site. It is therefore recommended that the developer explores these issues and undertakes an appropriate air quality assessment to consider possible effects to the water in the reservoir from both deposition and affected rainfall.

Further to the above, and where relevant, we recommend that the developer considers the impact upon any DCWW assets and apparatus and our ability to fulfil statutory obligations. In particular we draw the Planning Inspectorate and the developer's attention to the 48" strategic water main that crosses the application site. We would encourage and welcome early dialogue with ourselves to discuss these matters.

Notwithstanding the above, we respectfully reserve the right to comment further on any matters and issues arising from ongoing and future consultation. However, we trust the above information is helpful at this stage and we look forward to continuing our engagement on the project prior and during the submission of an application to the Planning Inspectorate.

Finally, I would be grateful if all future correspondence relating to the project is directed to me at the above address. For any further information, please do not hesitate to contact me.

Yours faithfully,



Owain George
Lead Development Control Officer
Developer Services



Welsh Water is owned by Glas Cymru – a ‘not-for-profit’ company.
Mae Dŵr Cymru yn eiddo i Glas Cymru – cwmni ‘nid-er-elw’.

We welcome correspondence in
Welsh and English

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APPENDIX 3

Presentation of the Environmental Statement

APPENDIX 3

PRESENTATION OF THE ENVIRONMENTAL STATEMENT

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (SI 2264) (as amended) sets out the information which must be provided for an application for a development consent order (DCO) for nationally significant infrastructure under the Planning Act 2008. Where required, this includes an environmental statement. Applicants may also provide any other documents considered necessary to support the application. Information which is not environmental information need not be replicated or included in the ES.

An environmental statement (ES) is described under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) as a statement:

- a) 'that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and of any associated development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile; but
- b) that includes at least the information required in Part 2 of Schedule 4'.

(EIA Regulations Regulation 2)

The purpose of an ES is to ensure that the environmental effects of a proposed development are fully considered, together with the economic or social benefits of the development, before the development consent application under the Planning Act 2008 is determined. The ES should be an aid to decision making.

The SoS advises that the ES should be laid out clearly with a minimum amount of technical terms and should provide a clear objective and realistic description of the likely significant impacts of the proposed development. The information should be presented so as to be comprehensible to the specialist and non-specialist alike. The SoS recommends that the ES be concise with technical information placed in appendices.

ES Indicative Contents

The SoS emphasises that the ES should be a 'stand alone' document in line with best practice and case law. The EIA Regulations Schedule 4, Parts 1 and 2, set out the information for inclusion in environmental statements.

Schedule 4 Part 1 of the EIA Regulations states this information includes:

- ‘17. *Description of the development, including in particular—*

 - (a) *a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;*
 - (b) *a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;*
 - (c) *an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc) resulting from the operation of the proposed development.*
- 18. *An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects.*
- 19. *A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.*
- 20. *A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:*

 - (a) *the existence of the development;*
 - (b) *the use of natural resources;*
 - (c) *the emission of pollutants, the creation of nuisances and the elimination of waste,*

and the description by the applicant of the forecasting methods used to assess the effects on the environment.
- 21. *A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.*
- 22. *A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.*
- 23. *An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information’.*

EIA Regulations Schedule 4 Part 1

The content of the ES must include as a minimum those matters set out in Schedule 4 Part 2 of the EIA Regulations. This includes the consideration of 'the main alternatives studied by the applicant' which the SoS recommends could be addressed as a separate chapter in the ES. Part 2 is included below for reference:

Schedule 4 Part 2

- A description of the development comprising information on the site, design and size of the development
- A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects
- The data required to identify and assess the main effects which the development is likely to have on the environment
- An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects, and
- A non-technical summary of the information provided *[under the four paragraphs above]*.

Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the SoS considers it is an important consideration *per se*, as well as being the source of further impacts in terms of air quality and noise and vibration.

Balance

The SoS recommends that the ES should be balanced, with matters which give rise to a greater number or more significant impacts being given greater prominence. Where few or no impacts are identified, the technical section may be much shorter, with greater use of information in appendices as appropriate.

The SoS considers that the ES should not be a series of disparate reports and stresses the importance of considering inter-relationships between factors and cumulative impacts.

Scheme Proposals

The scheme parameters will need to be clearly defined in the draft DCO and therefore in the accompanying ES which should support the application as described. The SoS is not able to entertain material changes to a project once an application is submitted. The SoS draws the attention of the applicant to the DCLG and the Planning Inspectorate's published advice on the preparation of a draft DCO and accompanying application documents.

Flexibility

The SoS acknowledges that the EIA process is iterative, and therefore the proposals may change and evolve. For example, there may be changes to the scheme design in response to consultation. Such changes should be addressed in the ES. However, at the time of the application for a DCO, any proposed scheme parameters should not be so wide ranging as to represent effectively different schemes.

It is a matter for the applicant, in preparing an ES, to consider whether it is possible to assess robustly a range of impacts resulting from a large number of undecided parameters. The description of the proposed development in the ES must not be so wide that it is insufficiently certain to comply with requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations.

The Rochdale Envelope principle (see *R v Rochdale MBC ex parte Tew (1999)* and *R v Rochdale MBC ex parte Milne (2000)*) is an accepted way of dealing with uncertainty in preparing development applications. The applicant's attention is drawn to the Planning Inspectorate's Advice Note 9 'Rochdale Envelope' which is available on the Advice Note's page of the National Infrastructure Planning website.

The applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the scheme have yet to be finalised and provide the reasons. Where some flexibility is sought and the precise details are not known, the applicant should assess the maximum potential adverse impacts the project could have to ensure that the project as it may be constructed has been properly assessed.

The ES should be able to confirm that any changes to the development within any proposed parameters would not result in significant impacts not previously identified and assessed. The maximum and other dimensions of the proposed development should be clearly described in the ES, with appropriate justification. It will also be important to consider choice of materials, colour and the form of the structures and of any buildings. Lighting proposals should also be described.

Scope

The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and local authorities and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

Physical Scope

In general the SoS recommends that the physical scope for the EIA should be determined in the light of:

- the nature of the proposal being considered
- the relevance in terms of the specialist topic
- the breadth of the topic
- the physical extent of any surveys or the study area, and
- the potential significant impacts.

The SoS recommends that the physical scope of the study areas should be identified for each of the environmental topics and should be sufficiently robust in order to undertake the assessment. This should include at least the whole of the application site, and include all offsite works. For certain topics, such as landscape and transport, the study area will need to be wider. The extent of the study areas should be on the basis of recognised professional guidance and best practice, whenever this is available, and determined by establishing the physical extent of the likely impacts. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given.

Breadth of the Topic Area

The ES should explain the range of matters to be considered under each topic and this may respond partly to the type of project being considered. If the range considered is drawn narrowly then a justification for the approach should be provided.

Temporal Scope

The assessment should consider:

- environmental impacts during construction works
- environmental impacts on completion/operation of the proposed development
- where appropriate, environmental impacts a suitable number of years after completion of the proposed development (for example, in order to allow for traffic growth or maturing of any landscape proposals), and
- environmental impacts during decommissioning.

In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment, as well as to enable the decommissioning of the works to be taken into account, is to encourage early consideration as to how structures can be taken down. The purpose of this is to seek to minimise disruption, to re-use materials and to restore the site or put it to a suitable new use. The SoS encourages consideration of such matters in the ES.

The SoS recommends that these matters should be set out clearly in the ES and that the suitable time period for the assessment should be agreed with the relevant statutory consultees.

The SoS recommends that throughout the ES a standard terminology for time periods should be defined, such that for example, 'short term' always refers to the same period of time.

Baseline

The SoS recommends that the baseline should describe the position from which the impacts of the proposed development are measured. The baseline should be chosen carefully and, whenever possible, be consistent between topics. The identification of a single baseline is to be welcomed in terms of the approach to the assessment, although it is recognised that this may not always be possible.

The SoS recommends that the baseline environment should be clearly explained in the ES, including any dates of surveys, and care should be taken to ensure that all the baseline data remains relevant and up to date.

For each of the environmental topics, the data source(s) for the baseline should be set out together with any survey work undertaken with the dates. The timing and scope of all surveys should be agreed with the relevant statutory bodies and appropriate consultees, wherever possible.

The baseline situation and the proposed development should be described within the context of the site and any other proposals in the vicinity.

Identification of Impacts and Method Statement

Legislation and Guidelines

In terms of the EIA methodology, the SoS recommends that reference should be made to best practice and any standards, guidelines and legislation that have been used to inform the assessment. This should include guidelines prepared by relevant professional bodies.

In terms of other regulatory regimes, the SoS recommends that relevant legislation and all permit and licences required should be listed in the ES where relevant to each topic. This information should also be submitted with the application in accordance with the APFP Regulations.

In terms of assessing the impacts, the ES should approach all relevant planning and environmental policy – local, regional and national (and where appropriate international) – in a consistent manner.

Assessment of Effects and Impact Significance

The EIA Regulations require the identification of the 'likely significant effects of the development on the environment' (Schedule 4 Part 1 paragraph 20).

As a matter of principle, the SoS applies the precautionary approach to follow the Court's⁴ reasoning in judging 'significant effects'. In other words 'likely to affect' will be taken as meaning that there is a probability or risk that the proposed development will have an effect, and not that a development will definitely have an effect.

The SoS considers it is imperative for the ES to define the meaning of 'significant' in the context of each of the specialist topics and for significant impacts to be clearly identified. The SoS recommends that the criteria should be set out fully and that the ES should set out clearly the interpretation of 'significant' in terms of each of the EIA topics. Quantitative criteria should be used where available. The SoS considers that this should also apply to the consideration of cumulative impacts and impact inter-relationships.

The SoS recognises that the way in which each element of the environment may be affected by the proposed development can be approached in a number of ways. However it considers that it would be helpful, in terms of ease of understanding and in terms of clarity of presentation, to consider the impact assessment in a similar manner for each of the specialist topic areas. The SoS recommends that a common format should be applied where possible.

Inter-relationships between environmental factors

The inter-relationship between aspects of the environments likely to be significantly affected is a requirement of the EIA Regulations (see Schedule 4 Part 1 of the EIA Regulations). These occur where a number of separate impacts, e.g. noise and air quality, affect a single receptor such as fauna.

The SoS considers that the inter-relationships between factors must be assessed in order to address the environmental impacts of the proposal as a whole. This will help to ensure that the ES is not a series of separate reports collated into one document, but rather a comprehensive assessment drawing together the environmental impacts of the proposed development. This is particularly important when considering impacts in terms of any permutations or parameters to the proposed development.

Cumulative Impacts

The potential cumulative impacts with other major developments will need to be identified, as required by the Directive. The significance of such impacts should be shown to have been assessed against the baseline position (which would include built and operational development).

⁴ See Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw (Waddenzee Case No C 127/02/2004)

In assessing cumulative impacts, other major development should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

- projects that are under construction
- permitted application(s) not yet implemented
- submitted application(s) not yet determined
- all refusals subject to appeal procedures not yet determined
- projects on the National Infrastructure's programme of projects, and
- projects identified in the relevant development plan (and emerging development plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited.

Details should be provided in the ES, including the types of development, location and key aspects that may affect the EIA and how these have been taken into account as part of the assessment.

The SoS recommends that offshore wind farms should also take account of any offshore licensed and consented activities in the area, for the purposes of assessing cumulative effects, through consultation with the relevant licensing/consenting bodies.

For the purposes of identifying any cumulative effects with other developments in the area, applicants should also consult consenting bodies in other EU states to assist in identifying those developments (see commentary on Transboundary Effects below).

Related Development

The ES should give equal prominence to any development which is related with the proposed development to ensure that all the impacts of the proposal are assessed.

The SoS recommends that the applicant should distinguish between the proposed development for which development consent will be sought and any other development. This distinction should be clear in the ES.

Alternatives

The ES must set out an outline of the main alternatives studied by the applicant and provide an indication of the main reasons for the applicant's choice, taking account of the environmental effect (Schedule 4 Part 1 paragraph 18).

Matters should be included, such as *inter alia* alternative design options and alternative mitigation measures. The justification for the final choice and evolution of the scheme development should be made clear. Where other sites have been considered, the reasons for the final choice should be addressed.

The SoS advises that the ES should give sufficient attention to the alternative forms and locations for the off-site proposals, where appropriate, and justify the needs and choices made in terms of the form of the development proposed and the sites chosen.

Mitigation Measures

Mitigation measures may fall into certain categories namely: avoid; reduce; compensate or enhance (see Schedule 4 Part 1 paragraph 21); and should be identified as such in the specialist topics. Mitigation measures should not be developed in isolation as they may relate to more than one topic area. For each topic, the ES should set out any mitigation measures required to prevent, reduce and where possible offset any significant adverse effects, and to identify any residual effects with mitigation in place. Any proposed mitigation should be discussed and agreed with the relevant consultees.

The effectiveness of mitigation should be apparent. Only mitigation measures which are a firm commitment and can be shown to be deliverable should be taken into account as part of the assessment.

It would be helpful if the mitigation measures proposed could be cross referred to specific provisions and/or requirements proposed within the draft development consent order. This could be achieved by means of describing the mitigation measures proposed either in each of the specialist reports or collating these within a summary section on mitigation.

The SoS advises that it is considered best practice to outline in the ES, the structure of the environmental management and monitoring plan and safety procedures which will be adopted during construction and operation and may be adopted during decommissioning.

Cross References and Interactions

The SoS recommends that all the specialist topics in the ES should cross reference their text to other relevant disciplines. Interactions between the specialist topics is essential to the production of a robust assessment, as the ES should not be a collection of separate specialist topics, but a comprehensive assessment of the environmental impacts of the proposal and how these impacts can be mitigated.

As set out in EIA Regulations Schedule 4 Part 1 paragraph 23, the ES should include an indication of any technical difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

Consultation

The SoS recommends that any changes to the scheme design in response to consultation should be addressed in the ES.

It is recommended that the applicant provides preliminary environmental information (PEI) (this term is defined in the EIA Regulations under regulation 2 'Interpretation') to the local authorities.

Consultation with the local community should be carried out in accordance with the SoCC which will state how the applicant intends to consult on the preliminary environmental information (PEI). This PEI could include results of detailed surveys and recommended mitigation actions. Where effective consultation is carried out in accordance with Section 47 of the Planning Act, this could usefully assist the applicant in the EIA process – for example the local community may be able to identify possible mitigation measures to address the impacts identified in the PEI. Attention is drawn to the duty upon applicants under Section 50 of the Planning Act to have regard to the guidance on pre-application consultation.

Transboundary Effects

The SoS recommends that consideration should be given in the ES to any likely significant effects on the environment of another Member State of the European Economic Area. In particular, the SoS recommends consideration should be given to discharges to the air and water and to potential impacts on migratory species and to impacts on shipping and fishing areas.

The Applicant's attention is also drawn to the Planning Inspectorate's Advice Note 12 'Development with significant transboundary impacts consultation' which is available on the Advice Notes Page of the National Infrastructure Planning website

Summary Tables

The SoS recommends that in order to assist the decision making process, the applicant may wish to consider the use of tables:

Table X to identify and collate the residual impacts after mitigation on the basis of specialist topics, inter-relationships and cumulative impacts.

Table XX to demonstrate how the assessment has taken account of this Opinion and other responses to consultation.

Table XXX to set out the mitigation measures proposed, as well as assisting the reader, the SoS considers that this would also enable the applicant to cross refer mitigation to specific provisions proposed to be included within the draft Development Consent Order.

Table XXXX to cross reference where details in the HRA (where one is provided) such as descriptions of sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.

Terminology and Glossary of Technical Terms

The SoS recommends that a common terminology should be adopted. This will help to ensure consistency and ease of understanding for the decision making process. For example, 'the site' should be defined and used only in terms of this definition so as to avoid confusion with, for example, the wider site area or the surrounding site.

A glossary of technical terms should be included in the ES.

Presentation

The ES should have all of its paragraphs numbered, as this makes referencing easier as well as accurate.

Appendices must be clearly referenced, again with all paragraphs numbered.

All figures and drawings, photographs and photomontages should be clearly referenced. Figures should clearly show the proposed site application boundary.

Bibliography

A bibliography should be included in the ES. The author, date and publication title should be included for all references. All publications referred to within the technical reports should be included.

Non Technical Summary

The EIA Regulations require a Non Technical Summary (EIA Regulations Schedule 4 Part 1 paragraph 22). This should be a summary of the assessment in simple language. It should be supported by appropriate figures, photographs and photomontages.

Appendix 4.3

Consultation Responses

Phase 1 S42 Consultation Feedback and APL Response

Between March 2015 when the Project was 'put on hold' and the submission of the DCO in May 2018 the Project was subject to further design refinements as a result of updated environmental assessments and in response to consultation feedback.

Notes provided in the column titled "Notes following Phase 2 Consultation (2018)" are given where the Project response to comments and feedback should be differentiated from or updated from the 2014 response due to the evolution of the Project, or updates in Policy and Guidance.

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
Site Selection	13	One comment strongly opposes the location of the proposed gas fired power plant, stating they live approximately 500 metres from the proposed site and are concerned about the emissions and also the noise levels (s42d). Another comment further states that this development is of great concern as it is located 500m from their property at Cefn Betingau (s42d).	As explained in the ES, APL undertook a detailed site assessment in the initial phase of the Project from 2010-2013, during which period a range of sites around the UK were studied as to their suitability for a flexible gas-fired power station. This process identified that the site had the following key advantages: ■ It is in close proximity to a suitable electrical connection point; ■ It is in close proximity to a suitable gas connection point; ■ The Project Site does not include any nationally important environmental designations; ■ The land available is of an adequate size to accommodate the Power	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			Generation Plant, Gas Connection and Electrical Connection; ■ The Project Site is largely situated on poor quality agricultural land (improved grassland classified as Grade 4 agricultural land); ■ It is in close proximity to similar industrial developments including the Felindre Gas Compressor Station and Swansea North Substation; ■ It is in close proximity to a well-developed road network Need for new energy infrastructure, and fossil fuel infrastructure, is established in NPS EN-1 and NPS EN-2. There is growing acknowledgement within Government policy and industry that established renewable technologies cannot provide the security of supply that consumers require. DECC currently forecast a need for ~42 GW of new Gas and Nuclear generation between 2012 and 2030. The type of gas generation	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			required post-2020 must be more flexible to support intermittent wind. WPL* is bringing forward three other power generation projects through the PA 2008 process. They are: ▪ Progress Power Ltd at Eye Airfield in Suffolk (www.progresspower.co.uk); ▪ Hirwaun Power Ltd at Hirwaun in South Wales (www.hirwaunpower.co.uk); and ▪ Millbrook Power Ltd at Rookery South Pit (www.millbrookpower.co.uk) A noise assessment has been carried out as part of the EIA and the findings are presented in chapter 7 of the ES. The noise assessment predicts that there will be no significant residual effects from the operation of the Project. Embedded mitigation measures will ensure that potential adverse impacts resulting from the Project are negligible and therefore not significant. An air quality assessment has been carried out as part of the EIA and the findings are presented in chapter 6 of the ES. The air quality assessment has	*WPL were the previous owners of the Project. The Project, and the other developments listed, have been acquired by Drax Group plc.

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			shown that the Project will not result in any likely significant environmental effects in relation to air quality either as a standalone project or cumulatively with other projects.	
		Two comments refer to the health and safety concerns regarding the selection of this site. One of these comments states that the positioning of the development will have serious health issues for the surrounding properties due to the co2 emissions, particularly during high pressure weather conditions (s42d). The other comment states that the proximity of a gas installation within close proximity of a hospital, schools, and houses will cause major health and safety concerns (s42d).	An air quality assessment has been carried out as part of the EIA and the findings are presented in chapter 6 of the ES. The air quality assessment has shown that the Project will not result in any likely significant environmental effects in relation to air quality either as a standalone project or cumulatively with other projects. Further, the air quality assessment (chapter 6 of the ES) states that there are unlikely to be permanent effects on air quality associated with the overall construction and decommissioning of the Project, and there are not predicted to be any significant impacts from the operation of the Project. Embedded mitigation measures will be implemented as part of the Project design, including a site specific dust management plan, as part of the Construction Environmental	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			Management Plan (CEMP), an outline of this document can be found in the ES appendices at Document Reference 6.2 Appendix 3.1 Gas fired power stations have been operating safely in the UK for the last 30 years. Some of these plants have operated in very close proximity to hospitals and residential populations.	
		One comment states that the loss of agricultural land that has been in production for hundreds of years should not be allowed unless food production and the development can be managed alongside each other (s42d).	An assessment of the likely impacts of the Project on geology, ground conditions and hydrogeology has been carried out as part of the EIA and the findings are presented in chapter 10 of the ES (Document Reference 6.1). The assessment states that whilst there will be a negligible adverse impact on agricultural land, the agricultural land within and surrounding the Project Site is of a poor quality and therefore the importance of this receptor for assessment purposes is low. Furthermore, APL undertook a detailed site assessment in the initial phase of the Project from 2010-2013, during which period a range of sites around the UK	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			were studied as to their suitability for a flexible gas-fired power station. A number of key factors were considered in the site selection process including environmental factors and the need to avoid sterilisation of the best and most versatile agricultural land. The Project Site is on poor quality agricultural land; based on this and other environmental, technical and economic considerations, a suitably sized site within Abergelli Farm was identified in 2013 and found likely to be suitable for development of a gas fired electricity generating station. Abergelli Farm has a history of commercial and industrial uses, including Abergelli Colliery and a landfill site. The area surrounding the Project Site will continue to change over the next few years as demonstrated by the list of Projects with planning permission listed in Chapter 4 of the ES. These include a number of renewable energy projects. The agricultural land is of poor quality (grades 4 and 5) and is not currently used	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			for food production (grazing of sheep only).	
		Three comments refer to the consideration of other alternatives. One of such comments states that consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES (s42a).	APL has considered alternatives in the selection of the Project Site, Generating Equipment technology options, Gas Connection and Electrical Connection. Consideration of alternatives is set out in chapter 5 of the ES (Document Reference 6.1). In respect of site alternatives, the ex-British Steel Works site was considered by APL, but the local authority have plans for this site and suggested that APL look at alternative sites in the area. Allocated employment land at Felindre Strategic Business Park, located approximately 1.5 km to the south-west of the Project Site, is a brownfield site which possesses excellent accessibility and other features that will enable it to provide a valuable economic role in the locality and region, and is both designated for, and likely to be very attractive to, employment uses at this stage of its development. Therefore it is considered by the Applicant and CCS	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			to be a less appropriate site for the Project than the site selected.	
		One comment states that there does not appear to be any evidence presented on the consideration of alternative sites for the power generation plant - this should be included in the EIA. One comment states that there is a far more suitable brownfield site approximately 800 m to the north-west. This alternative site is closer to the gas pipeline and the electrical connections are still accessible and closer to the main entrance to Abergelli Farm (s42d).	APL has fully considered alternatives in the selection of the Project Site, as set out in chapter 5 of the ES (Document Reference 6.1). APL undertook a detailed site assessment in the initial phase of the Project from 2010-2013, during which period a range of sites around the UK were studied as to their suitability for a flexible gas-fired power station. A number of key factors were considered in the site selection process: technical (e.g. the size of the site and the proximity to appropriate gas and electrical connection points), environmental, economic, and whether the proposals would be in line with local planning policy. On such basis a suitably sized site within Abergelli Farm was identified in 2013 and found likely to be suitable for development of a gas fired electricity generating station.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		A 15 km study area is considered acceptable for the Zone of Theoretical Visibility (ZTV) based on a maximum 40m stack height (a&d).	APL has noted this comment. As explained in chapter 11 of the ES (Document Reference 6.1), a study area of up to 15 km has been used for the landscape and visual impact assessment of the Project, based on a maximum stack height of 40 m*.	*The Power Generation Plant is now made up of only one Gas Turbine Generator with one exhaust gas flue stack, rather than up to five. The stack height is now a maximum of 45 m, instead of 40 m. The 15 km ZTV has been updated accordingly.
		One comment states that the proximity of a gas installation within close proximity of a hospital, schools, and houses will be an economic cost to people living in its immediate vicinity, due to the impact on property values (s42d).	APL has assessed the impacts of the Project and had regard to these when deciding on the red line boundary of the Project. See the ES (Document Reference 6.1). Where land may be injuriously affected by the Project during construction and / or operation, the PA 2008 provides that compensation may be payable.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that the application is not in keeping with the aesthetics of the area, namely it is proposed to build a power station in what is effectively Green Belt land. You are proposing to further decimate the few green spaces left (s42d).	The Project Site is not defined as Green Belt land. The Project Site was selected following a detailed site assessment in the initial phase of the Project from 2010-2013, during which period a range of sites around the UK were studied. A number of key factors were considered in the site selection process, including technical, environmental, economic and planning policy matters, and accordingly, a suitably sized site within Abergelli Farm was identified in 2013 and found likely to be suitable for development of a gas fired electricity generating station. A full assessment of the landscape and visual impact of the Project can be found in chapter 11 of the ES (Document Reference 6.1). A series of mitigation measures will be implemented throughout construction (see outline CEMP (Document Reference 6.2, Appendix 3.1)) and operation through embedded mitigation measures – see	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			chapter 3 of the ES. Further mitigation measures including additional planting can be found in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) and the Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3).	
Consultation	33	One comment requests to be consulted prior to undertaking any excavations as they are currently adding to their underground assets. Note that other gas transporters may have plant in the locality which could be affected (s42a).	APL has noted this comment.	
		One comment notes the relatively close proximity of Swansea Airport to the development site - as such advise that Swansea Airport's views are established and appropriately taken into account (s42a).	As explained in chapter 15 of the ES (Document Reference 6.1), in both 2014 and 2018 APL engaged with the Civil Aviation Authority, Ministry of Defence, Abertawe Bro Morgannwg University Health Board (which uses air ambulance services in relation to Morriston Hospital) and CCS as part of statutory s42 consultation to seek their views on the	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			likelihood of the Project affecting aviation assets and infrastructure. In particular, their views were sought on the effect of construction of stacks of up to 40 metres* at the Project Site. All of these consultees confirmed that the Project would not impact on aviation and it is therefore considered that the construction, operation and decommissioning of the Project will result in no change, with a neutral effect, which is not significant. In addition, CCS safeguard zone mapping was examined in relation potential impacts on Swansea Airport. It was confirmed that the Project is located outside of the relevant safeguarding zone for Swansea Airport. Nevertheless, as a courtesy, details about the Project were shared with Swansea Airport for information purposes following Phase 2 statutory consultation.	*The Power Generation Plant is now made up of only one Gas Turbine Generator with one exhaust gas flue stack, rather than up to five. The stack height is now a maximum of 45 m, instead of 40 m.
		One comment states that APL must contact Network Rail's Asset Protection Team well in	APL has noted this comment. APL has consulted with Network Rail as part of statutory s42 consultation and will	

Phase 1 S42 Consultation Feedback and APL Response

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		advance of commencing any works to mitigate any risk to Network Rail's structures (s42a).	continue to engage with Network Rail as required prior to commencing construction. An Outline CEMP will govern the implementation of construction works associated with the Project. The Outline CEMP (Document Reference 6.2; Appendix 3.1) is submitted as part of the Application.	
		One comment states that in due course they may wish to comment on haul routes or power lines if they affect any of the Neath and Tennant Canals (s42a).	APL has noted this comment. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. APL can confirm that there will be no impact from the Project on the Neath and Tennant Canals	
		One comment states that PHE will provide further comments	The ES (Document Reference 6.1) is submitted and is available as part of the DCO Application. APL is committed to	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		when the ES becomes available (s42a).	continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted.	
		One comment states that they respectfully reserve the right to comment further on any matters and issues arising from ongoing and future consultation (s42a).	APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted.	
		One comment states that they reserve the right to submit further representations when the access route to the site has been determined and with regards to outstanding matters not completed in the submitted EIA (s42a).	Following statutory consultation, APL continued to engage in discussions with National Grid about the use of its road, and subsequently reached an agreement to propose Option 2 (access from the B4489) as the Access Road. In order to allow statutory consultees to take this change into account, APL wrote to all s42 consultees on 26th January 2015, inviting any further comments on the Project The ES (Document Reference 6.1) is submitted and is available as part of the DCO Application. APL is committed to	

Phase 1 S42 Consultation Feedback and APL Response

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			continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted.	
		One comment states that WPD has 11kV overhead lines and underground mains within the redline boundary for the development. Should these be affected by the development, WPD would seek an agreement with the developers to either modify the development plans or agree to protect or divert these assets. It is further stated that WPD need to be consulted prior to construction to ensure safety requirements in relation to working in close proximity to where electricity lines/plant are met (s42a).	APL has consulted with WPD as part of statutory s42 consultation and will continue to engage with WPD as required prior to commencing construction. A CEMP will govern the implementation of construction works associated with the Project. An Outline CEMP (Document Reference 6.2; Appendix 3.1) is submitted as part of the Application. Draft protective provisions to protect WPD assets from the Project have been sent to WPD for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with WPD over these matters.	
		One comment states that the proposal will, by necessity, be	APL has consulted both Welsh Water and National Grid Gas plc as part of statutory	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		in close proximity to a number of Major Accident Hazard pipelines. The Section 42 consultation does not contain any information on the extent and severity of known hazards from the proposed generating station, with the potential to impact on local populations and/or the adjacent major hazard installation(s). The need for consideration at this stage of the development was recently supported by the Secretary of State for Energy and Climate Change in a ruling on a power plant order application - this noted that the preparation and approval of high-level assessment need not have a significant impact on project timescales. In view of adjacent major accident hazard sites, contact should be made with: Welsh Water Development Authority, and National Grid Gas plc (s42a).	s42 consultation in regards to the Project (see Appendix 4.1 of the Consultation Report (Document Reference 6.1). As explained in the ES (Document Reference 6.1), the quantities of 'dangerous' substances stored at the plant do not meet the lower thresholds which require implementation of the COMAH Directive (Control of Major Accident Hazards); instead the plant is subject only to national legislation (e.g. occupational safety and health regulations). The construction phase would be covered by the CEMP (an outline of which is provided in Appendix 3.1 of the ES (Document Reference 6.2)) and the operational phase will be covered by the APL Operational Procedures.	

Phase 1 S42 Consultation Feedback and APL Response

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		One comment states that comments should be sought from the local authority for matters relating to noise, odour, vermin and dust nuisance; site investigation and remediation; and Air Quality Management Areas (s42a).	APL has consulted CCS and key stakeholders from an early stage of the Project, including in relation to matters relating to noise, odour, vermin and dust nuisance; site investigation and remediation; and air quality, as detailed in chapters 6, 7, 10 and 15 of the ES (Document Reference 6.1). The requirements that are included in the draft DCO (Document Reference 3.1) have also been sent to the local authorities for comment.	
		Three comments state that comments should be sought from a number of agencies. Including: • The Food Standards Agency for matters relating to the impact on human health of pollutants deposited on land used for growing food (s42a). • The Environment Agency for matters relating to flood risk and releases with the	APL has consulted the EA (and NRW), NHS and CCS from an early stage of the Project and as part of statutory s42 consultation. APL has not consulted directly with the Food Standards Agency as their remit does not relate to gas-fired peaking plants. However, an assessment of the impact of the Project on human health has been undertaken as part of the EIA and the findings are presented in chapter 15 of the ES (Document Reference 6.1).	

Phase 1 S42 Consultation Feedback and APL Response

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		potential to impact on surface and groundwaters and for matters relating to waste characterisation and acceptance (s42a). Clinical Commissioning Groups, NHS commissioning Boards and Local Planning Authority for matters relating to wider public health (s42a).	As explained in chapter 15 of the ES (Document Reference 6.1), the likely significant effects on human health regarding air quality from construction and decommissioning of the Project relate to dust/particulate matter generated from construction activities. With the implementation of dust control measures through the Outline Construction Environmental Management Plan the effects of the Project are predicted to be negligible or low and not significant. The main likely significant effects on human health in relation to air quality arising from operation of the Project are associated with the stack emissions. However, modern gas-fired power plants are inherently clean and produce far fewer emissions than other fossil fuel power plants (e.g. coal) when compared on an energy output basis. The stack height has been designed to ensure that there are no significant effects on human health. Chapter 6 of the ES (Document Reference 6.1) states that the Project has	

Phase 1 S42 Consultation Feedback and APL Response

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			the potential to impact on human health due to contaminants, however measures have been included in the Outline CEMP (Appendix 3.1 of the ES (Document Reference 6.2) to control potential effects of ground contamination.	
		One consultee states that they have actively engaged on the project and will continue to do so in respect to the development and possible impact upon our assets. The comment further acknowledges that the details of the proposal are in a preliminary stage and thus are keen to work with APL to develop the proposal where there are possible impacts upon Welsh Water assets (s42a).	APL has consulted with Welsh Water as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	
		One consultee recommends that the developer considers	The impact of the Project on the Welsh Water water main has been considered	

Phase 1 S42 Consultation Feedback and APL Response

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		the impact upon any DCWW assets and apparatus and their ability to fulfil statutory obligations, in particular the 36" and 66" strategic water mains that cross the application site. Proactive discussions have taken place and they encourage this dialogue to be maintained (s42a).	as part of the EIA and is referenced in the ES (Document Reference 6.1). APL has consulted with Welsh Water as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	
		One comment notes that the information may be subject to further update and revision and the full results of the various technical studies undertaken will be provided in the ES, which will be submitted alongside the DCO application.	The ES (Document Reference 6.1) is submitted and is available as part of the DCO Application. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and	

Phase 1 S42 Consultation Feedback and APL Response

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		On this basis, NRW reserve the right to make further comments and representations during the course of the proposed application, as may be required (a&d).	decommissioning phases should a DCO be granted.	
		One comment states that NRW have not been in dialogue with the consultants in regards to noise monitoring locations, further stating that NRW would question whether it was consulted in agreeing a study area, a noise survey methodology, and suitable locations for the survey measurement positions (a&d).	Discussions were held with CCS in August 2014 to agree a study area for the noise and vibration assessment, a noise survey methodology, and suitable locations for the survey measurement positions. The study area includes the six closest Noise Sensitive Receptor locations to the Generating Equipment Site boundary, as agreed with CCS prior to undertaking the study (see chapter 7 of the ES (Document Reference 6.1)).*	*In 2017, the methodology and monitoring locations were confirmed with NRW, followed by detailed baseline sound monitoring, which was undertaken between 15 and 22 February 2018. The results included a full range of relevant weather conditions, which have been used to update the noise

Phase 1 S42 Consultation Feedback and APL Response

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				assessment in the ES.
		One comment states that CCS's Ecologist should be consulted regarding section 42 habitats and species in order to take account of possible adverse effects on such interests (a&d).	APL has consulted CCS from an early stage of the Project, including in relation to matters relating to ecology, as recorded within chapter 8 of the ES (Document Reference 6.1).	
		One comment states that further consultation with NRW should be carried out in relation to watercourses and wetland habitats and their associated species before detailed site layout plans are drawn up and submitted (a&d).	APL has consulted NRW as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. The ecological surveys including watercourses and wetland habitats have now all been completed and suitable ecological mitigation designed and detailed in the ES.	
		One comment states that protection and enhancement of	As part of the drainage, landscape and ecological mitigation proposals, drainage	

Phase 1 S42 Consultation Feedback and APL Response

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		suitable watervole habitat on site will be an important mitigation measure which we would like to discuss further in the future when detailed plans for the development are being considered (a&d).	ditches affected will be recreated and two attenuation ponds will need to be created. Also two ponds greater in size to the one lost will be created which will be subject to ecological enhancement measures.at least one drainage ditch and attenuation pond will need to be created. These features will be suitable for water voles should they colonise the site in the future.	
		One comment states that they advise that APL consult with CCS's Drainage Engineers with regards to flood risk associated with the ordinary watercourses crossing (a&d).	APL has consulted CCS from an early stage of the Project, including in relation to matters relating to flooding and drainage, as recorded within chapter 9 of the ES (Document Reference 6.1).	
		One comment states that for ordinary watercourses, you should consult CCS. We would expect the same level of protection to be applied with regard to pollution prevention and mitigation (a&d).	APL has consulted CCS from an early stage of the Project, including in relation to matters relating to watercourses, as recorded within chapter 9 of the ES (Document Reference 6.1).	
		One comment states that depending on the timescale of the project, other	An assessment of the cumulative effects of the Project has been undertaken as part of the EIA in respect of: air quality;	

Phase 1 S42 Consultation Feedback and APL Response

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		developments may need to be considered within the cumulative impact assessment and contact with the local authority is recommended in this regard (a&d).	noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics; and is recorded in chapters 6-15 of the ES (Document Reference 6.1). Table 4-6 of the ES (Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS. A full cumulative impact assessment was undertaken as part of the EIA following the non-statutory consultation period in order to consider the combined impacts of the Project with other nearby developments. Details are evident in each topic chapter and further as a standalone chapter (see ES Chapter 17 Cumulative Effects, Document Reference 6.1).	
		One comment states that no protective measures including the installation of concrete slab protection shall be installed over or near to the National	APL has noted this comment. APL will maintain continued engagement with National Grid following submission of the DCO Application.	

Phase 1 S42 Consultation Feedback and APL Response

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		Grid pipeline without the prior permission of National Grid (s42a).	Draft protective provisions have been sent to National Grid. These are included in the draft DCO (Document Reference 3.1)	
		One comment notes for developers to be aware that written permission is required before any works commence within the National Grid easement strip (s42a).	APL has noted this comment. APL will maintain continued engagement with National Grid following submission of the DCO Application. Draft protective provisions have been sent to National Grid. These are included in the draft DCO (Document Reference 3.1)	
		One comment states that no excavations are to take place above or within 10m of the confirmed position of the high pressure gas mains without prior consultation with WWU (a&d).	APL has noted this comment. APL has consulted WWU as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect Welsh Water assets from the Project	

Phase 1 S42 Consultation Feedback and APL Response

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			have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	
		One comment states that any gain from construction would be short-lived - in practice there is very limited scope for job creation because skilled workers are usually drafted in from outside the area (s42d).	APL intends to realise suitable opportunities for the local area over the longer-term and is discussing with CCS as to how local employment opportunities can be secured through an appropriate mechanism. A proposed Heads of Terms for a s106 agreement is included within the Application materials to address this (Document Reference 10.3)	
EIA	21	One comment welcomes that the forthcoming Environmental Impact Assessment (EIA) will cumulatively assess the likely significant environmental effects of the Project identified in the PEIR (s42a).	Chapters 6-15 of the ES (Document Reference 6.1) provide an assessment of the cumulative effects of the Project in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics. Table 4-6 of the ES	

Phase 1 S42 Consultation Feedback and APL Response

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			(Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS.	
		One comment states that PHE will provide further comments when the ES becomes available (s42a).	The ES (Document Reference 6.1) is submitted and is available as part of the DCO Application. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted.	
		One comment states that the EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA (s42a).	The EIA has been undertaken in accordance with the EIA Regulations, as explained in chapter 4 of the ES (Document Reference 6.1). In preparing the ES (Document Reference 6.1), due regard has been paid to relevant advice and good practice including: *Planning Inspectorate Advice Note 3: EIA Consultation and Notification (July 2013, Version 5);	* Planning Inspectorate Advice Note 3: EIA Consultation and Notification (republished August 2017, version 7) * Planning Inspectorate Advice Note 7: Environmental Impact Assessment,

Phase 1 S42 Consultation Feedback and APL Response

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			• *Planning Inspectorate Advice Note 7: Environmental Impact Assessment, Screening and Scoping (July 2013, Version 4); • Planning Inspectorate Advice Note 9: Rochdale Envelope (April 2012, Version 2); and • Appropriate guidance and legislation relevant to specific environmental topics presented in this ES.	Screening and Scoping (republished December 2017, version 6)
		One comment states that the ES should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land.	Chapter 3 of the ES (Document Reference 6.1) provides a clear description of the Project Site and surroundings including reference to human and environmental receptors that may be affected by the Project.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points (s42a).		
		One comment states that whilst screening of impacts using qualitative methodologies is common practice (e.g. for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken (s42a).	A quantitative assessment of the impacts of the Project has been undertaken as part of the EIA and is contained within chapter 14 of the ES (Document Reference 6.1).	
		One comment states that the EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site	Neither the Project nor other nearby developments constitute a COMAH or Major Accident Off-Site Emergency Plan site and therefore this topic has not received further consideration.	

Phase 1 S42 Consultation Feedback and APL Response

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		Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the these Regulations (s42a).		
		One comment states that the application site lies in close proximity to the Lower Lliw Reservoir which supplies Felindre Water Treatment Works. The documentation refers to this reservoir as an emergency supply. The proposed development has the potential to impact upon the water quality within the reservoir - therefore recommended that an appropriate air quality assessment is undertaken to	An assessment of the likely significant effects of the Project in respect of air quality has been undertaken as part of the EIA and the findings are recorded within chapter 6 of the ES (Document Reference 6.1). The Lower Lliw Reservoir is an emergency reservoir. It is not possible to assess deposition on water and therefore assessing deposition on the reservoir could not be undertaken. However as the Project is a gas power station the only	

Phase 1 S42 Consultation Feedback and APL Response

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		consider possible effects to the water in the reservoir from both deposition and affected rainfall. The reservoir should be considered as a main receptor in the air quality change modelling (s42a).	relevant pollutant is NOX and no metal deposition is expected.	
		One comment states that factoring the long-term predictions by operating hours is a methodology that is generally acceptable when there is sufficient headroom such that the uncertainties involved are unlikely to make a significant difference to predictions. In this case you acknowledge that critical loads at nearby habitats are already exceeded, therefore there is little headroom. Without further work NRW cannot comment on whether this methodology is a "worst case" approach. NRW would expect you to justify that your assessment is	The air quality assessment has assessed long term impacts by scaling the outputs for periods longer than one hour by the worst-case operating hours, 2,250 per year*. This in turn meant that annual mean impacts were based on 2,250 hours out of 8760 hours. This approach is considered to represent a likely worst case, although it is acknowledged that this not the absolute "worst case" which would see the plant modeled as operating during the absolute worst 2,250 hours each year however this has such a low probability of occurring that it is not relevant to the assessment of chronic or long term ecological effects. NRW acknowledges that factoring long term prediction by operating hours is a methodology that is generally acceptable. In order to address NRW concerns over	*The plant is expected to operate for up to 2,250 hours per year and 1,500 running hours rolling average over 5 years

Phase 1 S42 Consultation Feedback and APL Response

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		representative of a worst case scenario (a&d).	the scaling of long term predictions, we make reference to a previous assessment of a peaking plant, operating at 1500 hours per year, in Wales. As part of that assessment potential impacts of different combinations of operating hours over the 5 years of meteorological data were tested to address NRW concerns over the scaling of long term impacts. The overall conclusions of the statistical test was that the scaling of long term impacts can result in +/- 10% difference in concentrations at the 99th Percentile level. Applying this conclusions to the predicted results presented in the air quality assessment for the Abergelli Power Project and particularly on the most affected receptor (ie Rhyd-Y-Pandy Valley and Grasslands SINC) will mean that the Process Contribution from the proposed stack will change from 0.0071 to 0.0078 kg N/ha/yr which when compared to the minimum critical load for nitrogen deposition is a change from 0.071% of the minimum critical load to 0.078% of the minimum critical load. This difference is not significant and the	

Phase 1 S42 Consultation Feedback and APL Response

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			conclusions of the assessment are robust.	
		One comment states that the PEIR refers to monitoring of emissions as mitigation for the slight adverse effects on air quality during construction, operation and decommissioning. Monitoring is not considered to be mitigation, therefore what additional mitigation measures are proposed? (a&d)	The project has a number of embedded mitigations measures including a site specific Dust Management Plan (DMP) that forms part of the Construction Environmental Management Plan (CEMP). The monitoring of construction emissions will form part of the DMP to ensure that appropriate mitigation measures included in the DMP are applied proportionally and at a timely manner including damping down of dusty surfaces, imposing speed limits for vehicles, covering stock piles etc. etc. Furthermore ambient air monitoring during construction is a mitigation measure as an operator can set alarm levels to prevent emissions exceeding potentially significant levels. During operation, real time stack monitoring can also be considered mitigation as any increases in emissions concentrations can be identified. Furthermore the stack sensitivity assessment, included in the assessment ensured the adequate	

Phase 1 S42 Consultation Feedback and APL Response

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			dispersion that will not result harmful effects to occur.	
		One comment states that for all SSSIs within at least 2 km, and all SACs/SPAs/Ramsar sites within 10km of the proposed plant, the following information should be included within the ES - concentrations of NOx (and SO2 if present in emissions) emitted by the proposed plant compared to the critical levels for sensitive habitats at the above sites; proposed plant emissions (Process Contribution/PC) should be compared as a percentage of the relevant critical level as well being compared to the PC added to the background (PEC); levels of nutrient Nitrogen deposition and Acid deposition derived from the proposed plant (PC) should also be compared to	A number of SSSI's and SACs/SPAs/Ramsar sites are within the vicinity of the Project Site. Information on emission concentrations, comparisons with critical levels, and levels of acid an nitrogen deposition are contained within chapter 6 of the ES (Document Reference 6.1). The assessment considers potential impacts on European, national and local designated ecological sites during operations through air dispersion modelling. Potential impacts from airborne pollution including fugitive dust during site preparation, demolition and construction is assessed qualitatively using the IAQM Guidance. The air quality assessment (chapter 6 of the ES (Document Reference 6.1)) states that there are unlikely to be permanent effects on air quality associated with the overall construction and decommissioning of the Project, and there are not predicted to be any	

Phase 1 S42 Consultation Feedback and APL Response

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		site relevant critical loads for the above sites (a&d).	significant impacts from the operation of the Project	
		One comment states that the ambient noise survey was conducted in accordance with the relevant standards but key frequency data is omitted which was requested by the SoS and confirmed to be captured by the contractor. The PEIR outlines that at each identified Nearest Sensitive Receptor location the sound level is predicted to range between 40 dB to 47 dB LAeq which would result in a major noise impact at the receptor locations - however no mitigation has been factored in. What mitigation is planned to attenuate this increase in noise against the current background, and will each of the measures being proposed	The 2014 PEIR (and 2018 PEIR) noise modelling study was based on preliminary information. Detailed modelling was undertaken for the ES, superseding the predicted noise levels provided in the 2014 and 2018 PEIR. A noise contour plot to show the results of the modelling exercise is provided in Appendix 7.1. All noise mitigation measures are detailed in Section 7.7 of the ES.	

Phase 1 S42 Consultation Feedback and APL Response

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		reduce the noise levels to an acceptable level? (a&d).		
		One comment states that slight and minor adverse effects are predicted at sensitive receptors during the construction phase of the project, and the proposed mitigation is site hoarding to mask the activities - will this afford any real mitigation against the increased noise levels?	Construction noise mitigation measures are set out in the Outline CEMP. The results of the ES construction noise predictions are set out in ES Chapter 7. The site hoarding will provide a moderate level of noise reduction to low level receptors (Document References 6.1 and 6.2).	
		One comment which states that increased noise levels are likely to be perceived during start-up, and asks what levels are likely above background and how will this be mitigated?	The noise assessment is presented in Chapter 7 of the ES. A +3 decibel (dB) correction factor is incorporated into the assessment to account for potentially distinctive character (see Section 7.7 of Chapter 7). The assessment demonstrates that noise effects as a result of the operation of the Project are not significant, and therefore	

Phase 1 S42 Consultation Feedback and APL Response

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			no further mitigation or monitoring is proposed.	
		One comment stated that the predicted habitat losses should be quantified in the ES - this is particularly important when agreeing a mitigation/compensation (a&d)	Habitat losses for all Valued Ecological Receptors have been quantified in chapter 8 of the ES (Document Reference 6.1).	
		One comment advises that further detail is provided in the ES in relation to the discharge characteristics (with particular regards to temperature and chemical composition) of any cooling/process waters upon the above watercourses in order to assess any offsite environmental impact (a&d).	As explained in Chapter 3 and 9 of the ES, no process waters will be discharged at the site. Wastewater to be generated from the Project Site has been considered in the embedded mitigation (Section 3.11 in ES Chapter 3, Document Reference 6.1). No discharge of process water to nearby water receptors is planned as all process wastewater will be taken off-site via a tanker to an appropriate wastewater treatment facility by specialist contractors.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment advises that with regards to WFD compliance assessment - a screening assessment, to include new or changed river crossings, should be undertaken (a&d).	The assessment of water quality and resources (ES Chapter 9) incorporates WFD assessment and concludes the scheme will not affect WFD compliance. The WFD screening assessment is an appendix to the 2018 ES Appendix 9.2 Water Framework Directive Assessment (Document Reference 6.2).	
		One comment states that a contaminated land risk assessment should be undertaken as part of the ES, the scope of which should be agreed with CCS (a&d).	A Preliminary Geo-Environmental Risk Assessment (PRA) Report has been completed as part of the ES (presented in Appendix 10.1), which presents the documentation and drawings provided by NRW relating to the landfill and landfill extension within the vicinity of the Project Site. This information will be used to design the ground investigation.	
		One comment states that there does not appear to be any evidence presented on the consideration of alternative sites for the power generation plant - this should be included in the EIA. A 15 km study area is considered acceptable for	APL has fully considered alternatives in the selection of the Project Site, as set out in chapter 5 of the ES (Document Reference 6.1). As explained in chapter 11 of the ES (Document Reference 6.1), a study area of up to 15km has been used for the landscape and visual impact assessment	* The Power Generation Plant is now made up of only one Gas Turbine Generator with one exhaust gas flue stack, rather than up to five. The stack

Phase 1 S42 Consultation Feedback and APL Response

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		the Zone of Theoretical Visibility (ZTV) based on a maximum 40 m stack height (a&d).	of the Project, based on a maximum stack height of 40 m*.	height is now a maximum of 45 m, instead of 40 m. The 15 km ZTV has been updated accordingly
		One comment states that there is currently very little information on the opportunities for mitigation (in relation to landscape and visual impact) (s42a).	Landscape and visual impact mitigation measures are set out in the LVIA (ES Chapter 11), and illustrated in the Outline Landscape Mitigation Strategy (Document Reference 6.2) and Outline Landscape Mitigation Plan (Document Reference 6.3).	
		One comment requests that the potential impact of the proposed scheme on National Grid's existing assets as set out above is considered in any subsequent reports, including in the ES, and as part of any subsequent application (s42d).	An assessment of the impact of the Project on National Grid's assets has been undertaken as part of the EIA and is recorded within the ES (Document Reference 6.1) which is submitted as part of the Application.	
		One comment states that the project involves connections to electrical power distribution systems and has an impact on the existing generation,	APL has noted this comment.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		transmission and distribution assets on the UK mainland. As well as satisfying general health and safety legislation (i.e. the Health and Safety at Work etc Act 1974 and supporting regulations), the proposed design and future operations must comply with the Electricity at Work Regulations 1989 and the Electricity, Safety, Continuity and Quality Regulations 2002 as amended (s42a).		
Electrical Connection	4	One comment notes that the electric fields produced by the proposed new underground cables have been considered within the Report; however, such cables will also produce magnetic fields, which will not be shielded in the same way; therefore an assessment of the health impact of the magnetic fields should be included in the ES (s42a).	An Electrical Infrastructure Electric and Magnetic Fields (EMF) Assessment has been undertaken, the findings of which are in the EMF Report (ES Appendix 15.1, Document Reference 6.2). The above-ground components of the Electrical Connection will lie within the existing Swansea North Substation where there are already EMFs present that were considered as part of the application for the substation; they will not make a significant difference to the EMFs already present. It should also be noted	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			that the general public will not spend any prolonged time in close proximity to the Electrical Connection or to the Swansea North Substation boundary. The general public will thus not be exposed to any increase in EMFs from the Electrical Connection and there will be no significant effects arising from EMFs.	
		One comment notes that in Table 7.9 there is reference to 'slight adverse' effects but it is unclear whether this is referring to 'minor adverse' effects specified in Table 7.4 above. There is no justification as to why the sound levels from the gas and electrical connections are thought to be negligible (a&d).	The electrical and gas connections will be via underground cables and pipelines, there will be no noise producing elements above ground. This is discussed in detail in Section 7.7 of the ES.	
		One comment states that there are two High Pressure gas mains within the proposed redline boundary as shown on your enclosed plans, with WWU having the benefits of rights granted to us through	APL has consulted WWU as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction,	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		several easements. The works to lay the cable and the access roads will need to be approved by our Plant Protection and Operational departments prior to commencement (a&d).	operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect WWU assets from the Project have been sent to WWU for comment. These will be included in the draft DCO (Document Reference 3.1)	
		One comment states that they strongly oppose the location of the proposed gas fired power plant - located approximately 500 metres from the proposed site and are concerned about the emissions and also the noise levels - they purchased the property a year ago and if the power station is approved, this will definitely devalue	APL undertook a detailed site assessment in the initial phase of the Project from 2010-2013, during which period a range of sites around the UK were studied as to their suitability for a flexible gas-fired power station. A number of key factors were considered in the site selection process: technical (e.g. the size of the site and the proximity to appropriate gas and electrical connection points), environmental, economic, and whether the proposals would be in line with local planning policy. On such basis a suitably sized site within Abergelli Farm was identified in 2013 and found likely to be suitable for development of a gas fired electricity generating station.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			A noise assessment has been carried out as part of the EIA and the findings are presented in chapter 7 of the ES (Document Reference 6.1). The noise assessment predicts that there will be no significant residual effects from the operation of the Project. Embedded mitigation measures will ensure that potential adverse impacts resulting from the Project are negligible and therefore not significant. An air quality assessment has been carried out as part of the EIA and the findings are presented in chapter 6 of the ES (Document Reference 6.1). The air quality assessment (chapter 6 of the ES (Document Reference 6.1)) states that there are unlikely to be permanent effects on air quality associated with the overall construction and decommissioning of the Project, and there are not predicted to be any significant impacts from the operation of the Project.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
Socioeconomics	4	Two comments refer to the effect of the development on the ability to find a buyer and the value of their properties. One of these comments states that the proximity of a gas installation within close proximity of a hospital, schools, and houses will be an economic cost to people living in its immediate vicinity, due to the impact on property values.	APL has assessed the impacts of the Project and has had regard to these when deciding on the application boundary of the Project (see the ES (Document Reference 6.1)). Where land may be injuriously affected by the Project during construction and / or operation, the PA 2008 provides that compensation may be payable	
		One comment states that any gain from construction would be short-lived - in practice there is very limited scope for job creation because skilled workers are usually drafted in from outside the area	As set out in the socio-economic assessment (chapter 14 of the ES (Document Reference 6.1), the construction period is estimated to last approximately 25* months and the number of construction workers* onsite per month ranges from 5 to 86 during the peak construction period. As a result, during construction of the Power Generation Plant, there would be a slight beneficial impact. The Project's construction schedule shows approximately 40% of the	*duration of the construction phase will be 22 months *number of construction workers per month will range from 25 to 122 during the peak construction period

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			construction workforce will be highly skilled, 45% moderately skilled and 15% low skilled. In addition, the Statement of Proposed Heads of Terms for a s106 Agreement (Document Reference 10.3) commits APL to agree a local service provider engagement scheme with CCS prior to construction (the Local Services Scheme). The Local Services Scheme will set out the measures that APL will take in order to ensure that opportunities for local organisations to bid for contracts during the construction period of the Project are advertised locally. It must also set out the measures that APL will take in order to ensure that opportunities for local organisations to bid for contracts during the operational period of the Project (for example for maintenance, cleaning or security services) are advertised locally.	
Noise	17	Two comments refer to the impact of noise on their own wellbeing due to their own proximity to the plant. One of	APL undertook a detailed site assessment in the initial phase of the Project from 2010-2013, during which period a range of sites around the UK	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		these comments states that they strongly oppose the location of the proposed gas fired power plant, living approximately 500 metres from the proposed site and are concerned about the emissions and also the noise levels (s42a). Another comment states that the noise and exhaust gas emissions will have a detrimental effect on their health and wellbeing (s42d).	were studied as to their suitability for a flexible gas-fired power station. A number of key factors were considered in the site selection process: technical (e.g. the size of the site and the proximity to appropriate gas and electrical connection points), environmental, economic, and whether the proposals would be in line with local planning policy. On such basis a suitably sized site within Abergelli Farm was identified in 2013 and found likely to be suitable for development of a gas fired electricity generating station. A noise assessment has been carried out as part of the EIA and the findings are presented in chapter 7 of the ES (Document Reference 6.1). The noise assessment predicts that there will be no significant residual effects from the operation of the Project. Embedded mitigation measures will ensure that potential adverse impacts resulting from the Project are negligible and therefore not significant. The air quality assessment has shown that the Project will not result in any likely	

Phase 1 S42 Consultation Feedback and APL Response

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			significant environmental effects in relation to air quality either as a standalone project or cumulatively with other projects. See chapter 6 of the ES (Document Reference 6.1)	
		One of these comments identifies that the [2014] PEIR states that 3 day; 1 evening and 2 night samples will be taken - however it would appear that the actual sampling undertaken was 2 day; 1 evening and 1 night for each nearest sensitive receptor (s42a)	As set out in the baseline survey report (Appendix 7.1 of the ES, Document Reference 6.2), the 2014 noise monitoring undertaken was as follows: • Daytime - 2 sets of samples • Evening - 1 set of samples • Night time - 2 sets of samples	
		One comment states the ambient noise survey was conducted in accordance with the relevant standards but key frequency data is omitted which was requested by the SoS and confirmed to be captured by the contractor. The PEIR outlines that at each identified Nearest Sensitive Receptor location the sound	The 2014 and 2018 PEIR noise modelling study was based on the preliminary information. Detailed modelling has now been undertaken for the ES (Document Reference 6.1), superseding the predicted noise levels provided in the 2014 and 2018 PEIR. A noise contour plot to show the results of the modelling exercise is provided in Appendix 7.1 of the ES (Document Reference 6.2). Embedded noise mitigation is detailed in	

Phase 1 S42 Consultation Feedback and APL Response

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		level is predicted to range between 40 dB to 47 dB LAeq which would result in a major noise impact at the receptor locations - however no mitigation has been factored in. What mitigation is planned to attenuate this increase in noise against the current background, and will each of the measures being proposed reduce the noise levels to an acceptable level? (a&d).	Section 7.6 of the ES (Document Reference 6.1).	
		One comment identifies that the PEIR states that the ES will consider the potential impacts on human receptors from emissions to air, noise, water quality, ground and soil including potential for contamination. In addition, PHE welcomes that the forthcoming Environmental Impact Assessment (EIA) will cumulatively assess the likely	APL has noted this comment. An assessment of the cumulative effects of the Project has been undertaken as part of the EIA in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics; and is recorded in chapters 6-15 of the ES (Document Reference 6.1). Table 4-6 of the ES	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		significant environmental effects of the Project identified in the PEIR (s42a).	(Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS.	
		One comment states that no reference is made to the Environmental Agency's horizontal guidance note for noise (a&d).	The noise assessment (chapter 7 of the ES (Document Reference 6.1) includes reference to Environment Agency Horizontal Guidance H3 Part 2: Noise assessment and control	
		One comment states that increased noise levels are likely to be perceived during start-up - what levels are likely above background and how will this be mitigated? (a&d)	Mitigation will be designed so the plant does not exceed background during all operational modes. Proposed measures for mitigation are outlined in the mitigation section (Section 3.11 of the ES).	
		One comment states that NRW have not been in dialogue with the consultants in regards to noise monitoring locations (a&d)	Discussions were held with CCS in August 2014 to agree a study area for the noise and vibration assessment, a noise survey methodology, and suitable locations for the survey measurement positions. The study area includes the six closest Noise Sensitive Receptor locations to the Generating Equipment Site boundary, as agreed with CCS prior to undertaking the study. Refer to the	* Noise monitoring locations were confirmed with NRW prior to detailed noise monitoring in 2018.

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			chapter 7 of the ES (Document Reference 6.1).*	
		One comment states that a tonal assessment was expected to be carried out in tandem with the noise survey (a&d).	The noise assessment is presented in Chapter 7 of the ES (Document Reference 6.1). Detailed baseline sound monitoring was undertaken between 15 and 22 February 2018. Robust representative baseline ambient and background sound levels have been derived from the results by filtering for appropriate weather conditions and statistical analysis of filtered data. Corrections for tonality, impulsivity, and intermittency have not been applied on the assumption that these potential features would be designed out of the Project during the detailed design phase by the selection of appropriate plant, building cladding louvres and silencers/attenuators. However, for the daytime BS 4142 assessment a +3 dB correction has been applied to the specific noise levels predicted from the Project Site on the basis that the noise emissions may be distinctive above the	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			residual acoustic environment. This is considered conservative in the context of the prevailing noise environment, which includes road traffic, the existing electrical infrastructure and agricultural equipment.	
		One comment states that slight and minor adverse effects are predicted at sensitive receptors during the construction phase of the project, and the proposed mitigation is site hoarding to mask the activities - will this afford any real mitigation against the increased noise levels?	Construction noise mitigation measures are set out in the noise CEMP. The results of the construction noise predictions are set out in Tables 7.16 to 7.19 of ES Chapter 7 (Document Reference 6.1). The site hoarding will provide a moderate level of noise reduction to low level receptors.	
		One comment states that it should be explained why a 30 minute sample which covered a 24 hour period is believed to be representative to suggest that the sound was stable and not fluctuating.	The ambient noise survey methodology was discussed and agreed with the Environmental Protection officer at CCS prior to commencing the works. Short term sampling coupled with long term measurements are a standard method employed when access or safety precludes long term measurements at all locations.*	*A more detailed noise survey has been undertaken (Appendix 7.1, Document Reference 6.2), which has provided representative background and residual sound level

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
				data in line with that requested by NRW. This was used as the basis for day and night time BS 4142 assessments presented in the ES. At the ES stage the noise predictions are still based on example plant representative noise data and realistic worst case location of the sources within the Rochdale envelope.
		One comment states that in order to conduct a robust BS 4142 assessment, representative background LA90 noise levels are required at sensitive receptors. The noise monitoring survey should therefore be conducted over a sufficient time period and over relevant reference time	Detailed baseline sound monitoring was undertaken between 15 and 22 February (2018). The results included a full range of relevant weather conditions and will be used to update the assessment for the ES. Robust representative baseline ambient and background sound levels have been derived from the results by filtering for appropriate weather conditions and statistical analysis of	*Note that the previous 2014 response was no longer applicable, and therefore has been replaced.

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		intervals to determine typical background levels under all operational scenarios.	filtered data. The results show some changes from the data used in the PEIR. This is to be expected at the data used in the PEIR was based on very limited measurements in 2013 which were subject to the influence of both short duration sound source effects and inappropriate wind directions for some of the receptors. The most notable changes are that the detailed survey resulted in higher representative background sound levels at NSRs 1 and 6 and lower ambient levels at NSR 4. As a result the assessments are now clearer in terms of their low impacts. The BS 4142 night time assessment based on the results of the detailed survey demonstrate an impact better than low adverse at all receptors. A night time BS 4142 assessment will therefore be in the ES alongside the WHO assessment. The lower residual levels (baseline ambient) measured at NSR4 also mean that the complex situation regarding the WHO assessment at that location, where the residual noise already exceeded the WHO criterion but the power station noise	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			did not result in any increase, no longer applies.*	
		One comment states that it is recommended that an overview of 'A Noise Action Plan for Wales 2013-2018' is provided in the relevant policy and guidance section with particular emphasis on the importance of 'sustainable development principles' and 'creeping background'.	The Noise Action Plan for Wales (2013-2018) is referenced in chapter 2.7 of the ES (Document Reference 6.1).	
		One comment states that NRW would question whether it was consulted in agreeing a study area, a noise survey methodology, and suitable locations for the survey measurement positions.	In 2014 consultation with CCS was undertaken to agree the methodology for the initial ambient noise survey. The frequency data is now included in the baseline survey report, which is provided in Appendix 7.1 of the ES (Document Reference 6.2).	
		One comment states that they would like confirmation of how weather data, which is referred to in the PEIR, was collected.	For the 2014 PEIR, this was undertaken using Swansea MET office data, which can be made available upon request.*	* The nature and context of the site mean that BS 4142 would produce an inappropriate

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
				assessment of operational noise impacts at night. As a result, it was agreed in discussion with CCS to base the night time assessment upon the WHO document Night Noise Guidelines for Europe
		One comment states that in Table 7.9 there is reference to 'slight adverse' effects but it is unclear whether you are referring to 'minor adverse' effects specified in Table 7.4 above. There is no justification as to why the sound levels from the gas and electrical connections are thought to be negligible.	The electrical and gas connections will be via underground cables and pipelines, there will be no noise producing elements above ground. This is discussed in detail in Section 7.7 of the ES.	
		One comment states that when submitting a noise impact assessment, as part of the permit application for an EPR	The Environmental Permit application will refer to the EA Horizontal Guidance for Noise Document - IPPC H3 (Part 1). The assessment methodology for this noise	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		permit, you should refer to Environment Agency document Noise Impact Assessment - Information Requirements 3 to inform yourselves of the expected requirements for a noise impact assessment submission.	study (Section 7.5 of the ES) has followed all requirements as set out in the Environment Agency H3 document.	
Air Quality	26	Twelve comments state that the baseline, assessment and future monitoring should include: • appropriate screening assessments and detailed dispersion modelling where this is screened as necessary (s42a). • encompassing all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a	The baseline air quality assessment has been undertaken as part of the EIA and is reported in Section 6.5 of the ES (Document Reference 6.1). Future monitoring will be enforced through an Environmental Permit. More detail regarding the twelve points raised is outlined below: ▪ Section 6.4 of the ES outlines the methodology undertaken for the air quality assessment that includes dispersion modelling. ▪ Throughout the air quality assessment, the construction, operational and decommissioning phases have been assessed. ▪ Section 6.4 sets out the worst case scenario that has been assessed.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		single holistic assessment (s42a) • consideration the construction, operational, and decommissioning phases (s42a) • consideration of the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts (s42a) • fully accounting for fugitive emissions (s42a) • appropriate estimates of background levels (s42a) • consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data (s42a) • comparison of predicted environmental	▪ Within the assessment the effects duration is quantified from 0-1 year, 1-5 years or 5-15 years. ▪ Local and National monitoring data has been used within the assessment. ▪ Background concentrations are listed ▪ Section 6.3 lists the legislation and policy context that have been considered in the assessment; this includes the Air Quality Strategy 2007 that sets National Air Quality Objectives. ▪ Residential receptors have been identified within the assessment. Further details are in ES Chapter 6, Document Reference 6.1).	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels) (s42a) • identification and consideration on the impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development (s42a) • consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs) (s42a)		

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions) (s42a) modelling taking into account local topography (s42a)		
		Three comments refer to the impact of air quality on the public wellbeing. One of these comments states that they strongly oppose the location of the proposed gas fired power plant, living approximately 500 metres from the proposed site and are concerned about the emissions and also the noise levels (s42a). Another comment states that the noise and exhaust gas emissions will have a detrimental effect on their health and wellbeing (s42d). Another of these comments states that the positioning of this development	An air quality assessment has been carried out as part of the EIA and the findings are presented in chapter 6 of the ES (Document Reference 6.1). The air quality assessment (chapter 6 of the ES (Document Reference 6.1)) included an assessment at a number of identified human receptors within close proximity of the Project Site. The predicted concentrations at sensitive human receptors demonstrate that there will be no significant impacts on human health from emissions of the Power Generation Plant. Further, the air quality assessment (chapter 6 of the ES (Document Reference 6.1)) states that there are unlikely to be permanent effects on air quality associated with the overall	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		will also have serious health issues for the surrounding properties due to the CO2 emissions, particularly during high pressure weather conditions (s42a).	construction and decommissioning of the Project, and there are not predicted to be any significant impacts from the operation of the Project. Embedded mitigation measures will be implemented as part of the Project design, including a site specific dust management plan, as part of the outline Construction Environmental Management Plan (CEMP) (Document Reference 6.2; Appendix 3.1) for the Project Site.	
		Three comments make reference to the PEIR. These include the following: One comment identifies that in addition to the consideration of the potential impacts on human receptors from emissions to air noise, water quality, ground and soil, PHE welcomes that the forthcoming EIA will cumulatively assess the likely significant effects of the Project identified in the PEIR (s42a).	An assessment of the cumulative effects of the Project has been undertaken as part of the EIA in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics; and is recorded in chapters 6-15 of the ES (Document Reference 6.1). Table 4-6 of the ES (Document Reference 6.1) sets out the Projects that are considered as	

Phase 1 S42 Consultation Feedback and APL Response

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		One comment states that the PEIR refers to monitoring of emissions as mitigation for the slight adverse effects on air quality during construction, operation and decommissioning. Monitoring is not considered to be mitigation, therefore what additional mitigation measures are proposed? (a&d). One comment states that the PEIR has followed an assessment methodology that is appropriate in regards to air quality impact assessment, but that they have not completed a detailed assessment and therefore cannot comment on the predicted impact.	part of the cumulative assessment as agreed with CCS. The project has a number of embedded mitigations measures including a site specific Dust Management Plan (DMP) that forms part of the Construction Environmental Management Plan (CEMP). The monitoring of construction emissions will form part of the DMP to ensure that appropriate mitigation measures included in the DMP are applied proportionally and at a timely manner including damping down of dusty surfaces, imposing speed limits for vehicles, covering stock piles etc. etc. Furthermore ambient air monitoring during construction is a mitigation measure as an operator can set alarm levels to prevent emissions exceeding potentially significant levels. During operation, real time stack monitoring can also be considered mitigation as any increases in emissions concentrations can be identified. Furthermore the stack sensitivity assessment, included in the assessment ensured the adequate	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			dispersion that will not result harmful effects to occur.	
		One comment states that any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for (s42a).	Emissions arising during the construction and decommissioning phases of the project have been assessed within the Air Quality chapter 6 of the ES (Document Reference 6.1). Embedded mitigation measures will be implemented as part of the Project design, including a site specific dust management plan, as part of the Outline Construction Environmental Management Plan (CEMP) (Document Reference 6.2; Appendix 3.1) for the Project Site.	
		One comment states they would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from	The Outline Construction Environmental Management Plan (Document Reference 6.2, Appendix 3.1) outlines best practice to be followed during the construction and decommissioning phase to ensure appropriate mitigation is in place. Chapter 6 of the ES (Document Reference 6.1) explains the measures	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		emissions (point source, fugitive and traffic-related) (s42a).	that will be taken to mitigate impacts on sensitive receptors due to emissions during operation of the Project, for example an adequately sized stack. The ES includes detailed measures to be used to control stack and fugitive emissions. It demonstrates compliance with air quality standards and permit limits prescribed in the IED.	
		One comment states that the promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility (s42a).	An Outline Construction Environmental Management Plan is set out within (Document Ref 6.2.0, Appendix 3.1) that acts as the mechanism to deal with construction related impacts. An Outline Construction Traffic Management Plan (ES Appendix 3.3, Document Ref 6.2.0) and Outline Construction Worker Travel Plan (ES appendix 3.2, Document Ref 6.2.0) have been prepared to deal with construction related traffic impact.	
		One comment states that if no standard or guideline value	Chapter 6 of the ES (Document Reference 6.1) states that in the case of	

Phase 1 S42 Consultation Feedback and APL Response

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		exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent) (s42a).	combustion of natural gas in a power station, the main pollutants are NOx and Carbon Monoxide (CO).	
		One comment states that this should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion (s42a)	Chapter 6 of the ES (Document Reference 6.1) considers impacts to human and ecological receptors including deposition of nitrogen. Ground level concentrations are also considered.	
		One comment states that PHE's view is that the EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above (s42a)	The EIA considers both point source and diffuse emissions within the air quality assessment. The methodology and results are provided in chapter 6 of the ES (Document Reference 6.1). The assessment considers potential impacts on European, national and local designated ecological sites during operations through air dispersion modelling. Potential impacts from airborne pollution including fugitive dust during site preparation, demolition and	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			construction is assessed qualitatively using the IAQM Guidance.	
		One comment states that the application site lies in close proximity to the Lower Lliw Reservoir which supplies Felindre Water Treatment Works. The documentation refers to this reservoir as an emergency supply. The proposed development has the potential to impact upon the water quality within the reservoir - therefore recommended that an appropriate air quality assessment is undertaken to consider possible effects to the water in the reservoir from both deposition and affected rainfall. The reservoir should be considered as a main receptor in the air quality change modelling (a&d).	An assessment of the likely significant effects of the Project in respect of air quality has been undertaken as part of the EIA and the findings are recorded in the ES (Document Reference 6.1). As explained in the ES (Document Reference 6.1), the Lower Lliw Reservoir is an emergency reservoir. It is not possible to assess deposition on water and therefore assessing deposition on the reservoir could not be undertaken. However as the Project is a gas power station the only relevant pollutant is NOX and no metal deposition is expected.	
		One comment states that factoring the long-term	The air quality assessment has assessed long term impacts by scaling the outputs	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		predictions by operating hours is a methodology that is generally acceptable when there is sufficient headroom such that the uncertainties involved are unlikely to make a significant difference to predictions. In this case you acknowledge that critical loads at nearby habitats are already exceeded, therefore there is little headroom. Without further work NRW cannot comment on whether this methodology is a “worst case” approach. NRW would expect you to justify that your assessment is representative of a worst case scenario (a&d).	for periods longer than one hour by the worst-case operating hours, 2,250 per year*. This in turn meant that annual mean impacts were based on 2,250 hours out of 8760 hours. This approach is considered to represent a likely worst case, although it is acknowledged that this not the absolute “worst case” which would see the plant modeled as operating during the absolute worst 2,250 hours each year however this has such a low probability of occurring that it is not relevant to the assessment of chronic or long term ecological effects. NRW acknowledges that factoring long term prediction by operating hours is a methodology that is generally acceptable. In order to address NRW concerns over the scaling of long term predictions, we make reference to a previous assessment of a peaking plant, operating at 1500 hours per year, in Wales. As part of that assessment potential impacts of different combinations of operating hours over the 5 years of meteorological data were tested to address NRW concerns over the scaling of long term impacts. The overall conclusions of the statistical test	*The plant is expected to operate for up to 2,250 hours per year and 1,500 running hours rolling average over 5 years

Phase 1 S42 Consultation Feedback and APL Response

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			was that the scaling of long term impacts can result in +/- 10% difference in concentrations at the 99th Percentile level. Applying this conclusions to the predicted results presented in the air quality assessment for the Abergelli Power Project and particularly on the most affected receptor (ie Rhyd-Y-Pandy Valley and Grasslands SINC) will mean that the Process Contribution from the proposed stack will change from 0.0071 to 0.0078 kg N/ha/yr which when compared to the minimum critical load for nitrogen deposition is a change from 0.071% of the minimum critical load to 0.078% of the minimum critical load. This difference is not significant and the conclusions of the assessment are robust.	
Landscape	7	One comment states that where appropriate, the site should be landscaped (s42d).	APL has noted this comment. The landscaping proposals for the Project Site are set out in the Landscape Mitigation Strategy (ES Figure 11.10, Document Reference 6.3) and the Design Principles Statement, Document Reference 10.2).	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that in order to 'scope out' impacts on the Gower AONB and Brecon Beacons National Park, it would be helpful to provide photographs from viewpoints within these designations and within the 15km study area (a&d).	The 15 km ZTV (ES Figure 11.8, Document Reference 6.3) shows that there will be no theoretical visibility from any part of the National Park. NRW confirmed by email on the 4 th December 2017 that a viewpoint in the Brecon Beacons National Park would not be necessary (see ES Chapter 11, Document Reference 6.1). The ZTV also demonstrates limited to no theoretical visibility from the Gower AONB. ES Chapter 11 confirms that the Gower AONB would not experience significant effects due to the intervening distance, vegetation and built form.	
		One comment states that the assessment of landscape character and sensitivity should consider information from all five aspect areas, not only the visual and sensory aspect areas. As well as the overall evaluation for each aspect, the rarity/uniqueness evaluation for	APL has noted this comment. All 5 Aspect Areas are now detailed and mapped in an appendix. A summary is included in the main text under Baseline Conditions (see Section 11.5 of ES Chapter 11).	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		Geological Landscape, the connectivity/cohesion evaluation for Landscape Habitats, the scenic quality and character evaluation for Visual and Sensory and the rarity and group value for Historic Landscape and Cultural Landscape should be taken account of (a&d).		
		One comment states that it is unclear why houses in Llangyfelach are not considered in the residential visual receptors when the information states that there are views of the site from the village (a&d).	As set out within chapter 11 of the ES (Document Reference 6.1), Llangyfelach has been included in the assessment and the representative viewpoint is VP11.	
		One comment states that the LVIA should include an assessment of the visual effects of lighting e.g. the potential need for airport hazard lights (s42a).	The Outline Lighting Strategy (ES appendix 3.4) indicates that the maximum stack height (40 m above ground level for one or two stacks)* is below the threshold requiring safety lighting to prevent contact with aircraft. Therefore it was not considered relevant to the LVIA. The	*The Power Generation Plant is now made up of only one Gas Turbine Generator with one exhaust gas flue stack, rather than up

Phase 1 S42 Consultation Feedback and APL Response

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			LVIA includes an assessment of proposed lighting within a currently unlit landscape.	to five. The stack height is now a maximum of 45 m, instead of 40m.
		One comment states that there is currently very little information on the opportunities for mitigation (in relation to adverse landscape and visual impacts) (s42a).	Mitigation is set out in the LVIA and is illustrated in Figure 11.10 Outline Landscape Mitigation Strategy.	
		One comment states that if a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances (s42a).	This is identified in the Outline Landscape Mitigation Strategy (Figure 11.10 of the ES). It is noted that drilling and excavation work should not be undertaken if it has the potential to disturb or adversely affect the foundations of an existing tower.	

Phase 1 S42 Consultation Feedback and APL Response

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Need for Project	1	One comment asks why, if the supply of gas to Swansea and district is sufficient for the needs of all its residents, what reason is there to require the building of another plant? (a&d).	The Project will be providing electricity, not gas.	
Ecology	14	One comment states that fen habitats supporting a large amount of plants and animals would be lost if the development was to go ahead (a&d).	All habitats will be replaced where loss is unavoidable and enhancement measures will be implemented to improve habitat quality, as set out in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) and the Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3).	
		One comment states that there is an established wildlife pond on the eastern edge of the proposed development, however there has already been a huge decline in the amount of wildlife ponds in the last 50 years (a&d).	All habitats will be replaced where loss is unavoidable and enhancement measures will be implemented to improve habitat quality as set out in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) and the Outline Landscape and Ecology Mitigation Plan	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			(ES Figure 3.6, Document Reference 6.3).	
		One comment states that there is a long established badger sett on the northern edge of the proposed development - as you will be aware it is illegal, to disturb or destroy a badger sett, under the Badger Act 1992 (a&d).	This has been considered in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) and the Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3). and replacement habitat will be provided.	
		One comment states that for all SSSIs within at least 2 km, and all SACs/SPAs/Ramsar sites within 10km of the proposed plant, the following information should be included within the ES - concentrations of NOx (and SO2 if present in emissions) emitted by the proposed plant compared to the critical levels for sensitive habitats at the above sites; proposed plant emissions (Process Contribution/PC) should be compared as a	The assessment considers potential impacts on European, national and local designated ecological sites during operations through air dispersion modelling. Potential impacts from airborne pollution including fugitive dust during site preparation, demolition and construction is assessed qualitatively using the IAQM Guidance.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		percentage of the relevant critical level as well being compared to the PC added to the background (PEC); levels of nutrient Nitrogen deposition and Acid deposition derived from the proposed plant (PC) should also be compared to site relevant critical loads for the above sites (a&d).		
		One comment would welcome further justification if the final location for the Generating Equipment Site and Temporary Laydown Area is decided to be on an area of marshy grassland (also known as Purple moorgrass and rush pasture), and why it cannot be located on areas of improved grassland, which would be less ecologically damaging (a&d).	The Temporary Laydown Area is situated within a field of improved grassland, whilst the Generating Equipment Site is situated partially within fields of improved and semi-improved grasslands and two fields of marshy grasslands. The loss of this habitat could not be avoided, however suitable mitigation measures will be provided to replace the habitat lost. The proposed landscape and ecological mitigation plans are included in the ES.	
		One comment states that CCS's Ecologist should be consulted regarding section 42 habitats and species in order to take account of possible	APL has consulted CCS from an early stage of the Project, including in relation to matters relating to ecology, as	

Phase 1 S42 Consultation Feedback and APL Response

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		adverse effects on such interests (a&d).	recorded within chapter 8 of the ES (Document Reference 6.1).	
		One comment states that further consultation with NRW should be carried out in relation to watercourses and wetland habitats and their associated species before detailed site layout plans are drawn up and submitted (a&d).	The ecological surveys including watercourses and wetland habitats have now all been completed and suitable ecological mitigation designed and detailed in the ES.	
		One comment states that access option one would result in some habitat losses to Sites of Importance for Nature Conservation (SINC) through road widening. Option two would also result in habitat losses, but to a greater extent. The losses resulting from option two would result in permanent loss of ancient woodland which cannot be mitigated (a&d).	Following statutory consultation, APL continued to engage in discussions with National Grid about the use of its road, and subsequently reached an agreement to propose Option 2 (access from the B4489) as the Access Road. Only one option has been taken forward and assessed in the ES (Document Reference 6.1). This option will lead to permanent loss of Ancient Woodland *and it is acknowledged that this cannot be fully mitigated. The decision making process has taken account of the ecological impact as well other significant factors such as consideration for the local	* Access Road Option B selection and refinement following Phase 2 statutory consultation now means that no removal of ancient woodland is anticipated.

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			residents and overall it was considered that this option fulfilled most requirements. The loss of ancient woodland was minimised through design where possible.	
		One comment states that NRW note that there has already been a significant loss of woodland in this area as a result of industrial development and that the remaining woodland on and around the site was reclassified as Plantations on Ancient Woodland Sites (PAWS) under the Ancient Woodland Inventory (AWI) dataset in 2011. Based on section 5.2.9 of PPW Chapter 5, we advise that any proposed loss of woodland should be avoided (a&d).	APL welcomes the additional information on the reclassification of the woodland section which was not available before, The decision making process has taken account of the ecological impact as well other significant factors such as consideration for the local residents and overall it was considered that this option fulfilled most requirements. The loss of ancient woodland was minimised through design.	
		One comment states that once the final access route has been selected, should the route require any road	All areas where works are proposed as part of the Project have been included in the ecological surveys. The 2014 Phase 1 habitat assessment is presented in the	* Refer to updated 2018 Appendix 8.1: Preliminary Ecological Appraisal

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		widening/improvements, NRW advise that further survey work is carried out on the external access roads which have not been included in the Phase 1 habitat survey and possible subsequent protected species survey work (a&d).	updated Preliminary Ecological Appraisal which is presented in Appendix 8.1 of the ES.*	Report (Document Reference 6.2).
		One comment states that we advise that appropriate measures must be implemented for the removal or long-term management of the identified invasive species on site. Japanese Knotweed is classed as controlled waste under the Environmental Protection Act 1990 and as such must be disposed of in a suitable manner (a&d).	The ES (Chapter 8) identifies where invasive species will be directly affected by the Project and the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) and the Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) detail control measures in line with legislative requirements and best practice guidelines.	
		One comment states that they would recommend regularly re-surveying for otters in the watercourse where an otter spraint was found and the watercourses identified as	We are in agreement with the need of re-survey for otters before works commence on site and the need for this is captured in Chapter 8 of the ES.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		having potential to support otters (a&d).		
		One comment states that the details of the watervole survey in the PEIR Appendix appear to be inconclusive as to whether there are water voles on site. The surveys found no signs of recent activity but there was suitable habitat and hole. We would recommend that further watervole surveys are carried out in May when the voles are very active (a&d). Furthermore, one comment states that protection and enhancement of suitable watervole habitat on site will be an important mitigation measure which we would like to discuss further in the future when detailed plans for the development are being considered (a&d).	The water vole survey found no conclusive evidence of water voles but that suitable habitat is present on site. The ES takes into account the potential for this species and further re-survey for water voles will be undertaken before works commence during the active water vole season (the need for this is addressed in the ES).	
Design	12	One comment states that Network Rail's physical infrastructure must be	APL has noted this comment. APL has consulted with Network Rail as part of statutory s42 consultation and will	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		protected and new development must ensure that it does not have an adverse effect upon the safety of the railway line. Network Rail would be concerned if, during construction or operation, abnormal loads would use routes that include Network Rail assets - should any infrastructure be affected, a strategy should be agreed to protect assets from potential damage (s42a).	continue to engage with Network Rail as required prior to commencing construction. A CEMP will govern the implementation of construction works associated with the Project. An Outline CEMP (Document Reference 6.2; Appendix 3.1) is submitted as part of the Application. Cables or pipelines which are part of the Project do not cross any of Network Rail's infrastructure	
		One comment seeks clarification as to whether either of the identified access roads to the power plant would require any alteration or reinforcement where they pass over the Llangyfelach Rail Tunnel (s42a).	No works are proposed to the B4489 where it crosses the Llangyfelach Rail Tunnel as part of the APL DCO Application.	
		One comment states that the whole of the site's boundaries should be screened (s42d).	The LVIA has been undertaken as part of the EIA and is reported in Chapter 11 of the ES (Document Reference 6.1). Appropriate mitigation including	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			screening, where necessary, has been identified. The landscaping proposals for the Project Site are set out in the Landscape Mitigation Strategy (ES Figure 11.10, Document Ref 6.3) and the Design Principles Statement (Document Reference 10.2)	
		One comment states that where appropriate, the site should be landscaped (s42a).	The LVIA has been undertaken as part of the EIA and is reported in Chapter 11 of the ES (Document Reference 6.1). Appropriate mitigation including landscaping, where necessary, has been identified. Also see Figure 11.10: Outline Landscape Mitigation Strategy (Document Reference 6.3).	
		One comment states that WPD has 11kV overhead lines and some 1v underground mains within the redline boundary for the development. Should these be affected by the development, WPD would seek an agreement with the	APL has consulted with WPD as part of statutory s42 consultation and will continue to engage with WPD as required prior to commencing construction. A CEMP will govern the implementation of construction works associated with the Project. An Outline CEMP (Document	

Phase 1 S42 Consultation Feedback and APL Response

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		developers to either modify the development plans or agree to protect or divert these assets (s42d).	Reference 6.2; Appendix 3.1) is submitted as part of the Application. Draft protective provisions to protect WPD assets from the Project have been sent to WPD for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with WPD over these matters	
		One comment states that assuming access is available and the required minimum statutory clearances can be maintained to its overhead lines, WPD does not generally have any restriction on development in proximity to its strategic overhead lines but it would be sensible for the layout of the development to take WPD's requirements into account (s42d).	APL has noted this comment.	
		One comment states that significant impacts are unlikely	APL has noted this comment,	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		to arise from installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters (s42a).		
		One comment states that many aspects of the plant's design and operation will be assessed as part of the environmental permit process (a&d).	APL has noted this comment	
		One comment states that statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3 m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines (s42a).	APL has noted this comment. This is taken into account in the Project design. Draft protective provisions have been sent to National Grid. These are included in the draft DCO (Document Reference 3.1)	
		One comment states that Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres	APL has noted this comment. This is taken into account in the Project design.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing” (s42a).	Draft protective provisions have been sent to National Grid. These are included in the draft DCO (Document Reference 3.1)	
		One comment states that Cables may cross the pipeline at perpendicular angle to the pipeline i.e. 90 degrees. A National Grid representative shall supervise any cable crossing of a pipeline. Clearance must be at least 600 mm above or below the pipeline (s42d).	Draft protective provisions have been sent to National Grid. These are included in the draft DCO (Document Reference 3.1)	
		One comment states that Network Rail's physical infrastructure must be protected and new development must ensure that it does not have an adverse effect upon the safety of the railway line. Network Rail would be concerned if, during construction or operation, abnormal loads would use routes that include Network	APL has noted this comment. APL has consulted with Network Rail as part of statutory s42 consultation and will continue to engage with Network Rail as required prior to commencing construction. A CEMP will govern the implementation of construction works associated with the Project. An Outline CEMP (Document Reference 6.2; Appendix 3.1) is submitted as part of the Application.	

Phase 1 S42 Consultation Feedback and APL Response

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		Rail assets - should any infrastructure be affected, a strategy should be agreed to protect assets from potential damage (s42a).	Cables or pipelines which are part of the Project do not cross any of Network Rail's infrastructure	
Transport	11	One comment states that APL must contact Network Rail's Asset Protection Team well in advance of commencing any works to mitigate any risk to Network Rail's structures (s42d).	APL has noted this comment. APL has consulted with Network Rail as part of statutory s42 consultation and will continue to engage with Network Rail as required prior to commencing construction. A CEMP will govern the implementation of construction works associated with the Project. An Outline CEMP (Document Reference 6.2; Appendix 3.1) is submitted as part of the Application. Cables or pipelines which are part of the Project do not cross any of Network Rail's infrastructure	
		Two comments object to the use of use of Rhydybandy Road as the main access road. One such comment states that the main road to Morriston is	APL has noted this comment. Following Phase 1 statutory consultation, APL continued to engage in discussions with National Grid about the use of its road, and subsequently reached an agreement	

Phase 1 S42 Consultation Feedback and APL Response

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		extremely busy at all times - the suggestion that Rhydypany Road is used as the access route to the proposed site is a recipe for disaster. It is too narrow to accommodate lorries (s42d). One comment objects to the possible use of the Rhydypany Road route for site access. It is also the direct access route for emergency vehicles to/from Morriston Hospital. It is a narrow and circuitous country lane. Any delays or temporary closures will impact upon local residents. There are a number of other nearby energy generation schemes which combined will cause havoc to Rhydypany Road (s42d).	to propose Option 2 (access from the B4489) as the Access Road. A detailed assessment of the impact of the Project in respect of traffic and transport has been undertaken as part of the EIA and is contained in chapter 12 of the ES (Document Reference 6.1).	
		One comment states that two access route options pass over Llangyfelach Rail Tunnel via either the B4489 or Pant-lasau Road, and therefore	No works are proposed to the B4489 where it crosses the Llangyfelach Rail Tunnel as part of the APL DCO Application.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		consideration should be given to whether the number and loading of vehicles accessing the power plant via either of these routes will have any detrimental impact upon the structural integrity of Llangyfelach Tunnel (s42a).		
		One comment seeks clarification as to whether either of the identified access roads to the power plant would require any alteration or reinforcement where they pass over the Llangyfelach Rail Tunnel (s42d).	No works are proposed to the B4489 where it crosses the Llangyfelach Rail Tunnel as part of the APL DCO Application.	
		One comment states that they reserve the right to submit further representations when the access route to the site has been determined (s42d).	APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted.	
		One comment states that access option one would result in some habitat losses to Sites	Following statutory consultation, APL continued to engage in discussions with National Grid about the use of its road,	*The project has evolved leading to further refinement of

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		of Importance for Nature Conservation (SINC) through road widening. Option two would also result in habitat losses, but to a greater extent. The losses resulting from option two would result in permanent loss of ancient woodland which cannot be mitigated (a&d).	and subsequently reached an agreement to propose Option 2 (access from the B4489) as the Access Road. Only one option has been taken forward and assessed in the ES. This option will lead to permanent loss of Ancient Woodland and it is acknowledged that this cannot be fully mitigated*. The decision making process has taken account of the ecological impact as well other significant factors such as consideration for the local residents and overall it was considered that this option fulfilled most requirements. The loss of ancient woodland was minimised through design where possible.	Option 2 – Option A and Option B. Selection of Option B, the route of which was then revised in response to consultation feedback to avoid ancient woodland. As a result, the current Project design does not result in any loss of Ancient Woodland.
		One comment states that once the final access route has been selected, should the route require any road widening/improvements, NRW advise that further survey work is carried out on the external access roads which have not been included in the Phase 1	APL has noted this comment. Following statutory consultation, APL continued to engage in discussions with National Grid about the use of its road, and subsequently reached an agreement to propose Option 2 (access from the B4489) as the Access Road. All areas where works are proposed as part of the Project have been included in	*Refer to 2018 Appendix 8.1: Preliminary Ecological Appraisal Report (Document Reference 6.2).

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		habitat survey and possible subsequent.	the ecological surveys and where information was missing in the 2014 PEIR, the surveys have been updated. The update 2014 Phase 1 habitat assessment is presented in the updated Preliminary Ecological Appraisal which is presented in Appendix 8.1 of the ES.*	
		One comment states that where existing roads cannot be used, construction traffic should only cross the pipeline at previously agreed locations.	APL has noted this comment	
		One comment states that there are two High Pressure gas mains within the proposed redline boundary as shown on your enclosed plans, with WWU having the benefits of rights granted to us through several easements. The works to lay the cable and the access roads will need to be approved by our Plant Protection and Operational departments prior to commencement (a&d).	APL has consulted WWU as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect WWU assets from the Project have been sent to WWU for comment. These will be	

Phase 1 S42 Consultation Feedback and APL Response

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			included in the draft DCO (Document Reference 3.1) APL is actively engaging with WWU over these matters	
Cumulative Impact	5	One comment recommends that the EIA includes consideration of the impacts of associated development and that cumulative impacts are fully accounted for (s42a).	Chapters 6-15 of the ES (Document Reference 6.1) provide an assessment of the cumulative effects of the Project in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics. Table 4-6 of the ES (Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS.	
		One comment states that the baseline (of existing environmental quality) and assessment and future monitoring should identify cumulative and incremental	ES Chapters 6 to 15 (Document Reference 6.1) provide an assessment of the cumulative effects of the Project in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		impacts (i.e. assess cumulative impacts from multiple sources), including those arising from similar development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e. rail, sea, and air) (s42a).	hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics. Table 4-6 of the ES sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS. A full cumulative impact assessment was undertaken as part of the EIA following the non-statutory consultation period in order to consider the combined impacts of the Project with other nearby developments. Details are evident in each topic chapter and further as a standalone chapter (see ES Chapter 17 Cumulative Effects, Document Reference 6.1).	
		Two comments state that other developments need to be considered in regards to the impact of the proposed development. One comment states that depending on the timescale of the project, other developments may need to be considered and contact with the local authority is	Chapters 6-15 of the ES (Document Reference 6.1) provide an assessment of the cumulative effects of the Project in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics. Table 4-6 of the ES	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		recommended in this regard (s42a). One such comment states that a number of other wind farms and solar energy proposals have been approved and should be taken into account in the cumulative assessment, along with the other existing and planned development in the locality (e.g. Proposed Felindre Business Park and Sustainable Urban Village) (s42a).	(Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS. A full cumulative impact assessment was undertaken as part of the EIA following the non-statutory consultation period in order to consider the combined impacts of the Project with other nearby developments. Details are evident in each topic chapter and further as a standalone chapter (see ES Chapter 17 Cumulative Effects, Document Reference 6.1).	
		One comment advises that safe digging practices, in accordance with HS(G)47 must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used (s42a).	APL has noted this comment.	
Safety	18	One comment notes that for obstructions located away from aerodromes, aviation warning lighting only becomes	APL has noted this comment.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		mandatory for structures of 150m or more; however, structures of a lesser height may need aviation obstruction lighting if they are considered to be of a significant navigational hazard by virtue of their location and nature. In this case, given the maximum stack height of 40m, CAA confirm that it would not in isolation make a case for lighting. (s42a).		
		One comment assumes that the facility is not intended to vent or flare gas either routinely or as an emergency procedure such as to cause a danger to overlying aircraft (s42a).	APL has noted this comment. The Generating Equipment would not have a flare stack, as used in industrial plants such as chemical or natural gas processing plants. In such plants, flare stacks are used for burning off gas during unplanned over-pressuring of plant equipment. Gas is used to power turbines and generate electricity in a controlled environment. No venting or flaring of gas is therefore required either routinely or as an emergency procedure.	

Phase 1 S42 Consultation Feedback and APL Response

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		One comment notes there is a civil aviation requirement in the UK for all structures over 300ft (91.4m) high to be charted on aviation maps. As the maximum stack height is 40m, there is no civil aviation charting requirement; however, if crane usage in the construction phase involves heights of 300ft, the temporary structure will need to be appropriately notified, through the publication of a Notice to Airmen (NOTAM) (s42a).	APL has noted this comment.	
		One comment advises that the Ministry of Defence's position in regards to the proposed development and military aviation activity should be established (s42a).	APL has consulted the MoD as part of statutory s42 consultation on the Project.	
		One comment states that Network Rail's physical infrastructure must be protected and new development must ensure that it does not have an adverse	APL has noted this comment. APL has consulted with Network Rail as part of statutory s42 consultation and will continue to engage with Network Rail as	

Phase 1 S42 Consultation Feedback and APL Response

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		effect upon the safety of the railway line. Network Rail would be concerned if, during construction or operation, abnormal loads would use routes that include Network Rail assets - should any infrastructure be affected, a strategy should be agreed to protect assets from potential damage (s42d).	required prior to commencing construction.	
		One comment states that WPD need to be consulted prior to construction to ensure safety requirements in relation to working in close proximity to electricity lines/plant are met (s42d).	APL has consulted with WPD as part of statutory s42 consultation and will continue to engage with WPD as required prior to commencing construction. Draft protective provisions to protect WPD assets from the Project have been sent to WPD for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with WPD over these matters.	
		One comment states that the proposal will, by necessity, be	APL has consulted both Welsh Water and National Grid Gas plc as part of statutory	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		in close proximity to a number of Major Accident Hazard pipelines. The Section 42 consultation does not contain any information on the extent and severity of known hazards from the proposed generating station, with the potential to impact on local populations and/or the adjacent major hazard installation(s). The need for such a consideration was recently included in a Development Consent Order issued by the Secretary of State for Energy and Climate Change for another power plant - this noted that the preparation and approval of high-level assessment need not have a significant impact on project timescales. In view of adjacent major accident hazard sites, contact should be made with: Welsh Water Development Authority, and National Grid Gas plc (s42a).	s42 consultation in regards to the Project (see Appendix 4.1 of the Consultation Report (Document Reference 6.1). As explained in the ES (Document Reference 6.1), the quantities of 'dangerous' substances stored at the plant do not meet the lower thresholds which require implementation of the COMAH Directive (Control of Major Accident Hazards); instead the plant is subject only to national legislation (e.g. occupational safety and health regulations). The construction phase would be covered by the CEMP (an outline of which is provided in Appendix 3.1 of the ES (Document Reference 6.2)) and the operational phase will be covered by the APL Operational Procedures.	

Phase 1 S42 Consultation Feedback and APL Response

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		One comment states that the presence on, over or above land of certain hazardous substances, at or above set threshold quantities (Controlled Quantities), may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations. Further information on HSC should be sought from the relevant Hazardous Substances Authority (s42a).	Neither the Project nor other nearby developments constitute a COMAH or Major Accident Off-Site Emergency Plan site and therefore this topic has not received further consideration. Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4.	
		One comment states that the proposed development does not impinge on the separation	APL has noted this comment.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		distances of any explosives licensed site in the vicinity of the application (s42a).		
		One comment states that the project involves connections to electrical power distribution systems and has an impact on the existing generation, transmission and distribution assets on the UK mainland. As well as satisfying general health and safety legislation (i.e. the Health and Safety at Work etc Act 1974 and supporting regulations), the proposed design and future operations must comply with the Electricity at Work Regulations 1989 and the Electricity, Safety, Continuity and Quality Regulations 2002 as amended (s42a).	APL has noted this comment.	
		One comment states that within the EIA, PHE would expect to see information about how the promoter would	An Outline CEMP is provided as part of the application materials. It can be found at Document Reference 6.2, appendix 3.1. Full risk assessments will be carried	

Phase 1 S42 Consultation Feedback and APL Response

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		respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify a" potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects (s42a).	out and reported, and methods statements will be produced prior to commencement of construction once contractors are appointed. APL will require an Environmental Permit to operate the facility. As part of this, an Operational Management System will need to be put in place to deal with the items outlined in the comment.	
		One comment states that statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3 m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines (s42a).	APL has noted this comment. This is taken into account in the Project design.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that if any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances (a&d).	APL has noted this comment. This is taken into account in the Project design.	
		One comment states that plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing” (a&d).	APL has noted this comment. This is taken into account in the Project design.	
		One comment states that if a landscaping scheme is proposed as part of the proposal, it is requested that only slow and low growing species of trees and shrubs are planted beneath and adjacent	There is no intention to plant any trees or shrubs beneath overhead lines.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances (s42a).		
		One comment states that drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of any existing tower (s42a).	APL has noted this comment.	
		One comment states that the proximity of a gas installation within close proximity of a hospital, schools, and houses will cause major health and safety concerns (s42d).	An air quality assessment has been carried out as part of the EIA and the findings are presented in chapter 6 of the ES (Document Reference 6.1). The air quality assessment has shown that the Project will not result in any likely significant environmental effects in relation to air quality either as a standalone project or cumulatively with other projects. Further, the air quality assessment (chapter 6 of the ES (Document	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			Reference 6.1)) states that there are unlikely to be permanent effects on air quality associated with the overall construction and decommissioning of the Project, and there are not predicted to be any significant impacts from the operation of the Project. Embedded mitigation measures will be implemented as part of the Project design, including a site specific dust management plan, as part of the Construction Environmental Management Plan (CEMP), an outline of this document can be found in the ES appendices at Document Reference 6.2, Appendix 3.1. Gas fired power stations have been operating safely in the UK for the last 30 years. Some of these plants have operated in very close proximity to hospitals and residential populations.	
Ground Conditions Soil and Agriculture	12	One comment states that given the presence of surface coal resources, we would also expect due consideration to be afforded to the potential for prior extraction of the mineral resource in line with the	Impacts of sterilisation of potential minerals resources are minimised through the siting of the Project near to other major infrastructure and at the edge of the sand/aggregates resource, and mitigated partially on the cessation of the	

Phase 1 S42 Consultation Feedback and APL Response

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		requirements of Minerals Planning Policy Wales, paragraph 13. One comment states that the Coal Authority records indicate that parts of the proposed application site have been subject to both recorded and likely historic unrecorded underground coal mining at shallow depth. There are also two recorded mine entries either within or immediately adjacent to the proposed red line boundary. The Coal Authority is pleased to note that the PEIR has been informed by a desk-based review of coal mining and geological information which identifies the presence of the recorded mine entries and past underground coal mining at shallow depths. The PEIR also identifies the potential sterilisation of mineral resources and risk of ground	use pursuant to the decommissioning strategy secured by a requirement.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		instability resulting from past mining activity as two issues for further consideration and assessment. The PEIR also includes appropriate recommendations for intrusive site investigation works prior to commencement of development. The Coal Authority are satisfied with the desk based review work and conclusions of the PEIR with respect to coal mining legacy and ground conditions.		
		One comment notes that the PEIR states that the ES will consider the potential impacts on human receptors from emissions to air, noise, water quality, ground and soil including potential for contamination. In addition, PHE welcomes that the forthcoming EIA will cumulatively assess the likely significant environmental	The potential environmental impacts of the Project have been assessed in the EIA, in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual impacts; traffic, transport and access; archaeology and cultural heritage; and socio-economics. Where appropriate, mitigation measures are proposed in order to address any potential adverse impacts. The final findings of the environmental assessment undertaken	

Phase 1 S42 Consultation Feedback and APL Response

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		effects of the Project identified in the PEIR.	are contained within the ES (Document Reference 6.1) which accompanies the Application. The ES states that, following the implementation of appropriate mitigation measures, there will be no significant adverse impacts resulting from the Project. An assessment of the cumulative effects of the Project has been undertaken as part of the EIA in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics; and is recorded in chapters 6-15 of the ES (Document Reference 6.1). Table 4-6 of the ES (Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS. A full cumulative impact assessment was undertaken as part of the EIA following the non-statutory consultation period in order to consider the combined impacts of the Project with other nearby developments. Details are	

Phase 1 S42 Consultation Feedback and APL Response

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			evident in each topic chapter and further as a standalone chapter (see ES Chapter 17 Cumulative Effects, Document Reference 6.1).	
		One comment states that we would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.	Ground investigation works will be undertaken prior to construction and to intersect mine workings/coal seams a Coal Authority permit will be required.	
		One comment states that emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed and the potential impact on nearby receptors and control and mitigation measures should be outlined	Chapter 10 of the ES (Document Reference 6.1) concludes no impacts have been identified as a result of construction, operation or decommissioning of the Project. In order to determine appropriate design solutions for foundations and any infrastructure design, additional structure specific Phase 2 ground investigation will be undertaken, which will further inform the appropriate risk assessments and the need for any site specific mitigation measures. Section 15.3 (ES Chapter 15 Other Effects) also discusses pollution	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			and contamination in relation to public health. During the construction phase of the Project, onsite waste management will align with the Waste Hierarchy which promotes efficient resource use and minimisation of waste. Further details are in Section 6.6 of the Outline CEMP (Appendix 3.1, Document Reference 6.2).	
		One comment states that relevant areas outlined in the Government's Good Practice Guide for EIA include effects associated with ground contamination that may already exist	Chapter 10 of the ES (Document Reference 6.1) states that historical ground investigations have shown that significant contamination is not present at the Project Site.	
		One comment states that relevant areas outlined in the Government's Good Practice Guide for EIA include effects associated with the potential for polluting substances that are used (during construction I operation) to cause new ground contamination issues	Chapter 10 of the ES (Document Reference 6.1) states any pollution releases during construction/demolition works have the potential to affect construction workers. During construction works, there is potential to introduce new sources of contamination into the environment (for instance: uncontrolled leaks and spills from machinery). This	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		on a site, for example introducing and changing the source of contamination.	represents a small adverse effect on a receptor of medium sensitivity, resulting in a minor significance of effect. To mitigate this effect no special measures are required over and above the embedded mitigation referred to in Section 3.6 that will be included in the CEMP and the COCP. Provided the mitigation measures are implemented there are not anticipated to be any residual effects.	
		One comment states that relevant areas outlined in the Government's Good Practice Guide for EIA include impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc	APL has noted this comment. Chapter 2 of the ES (Document Reference 6.1) sets out the guidance used within the EIA including the Government's Good Practice Guide for EIA. During the construction phase of the Project, onsite waste management will align with the Waste Hierarchy which promotes efficient resource use and minimisation of waste. Further details are in Section 6.6 of the Outline CEMP (Appendix 3.1, Document Reference 6.2).	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that the applicant should fully assess any ground instability and should be satisfied that piling operations and any vibration associated with the construction process will not disturb or cause any fracturing of the Dwr Cymru/Welsh Water main that traverses the proposed site.	Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	
		One comment states that a contaminated land risk assessment should be undertaken as part of the ES, the scope of which should be agreed with CCS.	A Preliminary Geo-Environmental Risk Assessment (PRA) Report has been completed as part of the ES (presented in Appendix 10.1), which presents the documentation and drawings provided by NRW relating to the landfill and landfill extension within the vicinity of the Project Site. This information will be used to design the ground investigation prior to construction.	
		One comment states that the CEMP should include proposals for the protection and storage of soils and the	The Outline CEMP can be found in appendix 3.1 of the ES at Document Reference 6.2).	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		restoration of compounds and disturbed areas.		
		One comment states that National Grid pipelines shall be protected, at the crossing points, by temporary rafts constructed at ground level. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.	APL has noted this comment. APL will maintain continued engagement with National Grid following submission of the DCO Application. Draft protective provisions have been sent to National Grid. These are included in the draft DCO (Document Reference 3.1)	
		One comment states that no excavations are to take place above or within 10 m of the confirmed position of the high pressure gas mains without prior consultation with WWU.	APL has noted this comment. APL has consulted WWU as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted.	
Ground Conditions Soil	13	One comment states that the applicant should fully assess any ground instability and	An assessment of the potential impacts of the Project in respect of ground instability	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
and Agriculture (cont)		should be satisfied that piling operations and any vibration associated with the construction process will not disturb or cause any fracturing of the Dwr Cymru/Welsh Water main that traverses the proposed site (a&d).	is contained within chapter 10 of the ES (Document Reference 6.1). Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	
Permits and Consents	15	One comment states that it is not clear from the submission if the proposed site annexes land within the curtilage of the existing Felindre Gas Compressor Station. The Applicant should establish its 'control of the land' occupied by the compressor station will change (this is not simply who has ownership). If a part of the land with an extant consent is sold this could require a continuation, or possible revocation of the old consent if it's surrendered and a new	Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4. This includes the Pipelines Safety Regulations 1996. No works are proposed within the Felindre Gas Compressor Station.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		entity created. If this corridor is solely for the purposes of a pipeline branch into the existing line on the site, a notification under the Pipelines System Regulations is required.		
		One comment states that the presence on, over or above land of certain hazardous substances, at or above set threshold quantities (Controlled Quantities), may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these	APL has noted this comment. As set out within the ES (Document Reference 6.1), only small quantities of potentially hazardous waste will be stored on the Generating Equipment Site at any time, and such substances will be held in secured containers to prevent contaminant migration. Accordingly, it is not anticipated that Hazardous Substances Consent. Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4.	

Phase 1 S42 Consultation Feedback and APL Response

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		Regulations. Further information on HSC should be sought from the relevant Hazardous Substances Authority.		
		One comment states that the project involves connections to electrical power distribution systems and has an impact on the existing generation, transmission and distribution assets on the UK mainland. As well as satisfying general health and safety legislation (i.e. the Health and Safety at Work etc Act 1974 and supporting regulations), the proposed design and future operations must comply with the Electricity at Work Regulations 1989 and the Electricity, Safety, Continuity and Quality Regulations 2002 as amended.	APL has noted this comment. Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4.	
		One comment states that amongst other permits and consents, the development will	APL has noted this comment and is aware of the need to obtain an environmental permit and comply with	

Phase 1 S42 Consultation Feedback and APL Response

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		require an environmental permit from the Environment Agency to operate (under the Environmental Permitting (England and Wales) Regulations 2010). Therefore the installation will need to comply with the requirements of best available techniques (BAT). PHE is a consultee for bespoke environmental permit applications and will respond separately to any such consultation.	BAT. Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4.	
		One comment states that the operation of this development gives rise to Combustion Activities under Part A1 (s42a) of Schedule 1 Part 2 of the Environmental Permit Regulations 2010 and NRW are the determining authority for an Environmental Permit for such activity. At this time no application for an Environmental Permit has been made.	APL has noted this comment and will submit an application for an Environmental Permit, required to operate the Project, to NRW. Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4.	

Phase 1 S42 Consultation Feedback and APL Response

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		One comment states that advise that NRW will not be able to fully assess aspects of the proposal until the Environmental Permit application has been submitted. It is noted that an Environmental Permit application will be submitted 12 months prior to the commencement of commercial operations, which may add complexities to the process and require further information to be submitted during the determination process. Applicants are encouraged to 'twin-track' environmental permit applications in the Planning Inspectorate's Advice Note 11.	APL has noted this comment and will submit an application for an Environmental Permit, required to operate the Project, to NRW prior to the commencement of commercial operations.	
		One comment states that many aspects of the plant's design and operation will be assessed as part of the environmental permit process.	APL has noted this comment.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that the PEIR has followed an assessment methodology that is appropriate in regards to air quality impact assessment. We have not completed a detailed assessment and therefore cannot comment on the predicted impact. Further information may be required during a detailed risk impact assessment audit at the application stage for an EPR permit.	APL has noted this comment and will submit an application for an Environmental Permit, required to operate the Project, to NRW.	
		One comment states that when submitting a noise impact assessment, as part of the permit application for an EPR permit, you should refer to Environment Agency document Noise Impact Assessment - Information Requirements 3 to inform yourselves of the expected requirements for a noise impact assessment submission.	The Environmental Permit application will refer to the EA Horizontal Guidance for Noise Document - IPPC H3 (Part 1). The assessment methodology for this noise study has followed all requirements as set out in the Environment Agency H3 document.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that in the PEIR the consultant has used significance criteria set out in H1 Annex F - the consultant considered the impact of NOx and nitrogen deposition, and reference was made to acidification, but it is unclear if this was taken into account. This will need to be addressed when the permit application is submitted.	APL has noted this comment. This issue will be addressed in the Environmental Permit application.	
		One comment states that if any proposed route crossings or any works on site are likely to affect the main river, then relevant Flood Defence Consents may be required, along with detailed method statements that incorporate pollution prevention and mitigation	APL has noted this comment.	
		One comment states that if any cooling waters/process waters are proposed to be discharged to the receiving waters (River Llan and its tributaries/River	APL has noted this comment and will submit an application for an Environmental Permit, required to operate the Project, to NRW.	

Phase 1 S42 Consultation Feedback and APL Response

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		Lliw/Loughor), this will require a Water Discharge Activity Permit as part of the EPR.	Details of Other Consents, Licences and Permits required for which the SoS is not the consenting body can be found at Document Reference 5.4. No discharge of process water to nearby water receptors is planned as all process wastewater will be taken off-site via a tanker to an appropriate wastewater treatment facility by specialist contractors.	
		One comment states that EPR permits are likely to be required for wheel washing facilities and damping down if you generate effluent that will be discharged to surface or ground waters. If water for these activities is be sourced via abstraction rather than potable supply then an EPR permit maybe required.	APL has noted this comment. Water abstraction will not be required. EPR permits will be obtained by the Contractor prior to construction for activities such as wheel washing facilities and dewatering of excavations as detailed in the "Other consents" document (Document Reference 5.4).	
		One comment states that any dewatering as part of construction activities is likely to require an EPR permit.	APL has noted this comment. Water abstraction will not be required. EPR permits will be obtained by the Contractor prior to construction for activities such as wheel washing facilities and dewatering	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			of excavations as detailed in the “Other consents” document (Document Reference 5.4).	
		One comment states that in Table 7.9 there is reference to 'slight adverse' effects but it is unclear whether you are referring to 'minor adverse' effects specified in Table 7.4 above. There is no justification as to why the sound levels from the gas and electrical connections are thought to be negligible (a&d).	The electrical and gas connections will be via underground cables and pipelines, there will be no noise producing elements above ground. This is discussed in detail in Section 7.7 of the ES.	
		One comment notes that for obstructions located away from aerodromes, aviation warning lighting only becomes mandatory for structures of 150m or more; however, structures of a lesser height may need aviation obstruction lighting if they are considered to be of a significant navigational hazard by virtue of their location and nature. In	APL has noted this comment.	

Phase 1 S42 Consultation Feedback and APL Response

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		this case, given the maximum stack height of 40m, CAA confirms that it would not in isolation make a case for lighting (s42a).		
Gas Connection	1	One comment states that given the presence of surface coal resources, we would also expect due consideration to be afforded to the potential for prior extraction of the mineral resource line with the requirements of Minerals Planning Policy Wales, paragraph 13 (s42a).	Impacts of sterilisation of potential minerals resources are minimised through the siting of the Project near to other major infrastructure and at the edge of the sand/aggregates resource, and mitigated partially on the cessation of the use pursuant to the decommissioning strategy secured by a requirement.	
Health	12	One comment states that the development is contrary to the Swansea Unitary Development Plan, specifically Policies SP1, SP2 and SP3 (s42d).	A detailed assessment of the Project with regards to relevant local planning policy is contained within the Planning Statement (Document Reference 10.1.0). In relation to the strategic policies (in particular SP1, SP2 and SP3), the Project minimises its land take so far as practicable whilst remaining viable, is located away from homes and in an area	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			of countryside that contains substantial amounts of energy infrastructure already, and has been integrated into that landscape through careful siting, layout and landscape mitigation commitments secured through the Draft Proposed DCO requirements. Notwithstanding this the provisions of the relevant NPS are likely to be of primary importance due to the decision-making hierarchy set out in s104 of the PA 2008.	
		Three comments refer to the impact of the Proposal on the amenity of neighbours. One of these comments states that the proximity of a gas installation within close proximity of a hospital, schools, and houses will cause major health and safety concerns (s42d). One comment states that the noise and exhaust gas emissions will have a detrimental effect on neighbouring health and wellbeing (s42d). One comment states that the	An air quality assessment has been carried out as part of the EIA and the findings are presented in chapter 6 of the ES (Document Reference 6.1). The air quality assessment (chapter 6 of the ES (Document Reference 6.1)) included an assessment at a number of identified human receptors within close proximity of the Project Site. The predicted concentrations at sensitive human receptors demonstrate that there will be no significant impacts on human health from emissions of the Power Generation Plant.	

Phase 1 S42 Consultation Feedback and APL Response

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		positioning of this development will also have serious health issues for the surrounding properties due to the co2 emissions, particularly during high pressure weather conditions (s42d).	Further, the air quality assessment (chapter 6 of the ES (Document Reference 6.1)) states that there are unlikely to be permanent effects on air quality associated with the overall construction and decommissioning of the Project, and there are not predicted to be any significant impacts from the operation of the Project. Embedded mitigation measures will be implemented as part of the Project design, including a site specific dust management plan, as part of the Construction Environmental Management Plan (CEMP) (Document Reference 6.2; Appendix 3.1) for the Project Site.	
Health (cont)	12	One comment states that the electric fields produced by the proposed new underground cables have been considered within the Report; however, such cables will also produce magnetic fields, which will not be shielded in the same way;	An Electrical Infrastructure Electric and Magnetic Fields (EMF) Assessment has been undertaken, the findings of which are in the EMF Report (ES Appendix 15.1, Document Reference 6.2). The above-ground components of the Electrical Connection will lie within the existing Swansea North Substation	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		therefore an assessment of the health impact of the magnetic fields should be included in the ES (s42a).	where there are already EMFs present that were considered as part of the application for the substation; they will not make a significant difference to the EMFs already present. It should also be noted that the general public will not spend any prolonged time in close proximity to the Electrical Connection or to the Swansea North Substation boundary. The general public will thus not be exposed to any increase in EMFs from the Electrical Connection and there will be no significant effects arising from EMFs. There is an existing overhead line which runs through the Generating Equipment Site which is to be placed underground. This will result in a reduction in EMFs.	
		One comment states that it is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational,	Chapter 15 of the ES (Document Reference 6.1) assesses human health impacts at all stages of the Project including EMF, Air Quality, Noise and Vibration, and Pollution and Contamination.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		and decommissioning phases (s42a).		
		One comment states that consideration should be given to any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure (s42a).	Emissions have been considered within chapter 6 of the ES (Document Reference 6.1), both point source and diffuse pollution has been considered within the context of the proposals and concentrations compared against objectives where appropriate. The air quality assessment has shown that the Project will not result in any likely significant environmental effects in relation to air quality either as a standalone project or cumulatively with other projects	
		One comment states that there is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report, jointly published by Liverpool John Moores University and the HPA,	The potential for likely significant effects of the Project on human health relate primarily, to exposure to excessive levels of noise, pollutants released during construction or operation of the Project (to the air, water or land) as well as effects relating to EMFs. Chapter 15 of the ES	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: "Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible." PHE supports the inclusion of this information within EIAs as good practice. (s42a).	(Document Reference 6.1) assesses these impacts in terms of human health.	
		One comment states that there is a potential health impact associated with the electric and magnetic fields around substations and the connecting cables or lines. (s42a).	An Electrical Infrastructure Electric and Magnetic Fields (EMF) Assessment has been undertaken, the findings of which are in the EMF Report (ES Appendix 15.1, Document Reference 6.2). The above-ground components of the Electrical Connection will lie within the existing Swansea North Substation where there are already EMFs present that were considered as part of the	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
			application for the substation; they will not make a significant difference to the EMFs already present. It should also be noted that the general public will not spend any prolonged time in close proximity to the Electrical Connection or to the Swansea North Substation boundary. The general public will thus not be exposed to any increase in EMFs from the Electrical Connection and there will be no significant effects arising from EMFs. There is an existing overhead line which runs through the Generating Equipment Site which is to be placed underground. This will result in a reduction in EMFs.	
		One notes that the PEIR states that the ES will consider the potential impacts on human receptors from emissions to air, noise, water quality, ground and soil including potential for contamination. In addition, PHE welcomes that the forthcoming EIA will cumulatively assess the likely	The potential environmental impacts of the Project have been assessed in the EIA, in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual impacts; traffic, transport and access; archaeology and cultural heritage; and socio-economics. Where appropriate, mitigation measures are proposed in	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		significant environmental effects of the Project identified in the PEIR (s42a).	order to address any potential adverse impacts. The final findings of the environmental assessment undertaken are contained within the ES (Document Reference 6.1) which accompanies the Application. An assessment of the cumulative effects of the Project has been undertaken as part of the EIA in respect of: air quality; noise and vibration; ecology; water quality and resources; geology, ground conditions and hydrogeology; landscape and visual effects; traffic, transport and access; archaeology and cultural heritage; and socio-economics; and is recorded in chapters 6-15 of the ES (Document Reference 6.1). Table 4-6 of the ES (Document Reference 6.1) sets out the Projects that are considered as part of the cumulative assessment as agreed with CCS.	
Water	17	One comment states that the baseline (of existing water quality) and in the assessment and future monitoring should	Chapter 9 of the ES (Document Reference 6.1) outlines the existing baseline in relation to water, in terms of flood risk and water quality. It concludes	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		include assessment of potential impacts on human health and not focus solely on ecological impacts.	that the assessment of the potential effects of the Project on water quality and resources will not result in any likely significant environmental effects in relation to water quality and resources either as a standalone project or cumulatively with other projects.	
		One comment states that we have actively engaged with you on the project and will continue to do so in respect to the development and possible impact upon our assets. Acknowledge that the details of the proposal are in a preliminary stage and thus are keen to work with APL to develop the proposal where there are possible impacts upon Welsh Water assets (s42a).	APL has noted this comment. APL has consulted Welsh Water as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that The application site lies in close proximity to the Lower Lliw Reservoir which supplies Felindre Water Treatment Works - source to the largest Water Treatment Works in Wales, permanently supplying approximately 700,000 customers. The documentation refers to this reservoir as an emergency supply. The proposed development has the potential to impact upon the water quality within the reservoir - therefore recommended that an appropriate air quality assessment is undertaken to consider possible effects to the water in the reservoir from both deposition and affected rainfall. The reservoir should be considered as a main receptor in the air quality change modelling (s42a).	An assessment of the likely significant effects of the Project in respect of air quality has been undertaken as part of the EIA and the findings are recorded in the ES (Document Reference 6.1). The Lower Lliw Reservoir is an emergency reservoir. It is not possible to assess deposition on water and therefore assessing deposition on the reservoir could not be undertaken. However as the Project is a gas power station the only relevant pollutant is NOX and no metal deposition is expected.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment recommends that the developer considers the impact upon any DCWW assets and apparatus and our ability to fulfil statutory obligations, in particular the 36" and 66" strategic water mains that cross the application site. Proactive discussions have taken place and we encourage this dialogue to be maintained (s42a).	The impact of the Project on the Welsh Water main has been considered as part of the EIA and is referenced in the ES (Document Reference 6.1). APL has consulted with Welsh Water as part of statutory s42 consultation and will continue to do so. APL is committed to continued engagement following submission of the DCO Application, as well as throughout the construction, operational and decommissioning phases should a DCO be granted. Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	
		One comment advises that a flood consequences assessment should assess the impact of the development upon the flood risk associated with both the ordinary	APL has prepared a Flood Consequences Assessment (FCA) (Appendix 9.1, Document Reference 5.2) The FCA considers the risk to the Project and surrounding area.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		watercourses which cross the site, and the main River Llan, to ensure that it is compliant with TAN15. Any FCA should consider both risk to the development itself and demonstrate any consequences to third parties (a&d).		
		One comment advises that CCS's Drainage Engineers are consulted with regards to flood risk associated with the ordinary watercourses crossing the site (a&d).	APL has consulted CCS from an early stage of the Project, including in relation to matters relating to watercourses, as recorded within chapter 9 of the ES (Document Reference 6.1).	
		One comment advises that SUDS should be implemented where possible, subject to ground conditions, in accordance with Section 8 of TAN15 (a&d).	A drainage strategy has been prepared (Appendix E to ES Appendix 9.1, Document Reference 6.2) for the Project. The strategy states that SUDS will be incorporated where feasible.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		One comment states that if any proposed route crossings or any works on site are likely to affect the main river, then relevant Flood Defence Consents may be required, along with detailed method statements that incorporate pollution prevention and mitigation (a&d).	APL has noted this comment. The Project does not affect a main river.	
		One comment states that for ordinary watercourses, you should consult CCS. The consultee would expect the same level of protection to be applied with regard to pollution prevention and mitigation (a&d).	APL has consulted CCS from an early stage of the Project, including in relation to matters relating to watercourses, as recorded within chapter 9 of the ES (Document Reference 6.1).	
		One comment states that if any cooling waters/process waters are proposed to be discharged to the receiving waters (River Llan and its tributaries/River Lliw/Loughor), this will require a Water Discharge Activity	APL has noted this comment and will submit an application for an Environmental Permit, required to operate the Project, to NRW. Wastewater to be generated from the Project Site has been considered in the	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		Permit as part of the EPR (a&d).	embedded mitigation (Section 3.11 of ES Chapter 3, Document Reference 6.1). No discharge of process water to nearby water receptors is planned as all process wastewater will be taken off-site via a tanker to an appropriate wastewater treatment facility by specialist contractors.	
		One comment advises that further detail is provided in the ES in relation to the discharge characteristics (with particular regards to temperature and chemical composition) of any cooling/process waters upon the above watercourses in order to assess any offsite environmental impact (a&d).	Wastewater to be generated from the Project Site has been considered in the embedded mitigation (Section 3.11 of ES Chapter 3, Document Reference 6.1). No discharge of process water to nearby water receptors is planned as all process wastewater will be taken off-site via a tanker to an appropriate wastewater treatment facility by specialist contractors.	
		One comment advises that, in relation to a WFD compliance assessment, that a screening assessment, to include new or changed river crossings, should be undertaken as part of the ES (a&d).	The assessment of water quality and resources (ES Chapter 9, Document Reference 6.1) has been undertaken to meet the objectives of the WFD.*	*A Water Framework Directive Assessment (WFD) of the WFD water bodies likely to be impacted by the Project. A separate assessment to the

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
				EIA required to satisfy the objectives of the WFD is provided in Appendix 9.2 and should be read along this section of the ES (Document Reference 6.2).
		One comment states that the applicant should fully assess any ground instability and should be satisfied that piling operations and any vibration associated with the construction process will not disturb or cause any fracturing of the Dwr Cymru/Welsh Water main that traverses the proposed site (a&d).	An assessment of the potential impacts of the Project in respect of ground instability is contained within chapter 10 of the ES (Document Reference 6.1). Draft protective provisions to protect Welsh Water assets from the Project have been sent to Welsh Water for comment. These will be included in the draft DCO (Document Reference 3.1) APL is actively engaging with Welsh Water over these matters.	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
Waste	4	One comment states that The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal) (s42a).	As stated in Chapter 15 of the ES (Document Reference 6.1) APL, at all phases of the Project, will seek to apply the waste hierarchy as part of their waste prevention and management policy. More details are in Section 6.6 of the Outline CEMP (Appendix 3.1, Document Reference 6.2).	
		One comment states that for wastes arising from the installation, the EIA should consider the implications and wider environmental and public health impacts of different waste disposal options (s42a).	Chapter 15 of the ES (Document Reference 6.1) considers these implications. No significant adverse waste management effects are predicted to arise either during construction, operation or decommissioning.	
		One comment states for wastes arising from the installation the EIA should consider disposal route(s) and transport method(s) and how	No significant adverse waste management effects are predicted to arise either during construction, operation or decommissioning. See Chapter 15 of the ES (Document Reference 6.1) and	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		potential impacts on public health will be mitigated	the Outline CEMP (Appendix 3.1, Document Reference 6.2).	
		One comment highlights that contaminated excavation material and hazardous wastes outlets are likely to be outside of the County Borough - therefore it would be prudent to ensure that appropriate measures and outlets exist should they be necessary as part of the project (a&d).	Upon leaving the Project Site any waste arising will be treated and/or disposed of at licensed facilities and it is expected that the majority of these will be within the administrative area of the City of Swansea. Any wastes arising as part of the construction, operational and decommissioning phase will be handled and stored under appropriate waste management legislation e.g. Section 34 of the Environmental Protection Act 1990 and Part 2 of the Environmental Permitting (England and Wales) Regulations 2010*. No significant adverse waste management effects are predicted to arise either during construction, operation or decommissioning.	* Replaced by the Environmental Permitting (England and Wales) Regulations 2016
Other	1	One comment states that any installation of cables under or	APL has noted this comment. Cables or pipelines which are part of the Project do	

Phase 1 S42 Consultation Feedback and APL Response

Theme	No. of Comments	Summary of Comments	APL Response following Phase 1 (2014)	Notes following Phase 2 Consultation (2018)
		over the railway, any methods of electricity transmissions across Network Rail's land, or any access rights, temporary or otherwise will require the necessary property agreements to be entered into with Network Rail's Easements and Wayleaves Team.	not cross any of Network Rail's infrastructure.	

PHASE 2 RESPONSES

Theme	No. of Comments	Summary of Comments	Consultee Body	Response in APL ES and/or DCO Application
Air Quality	1	One comment agrees that in relation to the Natura 2000 sites there is no likely significant effect alone from the emissions and depositions of NOx. However, the consultee highlights that although the contributions are below 1% and may not be significant alone (ref to NSER), this does not rule out the requirement of an in-combination assessment.	Natural Resources Wales	APL welcomes the acceptance of the No Significant Effects Report (NSER) conclusions. APL's response regarding NRW comments on in-combination effects is given below.
Air Quality	1	One comment states that the nitrogen deposition Table 1-7 (Chapter 6) has not been displayed as percentage values, and the contributions from the development to the Natura 2000 sites are below 1% of the relevant nitrogen critical load. Based on the Wealden Judgment, it is considered that an in combination is required.	Natural Resources Wales	The table has been updated to present the % change in NOx. APL has assumed that NRW are acknowledging that the NSER report screens out in combination effects from the two developments due to stack emissions and that the query relates to in combination effects from road traffic emissions. APL wishes to note that limited to no traffic data is available for any of the strategic sites which are listed in the Chapter 17 Cumulative Effects.
Air Quality	1	One comment states that APL has identified two projects that could act in combination with the development. Sections 1.5.4 and 1.5.5 explain why these projects are not going to act in combination with Abergelli, however the consultee advises that additional information should be added to detailing and confirming where projects have changes in traffic emissions, that Natura 2000 sites are further than the 200m screening distance for road traffic assessments. Additionally, for other developments that have emissions, it would be beneficial to demonstrate that those developments are beyond their relevant screening distances.	Natural Resources Wales	APL has assumed that NRW is acknowledging that the NSER report screens out in combination effects from the two developments due to stack emissions and that the query relates to in combination effects from road traffic emissions. APL wishes to note that limited to no traffic data is available for any of the strategic sites which are listed in the Chapter 17 Cumulative Effects, and so clarity on this point would be very much appreciated at the earliest opportunity.
Air Quality	1	One comment advises that an assessment of Air Quality impacts (both alone, and cumulative effects) on the Sites of Special Scientific Interest (SSSI) within the relevant screening distance (2km) is required to be submitted.	Natural Resources Wales	The Nant y Crimp SSSI is more than 2km from the Project Site boundary and as such there are no in-combination traffic effects.
Air Quality	2	Two comments relate to dust emissions during the decommissioning phase of the Project, and one specifically asks that further reference is included in the ES in relation to dust and debris during the decommissioning phases of the Project.	City and County of Swansea Council	APL notes this comment and confirms that a Decommissioning Plan as detailed in the 'Decommissioning Strategy' requirement in the DCO, Schedule 2 Requirements will be required to be submitted and agreed with City and County of Swansea at the appropriate time but prior to any decommissioning works being undertaken.
Air Quality	4	Four comments are concerned about the effect of air emissions from the Project.	Pontlliw & Tircoed Community Council/ Llangyfelach Community Council	The potential effects on air quality are assessed in Chapter 6 of the ES and no significant impacts are anticipated.
Air Quality	2	Two of the comments are concerned that the positioning of the Project will have cause health issues for the surrounding properties due to the co2 (sic) emissions, mainly due to weather conditions i.e. temperature inversions.	Response anonymised	An assessment of the potential air quality effects of the proposed development is presented in Chapter 6 of the ES. The meteorological data used in the air quality assessment has been sourced in consultation with City and County of Swansea Council (CCS). The meteorological data provided by the CCS Environmental Health Officer has been selected to ensure that the air quality assessment takes account of the local meteorological conditions, including cloud cover, wind speeds, wind directions, precipitation and temperature. The assessment also includes terrain data to ensure that effects such as depression and low lying land are taken into account when predicting concentrations of emissions, such as CO2, at nearby receptors.
Air Quality	1	One comment notes that air quality modelling has been undertaken to assess the impact of NOx concentrations and acid/nitrogen deposition on ecological receptors and concludes the effects on air quality are considered 'Negligible'.	Dwr Cymru Welsh Water	APL notes this comment and considers no further action are necessary.
Air Quality	1	One comment states a detailed technical assessment of the air quality modelling will be undertaken by NRW once an EPR application has been duly made. NRW notes that it has previously provided comments on the suitability and availability of weather data for the locality.	Natural Resources Wales	APL acknowledges this comment. Further details on the EPR application are in Document Reference 5.4 Details of Other Consents and Licences Required.

Theme	No. of Comments	Summary of Comments	Consultee Body	Response in APL ES and/or DCO Application
Air Quality	2	Two comments question how the Project will interact with localised weather and wind conditions and how that will affect ground level gas pollutants and ground level acidity.	Pontlliw & Tircoed Community Council	The dispersion modelling for the air quality assessment presented in Chapter 6 of the ES has used meteorological data that has been specified by CCS, provided by the CCS Environmental Health Officer to ensure that the dispersion modelling takes account of the local meteorological conditions, including cloud cover, wind speeds, wind directions, precipitation and temperature. The dispersion model also includes terrain data to ensure that effects such as depression and low lying land are taking into account when predicting concentrations at receptors and dispersion from the stack. With regards to concerns about ground level gas pollutants and acid levels, the absorption of emissions from the plume into rainfall is very limited and does not take place within the short-term or close to the stack as the pollutants have to undergo various chemical reactions before they become soluble which takes many days and by that time, the pollutants will have travelled many hundreds of kilometres away. However, dry deposition is of more concern as it increases the availability of nutrient nitrogen and can increase acidification which could affect ecological receptors. This effect has been considered as part of the ecological assessment in Chapter 8 of the ES. The impact on ecology has been assessed to be negligible.
Air Quality	1	The local residents are concerned as the Project only has to meet the less stringent Emission Limit Values (ELV's) in respect of a 1500 hour derogation power plant (less stringent ELV's for SO2 & NOx apply to power plants which operate for less than 1500 hours per year on a rolling average over a 5 year period).	Llangyfelach Community Council	The proposed site has been designed to minimise emission to air as far as practicable while achieving its intended purpose. the emissions from the plant will achieve the emission limits set out in the European Industrial Emission Directive (IED) which the UK has written into law and forms part of our environmental permitting system over seen by NRW in Wales. These emission limits apply to all power stations across Europe and are designed to ensure that emission do not lead to significant environmental harm and take into account transboundary pollution effects on neighbouring countries within the EU and outside of Europe. The IED was preceded by the European Large Combustion Plant directive which was also written into UK law. The Large Combustion Plant directive introduced emission limits which had to be achieved by older power generating plants by a certain deadline if they were to continue operating. If the plant could not achieve the limit or if it was not cost effective to achieve these limits then the sites had to shut down which has resulted in the closure of a large number of older gas, oil and coal fired power stations throughout the UK. As well as setting limits for existing power plants the directive also set more stringent emission limits for all new plant that were to be built after the regulation came into force based on the state of technology at the time. The Large Combustion Plant directive was replaced by the IED which once more included one set of emission limits for existing plants or those under construction (Annex V Part 1) and more stringent emission limits for newer plants which are granted a permit to operate after the January 2013 or started operating by January 2014. As the 2013/2014 deadline has now passed the proposed OCGT plant will have to meet the most stringent emission limits that are set out in the IED. The proposed site will therefore achieve the most stringent emission limits that are applicable throughout Europe and in practice will operate at below these emission limits to ensure that any fluctuations in operations does not lead to an exceedance of the limit. If the limit is exceeded, then Natural Resources Wales (NRW) must be notified and if the limit is exceeded on a regular basis then NRW may order the site to cease operation (this is regulated under the Environmental Permit). The site's stack height has been optimised to maximise dispersion of pollutants to ensure that local impacts are minimised as far as practicable while more regional effects will be managed by the permitting process as applied by NRW and determined as part of the DCO process and forms one of the items of consideration as part of the <u>National Policy Statements for Energy</u>

Theme	No. of Comments	Summary of Comments	Consultee Body	Response in APL ES and/or DCO Application
Air Quality	1	One comment raises concern about air emissions settling on surrounding developments (both existing and proposed) .	Llangyfelach Community Council	The proposed stack height has been optimised to maximise dispersion of pollutants to ensure that air quality effects minimised as far as practicable. For the purposes of the air quality assessment presented in Chapter 6 of the ES, receptors have been located at both existing and proposed developments in the area. The air quality assessment considers all residential properties in close proximity to the site, as well as receptors at illustrative locations in order to cover residential areas further from the site, including one at Llangyfelach and one representative of Morriston Hospital. In addition, at the request of the CCS Environmental Health Officer, a receptor has also been located at the closest location on the LDP Strategic Development Site to the west of the Project Site, which includes a proposal for 850 dwellings. As such, the air quality assessment ensures that the potential effect of the plant on air quality on the nearby proposed residential site has been assessed.
Air Quality	2	There are two comments relating to air pollution. One is a more general comment about the effects from the Project on human health due to air pollution, the other specifically relates to air pollution from gas-fired generating stations in relation to current coal-fired generating stations.	Response anonymised	APL notes this comment and clarifies that major accidents and abnormal operations, including gas leaks, fires and explosions are considered in Chapter 15 Other Effects in the ES. Operational maintenance is also described in detail in Chapter 3 Project Site and Description. With regards to concerns that the Project is not "cleaner" than current coal APL notes that the emissions from the plant will achieve the emission limits set out in the European Industrial Emission Directive (IED) which the UK has written into law and forms part of our environmental permitting system over seen by NRW in Wales. These emission limits apply to all power stations across Europe and are designed to ensure that emission do not lead to significant environmental harm and take into account transboundary pollution effects on neighbouring countries within the EU and outside of Europe. The IED was preceded by the European Large Combustion Plant directive which was also written into UK law. The Large Combustion Plant directive introduced emission limits which had to be achieved by older power generating plants by a certain deadline if they were to continue operating. If the plant could not achieve the limit or if it was not cost effective to achieve these limits then the sites had to shut down which has resulted in the closure of a large number of older gas, oil and coal fired power stations throughout the UK. As well as setting limits for existing power plants the directive also set more stringent emission limits for all new plant that were to be built after the regulation came into force based on the state of technology at the time. The Large Combustion Plant directive was replaced by the IED which once more included one set of emission limits for existing plants or those under construction (Annex V Part 1) and more stringent emission limits for newer plants which are granted a permit to operate after the January 2013 or started operating by January 2014. As the 2013/2014 deadline has now passed the proposed OCGT plant will have to meet the most stringent emission limits that are set out in the IED. The proposed site will therefore achieve the most stringent emission limits that are applicable throughout Europe and in practice will operate at below these emission limits to ensure that any fluctuations in operations does not lead to an exceedance of the limit. If the limit is exceeded, then Natural Resources Wales (NRW) must be notified and if the limit is exceeded on a regular basis then NRW may order the site to cease operation. The site's stack height has been optimised to maximise dispersion of pollutants to ensure that local impacts are minimised as far as practicable while more regional effects will be managed by the permitting process as applied by NRW and determined as part of the DCO process and forms one of the items of consideration as part of the National Policy Statements for Energy.
Air Quality/Water	1	One comment notes that the reservoir and Afon Lliw have been excluded from further assessment as both are up gradient and therefore not in direct hydraulic continuity.	Dwr Cymru Welsh Water	APL notes this comment and considers no further action are necessary.
Cultural Heritage	1	One comment acknowledges and agrees with the conclusions of the PEIR on the impact of the proposal to the historic assets identified within the study area.	Welsh Government	APL notes this comment and considers no further action are necessary.

Theme	No. of Comments	Summary of Comments	Consultee Body	Response in APL ES and/or DCO Application
Cultural Heritage	1	One comments agrees that the Chapter 13 adequately covers the effect on all designated heritage assets and the Urban Design and Conservation Officer has no further comments in this regard.	City and County of Swansea Council	APL welcomes this comment and considers that no further action is required to resolve this comment.
Cultural Heritage	1	One comment suggests that there is the risk of unknown heritage being discovered during the development and the Glamorgan-Gwent Archaeological Trust (GGAT) should advise on the need for a watching brief.	City and County of Swansea Council	APL contacted GGAT to invite comment on the need for a watching brief during the construction phase. GGAT responded, suggesting that APL undertake a precautionary approach and undertake a watching brief. Accordingly, as identified in Chapter 13 Historic Environment of the ES (Document Reference 6.1) and secured by the "Archaeology" requirement in Schedule 2 of the DCO, prior to commencement of work a written scheme for the investigation of areas of archaeological interest must be approved by CCS.
Cultural Heritage	1	One comment highlighted that Table 5-5 of Appendix 13.1 (Heritage Gazetteer) indicates that Pare Llewelyn is Grade 2 Registered Historic Park and Garden. Following clarification with the Urban Design and Conservation Officer, the advise is that the Pare Llewelyn is not a Registered Historic Park, and APL may wish to exclude this from the Heritage Gazetteer.	City and County of Swansea Council	APL has clarified that Parc Llewellyn is included on the GIS dataset for the Cadw register of historic parks and gardens (dataset maintained and provided by Cadw). Its Register entry is PGW (Gm) 75(SWA) and is Grade II. We have not checked this data against the published copy of the Register, but have no reason to assume this is an error. In summary, the Heritage Gazateer presented as an appendix to the ES remains unchanged.
Cultural Heritage	1	Figure 13.1 shows the heritage assets located within 1km of the site boundary. Whilst the Listed Buildings at Tredegar Fawr are located just outside of this boundary, they are readily visible on the plan and it would be useful to indicate them on this figure to provide further context.	City and County of Swansea Council	APL acknowledges this and the heritage assets have been added to Figure 13.1.
Cumulative Impact	1	One comment questions how the Project would impact on proposed development. The comment states that there is already heavy development in the local area, including renewable energy, with more proposed, potentially including a rail station and village. The comment questions whether the development of the Project will open a gateway for further similar industrial development in the local area.	Response anonymised	The list of developments considered by the APL cumulative assessment has been agreed in consultation with the City and County of Swansea Council (CCS) and includes developments which are: • In the process of being built; • Permitted application(s) but not yet implemented; • Submitted application(s) not yet determined; • Projects on the National Infrastructure's programme of projects; • Projects identified in the relevant development plan (and emerging development plants – with appropriate weight being given as they move closer to adoption) recognising that information on the relevant proposals will be limited; and • Projects identified in other plans and programmes (as appropriate) which set the framework for future DCOs/approvals, where such development is reasonably likely to come forward. The agreed list can be found in Table 4-6 Projects considered with the cumulative assessment, in Chapter 4 "Approach to EIA". Future plans for the development of the local area are set out in the CCS Draft Local Development Plan, which is currently under examination. These plans include allocation for over 800 homes in the Strategic Development site to the west of the B4489, and an area allocated as a potential waste management area to the east of the site.

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Cumulative Impact	1	As explained in our recent meeting, there are also three other schemes located within 6km of the site that have recently been submitted (undetermined) that fall within the definition of major development as set out in the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended). However, two of these are residential developments of fewer than 23 units, each located approximately 5.5km away from the site whilst the other proposal is for 1,700m2 of commercial space located 4km away from the site. Within this context, it is not considered that these proposals would have a cumulative impact on the Project and that February 2018 is the cut off date for cumulative impact projects in the EIA.	City and County of Swansea Council	A cumulative assessment has been carried out relating to the three schemes as mentioned, where possible. The ES (Document Reference 6.1) includes a discussion on cumulative effects in Chapter 17 Cumulative Effects.
Cumulative Impact	1	Para 17.6.5 states that the Strategic Site at Felindre and other Strategic Sites have been scoped out as there are limited details about the scale and nature of the proposed developments. This is considered inaccurate. The Strategic Site at Felindre and the Strategic Site at Clasemont Road are both identified within the Emerging LDP which clarifies what is proposed as part of the development in terms of the number of units and supporting infrastructure. Both of these schemes have been subject to Scoping Opinions as well providing information on the various topics to be included within such an assessment. These sites are for 850 and 600 dwellings respectively and each would have a school and local centre. Junction 46 of the M4 is in very close proximity to each of these sites and, assuming the LDP is adopted in its current form, are highly likely to be under construction at the same time as this site given their long build out periods over several years. Whilst the LDP is currently under Examination and it is appreciated that the LDP may not be adopted in its current form, it is considered more robust to include these two proposals within the Landscape and Visual Impact and Traffic, Transport and Access Chapters at this stage as the LDP should be adopted in Autumn 2018, prior to any DCO consent being made	City and County of Swansea Council	Both of the strategic sites were identified in the 'long list' as detailed Table 4-6 and located in Figure 4-1. These schemes were classed as 'Identified / Allocated' and limited information was available at the time of writing. There are complexities with trying to assume likely effects and mitigation measures associated with the strategic sites that would prevent meaningful assessment at this stage. This Project is considerably progressed at this point, ahead of the nearby potential strategic site allocations. These allocated sites would therefore need to account for the Project as committed.
Cumulative Impact	1	One comment notes the difficulty of assessing the traffic forecasts for the decommissioning phase which is accepted, but this reiterates the need for a comprehensive Decommissioning Method Statement which considers updated environmental information at a later date. However, Paragraph 12.7.30 states that the overall impact of the project is likely to be lesser in nature than construction as many aspects are likely to be left in situ. Whilst this is appreciated, the traffic on the highway in the vicinity of the site (and utilising junction 46 specifically) is expected to have increased significantly by the time of decommissioning as the Strategic Business Park should have been developed at that time (utilising Link 2) and the Strategic Development Area identified in the LOP (assuming it is included in the Adopted Plan) would also be fully operational and heavily dependent on the car, based on the existing traffic situation.	City and County of Swansea Council	APL has included developments that are consented or allocated where there is a reasonable degree of certainty will proceed within the next three years. APL may be required to carry out an assessment of the impact of those adopted Local Plan allocations which have the potential to impact on the same sections of transport network as well as other relevant local sites benefitting from as yet unimplemented planning approval. In considering the current status of the LDP and the timeline of the Project, APL considers that it is unlikely that Felindre and the Project will overlap. The Swansea LDP is, at the time of writing, at the inspector's hearing and may become formally adopted by the end of summer or autumn. Therefore the official status of all the strategic development sites is unallocated. In the case of Felindre, the tender for transport planning services was put out one to two years ago and from APL's review we assume that there is no planning application submitted and in the public domain. Therefore the site in question is not classed as consented. The Application is to be submitted in May 2018 and DCO consent is anticipated in Q3 2019. This will lead to the commencement of the (less than) two year construction period. The probability of the two sites being in construction period at the same time is low. In the worst and unlikely case Felindre construction may start at the end of the Project construction period. This would be after peak Project construction traffic, which occurs around 11 months from start. The Felindre construction would also be limited to initial preliminary construction activities at that time.

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Cumulative Impact (continued)	1 (continued)	Para 12.10.4 considers the cumulative impact of other developments that have been submitted for planning permission. 12.10.5 goes on to state why certain projects have been excluded from the cumulative impact assessment. Whilst it is appreciated that two of the nearby LOP sites are not yet subject to a planning application and few details of traffic generation have been provided; it is considered that two strategic sites (Strategic Sites G at Felindre and E at Clasemont Road) should be included within the assessment given their proximity to the site and Junction 46 of the M4. The LOP is currently at Examination and given the scale of both developments (850 units and 600 units respectively along with a school and local centre at each site), it is anticipated that they will each take several years to develop completely. The LOP will run until 2025 and applications on these sites are anticipated shortly in order to provide the requisite number of units within the plan period. Given that construction of the Project is anticipated to occur in 2020, it is highly likely that these sites would be under construction at the same time (assuming the LOP is considered sound, these sites remain within the plan and the plan is recommended for adoption) and should therefore be considered within the cumulative assessment in terms of construction. Whilst at the current time full details of the construction timelines are not available, it is considered that the build rates would be similar to the Strategic Site at Llangyfelach (2017/1822/OUT) that has been included (as an application has been submitted) and this could be used as a basis for a more robust assessment. Link 2 in the TA would also be used by construction traffic for the Strategic Site at Felindre and Junction 46 is likely to be used by the construction traffic going to the 3 Strategic Sites within the vicinity.		At this stage this Project is considerably progressed, ahead of the nearby potential strategic site allocations. Thus if, in the unlikely scenario, the sites were to overlap construction periods for less than a year, Felindre would need to account for the Project as committed. This approach would also ensure robust assessments were undertaken in the future given that the Project traffic impact will be in the public domain and agreed with CCS, this eliminates the need for broad assumptions and follows logical steps. There are complexities with trying to assume development quantum, access arrangements and mitigation measures associated with strategic sites that would prevent meaningful assessment at this stage. With regards to the decommissioning, the request for assessments are noted. APL would advise that at present it does not have the ability to forecast that far into the future as the growth rate calculators are not that far advanced and also have not been updated with LDP allocations or any trends in economic activity or government intervention on private car use. APL has confirmed within the assessment that decommission will result in less of a traffic impact than construction. Decommissioning will be subject to the 'Decommissioning Strategy' requirement as detailed in the DCO, Schedule 2 Requirements.
Design	3	Three comments relate to the decommissioning phase, specifically the design life of the Project and state that the 2018 PEIR is unclear how the power plant will be re-powered at the end of its anticipated 25 year working life.	City and County of Swansea Council	APL can confirm that the ES has been updated to clarify the Project design life. For the purpose of the EIA and in order to allow a decommissioning assessment to be presented in the ES, the assessment takes the design life of the power generation plant (25 years) as its assumption for the point in time when decommissioning is assessed. For the purposes of the assessment, it is assumed that the above ground Generating Equipment would be demolished and removed after 25 years and the Generating Equipment Site re-instated to a similar condition as before construction. Any decommissioning phase would be likely to be of a similar duration to construction i.e. 22 months. The detail of future decommissioning will be determined following submission of a decommissioning strategy for approval by CCS under the corresponding Requirement in Schedule 2 of the DCO.
Design	1	Vodafone: Fixed does have apparatus within the vicinity of your proposed works. Where apparatus is affected and requires diversion, please send all the scheme related proposals that affects the Vodafone Network.	Vodafone Limited	APL notes this comment and can confirm that no impacts to Vodafone assets are anticipated as a result of the Project.
Design	1	The Community Council feel that that before a Development Control Order is considered for approval and an NRW permit is also considered for approval; that it would be more appropriate that a more efficient gas fired power station should be looked at to include the recycling of hot/warm gases generated, from such a station be used to serve the buildings on the site , the nearby Swansea Business Park & the proposed 850 dwelling etc. on Strategic Site G in the Swansea Local Development Plan.	Llangyfelach Community Council	APL notes this comment about the recycling of hot gases from the Project, to serve the onsite buildings as well as other developments in the local area. The potential for combined heat and power (CHP) opportunities are considered in Chapter 5 Alternatives Considered of the ES, which concludes that it is not technically or economically feasible with a peaking power station in this location. The proposed power station is to operate as a peaking plant to address short-term changes in power supply or demand. To achieve this the plant needs to be able to start producing electricity as quickly as possible and conversely to shut down as fast as possible to only operate when there is a need. This type of plant is not conducive to the supply of heat to other sites/residential properties which would need regular heating supplies throughout the year for industrial use of more heat in winter and none in summer for residential use. As the peaking plant will only operate if there is a need there would be no heat available at some time of the day/year unless the OCGT operated at all times which is not economically viable. APL notes the comment in relation to the Environmental Permit and can confirm that the DCO and EP applications will be twin tracked.

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Design	1	One comment notes that it is unlikely that there will be other impacts of the power project affecting access to the solar assets under your management. The comment further states there is a need for a technical interface discussion and the potential protections that may be given to Foresight on the face of the order (Protective Provisions).	Response anonymised	APL notes this comment. Consultation regarding the protection of assets is ongoing. Draft protective provisions to protect assets from the Project have been sent to the consultee for comment. These will be included in the draft DCO (Document Reference 3.1).
Ecology	1	One comment advises that the NSER is updated under the 'Justification for inclusion in HRA screening' column to include hydrological connectivity between the development site and the protected sites via the Afon Llan and Afon Lliw.	Natural Resources Wales	APL notes this comment. Additional information has been added to the HRA (Document Reference 5.5) to discuss hydrological connectivity.
Ecology	1	One comment welcomes the undergrounding of electricity cables, however asks for the impact of the installation process on wildlife to be fully assessed and compensatory provision made where required. Reference should be made to all protected species issues raised when the nearby gas pipeline was laid and Gas Compressor Station built.	Welsh Government	APL notes this comment and confirms that a comprehensive ecological assessment has been undertaken and the findings are presented in Chapter 8 Ecology of the ES (Document Reference 6.1)
Ecology	1	One comment suggests that the Project should progress any opportunities to enhance biodiversity to contribute to enhancements to biodiversity under Section 6 of the Environment (Wales) Act 2016	Welsh Government	APL can confirm that an Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) and Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) has been submitted with the DCO that includes reinstatement and enhancement measures.
Ecology	1	One comment welcomes the dormice surveys undertaken to inform the application and agrees that dormice are unlikely to be affected by the proposals.	Natural Resources Wales	APL welcomes this comment and considers that no further action is required to resolve this comment.
Ecology	1	One comment welcomes the Great Crested Newt surveys undertaken to inform the application and note the results of those surveys. No further comments are required.	Natural Resources Wales	APL welcomes this comment and considers that no further action is required to resolve this comment.
Ecology	1	One comment welcomes the 'Bat Activity - Areas of Potential Impact' figure, and considers that these matters should be addressed by reinstating the hedgerows and rows of trees in the north of the site, following the installation of the proposed gas pipeline to ensure that bat flightpaths along habitat features are maintained.	Natural Resources Wales	APL acknowledges the comments provided and confirms that a Landscape & Ecology Mitigation Plan has been produced (ES Figure 3.6, Document Reference 6.3) as per discussions in the meeting held on the 6th February 2018, which shows where hedgerows and trees will be removed and reinstated. APL can confirm that the hedgerows and trees removed to facilitate the construction of the gas pipeline will be reinstated, other than on land above the gas pipeline.
Ecology	1	One comment advises the agreement of a lighting plan that limits lighting of the site's infrastructure and not on the surrounding vegetation, by creating dark corridors within the project site.	Natural Resources Wales	APL notes the comment related to a Lighting Plan and dark corridors. Discussions were held during the meeting held on the 06 February 2018. The Outline Landscape & Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) provides details of how dark corridors will be designed to allow species to commute and forage across the Project during construction and operation.
Ecology	1	One comment notes the mine adit/shaft currently being assessed for its potential to support bats, and welcome that the results will be included in the final submission.	Natural Resources Wales	APL can confirm that safety investigations regarding the mine shaft have confirmed the location of the shaft and that it has been filled in, hence there is no likelihood of hibernating bats or any suitable bat habitat being present.
Ecology	1	One comment welcomes the surveys for otters and water voles and advises that further information on the final route of the access route should be submitted, along with an assessment of its impacts on the watercourses onsite, to include any culverting/re-routing of watercourses and riparian habitat retention/reinstatement. Clarification is required of the measures to ensure that otters/water voles can continue to move along the watercourse.	Natural Resources Wales	APL welcomes this comment. The Environmental Statement includes the location of the new section of access road and an updated assessment of watercourses. The Outline Landscape & Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) provides details of any watercourses which are diverted, removed and reinstated as part of the construction and operation of the Project, in addition to any mitigation required in relation to otters and water voles.
Ecology	1	One comment advises that lighting impacts to the watercourses particularly those in the eastern part of the site should be addressed by an agreed lighting plan.	Natural Resources Wales	APL confirms that the Outline Landscape & Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) provides details of watercourses which are diverted, removed and reinstated as part of the construction and operation of the Project, in addition to any mitigation required in relation to otters and water voles (if required).

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Ecology	1	One comment requests that the permanent removal of ancient woodland should be avoided where possible.	Natural Resources Wales	APL acknowledges this comment and confirms that the locations of the Generating Equipment Site and the Gas Pipeline have been designed to avoid ancient woodland. Furthermore, the final alignment of the new section of access road has also been selected to avoid, as much as possible, the area of ancient to the east of the Felindre Gas Compressor Station and the Substation.
Ecology	1	One comment requests that a proposed long-term habitat management plan should be provided, detailing retained features, mitigation and enhancement of habitats, including detail on how these areas will be managed and monitored.	Natural Resources Wales	APL notes this comment and clarifies that the Outline Landscape & Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) and Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) outlines features, mitigation and enhancement of habitats, and details how these areas will be managed and monitored.
Ecology	1	One comment is concerned about the removal of a hedgerow and two ponds, further suggesting that this would damage the wildlife dependent on the hedgerow and ponds.	Response anonymised	A comprehensive suite of ecological surveys has been carried out in support of the Project, all of which are published with the ES. In addition to a general habitat survey (Appendix 8.1), the following species specific surveys have also been carried out and can be located in Volumes B and C of the ES Technical Appendices (Document Reference 6.2) : • Invertebrate Survey Report • Great Crested Newt Survey Report • Reptile Survey Report • Breeding Bird Survey Report • Bat Surveys • Dormouse Survey • Otter and Water Vole Survey • Invasive Plant Species Survey • Arboricultural Survey Where the construction, operation of maintenance of the Project could affect habitats or species, the ES proposes appropriate mitigation – this is discussed in Chapter 8 Ecology. Where habitat is to be removed, reinstatement or replacement planting is proposed. This is also the case for the ponds, as two attenuation ponds that are included in the Project design – one at the Generating Equipment Site and the other adjacent to the Above Ground Installation – which will become green infrastructure features.
Ecology	1	One comment notes that the survey work undertaken to date is extensive and comprehensive, however, there is currently a lack of detail around the total extent of habitat loss and the measures to be employed to avoid, mitigate and compensate for the unavoidable impacts. The mitigation hierarchy must be clearly presented to allow an informed decision to be made regarding the degree of loss and subsequent measures to be employed to ameliorate that loss.	City and County of Swansea Council	APL notes this comment about the ongoing survey work. Habitat loss calculations have been included in the ES for each habitat and designated site. Mitigation and compensation measures have been included in the ES for each feature where an effect has been evaluated as being significant. The ES proposes mitigation and compensation measures for each feature where the effect has been evaluated as significant. An Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) and an Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) include details of where mitigation and compensatory habitats will be located, and how they will be created and managed. The mitigation hierarchy is clearly presented in ES Chapter 8 Ecology.
Ecology	1	One comment states that numerous bat species have been recorded as foraging and commuting across the site and NRW will provide detailed advice in relation to this European Protected Species.	City and County of Swansea Council	APL notes this comment regarding NRW providing advice on bats as a European Protected Species.
Ecology	1	One comment states that important routes appear to exist along the drainage ditches that cross the proposed main power generation plant area and therefore it is suggested that this be re-routed around the boundary of this working area to maintain the commuting route for these species.	City and County of Swansea Council	APL notes this comment and confirms that mitigation with regards to bats considers key commuting and foraging routes, and aims to continue to allow species to commute and forage across the Site. The Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) includes details of dark corridors designed to allow species to commute and forage across the Site during construction and operation.
Ecology	1	One comment notes that there are trees that have been identified as existing and potential bat roosts that must be fully considered as part of the application. In addition any new trees that might become affected as the scheme progresses must also be assessed for their potential to support roosting bats.	City and County of Swansea Council	Comments with regards to trees and bat roosts have been noted. Any trees that will be affected by the Project have been assessed for their potential to support roosting bats.

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Ecology	1	One comment notes there is still a question mark over the presence of hibernation roosts in an identified mine and adit and states that this issue must be resolved.	City and County of Swansea Council	APL clarifies that safety investigations regarding the mine shaft have confirmed the location of the shaft and that it has been filled in, therefore there is no likelihood of hibernating bats or any suitable bat habitat being present.
Ecology	1	One comments states that a detailed mitigation statement should be compiled to demonstrate how bat species will be considered during construction, plant operation and the decommissioning phases.	City and County of Swansea Council	Mitigation with regards to bats during construction, operation and decommissioning are included in the Chapter 8 Ecology of the ES (Document Reference 6.1). The Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) and Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2).
Ecology	1	One comment states that lighting will be particularly important for bats and the other nocturnal animals that have been identified, and a lighting strategy must be compiled that clearly demonstrates how lighting will be minimised and sensitively located in relation to the ecological constraints of the site.	City and County of Swansea Council	APL notes this comment and confirms that mitigation with regards to bats considers key commuting and foraging routes, and aims to continue to allow species to commute and forage across the Site. The Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) includes a details of dark corridors designed to allow species to commute and forage across the Site during construction and operation. Further details are in Appendix 3.5 Outline Lighting Strategy (Document Reference 6.2).
Ecology	1	One comment notes there are badger setts present that could be impacted by the proposal and NRW will need to comment on whether a licence might be necessary if works have the potential to infringe on The Protection of Badgers Act 1992. A detailed mitigation statement should be compiled to demonstrate how these species will be considered during construction/operation/decommissioning phases.	City and County of Swansea Council	APL confirms that details on the requirement for any licences if works have the potential to infringe on The Protection of Badgers Act 1992 have been included in the ES. Mitigation with regards to badgers during construction, operation and decommissioning are included in the ES (Document Reference 6.2).
Ecology	1	One comment notes that there is potential for otters to use habitats that will be affected by the proposal and NRW will provide detailed advice in relation to otter as a European Protected Species. Although current use by water vole has been ruled out they should be able to re-colonise the site if they move back. All new water features created as part of the scheme should incorporate features to enable them to be used by this species if present.	City and County of Swansea Council	Comment noted regard NRW providing advice on otter as a European Protected Species. Comments regarding water vole being able to recolonise previously used areas of the Site have been noted. Of the water features created by the Project, attenuation ponds will become green infrastructure features that are suitable water vole habitat. The fire water tank cannot double up as a green infrastructure feature as it is not compatible with its function.
Ecology	1	Populations of slow worm and grass snake have been recorded on site and in areas to be affected by the works. It is not possible to rule out other species such as Adder as the habitat is suitable particularly the wet woodland edge habitat and they have been recorded within the 2km record search buffer. A full and detailed method statement must be produced in respect of these species outlining how works will be carried out to avoid killing or injuring these species as required by the Wildlife & Countryside Act (1981). Given the amount of suitable surrounding habitat the strategy should seek to systematically make the working areas unsuitable for them and effectively "push" them into safeguarded adjacent receptor areas in the first instance. Some work may be required in the receptor areas before any works begin to increase the carrying capacity ready to receive the additional numbers of reptiles. As they will not be able to use the site in the same way as they currently do a certain amount of mitigation will be required to make up this short fall in the form of habitat improvement and targeted management. Some mitigation should take the form of creating suitable boundary habitats around working areas allowing reptiles to recolonise the site to some degree post construction.	City and County of Swansea Council	APL notes this comment about reptiles. A Reptile Mitigation Strategy has been provided in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2). This will be secured via corresponding requirement in schedule 2 of the DCO.

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Ecology	1	These are numerous on the site and there is a substantial risk of spread and contamination without appropriate preventative measures being in place. Of particular concern is the presence of floating pennywort in one of the ponds scheduled for removal. Given the amount of ground works and movement of soils, digging of new ditches and ponds that will be required there is a significant risk of spread. A detailed and thorough plan must be produced for its eradication on site and to prevent it from spreading to others. The same goes for the other species identified as present. A detailed mitigation statement should be compiled to demonstrate how these species will be considered during construction works (could be incorporated into the CEMP), during plant operation and during the decommissioning phase.	City and County of Swansea Council	APL notes this comment about invasive and non-native species. An invasive species plan has been submitted in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2).
Ecology	1	It is currently unclear exactly how much SINC and Section 7 habitat will be lost to the proposal. Whilst the 2018 PEIR sets out some figures for habitat loss these are based on the main power generation plant and does not consider other loss that may occur during associated works such as access routes construction, electrical cable installation, drainage, AGI construction etc. All these elements must be fully considered to allow a thorough mitigation package to be determined. Some loss has been identified as a temporary loss that can be reinstated once construction works are complete but this is not necessarily an easy thing to achieve, some habitat is easier than others but it must be carefully thought about and planned for it to be successful. Based on the current level of information it is not possible to determine if this strategy is feasible for example; is there sufficient receptor and storage areas for the temporarily removed habitat without harming existing habitat? How much will require new planting? More detail on how the temporary loss will be managed will be needed to properly determine the impacts of the scheme. Where long term loss of habitat will occur compensation will be necessary. Although not detailed in the submitted literature it is understood from verbal communication that the "tear drop" or southernmost part of the development boundary is being considered as an offsetting area. This area is already assessed as marshy grassland and therefore has value in its own right. It is acknowledged that improvements could be made to this area to partially offset some loss but based on current information is considered insufficient on its own. The most suitable areas for offsetting are those of low ecological value such as improved grassland which is present in the surrounding area. As a standard, twice the amount of area should be sought in compensation as that which has been lost.	City and County of Swansea Council	APL acknowledges the comments provided and confirms that an Outline Landscape & Ecological Mitigation Plan (ES Figure 3.6, Document Reference 6.3) has been produced (as per discussions in the joint CCS/NRW Project meeting on the 6th February 2018), which presents an overview of landscape and ecological mitigation. This includes details about habitat loss, reinstatement, replanting and enhancement. The Mitigation Plan also provides information about proposed planting and habitat management for the "teardrop" area to the southwest of the Generating Equipment Site. The Outline Landscape and Ecological Mitigation Plan is supported by the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2). The mitigation proposed in the Mitigation Plan and Mitigation Strategy are as discussed during a site visit on 19th March 2018, attended by both NRW and CCS.
Ecology	1	The Wildlife Protection Plan should build upon the principles of the submitted Outline CEMP and include the following as a minimum: • Risk assessment of potentially damaging construction activities. Identification of "biodiversity protection zones". • Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (including species and habitat specific method statements*). • The location and timing of sensitive works to avoid harm to biodiversity features. • The times during construction when specialist ecologists need to be present on site • Details of lighting during construction phase • Details of any additional survey that will be necessary prior to the start of works	City and County of Swansea Council	APL notes this comment. These measures are covered by the Outline Landscape and Ecology Mitigation Strategy and Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) (ES Appendix 3.4, Document Reference 6.2) submitted with the ES, and secured via the corresponding requirement(s) in schedule 2 of the DCO.

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Ecology	1	One comment notes that in Para 8.7.40 that the impact of construction noise has been considered on the nearest bat roost, however, it is queried whether the impact of the operation of the Project would impact on bats given that Figures 5.1 and 5.3 of Appendix 8.7 (Bat Activity Transect and Roost Survey Report) indicate that bats utilise the gallops which traverse the Project site. If this impact does not need to be considered, it would be useful to clarify why this element has not been considered further as it appears as an omission at the current time	City and County of Swansea Council	APL notes this comment and confirms that effects from noise on commuting and foraging bats has been considered in Chapter 8 Ecology (Document Reference 6.1).
Ecology	1	Once the details of the mitigation hierarchy have been established, then a long term management plan should be produced to secure the mitigation and compensation areas and maximise the benefits through appropriate management and monitoring. It should include the following: a) Description and evaluation of features to be managed. b) Ecological trends and constraints on site that might influence management. c) Aims and objectives of management e.g. to restore and enhance existing habitats, ensure successful establishment of new habitats etc. d) Appropriate management options for achieving aims and objectives. e) Prescriptions for management actions to include but not be limited to; a scheme for reptile receptor enhancement f) Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period). g) Details of the body or organization responsible for implementation of the plan.	City and County of Swansea Council	APL notes this comment and confirms that the mitigation hierarchy has been integrated into the plant design, for example through access road routing.
Ecology	1	Para 8.8.43 states that the detailed decommissioning....would be subject to a separate assessment and planning application at that time. Firstly, it is understood that the demolition of the Project would be included within any DCO granted so this statement is incorrect and secondly, it reiterates the general point that a full assessment of the environmental impact of the decommissioning will be required at a later date.	City and County of Swansea Council	APL notes these comments and clarifies that a Decommissioning Strategy will be required to be submitted and agreed with City and County of Swansea at the appropriate time but prior to any decommissioning works being undertaken, this will be secured via the 'Decommissioning Strategy' requirement in Schedule 2 of the draft DCO to be submitted with the APL DCO Application. For the purpose of the EIA and in order to allow a decommissioning assessment to be presented in the ES, the assessment takes the design life of the power generation plant (25 years) as its assumption for the point in time when decommissioning is assessed. For the purposes of the assessment, it is assumed that the above ground Generating Equipment would be demolished and removed after 25 years and the Generating Equipment Site re-instated to a similar condition as before construction. Any decommissioning phase would be likely to be of a similar duration to construction i.e. 22 months.
Ecology	1	It is appreciated that the additional mitigation measures will be required and that these have not been confirmed at this stage as they are subject to discussion with NRW and the Council's Ecologist (and some surveys are still on-going). Full details should however be provided with the DCO application.	City and County of Swansea Council	APL acknowledges this comment and considers no further action is necessary to resolve this comment.
Ecology	1	The submitted Arboricultural Report was undertaken in 2014 when the Project site was larger and the proposal was different. Section 3.3.5 highlights that certain works are required to trees along an internal access road (G3 and G4) which were required to enable construction of the gas connection. It is unclear whether the recommendations remain the same given that the scheme has subsequently changed. It would be useful for the applicant to update/ clarify the full extent of the tree works within the Environmental Statement to identify what is proposed as part of the DCO application.	City and County of Swansea Council	The scheme changes will be reflected in the Outline Landscape and Ecological Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) which will refer to the Arboricultural Survey Report.

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Ecology	1	One comment raises concerns about developing the Project on Green Belt land, in particular to prevent disturbing the nature and woodland area.	Response anonymised	APL notes this comment. The Abergelli Project is not located in a green belt area. Instead, both the Unitary Development Plan and the Local Development Plan (currently under examination) identify the land as a potential area of mineral extraction for either “Coal Resources” or “Sand and Gravel/Aggregates”. Potential effects to ecology as a result of the development are considered by the Environmental Impact Assessment (EIA) undertaken in support of the Project and reported in the ES. A comprehensive suite of ecological surveys have been carried out, including bat, dormice and reptile surveys – these reports are provided as appendices to the ES, and the assessment of impacts and proposed mitigation measures are presented in Chapter 8 of the ES (Document Reference 6.1).
Ecology	1	Fen habitats support a large amount of plants and animals some can contain over 500 different species of plants and more than half the U.K. Species of dragon flies, and several thousands of other insect's species such as aquatic species. These would be lost if this development was to go ahead.	Response anonymised	APL notes this comment. Chapter 8 of the ES assesses the impact of the Project on ecology, including habitats and wildlife. The chapter proposed mitigation measures which includes reinstatement of habitats impacted by the development, as well as enhancement measures to ensure that there is a net gain of habitat. The ES also includes an Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2), as well as an Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) that clearly set out where reinstatement planting and enhancement are proposed.
Ecology	1	The easterly edge of the proposed development there is an established wildlife pond. 50 years ago there were twice as many ponds in the countryside than there are today. There destruction has meant a huge decline in wild life in plants.	Response anonymised	APL notes this comment. The ES includes an Outline Landscape and Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) that sets out where reinstatement and replacement habitats are located, including at least two attention ponds which will become green infrastructure features to mitigate the loss of wildlife ponds within the Project Boundary.
Ecology	1	The northern edge for the proposed development, there is a long established badger sett. This set has been there a minimum of 120 years to my knowledge. As you will be aware it is illegal, to disturb or destroy a badger sett, under the badger act 1992. The proposed site is crossed over with runs to their feeding grounds.	Response anonymised	APL notes this comment. An ecological survey, including a badger survey, has been undertaken and the findings are in Chapter 8 of the ES. The Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4, Document Reference 6.2) and Outline CEMP (ES Appendix 3.1, Document Reference 6.2) provide details on the additional mitigation measures to be implemented during the construction phase of the Project.
Electrical Connection	1	In respect of existing NGET and NGG infrastructure, both will require appropriate protection for retained apparatus including compliance with relevant standards for works proposed within close proximity of its apparatus; providing that the order affects NGET & NGG apparatus in any way.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice. Protective provisions have been proposed in the Draft DCO for the protection of National Grid apparatus.
Electrical Connection	1	Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice. Protective provisions have been proposed in the Draft DCO for the protection of National Grid apparatus.
Electrical Connection	1	If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Electrical Connection	1	Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing”	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Electrical Connection	1	National Grid requests that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Electrical Connection	1	Drilling or excavation works should not be undertaken if they have the potential to disturb adversely affect the foundations or “pillars of support” of any existing tower.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.

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Electrical Connection	1	Ground levels above our cables must not be altered in any way. Any alterations to the depth of our cables will subsequently alter the rating of the circuit and can compromise the reliability, efficiency and safety of our electricity network and requires consultation with National Grid prior to any such changes in both level and construction being implemented.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Electrical Connection	1	Cables may cross the pipeline at perpendicular angle to the pipeline i.e. 90 degrees. A National Grid representative shall supervise any cable crossing of a pipeline. Clearance must be at least 600mm above or below the pipeline. Impact protection slab should be laid between the cable and pipeline if cable crossing is above the pipeline. A Deed of Consent is required for any cable crossing the easement. Where a new service is to cross over the pipeline a clearance distance of 0.6 metres between the crown of the pipeline and underside of the service should be maintained. If this cannot be achieved the service shall cross below the pipeline with a clearance distance of 0.6 metres.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Electrical Connection	1	National Grid will need to ensure that our pipelines access is maintained during and after construction. Our pipelines are normally buried to a depth cover of 1.1 metres however; actual depth and position must be confirmed on site by trial hole investigation under the supervision of a National Grid representative. Ground cover above our pipelines should not be reduced or increased. If any excavations are planned within 3 metres of National Grid High Pressure Pipeline or, within 10 metres of an AGI (Above Ground Installation), or if any embankment or dredging works are proposed then the actual position and depth of the pipeline must be established on site in the presence of a National Grid representative. A safe working method agreed prior to any work taking place in order to minimise the risk of damage and ensure the final depth of cover does not affect the integrity of the pipeline. Excavation works may take place unsupervised no closer than 3 metres from the pipeline once the actual depth and position has been confirmed on site under the supervision of a National Grid representative. Similarly, excavation with hand held power tools is not permitted within 1.5 metres from our apparatus and the work is undertaken with NG supervision and guidance.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Electrical Connection/Gas connection	2	Two comments state that they have no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works.	ESP Utilities/SGN	APL acknowledges this comment and considers that no further action is required to resolve this comment.
Electrical Connection/Gas connection	1	One comment states that sufficient information, in particular any specific gas connections, is not available to facilitate a detailed response.	Wales and West Utilities Limited	APL notes this comment and clarifies that consultation with Wales and West Utilities is ongoing. Draft protective provisions to protect Wales and West Utilities assets from the Project have been sent to Wales and West Utilities for comment. These are included in the draft DCO (Document Reference 3.1).

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Environmental Impact Assessment	4	Four comments refer to the proposed embedded mitigation during the decommissioning phases of the project to mitigate any adverse environmental effects and states that a Demolition Environmental Management Plan would be required to fully assess the decommissioning requirements at that stage, in line with relevant legislation and policy at that time.	City and County of Swansea Council	APL notes this comment and clarifies that the potential effects of the decommissioning phase are considered and assessed within the Environmental Statement in the relevant topic chapters. For the purpose of the EIA and in order to allow a decommissioning assessment to be presented in the ES, the assessment takes the design life of the power generation plant (25 years) as its assumption for the point in time when decommissioning is assessed. For the purposes of the assessment, it is assumed that the above ground Generating Equipment would be demolished and removed after 25 years and the Generating Equipment Site re-instated to a similar condition as before construction. Any decommissioning phase would be likely to be of a similar duration to construction i.e. 22 months. A Decommissioning Strategy will be required to be submitted and agreed with City and County of Swansea at the appropriate time but prior to any decommissioning works being undertaken, this will be secured via the 'Decommissioning Strategy' requirement in Schedule 2 of the draft DCO to be submitted with the APL DCO Application.
Environmental Impact Assessment	1	It is noted that the environmental impact assessment is ongoing and comments are unable to be made on assessments not yet undertaken or publicised.	Welsh Government	APL notes this comment.
Gas Connection	1	The following is stated for Gas pipelines: -Where existing roads cannot be used, construction traffic should ONLY cross the pipeline at previously agreed locations. -The pipeline shall be protected, at the crossing points, by temporary rafts constructed at ground level. -The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required. -The type of raft shall be agreed with National Grid prior to installation. -No protective measures including the installation of concrete slab protection shall be installed over or near to the National Grid pipeline without the prior permission of National Grid. -National Grid will need to agree the material, the dimensions and method of installation of the proposed protective measure. -The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to National Grid. -Please be aware that written permission is required before any works commence within the National Grid easement strip.	National Grid	APL acknowledges these comments and confirms that all works will adhere to National Grid advice and best practice.
Gas Connection	1	The gas pipeline and Gas Connection Route Corridor of the proposed gas fired power plant has the potential to adversely affect both the solar farm assets and the Distribution Network Operator assets and acceptable protection, mitigation and restoration measures will be necessary to ensure no damage or harm is done to those assets during construction of the pipeline and that there are no additional risks to those assets when the pipeline is in operation.	Response anonymised	APL notes this comment. Consultation regarding the protection of assets is ongoing. Draft protective provisions to protect assets from the Project have been sent to the consultee for comment. These will be included in the draft DCO (Document Reference 3.1).

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Gas Connection	1	Para 10.7.16 2018 PEIR refers to the sand and gravel reserves within the vicinity of the gas connection. It is unclear whether the significance of the magnitude of the impact would change given that, unlike the Power Generation Plant, the gas pipeline is expected to be left in situ (see para 10.7.50 of the CCS s42 response) and therefore this sterilisation would be permanent as opposed to just for the duration of the project as indicated in this paragraph. Para 9.7.61 2018 PEIR states that the reinstatement of the power generation plant to the existing characteristics would bring back the drainage benefits of the existing 'greenfield' characteristics. However, it is considered that the soil would be heavily compacted as a result of the development of the Project and details to overcome soil compaction as a result of the development would be required at the decommissioning stage.	City and County of Swansea Council	APL notes this comment. Para 11.7.16 (formerly 10.7.16) does indicate that the sterilisation of the sand and gravel reserves would be permanent however the significance of effects is only considered to be minor as the area sterilised by the pipeline compared to the overall size of the reserves is relatively small and there is minimal economic use of the reserves. Table 11.14 (formerly Table 10.14) will be amended to include an additional row relating to the gas pipeline and electrical connection being left in situ following decommissioning permanently sterilising a thin strip of land. Given the low economic value of the reserves and the relatively small area affected the significance of effect is considered to be minor adverse. APL notes this comment and confirms the issue will be appropriately at the decommissioning stage.
General	1	One comment notes that the 2018 PEIR clearly explains the technical differences between the project as indicated currently and the previous 2014 PEIR. The consultee suggests that an annotated diagram of the proposed site layout that relates to the individual elements identified in the Parameters of Assessment indicated in table 3-3 would be useful.	City and County of Swansea Council	APL welcomes your positive comments on the 2018 PEIR NTS and clarifies that an annotated diagram will be presented within the ES and ES NTS as described in Table 3-3.
General	1	One comment suggests that the height of the fin fan coolers in Table 3-3 refers are incorrect.	City and County of Swansea Council	APL can confirm that the fin fan cooler parameters were given in error and this is amended in the ES.
General	1	One comment questions whether a bond will be put aside for decommissioning the Project, and emphasises the cost to developers of decommissioning power plants.	City and County of Swansea Council	APL can confirm that there is no intention to provide a bond for decommissioning at this stage. This is not normally required for this type of project.

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General	1	In terms of the Non-Technical Summary, I would advise that this document strikes a good balance between the level of information contained within it whilst also ensuring that the document is user-friendly. The NTS provides a significant amount of useful information in easy to understand language whilst also clarifying what has been covered in each topic area and giving an indication of the significance of these effects. It is appreciated that it is a difficult task to reconcile providing a summary of the environmental information without going into the detail contained within the 2018 PEIR in an easy access format but it is hoped that the final NTS follows the same approach to enable all participants to understand the environmental issues that have been considered and their significance overall in EIA terms. The list of abbreviations at the start is particularly useful given the amount of acronyms used throughout the document. One point to note is the use of the term "major development" on P46 of the NTS. There is a statutory definition of major development contained within the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended). This definition provides for schemes of 10 or more dwellings and commercial developments creating over 1,000m2 of floor space amongst other criteria. Within this context, the term major development is misleading as it was agreed that larger, more strategic scale developments would be considered (i.e. 40+ dwellings or more) within the 5km area. These larger schemes are considered to have more potential for a cumulative impact given their scale/ characteristics than smaller developments. An indicative site layout of the Project site itself would also prove beneficial in the NTS along with a plan referring to the different pieces of infrastructure on site.	City and County of Swansea Council	APL welcomes the positive comments on the NTS. The term 'major development' will be amended within the NTS to a non-statutory definition.
Ground Conditions and Agricultural	1	One comment advises APL to note that dewatering for engineering works is no longer classed as exempt under the Water Resources Act 1991 and therefore may require an abstraction licence from NRW depending on the volume and duration of the dewatering proposed.	Natural Resources Wales	APL acknowledges this comment and no actions are required.
Ground Conditions and Agricultural	1	One comment notes that pollution prevention measures to protect controlled waters are covered in the draft CEMP, including the construction and operation phases of the Project.	Natural Resources Wales	APL acknowledges this comment and no actions are required.
Ground Conditions and Agricultural	1	The loss of agricultural land that has been in production for hundreds of years should not be allowed unless food production and the development can be managed alongside each other. Such as land based solar panels and sheep production this development will mean the total loss of production permanently.	Response anonymised	APL notes this comment. As explained in Chapter 10 Geology, Ground Conditions and Hydrogeology (Document Reference 6.1), the agricultural land classification for the land within and surrounding the Project site is Grade 4 poor quality agricultural land "with severe limitations which significantly restricts the range of crops and/or level of yields, mainly suited to grass with occasional arable crops." Chapter 10 assesses the impact of the Project on agricultural land to be negligible, with only a relatively small area of the Project Site permanently sterilised by the development with the rest reinstated following construction.
Ground Conditions and Agricultural	1	One comment states that mechanical treatment for handling contaminated discharges from the construction phase requires an Environmental Permit from NRW, and all discharges to controlled waters must be free from polluting matter including suspended sediment.	Natural Resources Wales	APL acknowledges this comment and can confirm that an Environmental Permit will be obtained as appropriate.
Ground Conditions and Agricultural	1	One comment recommends that any stored stockpiles of material e.g. soils, are surrounded at their base by silt fencing to prevent contaminated run-off being generated during inclement weather conditions.	Natural Resources Wales	APL is in agreement and can confirm that ES Chapter 3 Project and Site Description of the Environmental Statement has been amended accordingly.

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Ground Conditions and Agricultural	1	One comment notes that the final design will incorporate suitable mitigation on the basis of intrusive investigation findings to minimise disturbance with peat, and a Peat Management Plan is proposed. NRW recommends: -information on the location and extent of peat is provided upfront as part of the DCO submission -a peat survey should comply of a minimum, of 1 peat probe per hectare of development area and 1 pear probe per 10 peat probes -the above will show the distribution of peak across the development area so that the main areas of peat can be avoided by infrastructure.	Natural Resources Wales	APL notes this comment and confirms that an additional desk study of peat resources including NATMAP Soilscales dataset (Cranfield University) and soil maps have been undertaken to better understand the location and spatial extent of the peat deposits. The results of this assessment have been included in the ES chapter. It is understood that a peat survey is recommended, this will be undertaken during ground investigations. If following the peat survey a reasonable amount of peat is found, a Peat Management Plan will be agreed in consultation with CCS and NRW. This will be secured via the corresponding requirement in schedule 2 of the DCO.
Ground Conditions and Agricultural	1	Parts of the site fall within the defined Development High Risk Area. The Coal Authority records indicate that parts of the site have been subject to historic recorded underground coal mining at shallow depth and that other parts of the site are likely to have been subject to historic unrecorded underground coal mining at shallow depth associated with a thick coal outcrop.	The Coal Authority	APL notes these comments from the Coal Authority.
Ground Conditions and Agricultural	1	Consequently, the likely Coal Authority recommendation to the LPA would be no objections, subject to the imposition of an appropriate planning condition to secure site investigations and any necessary remedial measures.	The Coal Authority	APL notes these comments from the Coal Authority.
Health	1	The report produced does not state the effect on human amenity? Such as finances, happiness, visual amenity, greenhouse gas, climate control?	Response anonymised	Landscape and visual effects are addressed in the 2018 PEIR Chapter 11 “Landscape and Visual”. Air Quality effects are addressed in the 2018 PEIR Chapter 6 “Air Quality”. Climate Change concerns are addressed in the 2018 PEIR Chapter 15 “Other Effects Considered”. Amenity will be discussed in the Planning Statement submitted with the DCO application.
Health	1	We are satisfied that the approach to the Environmental Impact Statement is in line with current guidance and good practice. We would point out however, that where electricity generation and/or distribution equipment is identified, in this case for example, the 400 kV cable from the generating plant to the substation, an assessment of potential EMF exposures should be included.	Public Health England	APL notes this comment and confirms that an EMF Report is included as Appendix 15.1 to the ES (Document Reference 6.2).
Landscape and Visual Impact	1	One comment is concerned about the visual impact of the potential vapour from the stack.	Response anonymised	A plume consisting mainly of water vapour may be visible from the stack of the power station but only under certain atmospheric conditions (cold and dry with high pressure); this is not ‘smoke’. The emissions from the stack will be strictly limited by Natural Resources Wales (NRW) as part of an operational environmental permit and will not have any significant effect on people or the environment.
Landscape and Visual Impact	1	One comment has concern about the visual impact of the proposed buildings on the site, particularly the height and diameter of the stack	Llangyfelach Community Council	APL notes this comment. Significant residual effects on the landscape and visual resource are localised and not extensive. The visual change from Llangyfelach Churchyard (Viewpoint 11) has been assessed as not significant (refer to the Photomontages in Document Reference 7.1).

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Landscape and Visual Impact	1	Further to our recent meeting, it was suggested that additional information is added to the submitted photomontages to clarify exactly what is being indicated in each drawing and clearly point out where the Project site is in some of the viewpoints (especially the longer distance views where the site would be partially visible). Whilst the impact is Major Adverse from views 16 and 17, it is not readily apparent where the equipment and stack are in each viewpoint. Currently, the red outline of the Project infrastructure is not clear and is not used in all montages. As discussed, wireframes should be added to indicate landform and the outline of the infrastructure should be indicated on all montages, especially where the project would be visible. It is also appreciated that the winter shots to be added would further aid interpretation. Further to this, the inclusion of two pylon heights (Para 11.5.7) within close proximity to the site are welcomed as this will help gain a better appreciation of the scale of the project relative to the existing infrastructure in the area. However, it would be useful if these two pylons are marked on a plan (I would suggest Figure 3.1 - Existing Site Levels) along with their topographical datum points and this cross-referenced on the relative photomontages (such as view 9 where a pylon towers above the stack comparatively). This would enable readers to cross-reference the photomontages with these points and enable easier comparison/ verification.	City and County of Swansea Council	All comments noted and all VVMs will be updated as requested.
Landscape and Visual Impact	1	It was previously queried whether viewpoints from neighbouring Authorities to the east and west could be provided, but having viewed closer viewpoints and your clarification on the limited intervisibility due to intervening land form and the distances involved, it is agreed that these are not required and wouldn't add additional benefit to the process.	City and County of Swansea Council	APL welcomes this comment and no further actions are required.
Landscape and Visual Impact	1	One comment requests that a photomontage from Gower (Fairwood Common) is produced and advises that Table 4-2 is amended to reflect this, if it provides supporting evidence on why the Gower AONB has been scoped out.	Natural Resources Wales	APL confirms that Table 4-2 has been updated with a cross-reference to the Fairwood Common viewpoint assessment and associated VVM.
Landscape and Visual Impact	1	The field boundaries of the solar farm also comprise hedgerow planting that is a planning requirement for the solar farm and these landscape features will need to be protected from damage, and if damage does occur to be replaced to British Standards at APL's cost. In addition to this, any new landscape planting required as a result of the proposed works needs to ensure that there is no shadowing impact on the panels. There should also be no shadowing caused by large items of equipment, materials or machinery associated with the construction project or the development itself.	Response anonymised	APL notes this comment and ongoing consultation is being undertaken regarding the protection of assets. Draft protective provisions to protect assets from the Project have been sent to the consultee for comment. These will be included in the draft DCO (Document Reference 3.1).
Landscape and Visual Impact	1	One comment notes that photographs and photomontages for the two additional viewpoints (Mynydd Gelliwastad and Fairwood Common) that NRW requested are in preparation and will be submitted as part of the DCO submission.	Natural Resources Wales	APL notes this comment and considers no further action to be necessary.
Landscape and Visual Impact	1	One comment requires further information on landscape mitigation and restoration proposals to include details of the proposed woodland, hedgerows, grassland and attenuation ponds. NRW notes that Section 3.11.55 refers to planting proposals within Figures 11.10-11.12, however NRW has only been provided with Figure 11.10 at this stage.	Natural Resources Wales	APL notes this comment. An integrated Outline Landscape & Ecology Mitigation Plan (ES Figure 3.6, Document Reference 6.3) has been prepared showing the proposed species mixes and habitat types for the mitigation habitat restoration and planting proposals. The plan also includes drainage proposals including the attenuation pond, thereby showing an integrated approach to the mitigation associated with landscape, ecology and drainage.

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Landscape and Visual Impact	1	One comment requests that further detail on the colour scheme for the development should be provided. We note that recessive and matt colours are proposed, however in some of the photomontages the stack and buildings appear pale and therefore stand out (however we note this might be for the benefit of the photomontages.) Colour can affect visibility and therefore may affect assessment results. One comment notes colour can affect visibility and therefore may affect LVIA assessment results.	Natural Resources Wales	APL acknowledges this comment and confirms that colours of the final scheme will be subject to detail design and those used on the VVMs are for illustrative purposes, however, for the purposes of the assessment, it has been assumed that colours will be matt and recessive.
Landscape and Visual Impact	1	One comment states that it is not NRW's role to advise who should be consulted. NRW's view (as stated within our email dated 4 December 2017 to Aecom) was that a viewpoint from BBNP wasn't necessary.	Natural Resources Wales	APL confirms that the ES wording has been updated to reflect that NRW do not consider a viewpoint in the BBNP necessary.
Landscape and Visual Impact	1	One comment asks for clarity on the photographic information of all viewpoints including distance from the proposal, horizontal angle of view and number of frames in panoramas.	Natural Resources Wales	APL notes this comment and confirms that all VVMs have been updated to provide information including distance from the proposal, horizontal angle of view and number of frames in the panoramas.
Landscape and Visual Impact	1	One comment requests that single frame photographs with a 40-degree horizontal angle of view, reproduced at A3 as extracts from panoramas which are more user friendly onsite.	Natural Resources Wales	APL notes this comment. Single frame images are provided in Document Reference 6.3.
Landscape and Visual Impact	1	One comment asks APL to confirm if the distances in the Landscape and Visual Photomontages document are correct.	Natural Resources Wales	APL notes this comment and confirms that all distances between the viewpoint and a fixed point within the Project Site have been verified for the final submission.
Landscape and Visual Impact	1	One comment states that the location of the development on all photomontages needs to be provided for all viewpoints and information appears to be missing from many viewpoints provided.	Natural Resources Wales	APL notes this comment and clarifies that wirelines will be provided for each set of viewpoint VVMs.
Landscape and Visual Impact	1	One comment advises that the proposed landscape mitigation should be proposed for 25 years, which is a standard time length for an LEMP and that the LEMP could be reviewed every 5 years.	Natural Resources Wales	APL notes this comment and confirms that the LEMP refers to a 25 year management plan outlining the management operations required, with a mechanism calling for a review every 5 years.
No Comment	1	One comment reflects that no infrastructure is within 40km of the proposed site, and as such the consultee does not expect to raise any objections to the proposal. However, we will respond to any formal consultation once it is received from the relevant body.	NATS En-Route (NERL) Safeguarding	APL acknowledges this comment and considers that no further action is required to resolve this comment.
No Comment	3	Three comments note the proposals and request that no further information is sent, unless there are significant changes to the proposed development	The Crown Estate/The Equality and Human Rights Commission/The Canal and River Trust	APL acknowledges this comment and considers that no further action is required to resolve this comment.
No Comment	1	One consultee has no objections and provides no further other comments.	Neath Port Talbot County Borough Council	APL acknowledges that Neath Port Talbot County Borough Council has no objections and no further action is required.

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Noise	2	Two comments are concerned about the effect of noise (including vibration) emissions from the Project on their home.	Response anonymised	Detailed baseline sound monitoring was undertaken between 15 and 22 February 2018. The results included a full range of relevant weather conditions which have been used to update the noise assessment in the ES. Robust representative baseline ambient and background sound levels have been derived from the results by filtering for appropriate weather conditions and statistical analysis of filtered data. The results show some changes from the data used in the 2018 PEIR. This is to be expected at the data used in the 2018 PEIR was based on very limited measurements in 2014 which were subject to the influence of both short duration sound source effects and inappropriate wind directions for some of the receptors. The most notable changes are that the detailed survey resulted in higher representative background sound levels at NSRs 1 and 6 and lower ambient levels at NSR 4. As a result the assessments are now clearer in terms of their low impacts. The BS 4142 night time assessment based on the results of the detailed survey demonstrate an impact better than low adverse at all receptors. A night time BS 4142 assessment is therefore in the ES alongside the WHO assessment. ES Chapter 7 'Noise and Vibration' confirms that operational noise effects at the property in question are negligible and not significant.
Noise	1	One comments advises that the data presented in the ES for background sound level (L90) is not sufficient to be able to present a typical, representative sound level and may not be appropriate for permitting.	Natural Resources Wales	APL notes this comment. Detailed baseline sound monitoring was undertaken between 15 and 22 February 2018. The results included a full range of relevant weather conditions and have been used to update the assessment for the ES. The data presented in the ES for the background sound level (L90) is therefore considered to be appropriate for permitting.
Noise	1	One comment queries the assessment criteria used for the noise assessment and makes the following statements: - use of BS4142 at night has been omitted and WHO night noise guidelines for Europe has been opted to be used, which the guidelines define as the 1 year LAeq over 8 hours. - NRW states that it has been presented with a 10-minute sample. - WHO excludes sound with characteristics which is associated with industrial noise. - NRW acknowledges APL's need to undertake additional monitoring which should produce a greater detailed data set for the L90 and residual sound, and once this has been presented they would consider whether BS4142 is more suitable for night time sound.	Natural Resources Wales	APL notes this comment. As discussed with NRW following the s42 consultation, detailed baseline sound monitoring was undertaken between 15 and 22 February 2018. The results included a full range of relevant weather conditions, which have been used to update the noise assessment in the ES. Robust representative baseline ambient and background sound levels have been derived from the results by filtering for appropriate weather conditions and statistical analysis of filtered data. The results show some changes from the data used in the 2018 PEIR. This is to be expected at the data used in the 2018 PEIR was based on very limited measurements in 2013 which were subject to the influence of both short duration sound source effects and inappropriate wind directions for some of the receptors. The most notable changes are that the detailed survey resulted in higher representative background sound levels at NSRs 1 and 6 and lower ambient levels at NSR 4. As a result the assessments are now clearer in terms of their low impacts. The BS 4142 night time assessment based on the results of the detailed survey demonstrate an impact better than low adverse at all receptors. A night time BS 4142 assessment is therefore in the ES alongside the WHO assessment. The lower residual levels (baseline ambient) measured at NSR4 also mean that the complex situation regarding the WHO assessment at that location, where the residual noise already exceeded the WHO criterion but the power station noise did not result in any increase, no longer applies.

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Noise	1	The noise pollution from construction and the running of the plant I don't feel has been fully assessed as yet, whilst we currently have a noise monitor at our property we look forward to being provided with the results and what the increase in noise will be. Whilst we note comments that the plant will not be running day in day out, the running noise will impact us.	Response anonymised	As noted above, detailed baseline sound monitoring was undertaken between 15 and 22 February 2018. The results included a full range of relevant weather conditions which have been used to update the noise assessment in the ES. Robust representative baseline ambient and background sound levels have been derived from the results by filtering for appropriate weather conditions and statistical analysis of filtered data. The results show some changes from the data used in the 2018 PEIR. This is to be expected at the data used in the 2018 PEIR was based on very limited measurements in 2013 which were subject to the influence of both short duration sound source effects and inappropriate wind directions for some of the receptors. The most notable changes are that the detailed survey resulted in higher representative background sound levels at NSRs 1 and 6 and lower ambient levels at NSR 4. As a result the assessments are now clearer in terms of their low impacts. The BS 4142 night time assessment based on the results of the detailed survey demonstrate an impact better than low adverse at all receptors. A night time BS 4142 assessment is therefore in the ES alongside the WHO assessment. ES Chapter 7 'Noise and Vibration' confirms that operational noise effects at the property in question are negligible and not significant.
Noise	1	One comment states that the Local Authority will be interested to see tonal information in relation to potential operation at night given that the predicted ambient sound levels are above the baseline ambient sound level.	City and County of Swansea Council	The exact nature of the character of the power station sound at each receptor is not known although observations of similar sites confirm that the intention for there to be no major tonal or impulsive characteristics is achievable. The noise will not be significantly different in character from other sources contributing to the existing background and ambient sound. However a correction of +3 dB has been added to allow for minor noticeable characterises.
Noise	1	Section 3.7.1. refers to operating hours during construction but advises that a) these are subject to change with agreement with CCS, and b) these hours will not apply to commissioning and testing of the project. Firstly, details need to be put in place to notify local residents of any agreed changes to ensure that they are aware of the extended timings and their anticipated durations to reduce enquiries and complaints to the Council. Secondly, if certain activities are not to be subject to these timeframes, full definitions of what works fall within "commissioning" and "testing" are required within the CEMP to avoid ambiguity and complaints at a later date.	City and County of Swansea Council	We note your comment on construction working hours, and understand this is in agreement with CCS. The CEMP has been updated to include details on notices to residents, APL community liaison groups and forums. Definitions and clarity have also been added to the CEMP on 'commissioning' and 'testing'.
Permits and Consents	1	Following the publication of the Large Combustion Plant (LCP) Best Reference Document (BREF) in December 2017, the Best Available Techniques (BAT) conclusions (BATc) are now in effect and will need to be complied with as well as Annex V of the Industrial Emissions Directive (IED).	Natural Resources Wales	APL notes this comment and APL intends to contact NRW shortly to discuss the permit application.
Permits and Consents	1	There will be a need for insurance cover and indemnity agreements to ensure the protection of the solar assets and we would expect APL to bear ASL's reasonable costs associated with researching, entering into and completing such agreements and meeting any necessary requirements (such as additional health and safety measures) and other costs (such as, potentially, increased insurance premiums).	Response anonymised	APL notes this comment and can confirm that consultation regarding the protection of assets is ongoing. Draft protective provisions have been prepared and sent to the consultee for comment. These are included in the draft DCO (Document Reference 3.1).
Permits and Consents	1	We advise that the proposed power station will require an environmental permit under the Environmental Permitting (England and Wales) Regulations 2016 (EPR). We recommend that the applicant twin tracks the planning and permit application in order for all information to be considered at the same time, and for NRW to provide specific advice for the applicant and other stakeholders.	Natural Resources Wales	APL notes this comment and can confirm that APL will twin track the DCO Application and permit application.
Permits and Consents	1	The proposal is for an open cycle plant, and as a peaking plant we expect energy efficiency to form a significant part of the environmental permit application to ensure operations have accounted for the aforementioned LCP BATc published last year.	Natural Resources Wales	APL notes this comment. Potential adverse effects will be controlled by adopting best available techniques (BAT) and this will be determined through the Environmental Permit application

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Permits and Consents	1	One comment clarifies that the monitoring will be the responsibility of the EPR permit holder/operator. NRW will only be responsible for checking that the monitoring conducted is in compliance with the relevant permit conditions.	Natural Resources Wales	APL acknowledges the comment and Chapter 3 Project and Site Description has been amended accordingly.
Permits and consents	1	A detailed technical assessment of the air quality modelling will be undertaken by NRW once an EPR application has been duly made. We note that we have previously provided comments on the suitability and availability of weather data for the locality. Section 6.3.24 refers to the relevant Emission Limit Values (ELVs) for the Generating Equipment being set out in Annex V Part 1 of the IED. We advise that it is expected that Annex V Part 2 of the IED will apply to this project.	Natural Resources Wales	APL acknowledges these comments and considers no further work to be necessary.
Policy	1	We require all new combustion power plants (that do not include CHP from the outset) to be CHP ready to a sufficient degree, dictated by the likely future technically viable opportunities.	Natural Resources Wales	APL notes this comment. The potential for CHP opportunities is considered in Chapter 5 Alternatives Considered of the ES.
Policy	1	Reference is made in para 2.10.32 to Swansea being located within the South East Wales Capital region in the Wales Spatial Plan. It should be noted that Swansea is located in the Swansea Bay Waterfront and Western Valleys Region. In addition, para 2.10.23 will need to be updated as the LDP Examination Hearings have now commenced. They are likely to have been completed by the time that the full Environmental Statement is completed	City and County of Swansea Council	APL notes this comment and paragraph 2.10.32 has been updated. APL notes that the LDP examination hearings are underway and it is envisaged that the published Environmental Statement will report the status of the hearings as current at the time.
Policy	1	On a more general note, the Community Council is aware that the land adjacent to the site of the proposed power station is included in the draft Local Development Plan as a site for a proposed residential development of approximately 750 houses. The proposed development of a power station adjacent to such a significant housing development is inherently inconsistent with a residential development.	Pontlliw & Tircoed Community Council	The Project is located adjacent to an existing electricity substation and is set within an area of existing energy-related infrastructure (substation and overhead power lines). There is an existing belt of trees which acts to separate and provide a visual barrier from the existing and proposed infrastructure to any proposed residential development. It is noted that the draft Local Development Plan sets out aspirations for this area which include waste management facilities, employment as well as residential development.
Policy	1	Within the CCC's recommended pathway, the level of electricity generation from gas plants must reduce substantially in Wales before 2030 and 2050. The impact additional gas capacity in Wales would have on the ability to meet our statutory emissions reduction targets should be considered within this application	Welsh Government	APL notes this comment. The Project has the ability to meet statutory emissions reduction targets. The Project is a new Power Generation Plant in the form of an Open Cycle Gas Turbine (OCGT) peaking power generating station, which is designed to operate intermittently, to provide support in plugging the gaps created by intermittent renewables, and boosting the overall security of supply. Paragraph 3.6.1 of the Overarching National Policy Statement for Energy (EN-1) recognises the 'vital role' that fossil fuel power stations play in providing electricity supplies, and states that 'they will continue to play an important role in our energy mix as the UK makes the transition to a low carbon economy.'
Policy	1	The CCC's Climate Change Risk Assessment (CCRA) report summary for Wales provides a review of risks which may impact Wales as a result of climate change. A number of these risks have the potential to impact heavily on energy generation and infrastructure, as well as business productivity. APL should review the CCRA carefully in the development of their DCO application	Welsh Government	APL notes this comment about Climate Change Risk Assessment and clarifies that climate change is factored into the EIA and considered throughout the Environmental Statement in various topic chapters. Climate resilience has been built into the Project design to reduce effects from climate change, namely ecology, air quality and flood risk. Chapter 15 Other Effects of the ES summarises how these three topics associate with climate change, with further details in Chapter 6 Air Quality, Chapter 8 Ecology, and Chapter 9 Water Quality and Resources.
Policy	1	Application for a non-wind onshore generating station in Wales under section 37 of the Planning Act 2008 with a capacity of below 350MW and which has yet to be accepted by the Secretary of State before this date cannot proceed as a Nationally Significant Infrastructure Project. Any application made on or after 1 April 2019 will fall to be determined under Town and Country Planning Act 1990, for which there are different pre-application procedures and submission requirements	Welsh Government	APL acknowledges this comment and, as the Application is to be accepted prior to 1 April 2019, considers that no further action is required to resolve this comment.
Policy	1	We note this development is near to but not in the Welsh National Marine Plan area. Under the Marine and Coastal Access Act 2009 any development with potential to affect the Welsh National Marine Plan area has to take account of the marine plan.	Welsh Government	APL acknowledges this comment and considers that no further action is required to resolve this comment.

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Safety	1	Our records also indicate that a recorded mine entry (adit) is present within the planning boundary and that within the planning boundary there have been 4 reported hazards. In addition, 2 reported subsidence claims have been made within the planning boundary.	The Coal Authority	APL notes these comments from the Coal Authority. APL clarifies that safety investigations regarding the mine shaft have confirmed the location of the shaft and that it has been filled in.
Safety	1	One comment notes that by necessity the proposal will be in close proximity to a number of Major Accident Hazard Pipelines located mainly to the north of the proposed site. In addition, the proposed project site boundary appears to impinge on land ascribed to the Felindre Gas Compressor Station which already has a 3-zone map for land-use planning purposes.	Health and Safety Executive	APL acknowledges this comment. The Project's vulnerability to risk of major accidents and disasters is considered in Chapter 15 Other Effects. No further action is required to resolve this comment.
Safety	1	Should the project progress, we would expect notification under the Pipelines Safety Regulations and, depending upon whom the pipeline operator is, a Gas Safety (Management) Regulations safety case may be required.	Health and Safety Executive	APL acknowledges this comment.
Safety	1	The developer is advised to consider whether storage of hazardous substances is involved and, if so, whether Hazardous Substances Consent would be required.	Health and Safety Executive	APL confirms that there are no proposals to store any hazardous substances at the Project Site.
Safety	1	The presence on, over or above land of certain hazardous substances, at or above set threshold quantities (Controlled Quantities), may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 1992 as amended by The Planning (Hazardous Substances) (Amendment) (England) Regulations 2009 and 2010.	Health and Safety Executive	APL confirms that there are no proposals to store any hazardous substances at the Project Site.
Safety	1	Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.	Health and Safety Executive	APL confirms that there are no proposals to store any hazardous substances at the Project Site.
Safety	1	The proposed Abergelli Power Project development does not impinge on the separation distances of any explosives licensed site in the vicinity of the application.	Health and Safety Executive	APL notes this comment.
Safety	1	In respect of waste management, the applicant should take account of and adhere to relevant health and safety requirements. Particular attention should be paid in respect of risks created from historical landfill sites.	Health and Safety Executive	APL notes this comment. Waste management is discussed in the Outline CEMP ES Appendix 3.1 (Document Reference 6.2).
Safety	1	The site should be protected by a security fence that is at least 2.4m high, and manufactured of weld mesh or expanded metal. It should meet Secured by Design standards and specifications.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	The whole of the site, especially the perimeter and main entrances must be protected by a monitored CCTV system. It should be capable of producing quality evidential imagery and also be capable of detecting movement around the site whilst providing recognition of persons.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	Adequate lighting should be installed throughout the site to cover vehicle and pedestrian areas during the hours of darkness. A scheme of work and lux plan should be provided and the lighting must complement and enhance any CCTV cameras operating on site.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	Access to the roof of any buildings must be prevented or made difficult. Any features that assist climbing must be designed out. Access points to the roofs must be gated, the gates having access control fitted to prevent unlawful persons accessing.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	All buildings that are not occupied 24 hours per day or contain critical equipment or items of significant value should be protected by a monitored silent intruder alarm system. The system installed should meet the relevant British Standards for alarm installations.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements

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Safety	1	Both vehicle and pedestrian access onto site must be controlled. Suitable access control facilities must be put in place for both vehicles and pedestrians that meet Secured by Design standards and specifications.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	External entrance doors, and doors protecting areas that contain critical equipment or other items of significant value, should meet the security standard LPS1175 SR2 or the equivalent standard.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	Any trees should have no foliage or branches below 2 metres from the ground, and must not interfere with lighting or CCTV. In addition, trees must not be located adjacent to buildings or any perimeter security.	South Wales Police	APL notes these comments and confirms that all issues raised by South Wales Police will be considered during the design of security arrangements
Safety	1	Swansea Airport are to be consulted should there be an impact to the safeguarding area, in which case lighting of the landmark building may be required	Civil Aviation Authority	APL acknowledges these comments on landmark lighting. CCS safeguard zone mapping has been examined and it has been confirmed that the Project is located outside of the relevant safeguarding zone for Swansea Airport. Nevertheless, as a courtesy, details about the Project were shared with Swansea Airport for information purposes.
Safety	1	If the structure constitutes an 'aerodrome obstruction' it is the aerodrome operator that will review the lighting requirement (part of the safeguarding process).	Civil Aviation Authority	APL acknowledges these comments on aviation obstruction lighting.
Safety	1	In the UK, the need for aviation obstruction lighting on 'tall' structures depends in the first instance upon any particular structure's location in relationship to an aerodrome. If the structure constitutes an 'aerodrome obstruction' it is the aerodrome operator that will review the lighting requirement (part of the safeguarding process). For civil aerodromes, they will, in general terms, follow the requirements of CAP 168 - Licensing of Aerodromes. Chapter 4 refers to obstacles and obstacle lighting (I have included an extract from CAP168). Article 222 of the UK Air Navigation Order applies. Article 222 requires that for en-route obstructions (i.e. away from aerodromes) lighting only becomes legally mandated for structures of a height of 150m or more above ground level. Typically, structures less than 150m above ground level and away from the immediate vicinity of an aerodrome are not routinely lit for civil aviation purposes. However, structures of lesser high might need aviation obstruction lighting if, by virtue of their location and nature, they are considered a significant navigational hazard. Note that if the structure is to be 150m or higher, the lighting specification set out in Article 222 becomes a statutory requirement. In this latter case, any proposal to seek a lighting specification at odds with Article 222 should involve the CAA.	Civil Aviation Authority	APL acknowledges these comments on aviation obstruction lighting.
Safety	1	Due to the unique nature of operations in respect of altitudes and potentially unusual landing sites, it would be sensible for you to establish the related viewpoints of local emergency services Air Support Units through the National Police Air Service (NPAS) organisation	Civil Aviation Authority	APL acknowledges this comment. As recommended by the CAA, APL shared information about the Project with both the National Police Air Service (NPAS) and Wales Air Ambulance.
Safety	1	The proposal should be brought to the attention of the Safeguarding Department within the MoD's Defence Infrastructure Organisation	Civil Aviation Authority	APL notes this comment and confirms that the MoD has been consulted.
Safety	1	Fire hazards are abundant, water, gas, electricity all in such close proximity to each other and local residents? Lightening poses a real threat, I cannot locate comment in the report regards to the fire risk the site proposes to the area which is also surrounded by grassland	Response anonymised	APL notes this comment and clarifies that major accidents and abnormal operations, including gas leaks, fires and explosions are considered in Chapter 15 Other Effects in the ES. Operational maintenance is also described in detail in Chapter 3 Project Site and Description (Document Reference 6.1). APL also notes that gas-fired power stations in the UK have an excellent safety record, and we do not consider there to be any issues of concern with our site and the neighbouring energy facilities. Drax Power Station, Abergelli Power owner's existing power plant, has a better-than-average safety record among other coal, gas and biomass power stations

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Safety	1	Mid and West Wales Fire and Rescue Service expects APL to contact again with a view of holding some dialogue on the following: -Impact of construction traffic on the local road network which may affect the ability of the Fire and Rescue Service to service the local community -The security arrangements for the site and whether it will be considered to be of critical national infrastructure status -The proximity to the M4 motorway and other local receptors and the impact of fire or release from the site. A downwind cordon of up to 800m may be required -The provision of fire fighting equipment and other relevant fixed firefighting installations -The type and coverage of gas monitoring equipment -Staffing requirements and human presence on the site -The means by which the site will be accessed out of hours, on weekends and public holidays -Availability of water for firefighting and release mitigation and the details of any hydrant system that will be installed during construction and following commission -Assurance that the road network provided to serve the site will be sufficient to accommodate fire and rescue service vehicles of up to 26 tonnes and 8m in length -AGI - except that a similar arrangement to those indicated will be applied -Arrangements will be made to ensure that any water run-off from the site can be directed in such a way as to not affect any vulnerable receptors	Mid and West Wales Fire and Rescue	APL notes this comment and will engage with the Fire and Reuse Service to close out these points until the detailed design stage.
Site Selection	1	We are not in principally objecting to this development as we will always need an electrical generation. It is the location we are objecting to. When there is a far more suitable site approximately 800meters to the North West which could be classed as a brown field site because of its industrial past i.e. coal mining and recent land fill. A second alternative site lies approximately 400m to the west alongside the existing development of the gas pumping station.	Response anonymised	APL notes this comment about site selection. The suggested site approximately 400 m west of the proposed Generating Equipment Site would not be suitable due to the National Transmission System gas pipelines that enter Felindre Gas Compressor Station on the western side of the National Grid compound. Figure 3.4 of the ES (Document Reference 6.3) shows the existing utilities (including underground gas pipelines, overhead and underground electricity cables and telecommunication lines) within the Project Site area. The proposed site for the Abergelli Power Project has been carefully considered and selected after an extensive site selection process. The Project Site was considered suitable for the following main reasons: - It is in close proximity to a suitable electrical connection point; - It is in close proximity to a suitable gas connection point; - The Project Site does not include any nationally important environmental designations; - The land available is of an adequate size to accommodate the Power Generation Plant, Gas Connection and Electrical Connection; - The Project site is largely situated on poor quality agricultural land (improved grassland classified as Grade 4 agricultural land); - It is in close proximity to similar industrial developments including the Felindre Gas Compressor Station and Swansea North Substation; - The surrounding network is within an area of net electricity import; and - It is in close proximity to a well-developed road network to the Project Site.
Socio-economics	1	The Community Council are of the opinion, that should the DCO be approved, the size & height, especially of the stack of this proposed power station would have a substantial & damaging effect on the marketability of the aforementioned sites. The Community Council consider the proposed Residential use & existing Business Park to be more appropriate for their area, especially if the Swansea Barrage scheme is given the go-ahead.	Llangyfelach Community Council	APL notes this comment and has worked, through the design and assessment process, to minimise intrusion by reducing the footprint of the Project and limiting the number of stacks to one. APL also proposes that the electrical connection to the nearby substation is underground rather than a more traditional overhead line connection. It is considered that a project of this nature, situated close to significant existing energy-related infrastructure (including the substation and overhead powerlines), which assist in achieving these design efficiencies, is appropriately designed and located.

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Socio-economics	1	This should not be at the expense of existing residents by retrospectively damaging our carefully planned long term financial positions. We feel that the construction and running of the station would have a very damaging impact on local house prices, tourism and the future of Felindre being a desirable place to live.	Response anonymised	APL notes this comment. ES Chapter 14 "Socio-economics" discusses likely effects on tourism and business as a result of the Project. As explained, a tourism business survey was carried out during November and December in 2014. This has not been repeated for this assessment as baseline assessment shows the visitor economy has not materially changed since 2014. The 2014 business survey findings are therefore considered to remain valid for this assessment. In terms of impact, the vast majority of respondents felt that the Project would have no impact on business performance. Some businesses felt that they would benefit at the construction phase through related demand for accommodation, food and drink, and other services. Only one respondent predicted an adverse impact on business performance based mainly on perceived adverse visual impact. In response to concerns about house prices, APL advises that loss of property value is not a material consideration in the planning process and is therefore not something that is covered in an EIA. Evidence would need to be provided to demonstrate that the proposed development would have an adverse impact on the property value. APL provided additional explanation to explain the circumstances in which parties may be entitled to claim compensation due to impacts from the proposed development, whilst noting that parties should, in any event, seek independent legal advice if they believe they are affected by the Project.
Socio-economics	1	Para 14.8.35 relates to Construction and Decommissioning and states that the adoption of the embedded mitigation in the CEMP would ensure no tourism/ recreation receptors are affected significantly during construction (no reference to decommissioning).	City and County of Swansea Council	Text has been amended at ES Para. 14.8.35 and at other sections in tourism and recreation impact analysis to clarify the position. A Decommissioning Plan as detailed in 'Decommissioning Strategy', paragraph 18 (1) Schedule 2 of the DCO Requirements will be required to be submitted and agreed with City and County of Swansea at the appropriate time but prior to any decommissioning works being undertaken.
Socio-economics	1	Table 14.30 (Cumulative Projects) provides the construction cost of various different projects, but it is not clear how these have been valued given that the site at Llewelyn Road (for up to 200 homes) has been valued at £23.4m whilst the site at Pare Ceirw (for up to 300 homes) is valued at £5.9m and the Strategic Sites at Llangyfelach (up to 1,950 dwellings) and Garden Village (650) are only £16.4m and £11.8m respectively.	City and County of Swansea Council	Table 14.30 (Cumulative Projects) has been amended. Another column has been added to clarify the total construction value of each project (where possible) and annual construction cost. Annual construction cost has been derived using build period information (where programme information is available). If not available, unit-based construction cost information has been used which is deemed to be the worst case scenario.
Socio-economics	1	Our property is currently up for sale, it is an executive property, and we are extremely worried about the depreciation in value if we were to have this power station next door.	Response anonymised	APL notes this comment. Loss of property value is not a material consideration in the planning process and is therefore not something that is covered in an EIA. Evidence would need to be provided to demonstrate that the proposed development would have an adverse impact on the property value. APL provided additional explanation to explain the circumstances in which parties may be entitled to claim compensation due to impacts from the proposed development, whilst noting that parties should, in any event, seek independent legal advice if they believe they are affected by the Project.
Transport	1	The access route which you wish to use is also access to many properties, this could cause bad congestion. This road narrows badly in certain parts, as we travel this way several times a week.	Response anonymised	The proposed Access Road has been selected following previous consultation in 2014 and 2015. In 2014, two potential access routes were considered to reach the Generating Equipment Site as discussed in Chapter 5 "Alternatives" of the ES. Feedback from the local authority, local highways authority and local residents indicated that the preference would be to avoid use of the Rhyd-y-Pandy Road and instead route via the B4489. Therefore, the chosen route to site is from Junction 46 of the M4, north along the B4489, then along the existing access to the National Grid compound which houses the Felindre Gas Compressor Station and Swansea North Substation. The selected access route will result in a lower adverse impact on traffic by using a shorter, more direct route and would avoid the roads leading to Morriston Hospital. ES Chapter 12 Traffic and Transport considers the impacts of traffic generating by the Project. The assessment states that there will be some temporary adverse effects in relation to increased HGV movements during the construction period. A Construction Traffic Management Plan is submitted as Appendix 3.3 to the ES Document Reference 6.2) setting out measures to manage construction traffic and minimise adverse impacts. The traffic and transport assessment concludes that there will be no adverse effects during operation of the Project.

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Transport	1	Any proposals that include the installation of cables under or over the railway, any methods of electricity transmissions across Network Rail's land, or any access rights, temporary or otherwise will require the necessary property agreements to be entered into with our Easements and Wayleaves team	Network Rail	APL notes this comment and considers that no further action is necessary.
Transport	1	If there is any impact upon rail infrastructure, this must be examined and addressed within Abergelli Power Limited's Environmental Statement.	Network Rail	APL notes this comment. The Network Rail Asset Protection Team have been consulted and confirmed that they have no objections to the proposed route.
Transport	1	Network Rail would have strong concerns if, during the construction or operation of the power generation plant, abnormal loads would use routes that include Network Rail's assets (e.g. level crossings, bridges etc.) and would advise that contact is made with Network Rail's Asset Protection Engineers	Network Rail	APL notes this comment. The Network Rail Asset Protection Team have been consulted and confirmed that they have no objections to the proposed route.
Transport	1	The solar farm (and I believe also the DNO) needs to have continuous 24-hour access to this private road and the farm track to the solar fields, and this includes for HGV's carrying heavy loads that may occasionally be required. The track and road therefore need to be protected from damage and any damage to the road and track will need to be made good to an acceptable standard. Particular care will also be required when excavating around the track, both to ensure that the solar farm cables are effectively protected (both during and after construction) and to protect access to the solar farm	Response anonymised	APL notes this comment and can confirm that consultation regarding the protection of assets is ongoing. Draft protective provisions have been prepared and sent to the consultee for comment. These are included in the draft DCO (Document Reference 3.1).
Transport	1	As Junction 46 is affected with heavy traffic build-up due to an increase of vehicles during rush hour and the Hospital shift change, it would be prudent to suggest to the applicant that they should seek to programme their deliveries in their Construction Traffic Management Plan, to arrive outside the peak hours on the motorway.	Welsh Government	APL notes this comment and can clarify that the Construction Travel Management Plan (CTMP) (Appendix 3.3, Document Reference 6.2) will seek to minimise deliveries at peak hours. Abnormal loads will be delivered outside peak hours.
Transport	1	Royal Mail operations are highly sensitive to any changes in the capacity of Junction 46 of the M4 Motorway.	Royal Mail	APL confirms that the transport assessment considers the impact on major road users. A draft Construction Traffic Management Plan (CTMP) is contained in Appendix 3.3 and Outline Construction Environmental Management Plan (CEMP) has been submitted (Appendix 3.1 in Document Reference 6.2).
Transport	1	Whilst it is noted that a CTMP will be prepared and submitted with the DCO application, the documents do not acknowledge the need to ensure that major road users such as Royal Mail are not disrupted though full advance consultation by the applicant at the appropriate time in the development process. Royal Mail wish to be consulted on the future submissions.	Royal Mail	APL confirms that the transport assessment considers the impact on major road users. A draft Construction Traffic Management Plan (CTMP) is contained in Appendix 3.3 and Outline Construction Environmental Management Plan (CEMP) has been submitted (Appendix 3.1 in Document Reference 6.2).
Transport	1	The access road has now been moved, which is a real concern. The traffic flow especially at certain times of the day is somewhat busy and the junction for the M4 currently sees daily queues, over hanging trees will also cause an issue for high loads, the width of Llangyfelach road for 2 lorry's passing would not be possible, and the road see many cyclists, pedestrians and horse Back riders to which increased large vehicles pose a real threat to all.	Response anonymised	APL notes this comment about traffic flows and access road. The Access Road has not been moved. The proposed Access Road has been selected following previous consultation in 2014 and 2015. In 2014, two potential access routes were considered to reach the Generating Equipment Site as discussed in Chapter 5 "Alternatives" of the ES. Feedback from the local authority, local highways authority and local residents indicated that the preference would be to avoid use of the Rhyd-y-Pandy Road and instead route via the B4489. Therefore, the chosen route to site is from Junction 46 of the M4, north along the B4489, then along the existing access to the National Grid compound which houses the Felindre Gas Compressor Station and Swansea North Substation. The selected access route will result in a lower adverse impact on traffic by using a shorter, more direct route and would avoid the roads leading to Morriston Hospital. ES Chapter 12 Traffic considers the impacts of traffic generating by the Project. The assessment confirms that there will be some temporary adverse effects in relation to increased HGV movements during the construction period. An Outline CTMP (ES Appendix 3.3, Document Reference 6.2) provides measures to manage construction traffic and minimise adverse impacts. The traffic and transport assessment concludes that there will be no adverse effects during operation of the Project.
Transport	1	Table 16.1 (List of Adverse Residual Impacts) refers incorrectly to Link 1 in the Traffic, Transport and Access discipline rather than Link 2 (p.16-7).	City and County of Swansea Council	APL confirms that this error has been rectified in the final ES.

Theme	No. of Comments	Summary of Comments	Consultee Body	Response in APL ES and/or DCO Application
Waste	1	Dust suppression and waste disposal measures in working and storage areas and for trucks carrying loose material may be necessary to ensure that windblown dust, soil, packaging and detritus are not blown on to on the solar fields and panels as this will affect the performance of the panels.	Response anonymised	APL notes this comment regarding dust and waste. The Construction Environmental Management Plan (Appendix 3.1, Document Reference 6.2) provides details on dust protection measures and waste management to be implemented during the construction phase.
Water Quality	1	One comment states refers to hydrological protection measures and advises that any stored stockpiles of material e.g. soils, are surrounded at their base by silt fencing to prevent contaminated run-off being generated during inclement weather conditions.	Natural Resources Wales	APL acknowledges this and Chapter 3 Project and Site Description of the Environmental Statement has been amended.
Water Quality	1	One comment suggests that it would be prudent to conduct periodic manual/visual checks and maintenance, which should be incorporated into the relevant management plan in respect of oil separators	Natural Resources Wales	APL acknowledges this and Chapter 3 Project and Site Description of the Environmental Statement has been amended.
Water Quality	1	One comment has concerns about contamination of a nearby by water supply during the construction and maintenance phases of the development.	Response anonymised	Measures will be in place during the construction and operation of the Abergelli Project to ensure that silt and other deposits do not contaminate private water supplies. Chapter 3, section 3.11 discusses embedded mitigation measures in relation to drainage. The Outline Construction Environment Management Plan (ES Appendix 3.1) includes Sections 4.4 Water Management Plan which sets out construction practices to safeguard water resources and quality, and 4.5 Pollution Prevention Management Plan which sets out measures to minimise the risk of pollution to ground and surface water.
Water Quality	1	One comment advises that air quality assessment should be appropriate to consider possible effects to the Lower Lliw Reservoir from deposition and affected rainfall.	Dwr Cymru Welsh Water	APL notes the comment. The potential impact on the Lower Lliw Reservoir has been assessed in Chapter 9 (Water Quality and Resources).
Water Quality	1	One comment states that the Project intends to “consolidate the Generating Equipment Site to the north of the Water Main”, and it appears that the consultation documents does not include any detailed layouts at this stage.	Dwr Cymru Welsh Water	APL notes this comment. The DCO Application submission includes Figure 2.6 Indicative Site Layout which shows that the Generating Equipment is located north of the water main.
Water Quality	1	One comment suggests that straw bales are not an effective form of silt control. The use of sediments or similarly commercially available products should be investigated for this development.	Natural Resources Wales	APL notes this comment and Chapter 3 Project and Site Description of the Environmental Statement has been amended accordingly.
Water Quality	1	Comment suggests that once the foul water system and disposal method is agreed, the consultee advises that APL consults NRW as an EPR permit may be required for the discharge.	Natural Resources Wales	APL will contact NRW to discuss the agreed foul water system and disposal method and the requirement for an Environmental Permit.
Water Quality	1	One comment states that the proposed oily water drainage system should also be compliant with the Oil Storage Regulations 2016 and Pollution Prevention Guidance 3: Use and design of oil separators in surface water drainage systems.	Natural Resources Wales	APL notes the comment and Chapter 3 Project and Site Description of the Environmental Statement has been amended accordingly.
Water Quality	1	One comment advises that emergency cut-off via a penstock valve should be incorporated in the event of having to contain contaminated run-off, as well as the proposed emergency overflow.	Natural Resources Wales	APL notes this comment, which will be confirmed during detailed design. The priority for the emergency overflow will be to safeguard the Generating Equipment Site.
Water Quality	1	One comment suggests that it would be prudent to conduct periodic manual/visual checks and maintenance, which should be incorporated into the relevant management plan in this respect.	Natural Resources Wales	APL notes the comment. Operation and maintenance is discussed in Section 3.9 of Chapter 3 of the ES (Document Reference 6.1).
Water Quality	1	One comment notes that this land is proposed for ecological mitigation however no further detail has yet been provided on this. NRW advises that if these proposals include raising of land within the flood zone (C2), further flood risk assessment may be required and any works on the River Llan may also require a Flood Risk Activity Permit from NRW.	Natural Resources Wales	APL notes the comment. Acknowledged. APL can confirm that there will be no built equipment in this area and that the area known locally as the "teardrop" will be primarily and only for Ecological Mitigation. As such no Flood Risk Activity Permit will be required.
Water Quality	1	One comment notes the submission of the Water Framework Directive (WFD) screening assessment for this project. and agrees with its conclusion that the project will not have a significant adverse effect on the River Llan waterbody from a WFD perspective, and that no further assessments are required.	Natural Resources Wales	APL notes this comment and agrees that no further action is required.

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Water Quality	1	One comment suggests that the APL should consider the proposed surface water attenuation pond(s) to be potentially dual use, i.e. a sustainable drainage solution, which also doubles as green infrastructure, whereby the water could be reused/recycled for fire-fighting purposes in the event of an emergency and negate the need for an additional fire water storage tank.	Natural Resources Wales	APL notes the comment and clarifies that green infrastructure attenuation pond(s) would not suitable to double up as fire water storage due the health and safety implications and would not conform to industrial standards or regulations.
Water Quality	1	One comment advises that a statement about the water quality improving overtime as sediments settle and pollutants are dispersed/diluted/treated by natural processes is not relied upon, as appropriate mitigation in response to any adverse impact during construction.	Natural Resources Wales	APL clarified that Para 9.7.6 of the 2018 PEIR, as stated, is not the primary mitigation to be employed, and is used only for reference to described what would happen without mitigation as detailed in the CEMP.
Water Quality	1	One comment is satisfied that the draft CEMP, Surface Water and Environmental Management Plans incorporate matters raised for consideration in response to the previous 2018 PEIR consultation. NRW notes that that these documents will be developed further when more specific details of the development emerge in the coming stages.	Natural Resources Wales	APL acknowledges this comment and confirms that this will be part of detailed design.
Water Quality	1	The Drainage Strategy and Flood Consequences Assessment (FCA) are broadly acceptable. In regards to section 1.1.7 of the FCA, this is correct, the lifetime of the development is taken to be 25 years which takes us to early 2050's and therefore complies with Table 7-1 for peak river flows. Table 7-2 further expands this by looking at peak rainfall intensity where the anticipated change by the 2050's is 20%, again this is an acceptable approach and complies with the latest guidance available on surface water design parameters. It is noted that the 20% figure is based on figures which run to 2069 (based on 7.2.2 and 7.3.2 of the FCA) which would comprise a 47 year lifetime for the development (assuming it is completed in 2022). However, it is noted that the Power Station could be re-powered on more than one occasion and the WG Policy Clarification Letter - Guidance on Climate Change Allowance for Planning Purposes (CL-03-16) - indicates that a lifetime of 75 years should be assumed for non-residential development. It is therefore considered that an allowance of 30% should be added on for climate change pursuant to this guidance. Given that the overall lifetime of the development is not known, it would be considered prudent to plan for the future to ensure any attenuation is appropriately sized. In section 8.3.4 the report indicates that the site surface water drainage system will be designed to prevent flooding of the project-t site for events up to and including 1 in 30 year and maintain existing runoff rates for events from 1 in 30 year up to and including 1 in 100 year including an appropriate allowance for climate change, this is an acceptable approach. To enable such an approach, sufficient information will be needed showing where and how surface water will be stored across the site to maintain existing run-off rates while not placing both the site itself and adjacent third party land at risk.	City and County of Swansea Council	The ES has been updated to clarify that the operational life of the Power Station is 25 years only. From previous correspondence with CCS (18/10/2017) and this consultation response it is understood that the assessment undertaken using the 20% climate change allowances is acceptable for an operational life of 25 years. It is therefore considered there are no requirements to update the climate change allowance for this application. Plans of the proposed surface water drainage network are detailed in the DCO Application, in compliance with runoff capacity requirements set out in the Drainage Strategy (Appendix 9.1 of Document Reference 6.2) and secured by 'Surface and foul water drainage' requirement in Schedule 2 of the DCO to be submitted with the APL DCO Application. Detailed plans of the proposed watercourse crossings are supplied as part of the DCO application to validate the conclusions of the FCA (Appendix 9.1). An assessment for the requirement of trash screens will be carried out for access road crossings during the detailed design phase of the project, and a written surface and foul water drainage plan have been submitted to and approved by CCS as secured by 'Surface and foul water drainage', requirement. As noted in ES Chapter 9, the run off rate calculations have been updated using the FEH2013 rainfall parameters and the attenuation storage requirements for the Project Site will be confirmed.

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Water Quality	1	Continued... We understand from previous discussions and the FCA/DS document that several on site streams will be altered to enable the development and it's access, detailed plans will be needed showing the diversionary routes, gradients, cross sections, any retaining structures and crossings supported by appropriate levels of assessment to demonstrate that the changes will not affect third party land or the development itself. Section 8.2.20 mentions that for access roads twin culvert arrangements and/or trash screens are implemented, we recommend that a robust assessment is carried out on the need for trash screens as in our experience they cause more issues that they solve. In regards to run-off rates, the approach used is acceptable i.e. IOH124, but when it comes to assessment of the chosen system we would be looking for FEH2013 rainfall parameters to be used in preference to FSR or earlier versions of FEH in line with the latest NRW guidance from 2016.	City and County of Swansea Council	
Water Quality	1	One comment advises that further information should be provided on the in-combination effect of foul water drainage from the Project and other potential developments.	Natural Resources Wales	APL acknowledges this comment and provided clarification regarding foul water drainage. Namely, there will be a maximum of 2 toilets on site with approximately 3 shifts of 5 workers in a 24 hour period. As there is no main drainage available to the Project, preference is to install a Package Treatment Plant (as described in Chapter 3 of the ES (Document Reference 6.1). Therefore the discharge from the Project site during operation will be negligible and highly unlikely to cause significant effects to a Natura 2000 site. During construction temporary package treatment or mobile provision of toilets will be utilised, and therefore the conclusions within the NSER remain valid.
Water Quality and Ground Conditions	1	One comment accepts that the pollution control measures contained within the project proposals, if implemented as designed should mean that there will be no significant impacts on the water environment as a result of pollution from both construction and operation of the facility.	Natural Resources Wales	APL notes this comment and agrees that no further action is required.
Water Quality and Ground Conditions	1	Drainage will also need to be considered to ensure that stockpiling, landform compaction and modifications and drainage of hardstandings do not drain towards the solar fields and that drainage ditches are properly maintained.	Response anonymised	APL acknowledges this comment regarding earthworks and drainage ditches.